ZCC Cutting Tools
Europe GmbH



Catalogo Principale

Version 2023

2023

– IT –

Benvenuti in ZCC Cutting Tools Europe GmbH,

e benvenuti nella versione più recente del nostro catalogo generale. Io e il team di ZCC Cutting Tools siamo lieti di potervi presentare il nostro portafoglio di prodotti e soluzioni in costante aumento dedicato all'ottimizzazione della vostra capacità produttiva sul piano qualitativo ed economico.

In aggiunta ai nostri cataloghi riguardanti le novità, pubblicati due volte ogni anno, con questo catalogo generale avrete a disposizione una panoramica della nostra offerta e delle costanti innovazioni proposte da ZCC-CT.

"Il valore aggiunto si ottiene con la collaborazione" è e continua a essere la nostra vision e la nostra promessa per voi. L'offerta quindi non si limita al contenuto del presente catalogo, bensì va ben oltre. Oltre ai test e allo sviluppo delle vostre soluzioni speciali all'interno del nostro Centro dimostrativo e di prova situato nella sede centrale di Düsseldorf, l'assortimento comprende servizi di assistenza di ampio respiro come il Tool Management, la predisposizione dei dati degli utensili, la preparazione degli utensili e l'offerta di corsi di formazione creati in base alle vostre esigenze. Non esitate a contattarci: siamo al vostro fianco, in ogni momento.

Il presente catalogo generale si suddivide in tre principali aree applicative Nella Parte A che segue troverete gli utensili di tornitura, nella Parte B gli utensili di fresatura e nella Parte C gli utensili di foratura. Per quanto riguarda la mandrineria e il sistema CAD, ZCC-CT propone un catalogo separato. Non esitate a contattare il vostro referente personale o il nostro reparto Vendite interne nel caso necessitiate di cataloghi aggiuntivi o informazioni supplementari.

Vi ringraziamo per la fiducia riposta e confidiamo di poter intraprendere un'ottima collaborazione con voi.
Il team di ZCC Cutting Tools Europe è al vostro fianco in ogni momento.

Quanliang Zhao

Direttore Generale
ZCC Cutting Tools Europe GmbH



Sede principale di ZCC Cutting Tools, Zhuzhou, Cina



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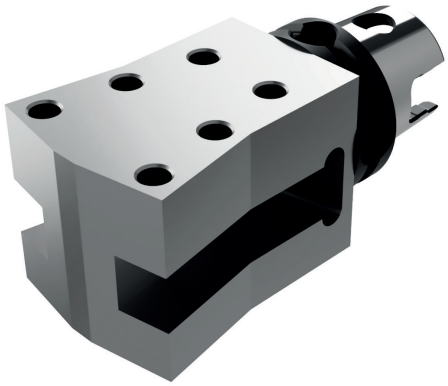
Member of Minmetals Group

Utensili speciali: il vostro utensile ottimizzato vi aspetta

Applicazioni speciali richiedono soluzioni speciali e ottimizzate. In ogni settore industriale, gli utensili speciali possono offrire vantaggi sul piano economico, tecnico o di processo rispetto alle soluzioni tradizionali. Per ogni singolo caso, collaboriamo insieme a voi per determinare l'esatto potenziale dei benefici considerando anche tutte le condizioni specifiche dei vostri cicli operativi. Nella nostra sede centrale europea di Düsseldorf, il Reparto ricerca e sviluppo di ZCC Cutting Tools Europe realizza per voi la soluzione su misura ideale per una lavorazione particolarmente economica.

Perché scegliere gli utensili speciali di ZCC Cutting Tools?

Sviluppiamo soluzioni per utensili su misura per voi e adatte alle più disparate tipologie di lavorazione. Collaborando a stretto contatto con voi sin dalle prime fasi, riusciamo a costruire gli utensili ottimizzati che soddisfano esattamente le vostre esigenze e le vostre priorità. Il nostro know-how pluriennale spazia dalla progettazione alla fabbricazione, sino ad arrivare alla logistica. Sfruttate le nostre competenze specialistiche per un successo nel lungo termine.



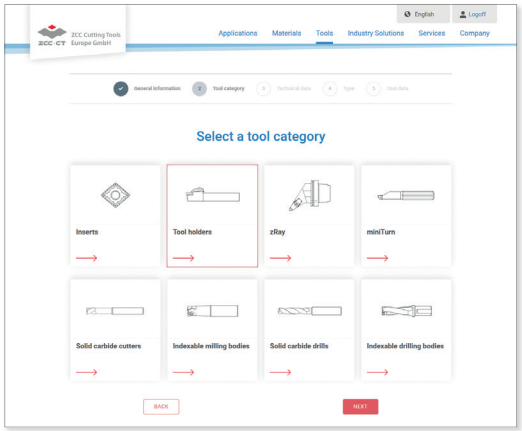
Esempio di supporto speciale



Esempio di punta speciale a gradino in metallo duro integrale

Il vostro utensile speciale personalizzato è a portata di mano

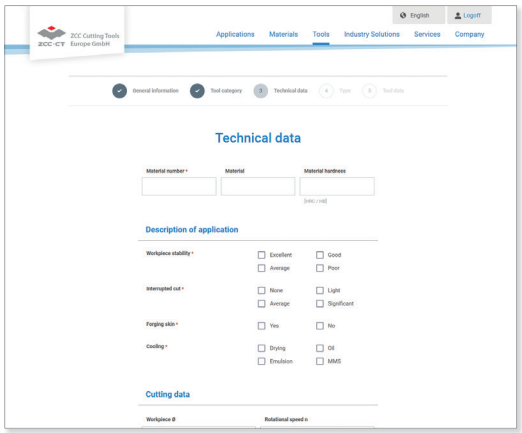
Lavorate con applicazioni per cui è possibile ottenere vantaggi in termini commerciali, tecnici o logistici impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (www.zccct-europe.com).



Home page "Strumento online per utensili speciali" con Selezione della categoria dell'utensile

Selezione della categoria dell'utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell'utensile

Definizione dei parametri dell'utensile

Successivamente potete seguire comodamente la procedura. Potete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

L'accesso rapido e diretto agli utensili speciali di ZCC Cutting Tools Europe.

Effettuate subito l'accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.

Sede principale di ZCC Cutting Tools, Zhuzhou, Cina



Produzione di utensili



Sinterizzazione di inserti

Tornitura A	Tornitura generale	A1-A379
	Scanalature e gole	A380-A457
	Filettatura	A458-A500
Fresatura B	Inserti per fresatura	B1-B263
	Frese in metallo duro integrale	B264-B526
Foratura C	Punta ad inserti	C1-C37
	Punte in metallo duro integrale	C38-C151
	Alesatori in metallo duro integrale	C152-C171
	Utensili per filettatura in M. D. integrale	C172-C200
Informazioni tecniche D		D1-D12
Indice E		E1-E10

TORNITURA GENERALE



Tornitura generale

Panoramica prodotti	**A2-A15**
Panoramica rompitrucioli	**A16-A26**
Campo di applicazione dei rompitrucioli	**A27-A35**
Panoramica gradi	**A36-A41**
Campo di applicazione dei gradi	**A42-A47**
Codice ISO – Indicazioni generali inserti tornitura	**A48-A49**
Tabella di conversione metrico/imperiale	**A50**
Inserti negativi	**A51-A115**
Inserti positivi	**A116-A157**
Codice ISO – Inserti PCBN & PCD	**A158-A159**
Inserti in PCBN & PCD	**A160-A197**
Codice ISO – Inserti ceramici	**A198-A199**
Inserti ceramici	**A200-A221**
Panoramica portautensili esterni	**A222-A227**
Codice ISO – Portautensili esterni	**A228-A229**
Portautensili esterni	**A230-A303**
Codice ISO – Portautensili esterni – pezzi lunghi	**A304-A305**
Portautensili esterni – Fantine mobili	**A306-A313**
Codice ISO – Portautensili – Tecnologia ferroviaria	**A314-A315**
Portautensili – Tecnologia ferroviaria	**A316-A319**
Panoramica barre alesatrici	**A320-A321**
Codice ISO – Barre alesatrici	**A322-A323**
Barre alesatrici	**A324-A365**
Dati di taglio consigliati	**A366-A379**
Misure per la risoluzione dei problemi	**A502-A503**
Informazioni tecniche	**A505-A509**
Gli utensili speciali	**A513**

Inserti in metallo duro e cermet

Negativo, bilaterale – Finitura



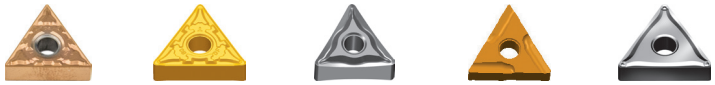
CNEG-NF	CNMG-ADF	CNMG-DF	CNMG-EF	CNMG-SF	CNMG-XF	
12	12	09 12	09 12	09 12	12	Lunghezza tagl.
A52	A51	A51	A51	A51	A52	Pagina



DNEG-NF	DNEG-NGF	DNMG-ADF	DNMG-DF	DNMG-EF	DNMG-FM	DNMG-SF	DNMG-XF	
15	15	15	11 15	11 15	15	11 15	11 15	Lunghezza tagl.
A66	A66	A62	A62	A66	A66	A62	A63	Pagina



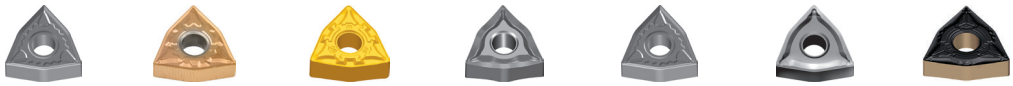
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12	12	09 12 15	09 12	12	Lunghezza tagl.
A71	A71	A72	A71	A73	Pagina



TNMG-ADF	TNMG-DF	TNMG-EF	TNMG-FM	TNMG-SF	
16	16 22	11 16 22	16	16	Lunghezza tagl.
A87	A87	A89	A90	A88	Pagina



VNEG-NF	VNEG-NGF	VNMG-ADF	VNMG-DF	VNMG-EF	VNMG-SF	VNMG-XF	
16	16	16	16	16	16	16	Lunghezza tagl.
A100	A101	A100	A100	A100	A101	A102	Pagina



WNEG-NF	WNMG-ADF	WNMG-DF	WNMG-EF	WNMG-NF	WNMG-SF	WNMG-XF	
08	08	06 08	06 08	06	06 08	06 08	Lunghezza tagl.
A106	A105	A105	A106	A106	A105	A107	Pagina

Negativo, bilaterale, raschiante – Finitura

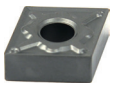


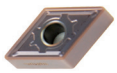
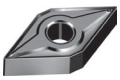
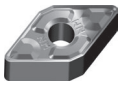
CNMG-WG	DNMX-WG	TNMX-WG	WNMG-WG	
12	11 15	16	08	Lunghezza tagl.
A51	A62	A87	A106	Pagina

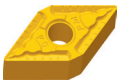
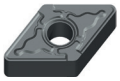
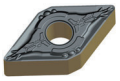
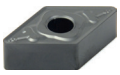
Inserti in metallo duro e cermet

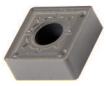
Negativo, bilaterale – Asportazione media

					
CNMG	**CNMG-DM**	**CNMG-EG**	**CNMG-EM**	**CNMG-NM**	
12 16 19	09 12 16 19	12	12 16	12	Lunghezza tagl.
A61	A54	A54	A54	A56	Pagina

					
CNMG-PM	**CNMG-TC**	**CNMG-TK**	**CNMG-XM**	**CNMG-ZM**	
09 12 16 19	12 16	12	12 16 19	12	Lunghezza tagl.
A53	A56	A56	A53	A55	Pagina

					
DNMG-DM	**DNMG-EG**	**DNMG-EM**	**DNMG-NM**		
11 15	15	11 15	15		Lunghezza tagl.
A64	A67	A67	A67		Pagina

					
DNMG-PM	**DNMG-TC**	**DNMG-TK**	**DNMG-XM**	**DNMG-ZM**	
11 15	15	15	11 15	15	Lunghezza tagl.
A64	A67	A68	A63	A65	Pagina

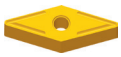
					
SNMG	**SNMG-DM**	**SNMG-EG**	**SNMG-EM**	**SNMG-NM**	
12 25	09 12 15 19	12	12 15	12	Lunghezza tagl.
A83	A75	A75	A76	A77	Pagina

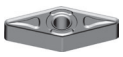
					
SNMG-PM	**SNMG-TC**	**SNMG-TK**	**SNMG-XM**		
09 12 15 19	12 15	12	12 15 19		Lunghezza tagl.
A74	A76	A76	A73		Pagina

								
TNMG	**TNMG-DM**	**TNMG-EG**	**TNMG-EM**	**TNMG-PM**	**TNMG-TC**	**TNMG-XM**	**TNMG-ZM**	
16 22 27 33	11 16 22	16	16 22	11 16 22	16 22	16 22	16	Lunghezza tagl.
A98	A91	A93	A93	A91	A93	A90	A92	Pagina

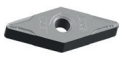
Inserti in metallo duro e cermet

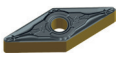
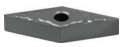
Negativo, bilaterale – Asportazione media



VNMG	VNMG-DM	VNMG-EM	VNMG-NM	
16	16	16	16	Lunghezza tagl.
A103	A103	A103	A103	Pagina

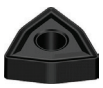



VNMG-PM	VNMG-SNR	VNMG-TC	VNMG-XM	VNMG-ZM	
16	16	16	16	16	Lunghezza tagl.
A104	A104	A104	A102	A104	Pagina






WNMG-DM	WNMG-EG	WNMG-EM	WNMG-NM	
06 08	08	06 08	08	Lunghezza tagl.
A108	A108	A108	A110	Pagina




WNMG-PM	WNMG-TC	WNMG-TK	WNMG-XM	WNMG-ZM	
06 08	08	08	06 08	08	Lunghezza tagl.
A109	A110	A110	A107	A109	Pagina



RNMG	
12	Lunghezza tagl.
A112	Pagina

Negativo, bilaterale – Asportazione media - sgrossatura





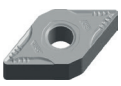



CNMA	DNMA	SNMA	SNUN	TNMA	WNMA	
12 16 19	15	12 15 19	12 19	16 22	06 08	Lunghezza tagl.
A61	A69	A84	A86	A99	A111	Pagina

Negativo, bilaterale – Sgrossatura





CNMG-DR	CNMG-ER	CNMG-SNR	DNMG-DR	DNMG-ER	DNMG-SNR	
12 16 19 25	12 16 19	12 16 19	15	15	15	Lunghezza tagl.
A57	A58	A57	A68	A69	A68	Pagina

Inserti in metallo duro e cermet

Negativo, bilaterale – Sgrossatura

 **SNMG-DR**	 **SNMG-ER**	 **SNMG-SNR**	 **TNMG-DR**	 **TNMG-ER**	 **TNMG-SNR**	
12 15 19 25	12 15 19	12	16 22 27	16 22	16	Lunghezza tagl.
A77	A78	A78	A94	A95	A92	Pagina

 **WNMG-DR**	 **WNMG-SNR**	
06 08	08	Lunghezza tagl.
A111	A109	Pagina

Negativo, monolaterale – Sgrossatura

 **CNMM**	 **CNMM-DR**	 **CNMM-ER**	 **CNMM-HDR**	 **CNMM-HPR**	 **CNMM-LR**	
12 19	12 16 19 25	25	12 16 19 25	19 25	12 16 19 25	Lunghezza tagl.
A60	A58	A58	A60	A60	A59	Pagina

 **DNMM-DR**	 **DNMM-ER**	 **DNMM-HDR**	 **DNMM-LR**	
15	15	15	15	Lunghezza tagl.
A70	A70	A70	A70	Pagina

 **SNMM**	 **SNMM-DR**	 **SNMM-ER**	 **SNMM-HDR**	 **SNMM-HPR**	 **SNMM-LR**	
19 25	15 19 25	25	12 15 19 25	19 25	12 15 19 25	Lunghezza tagl.
A85	A79	A79	A81	A82	A80	Pagina

 **TNMM**	 **TNMM-DR**	 **TNMM-HDR**	 **TNMM-LR**	
16 22 27	16 22 27	22 27	16	Lunghezza tagl.
A99	A95	A97	A95	Pagina

Forma speciale – Finitura

 **CNMG-RF**	 **CNMM-RF**	 **CNMM-RH**	 **KNUX**	 **LNUX-RF**	 **LNUX-RH**	
19	19	19	16	19 30	19 30	Lunghezza tagl.
A114	A114	A114	A113	A115	A115	Pagina

Inserti in metallo duro e cermet

Positivo – Finitura di precisione



CCGT-SF	CCGT-USF	CPGT-SF	DCGT-SF	DPGT-SF	
06 09	06 09	06 09	07 11	07 11	Lunghezza tagl.
A116	A116	A124	A125	A131	Pagina



TBGH	TCGT-SF	TPGH	TPGT-SF		
06	06 09 11	09 11	09 11		Lunghezza tagl.
A139	A140	A146	A147		Pagina



VBGT-SF	VCGT-SF				
11	11 16				Lunghezza tagl.
A150	A153				Pagina

Positivo – Finitura



CCMT-AHF	CCMT-EF	CCMT-HF	CCMT-XF	CPMT-HF	
06 09 12	06 09 12	06 09 12	06 09	06	Lunghezza tagl.
A117	A118	A117	A118	A124	Pagina



DCMT-AHF	DCMT-EF	DCMT-HF	DCMT-XF	SCMT-AHF	SCMT-EF	SCMT-HF	SCMT-XF	
07 11	07 11	07 11	07 11	09	09	09	09	Lunghezza tagl.
A125	A126	A126	A126	A134	A134	A135	A134	Pagina



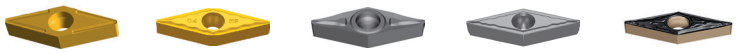
TCMT-AHF	TCMT-EF	TCMT-HF	TCMT-XF					
11 16	09 11 16	09 11 16	09 11 16					Lunghezza tagl.
A141	A142	A141	A141					Pagina



VBET-NF	VBET-NGF	VBMT-AHF	VBMT-EF	VBMT-HF	VBMT-XF			
16	16	16	11 16	11	11 16			Lunghezza tagl.
A149	A151	A148	A148	A149	A148			Pagina

Inserti in metallo duro e cermet

Positivo – Finitura



VCGT	VCGT-HF	VCGT-NF	VCMT-EF	VCMT-XF	
13	11	16	16	11 16	Lunghezza tagl.
A153	A153	A153	A156	A156	Pagina

Positivo – Asportazione media



CCMT-EM	CCMT-HM	CCMT-XM	CCMW	CPGW	CPMT-HM	
06 09 12	06 09 12	09 12	09 12	06	09	Lunghezza tagl.
A119	A120	A119	A121	A124	A124	Pagina



DCMT-EM	DCMT-HM	DCMT-XM	DCMW	
07 11	07 11	11	11	Lunghezza tagl.
A127	A128	A127	A129	Pagina



SCMT-EM	SCMT-HM	SCMT-XM	SPMW	
09 12	09 12	09 12	09 12	Lunghezza tagl.
A134	A135	A135	A138	Pagina



TCMT	TCMT-EM	TCMT-HM	TCMW	TCMT-XM	
22	09 11 16	09 11 16	16	16	Lunghezza tagl.
A144	A142	A143	A143	A142	Pagina



VBMT-EM	VBMT-HM	VBMT-XM	VCMT-EM	VCMT-XM	
11 16	16	16	16	16	Lunghezza tagl.
A151	A151	A151	A156	A156	Pagina

Positivo – Sgrossatura



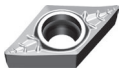
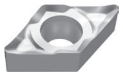
CCMT-HR	CCMT-TC	DCMT-HR	RCMT · RCGT	RCMX	RCMX-PV	SCMT-HR	TCMT-HR	
06 09 12	06 09 12	11	08 10 12 16 20 25	08 10 12 16 20 25 32	32	09 12	09 11 16 22	Lunghezza tagl.
A121	A121	A129	A132	A133	A133	A136	A143	Pagina

Inserti in metallo duro e cermet

Positivo – Sgrossatura

		
VBMT-HR	**VBMT-SNR**	
16	16	Lunghezza tagl.
A152	A152	Pagina

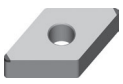
Positivo – Lavorazione alluminio

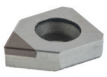
					
CCGX-LC	**CCGX-LH**	**DCGX-LC**	**DCGX-LH**	**RCGX-LH**	
06 09 12	06 09 12	07 11	07 11	08 12	Lunghezza tagl.
A122	A122	A129	A130	A132	Pagina

						
SCGX-LC	**SCGX-LH**	**TCGX-LC**	**TCGX-LH**	**VCGX-LC**	**VCGX-LH**	
09 12	09 12	09 11 16	09 11 16	11 16 22	11 16 22	Lunghezza tagl.
A136	A137	A145	A145	A154	A155	Pagina

Inserti in PCBN & PCD

Negativo

					
CNGA-2	**CNGA-2W**	**DNGA-2**	**SNGA-4**	**TNGA-3**	
12	12	15	12	16	Lunghezza tagl.
A160	A160	A161	A162	A163	Pagina

						
VNGA-2	**WNGA-3**	**ZNEX**				
16	08	04				Lunghezza tagl.
A164	A165	A166				Pagina

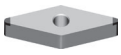
							
CNGN	**CNGN-M**	**RNGN**	**SNGN**	**SNGN-M**	**WNGN**	**WNGN-M**	
09 12	12	09 12	12	12	08	08	Lunghezza tagl.
A173	A173	A174	A175	A175	A176	A176	Pagina

Inserti in PCBN & PCD

Negativo


CNGA

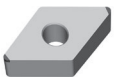

DNGA


VNGA

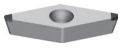
12	15	16	Lunghezza tagl.
A177	A178	A179	Pagina

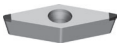
Positivo


CCGW-2


DCGW-2


TCGW-3


VBGW-2


VCGW-2

06 09 12	07 11	11 16	16	11 16	Lunghezza tagl.
A167	A169	A170	A171	A172	Pagina


CCGT

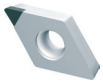

CCGT-1MED

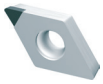

CCGT-L

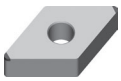

CCGW


CCGW-L

06 09 12	06 09	09 12	06 09 12	06 09 12	Lunghezza tagl.
A180	A180	A181	A182	A183	Pagina


DCGT


DCGT-1MED

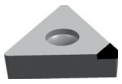

DCGW

07 11	07 11	07 11	Lunghezza tagl.
A184	A185	A186	Pagina


TCGT


TCGT-1MED


TCGT-L

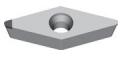

TCGW


TCGW-L

11 16	11 16	11 16	11 16	11 16	Lunghezza tagl.
A187	A187	A188	A189	A190	Pagina


VBGT


VBGT-1MED


VBGW


VCGT


VCGT-1MED


VCGW

11 16	16	11 16	11 16	11 16	11 16 22	Lunghezza tagl.
A191	A191	A192	A193	A194	A195	Pagina

Inserti ceramici

Negativo


CNGA


CNGN


CNGX


DNGA


DNGN


DNGX

12 16	12 16	12	15	15	15	Lunghezza tagl.
A200	A201	A203	A204	A205	A206	Pagina

Inserti ceramici

Negativo



RNGA	RNGN	SNGA	SNGN	SNGX	TNGA	TNGN	
12	06 09 12 15 19 25	12	12 15 19	12	16 22	16 22	Lunghezza tagl.
A207	A208	A210	A211	A213	A214	A215	Pagina



VNGA	WNGA	
16	08	Lunghezza tagl.
A216	A217	Pagina

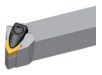
Positivo



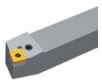
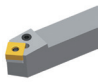
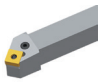
RCGX	RPGN	RPGX	TPGN	
06 09 12 19	12	09	11 16	Lunghezza tagl.
A218	A219	A220	A221	Pagina

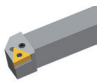
Portautensili esterni

Portautensile con bloccaggio doppio

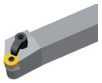
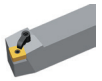
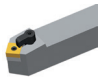
								
DCLNR/L	**DDJNR/L**	**DSBNR/L**	**DTGNR/L**	**DVJNR/L**	**DVVNN**	**DWLNR/L**		
95°	93°	75°	90°	93°	72,5°	95°		Angolo
A230	A231	A232	A233	A235	A234	A236		Pagina

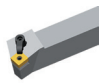
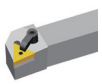
Portautensile con bloccaggio a leva

								
PCBNR/L	**PCLNR/L**	**PDJNR/L**	**PDNNR/L**	**PSBNR/L**	**PSDNN**	**PSKNR/L**	**PSSNR/L**	
75°	95°	93°	63°	75°	45°	75°	45°	Angolo
A237	A238	A240	A241	A242	A244	A245	A246	Pagina

								
PTFNR/L	**PTGNR/L**	**PTTNR/L**	**PWLNR/L**					
91°	90°	60°	95°					Angolo
A247	A249	A248	A251					Pagina

Portautensile con sistema di bloccaggio a staffa / perno

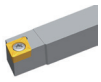
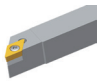
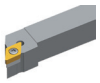
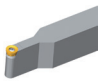
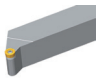
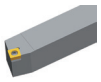
								
MCBNR/L	**MCLNR/L**	**MDJNR/L**	**MDPNN**	**MRDNN**	**MRGNR/L**	**MSBNR/L**	**MSDNN**	
75°	95°	93°	62,5°	45°	90°	75°	45°	Angolo
A252	A253	A254	A255	A267	A268	A256	A259	Pagina

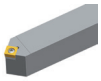
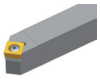
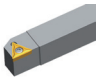
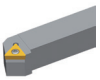
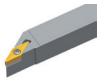
								
MSKNR/L	**MSRNR/L**	**MTFNR/L**	**MTGNR/L**	**MTJNR/L**	**MTJNR/L-Z**	**MVJNR/L**	**MVVNN**	
75°	75°	90°	90°	93°	93°	93°	72,5°	Angolo
A258	A257	A263	A260	A261	A262	A265	A264	Pagina

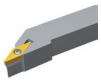
								
MWLNR/L								
95°								Angolo
A266								Pagina

Portautensili esterni

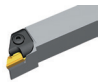
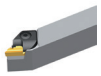
Portautensile con bloccaggio a vite

								
SCACR/L	**SCLCR/L**	**SDACR/L**	**SDJCR/L**	**SDNCN**	**SRDCN**	**SRGCR/L**	**SSBCR/L**	
90°	95°	90°	93°	63°	45°	90°	75°	Angolo
A269	A270	A271	A272	A273	A288	A289	A279	Pagina

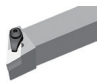
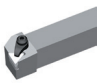
								
SSDCN	**SSKCR/L**	**SSSCR/L**	**STACR/L**	**STFCR/L**	**STGCR/L**	**STTCR/L**	**SVABR/L**	
45°	75°	45°	90°	90°	90°	60°	90°	Angolo
A280	A281	A282	A283	A284	A285	A286	A275	Pagina

								
SVJBR/L	**SVJCR/L**	**SVVBN**	**SVVCN**	**SWACR/L**				
93°	93°	72,5°	72,5°	90°				Angolo
A274	A278	A276	A277	A287				Pagina

Portautensile con bloccaggio a staffa

								
CKJNR/L	**CKNNR/L**							
93°	63°							Angolo
A290	A291							Pagina

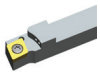
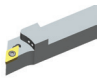
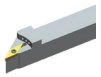
Portautensili per inserti ceramici e CBN completo

								
CCLNR/L	**CDJNR/L**	**CRDNN**	**CSDNN**	**CSKNR/L**	**CSRNR/L**	**CTJNR/L**	**CTUNR/L**	
95°	93°	45°	45°	75°	75°	93°	93°	Angolo
A292	A294	A298	A299	A296	A297	A293	A295	Pagina

								
JCLNR/L	**JDJNR/L**	**JSDNN**						
95°	93°	45°						Angolo
A300	A301	A302						Pagina

Portautensili esterni

Fantine mobili

								
SCACR/L-SC	**SCLCR/L-SC**	**SDACR/L-SC**	**SDHCR/L-SC**	**SDJCR/L-SC**	**SDNCN-SC**	**SVACR/L-SC**	**SVJCR/L-SC**	
90°	95°	90°	107,5°	93°	63°	90°	93°	Angolo
A306	A307	A308	A309	A310	A311	A312	A313	Pagina

Tecnologia ferroviaria

			
RW-PCLNR/L	**RW-PLANR/L**	**RW-PLFNR/L**	
90°	90°	90°	Angolo
A318	A316	A317	Pagina

Barre alesatrici

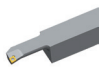
Barre alesatrici in acciaio con bloccaggio a leva

					
A*-PCLNR/L**	**A***-PDSNR/L**	**A***-PDUNR/L**	**A***-PSKNR/L**	**A***-PTFNR/L**	
95°	45°	93°	75°	90°	Angolo
A324	A326	A327	A329	A330	Pagina

						
S*-PCLNR/L**	**S***-PDSNR/L**	**S***-PDUNR/L**	**S***-PSKNR/L**	**S***-PTFNR/L**	**S***-PWLNR/L**	
95°	45°	93°	75°	90°	95°	Angolo
A324	A326	A327	A329	A330	A332	Pagina

Barre alesatrici in acciaio con bloccaggio a vite

				
A*-SCLCR/L**	**A***-SDQCR/L**	**A***-SDUCR/L**	**A***-SDZCR/L**	
95°	107.5°	93°	95°	Angolo
A334	A336	A337	A338	Pagina

								
S*-SCFCR/L**	**S***-SCLCR/L**	**S***-SCLPR/L**	**S***-SDQCR/L**	**S***-SDQPR/L**	**S***-SDUCR/L**	**S***-SDUPR/L**	**S***-SDZCR/L**	
90°	95°	95°	107.5°	107.5°	93°	93°	95°	Angolo
A352	A334	A348	A336	A349	A337	A350	A338	Pagina

Barre alesatrici

Barre alesatrici in acciaio con bloccaggio a vite






A***-SSKCR/L	A***-STFCR/L	A***-SVQBR/L	A***-SVUBR/L	
75°	90°	107.5°	93°	Angolo
A339	A341	A345	A346	Pagina









S***-SSKCR/L	S***-STFCR/L	S***-STUPR/L	S***-SVQBR/L	S***-SVQCR/L	S***-SVUBR/L	S***-SVUCR/L	
75°	90°	93°	107.5°	107.5°	93°	93°	Angolo
A339	A341	A351	A345	A343	A346	A344	Pagina

Barre alesatrici in metallo duro integrale con bloccaggio a vite









C***-SCLPR/L	C***-SDQPR/L	C***-SDUPR/L	C***-STUPR/L	C***-SVQCR/L	C***-SVUCR/L	C***-SZLNR/L	
95°	107,5°	93°	93°	107,5°	93°	95°	Angolo
A354	A356	A358	A360	A363	A364	A365	Pagina









E***-SCLCR/L	E***-SCLPR/L	E***-SDQCR/L	E***-SDUCR/L	E***-STFCR/L	E***-STFPR/L	E***-SVUCR/L	
95°	95°	107.5°	93°	90°	90°	93°	Angolo
A355	A354	A357	A359	A361	A362	A364	Pagina

Note

Inserti negativi

Finitura

XF P





Geometria bilaterale per la finitura nel campo di applicazione P. Controllo del truciolo ottimale con forze di taglio ridotte.

RF P





Geometria bilaterale per cicli che spaziano dalla finitura all'asportazione media.

SF P M K





Rompitruciolo bilaterale in combinazione con gradi Cermet. Geometria molto affilata con controllo del truciolo migliorato e elevata finitura superficiale. Ideale per lavorazioni con profondità di taglio e avanzamento ridotti.

DF P K





Rompitruciolo bilaterale con elevato controllo del truciolo. Adatto alla finitura e l´asportazione media di acciaio e ghise.

ADF P M





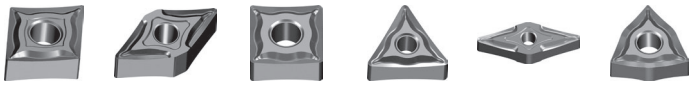
Rompitruciolo bilaterale rettificato con elevato controllo del truciolo. Ampio campo di applicazione grazie all'eccellente bilanciamento di affilatezza e stabilità del tagliente.

Inserti negativi

Finitura

EF M S

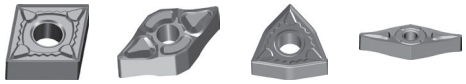




Rompitruciolo bilaterale con tagliente affilato e grande angolo di spoglia per la finitura di acciai inossidabili.

NF S M

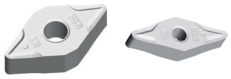




Rompitruciolo bilaterale con tagliente rettificato e grande angolo di spoglia per la finitura. Classe E per una migliore ripetibilità.

NGF S M





Rompitruciolo bilaterale con tagliente rettificato e grande angolo di spoglia per la finitura. Classe E per una migliore ripetibilità.

Raschiante

WG P M K





Rompitruciolo bilaterale con geometria raschiante. Permette una finitura superficiale costante in caso di raddoppio dell´avanzamento.

Asportazione media

XM P





Geometria bilaterale per l'asportazione media nel campo di applicazione P. Controllo del truciolo ottimale in caso di avanzamenti elevati e ridotti.

Inserti negativi

Asportazione media

DM P K





Rompitruciolo bilaterale per lavorazione media. Ampio campo di applicazione grazie all'eccellente bilanciamento di affilatezza e stabilità del tagliente.

ZM P





Rompitruciolo bilaterale per lavorazione media. Ampio campo di applicazione grazia al tagliente stabile e al grande angolo di spoglia. Particolarmente adatto anche per la lavorazione dell´acciaio.

PM P K





Rompitruciolo bilaterale per lavorazione media. Ampio campo di applicazione per acciaio e ghise.

TC K P





Rompitruciolo bilaterale con tagliente periferico. Affidabilità di processo grazie alla più elevata stabilità del tagliente.

TK K





Geometria bilaterale per l'asportazione media nel campo di applicazione K. Straordinaria combinazione di affilatura del tagliente e resistenza agli impatti.

Inserti negativi

Asportazione media

NM S M





Rompitruciolo bilaterale con tagliente affilato e grande angolo di spoglia per la lavorazione media di materiali a difficile asportazione.

EM M S

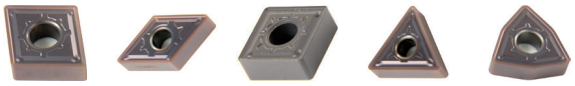




Rompitruciolo bilaterale con tagliente affilato e grande angolo di spoglia. Affidabilità di processo nella lavorazione media di acciai inossidabili.

EG M S





Rompitruciolo bilaterale con tagliente rettificato e grande angolo di spoglia. Ampio campo di applicazione nella lavorazione media di acciai inossidabili.

Basic P K





Rompitruciolo bilaterale con tagliente periferico per lavorazione universale di acciaio e ghise.

Sgrossatura

DR Bilaterale P K





Rompitruciolo bilaterale con angolo di spoglia positivo e tagliente stabile per sgrossatura leggera e media di acciaio e ghise.

Tornitura generale Panoramica rompitrucioli

Inserti negativi

Sgrossatura

DR Monolaterale P K





Rompitruciolo monolaterale con angolo di spoglia positivo e tagliente stabile per sgrossatura leggera e media di acciaio e ghise.

RH P

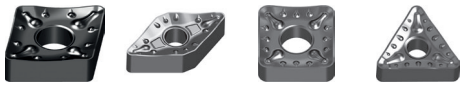




Geometria bilaterale per operazioni dall'asportazione media alla sgrossatura.

LR P M





Rompitruciolo monolaterale con tagliente curvo e geometria a bugna dal design unico. Pressione di taglio ridotta per affidabilità di processo. Sgrossatura leggera di acciaio e acciaio inossidabile.

ER Bilaterale M S





Rompitruciolo bilaterale con grande angolo di spoglia per basse forze di taglio Adatto per la sgrossatura di acciai inossidabili.

ER Monolaterale M S





Rompitruciolo monolaterale con grande angolo di spoglia per basse forze di taglio. Adatto per la sgrossatura di acciai inossidabili.

Inserti negativi

Sgrossatura

HDR P K





Rompitruciolo monolaterale con elevata stabilità del tagliente e resistenza alla deformazione. Particolarmente adatto per la sgrossatura con profondità di taglio elevate di acciaio e acciaio inossidabile.

HPR P K





Rompitruciolo monolaterale con elevata stabilità del tagliente e ampia tasca del rompitruciolo. Particolarmente adatto per la sgrossatura pesante di acciaio e ghise.

Flat K

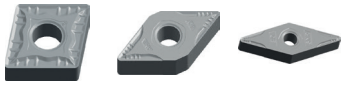




Inserto bilaterale senza rompitruciolo. Versione stabile del tagliente grazie alla mancanza di microgeometria. Particolarmente adatto per la sgrossatura di ghise.

SNR M S N





Rompitruciolo bilaterale per sgrossatura. Ampio campo di applicazione grazie all'eccellente bilanciamento di affilatezza e stabilità del tagliente.

Inserti in PCBN & PCD

Flat N H





Con angolo esterno in CBN e PCD brasato. Per la lavorazione di acciaio temprato (CBN) o metalli non ferrosi (PCD).

Inserti negativi

Inserti in PCBN & PCD

Flat H K





Inserto in CBN integrale per la lavorazione di acciaio e ghise.

Inserti ceramici

Flat K H





Inserti ceramici per la lavorazione di acciaio temprato, basso, e ghise.

Inserti positivi

Finitura di precisione

USF P M

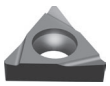




Rompitruciolo monolaterale per finitura di precisione. Tagliente a spigolo vivo con profonde scanalature, particolarmente adatto per la lavorazione di pezzi di piccole dimensioni. Classe G per un'elevata ripetibilità.

R/L P M

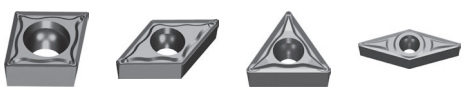




Rompitruciolo monolaterale per finitura di precisione. Particolarmente adatto per ottime finiture superficiali. Classe G per un'elevata ripetibilità.

SF P M





Rompitruciolo monolaterale in combinazione con gradi Cermet. Geometria molto affilata con controllo del truciolo migliorato e elevata finitura superficiale. Ideale per lavorazioni con profondità di taglio e avanzamento ridotti.

Inserti positivi

Finitura

XF P




Geometria monolaterale per la finitura nel campo di applicazione P. Controllo del truciolo ottimale con forze di taglio ridotte.

HF P K




Rompitruciolo monolaterale con elevato controllo del truciolo. Adatto la finitura e l´asportazione media di acciaio e ghise.

AHF M S P




Rompitruciolo monolaterale rettificato con elevato controllo del truciolo. Ampio campo di applicazione grazie all'eccellente bilanciamento di affilatezza e stabilità del tagliente.

EF M S




Rompitruciolo monolaterale con tagliente affilato e grande angolo di spoglia per la finitura di acciai inossidabili.

NF M S




Rompitruciolo monolaterale con tagliente rettificato e grande angolo di spoglia per la finitura. Classe E per una migliore ripetibilità.

Inserti positivi

Finitura

NGF M S





Rompitruciolo monolaterale con tagliente rettificato e grande angolo di spoglia per la finitura. Classe E per una migliore ripetibilità.

Asportazione media

XM P

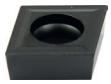




Geometria monolaterale per l'asportazione media nel campo di applicazione P. Controllo del truciolo ottimale in caso di avanzamenti elevati e ridotti.

TC K P





Rompitruciolo monolaterale con elevato controllo del truciolo. Adatto la finitura e l´asportazione media di acciaio e ghise.

HM P K

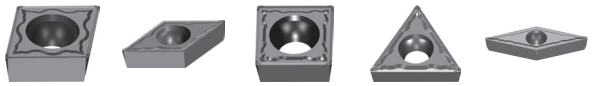




Rompitruciolo monolaterale per lavorazione media. Ampio campo di applicazione grazie all'eccellente bilanciamento di affilatezza e stabilità del tagliente.

EM M S





Rompitruciolo monolaterale con tagliente affilato e grande angolo di spoglia. Affidabilità di processo nella lavorazione media di acciai inossidabili.

Inserti positivi

Asportazione media

Basic P K




Rompitruciolo monolaterale con tagliente periferico per lavorazione universale di acciaio e ghise.

Sgrossatura

Flat K




Inserto monolaterale senza rompitruciolo. Versione stabile del tagliente grazie alla mancanza di microgeometria. Particolarmente adatto per la sgrossatura di ghise.

HR P K




Rompitruciolo monolaterale con angolo di spoglia positivo e tagliente stabile per sgrossatura leggera e media di acciaio e ghise.

SNR S M




Rompitruciolo monolaterale per sgrossatura. Ampio campo di applicazione grazie all'eccellente bilanciamento di affilatezza e stabilità del tagliente.

Basic P K




Rompitruciolo monolaterale con tagliente periferico per lavorazione universale di acciaio e ghise.

Inserti positivi

Lavorazione alluminio

LC N





Rompitruciolo monolaterale con versione del tagliente straordinaria. Tagliente affilato con angolo di spoglia positivo. Classe G per un'elevata ripetibilità.

LH N





Rompitruciolo monolaterale per la lavorazione di leghe di alluminio. Tagliente affilato con angolo di spoglia positivo. Classe G per un'elevata ripetibilità.

Inserti in PCBN & PCD

Flat N H





Con angolo esterno in CBN o PCD brasato. Per la lavorazione di acciaio temprato (CBN) o metalli non ferrosi (PCD).

MED N





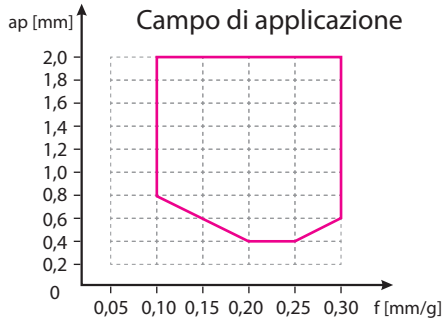
Geometria riportata al laser per la finitura e l'asportazione media.

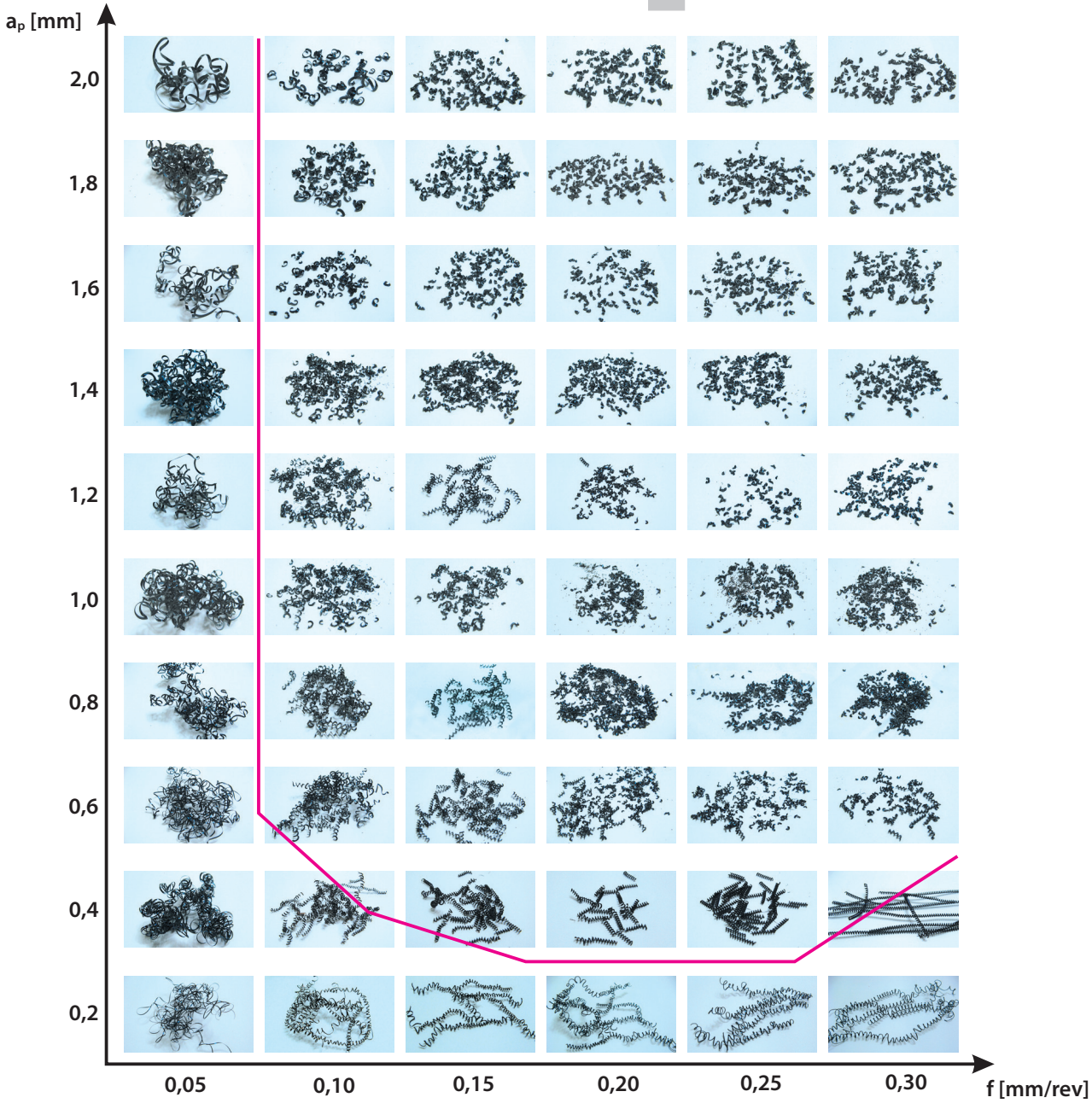
Tornitura generale

Campo di applicazione dei rompitrucioli

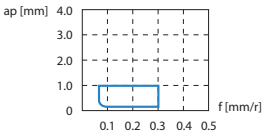
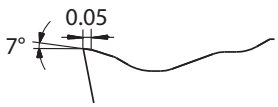
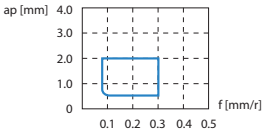
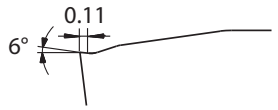
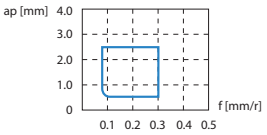
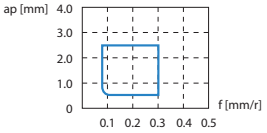
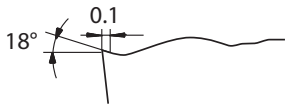
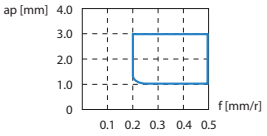
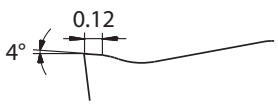
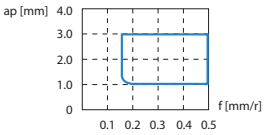
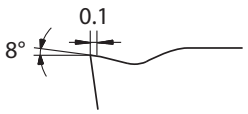
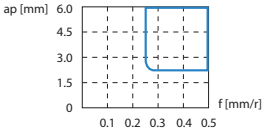
Esempio

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Portautensile:	PCLNL2525M12
Materiale:	C45 Acciaio
V_C:	200 m/min

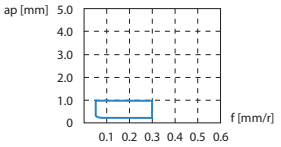
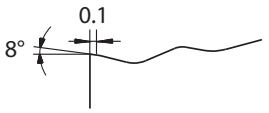
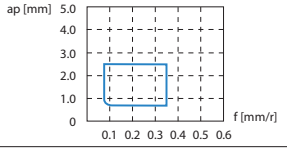
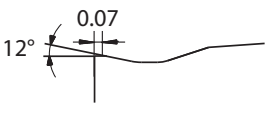
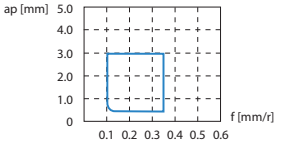
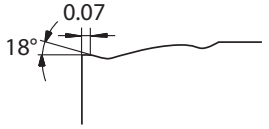
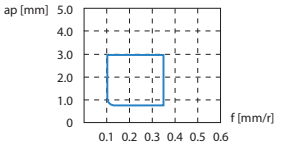
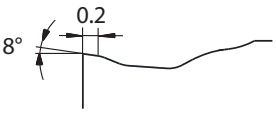
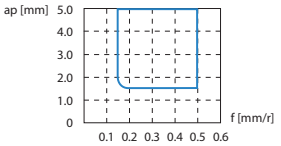
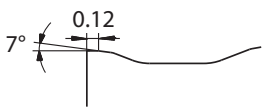
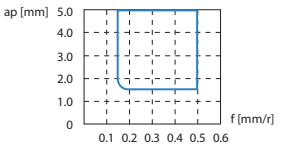
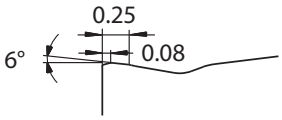
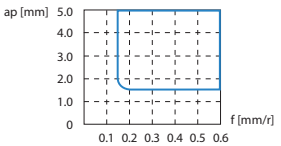
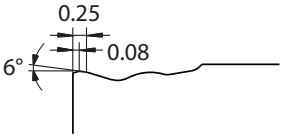
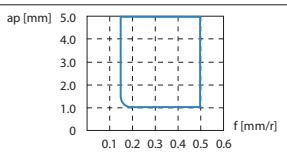
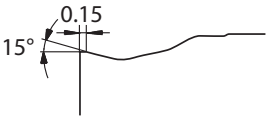
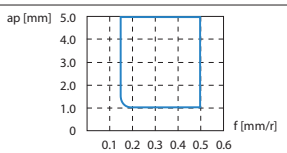
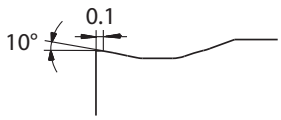
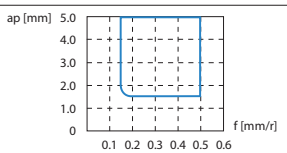
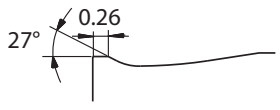
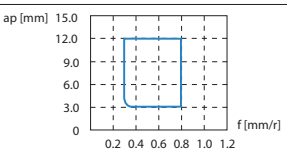
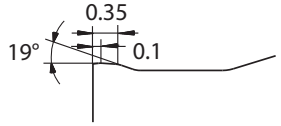




P Inserti positivi

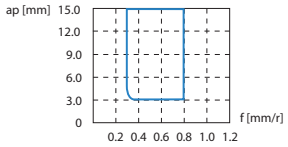
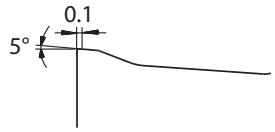
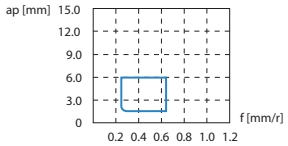
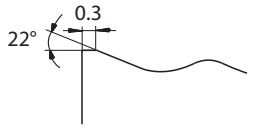
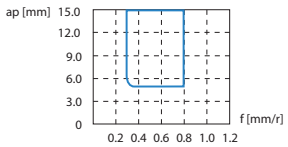
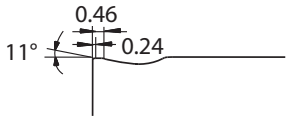
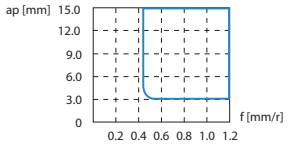
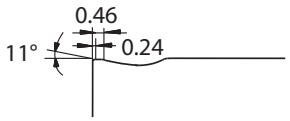
Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
SF	Finitura di precisione	●		
HF	Finitura	● ✱		
AHF	Finitura	● ✱		
XF	Finitura	● ✱		
HM	Asportazione media	● ✱		
XM	Asportazione media	● ✱		
HR	Sgrossatura	● ✱ ✱		

P Inserti negativi

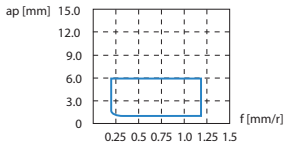
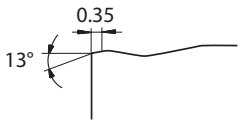
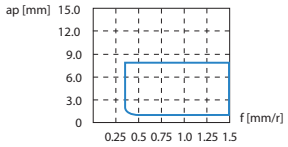
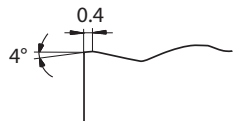
Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
SF	Finitura di precisione			
DF	Finitura			
XF	Finitura			
ADF	Finitura			
DM	Asportazione media			
PM	Asportazione media			
ZM	Asportazione media			
XM	Asportazione media			
WG	Asportazione media			
Basic	Asportazione media			
DR	Sgrossatura			

Tornitura generale Campo di applicazione dei rompitrucioli

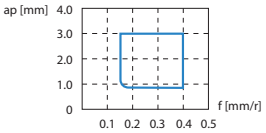
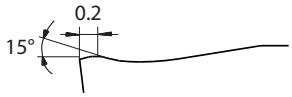
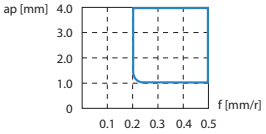
P Inserti negativi

Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
DR (monolaterale)	Sgrossatura			
LR (monolaterale)	Sgrossatura			
HDR (monolaterale)	Sgrossatura			
HPR (monolaterale)	Sgrossatura			

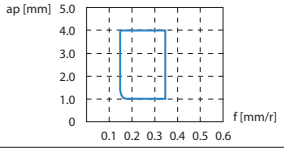
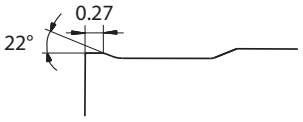
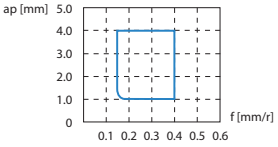
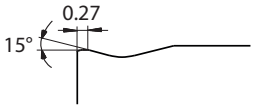
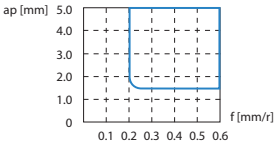
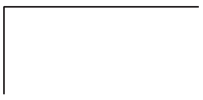
P Inserti negativi (tecnologia ferroviaria)

Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
RF	Finitura			
RH	Sgrossatura			

K Inserti positivi

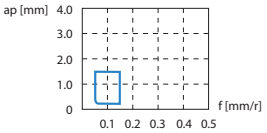
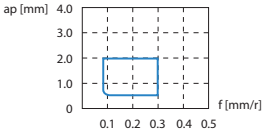
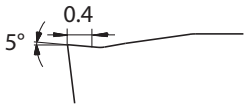
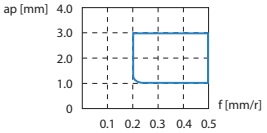
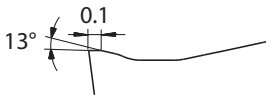
Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
TC	Asportazione media			
Flat	Sgrossatura			

K Inserti negativi

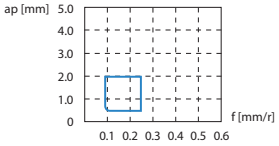
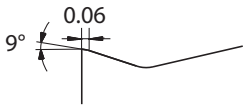
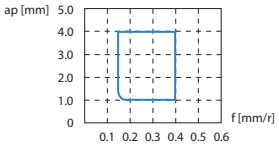
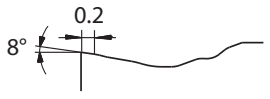
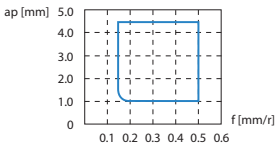
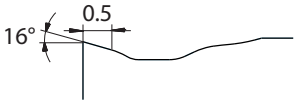
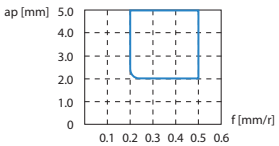
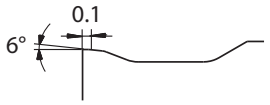
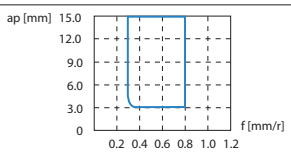
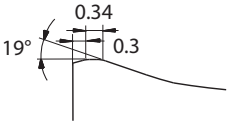
Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
TK	Asportazione media			
TC	Asportazione media			
Flat	Sgrossatura			

Tornitura generale Campo di applicazione dei rompitrucioli

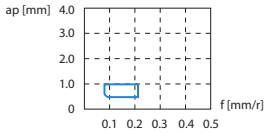
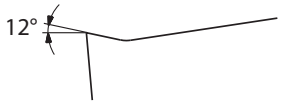
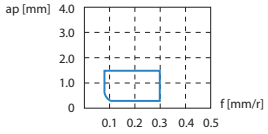
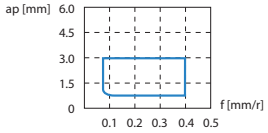
M Inserti positivi

Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
USF	Finitura di precisione	●		
EF	Finitura	● ✱		
EM	Asportazione media	● ✱ ✱		

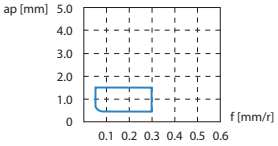
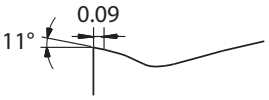
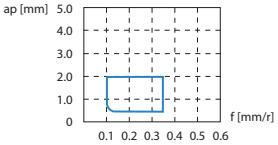
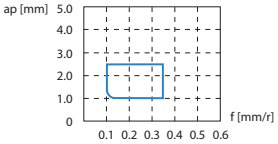
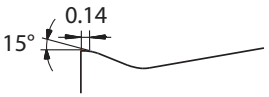
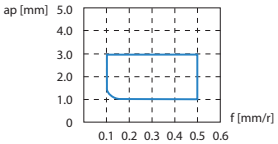
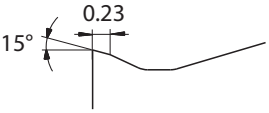
M Inserti negativi

Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
EF	Finitura	●		
EM	Asportazione media	● ✱		
EG	Asportazione media	● ✱		
ER	Sgrossatura	● ✱ ✱		
ER (monolaterale)	Sgrossatura	● ✱ ✱		

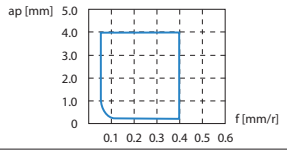
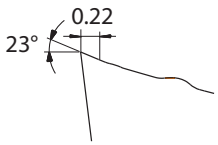
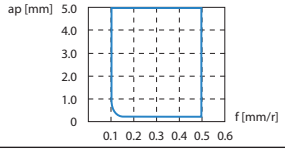
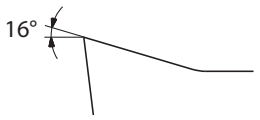
S Inserti positivi

Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
NF	Finitura			
NGF	Finitura			
SNR	Sgrossatura			

S Inserti negativi

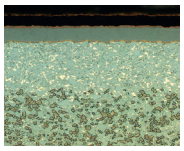
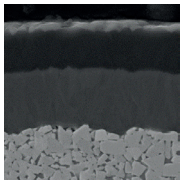
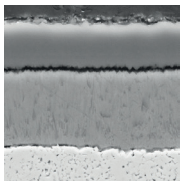
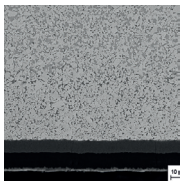
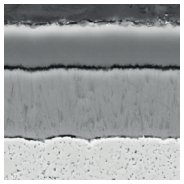
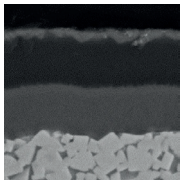
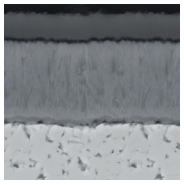
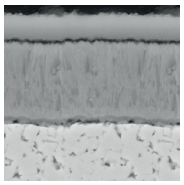
Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
NF	Finitura			
NGF	Asportazione media			
NM	Asportazione media			
SNR	Sgrossatura			

N Inserti positivi

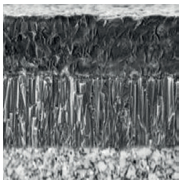
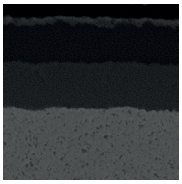
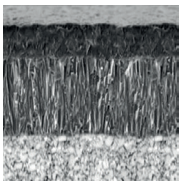
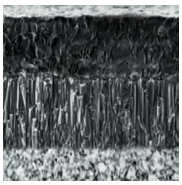
Rompitruciolo	Applicazione		Campo di applicazione	Versione tagliente
LC	Finitura	●		
LH	Finitura	●		

Note

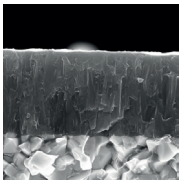
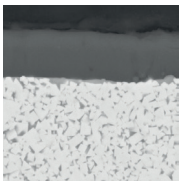
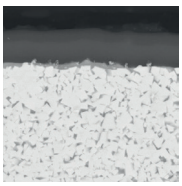
Metallo duro rivestito CVD

Grado	ISO	Microstruttura	Descrizione gradi
YBC103	P05 – P15		Grado P10 con eccellente resistenza all'usura ad alte velocità di taglio. Il processo di sinterizzazione di ultima generazione e le tecnologie di rivestimento CVD consentono un'ampia gamma di applicazioni nell'area dei materiali P.
YB6315	P05 – P20		Grado di metallo duro con rivestimento in CVD P10-P20 adatto per lavorazioni dalla finitura all´asportazione media di acciaio, acciaio fuso e acciai al cromo. Eccellente caratteristiche per elevata velocità di taglio e temperatura, con eccellente resisten
YBC152	P10 – P20		Grado di metallo duro con rivestimento in CVD P10-P20 adatto per lavorazioni dalla finitura all´asportazione media di acciaio e acciaio fuso. Eccellenti caratteristiche per elevate velocità di taglio e temperature, con eccellente resistenza all´usura.
YBC203	P15 – P25		Grado P20 con eccellente resistenza all'usura e tenacia e resistenza alla frattura per una lavorazione sicura. L'innovativa procedura di sinterizzazione e le tecnologie di rivestimento CVD permettono di operare con un ampio spettro di applicazioni nel campo del materiale P.
YBC252	P20 - P35		Grado di metallo duro con rivestimento in CVD P20-P35 adatto per lavorazioni dall´asportazione media alla sgrossatura di acciaio e acciaio fuso. Resistenza all´usura e tenacità ottimizzate per un ampio campo di applicazioni.
YBC352	P20 - P40		Grado di metallo duro con rivestimento in CVD P20-P40 adatto per la sgrossatura di acciaio e acciaio fuso. Resistenza all´usura e tenacità ottimizzate per un ampio campo di applicazioni.
YBM153	M10 - M25		Grado di metallo duro con rivestimento in CVD M10-M25 adatto per lavorazioni dalla finitura all´asportazione media di acciai inossidabili. Elevata resistenza all´usura e alla deformazione ad alte velocità di taglio.
YBM253	M15 - M35		Grado di metallo duro con rivestimento in CVD M15-M35 adatto per lavorazioni da media fino alla sgrossatura di acciai inossidabili in un ampio campo di applicazioni. Elevata resistenza all´usura e alla deformazione per alte velocità di taglio. Metallo dur

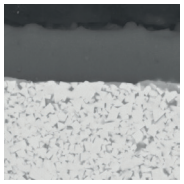
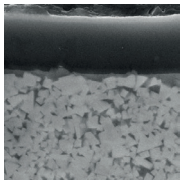
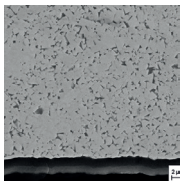
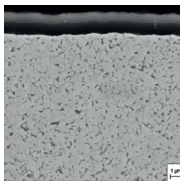
Metallo duro rivestito CVD

Grado	ISO	Microstruttura	Descrizione gradi
YBD102	K05 - K20		Grado di metallo duro rivestito in CVD K05-K20. Ottimale per l´asportazione media di ghisa, in particolare ghisa sferoidale, e acciaio pre-temprato ad alte velocità.
YB7315	K10 - K25		Grado di metallo duro con rivestimento in CVD K10-K25 per lavorazioni da media fino alla sgrossatura di materiali in ghisa. Resistenza all´usura e alla rottura migliorate ad alte velocità di taglio.
YBD152	K10 - K25		Grado di metallo duro con rivestimento in CVD K10-K25 per lavorazioni da media fino alla sgrossatura di materiali in ghisa. Elevata resistenza all´usura e alla rottura ad alte velocità di taglio.
YBD152C	K10 - K25		Grado di metallo duro con rivestimento spesso K10–K25 in CVD Al2O3 per lavorazioni da media fino alla sgrossatura di materiali in ghisa. Elevata resistenza all´usura e alla rottura ad alte velocità di taglio in combinazione con rompitruciolo TC.

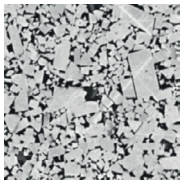
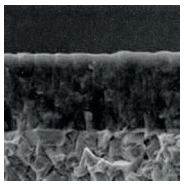
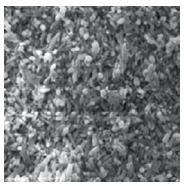
Metallo duro rivestito PVD

Grado	ISO	Microstruttura	Descrizione gradi
YBG101	N05 - N20		Grado di metallo duro N05 - N20 con rivestimento in PVD per lavorazioni che spaziano dalla finitura all'asportazione media di materiali in alluminio. Il rivestimento applicato unicamente sulla superficie del vano truciolo riduce, in combinazione con il rompitruciolo in alluminio, la formazione de tagliente di riporto e assicura un taglio morbido.
YBG102	S05 - S15		Grado di metallo duro con rivestimento in PVD S05-S15 per lavorazioni dalla finitura all´asportazione media di superleghe, acciaio inossidabile e alluminio. Ottima resistenza all´usura in una vasta gamma di applicazioni.
YBG105	S05 - S20		Grado di metallo duro con rivestimento multistrato in PVD S05-S20 adatto per lavorazioni dalla finitura all´asportazione media di superleghe ma anche di acciai inossidabili. Ottima resistenza all´usura e alla temperatura in una vasta gamma di applicazioni

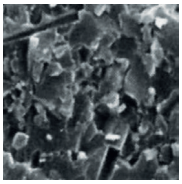
Metallo duro rivestito PVD

Grado	ISO	Microstruttura	Descrizione gradi
YBG205	P10 - P30 M20 - M40 S15-S25		Grado di metallo duro P10 - P30/M20 - M40/S15 - S25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (fresatura). Resistenza all'usura e resistenza termica ottimali in un ampio campo di applicazione.
YB9320	P10 - P30 M10 - M25		Grado di metallo duro P10 - P30/M10 - M25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (scanalatura/fresatura). Resistenza all'usura ottimale grazie all'adesione migliore del rivestimento e alla maggiore resistenza termica in un ampio campo di applicazione.
YPD201	S20 – S30		Grado in metallo duro per asportazione media fino alla sgrossatura di materiali ad alta resistenza e ad alta lega. Grado ad alte prestazioni con elevata resistenza all'usura. Durezza e tensione residua bilanciate offrono un ampio spettro di applicazioni.
YBS103	S10 – S20		Grado per la lavorazione di materiali a base di nichel. Uno speciale substrato in metallo duro e l'ultima tecnologia di rivestimento PVD consentono un'ottima resistenza all'usura e un'alta stabilità termica.

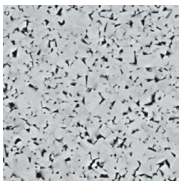
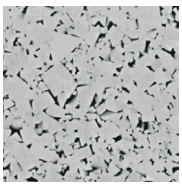
Ceramici

Grado	ISO	Microstruttura	Descrizione gradi
CA1000	K10 - K25 H10 - H25		Grado ceramico misto non rivestito K10–K25/H10–H25 per lavorazioni dalla finitura all´asportazione media di acciaio temprato e ghisa e ghisa sferoidale. Buona resistenza all´usura e tenacità alla rottura.
CM1000	K10 - K25 H10 - H25		Grado ceramico misto rivestito H10–H25/K10–K25 per cicli che spaziano dalla finitura alla lavorazione media di acciaio temprato, acciaio per utensili, acciaio HSS e ghisa sferoidale. Buona resistenza all'usura e tenacità alla frattura.
CN1000	K05 - K15		Grado ceramico non rivestito K05–K15 Si3N4 per lavorazioni dalla finitura all´asportazione media di ghisa grigia. Buona resistenza all´usura e stabilità termica.

Ceramici

Grado	ISO	Microstruttura	Descrizione gradi
CS1000	S05 – S20		Grado ceramico SiAlON non rivestito per lavorazioni che spaziano dall'asportazione media alla sgrossatura di leghe a base di Ni e cobalto con velocità di taglio da medie a basse.
CW1400	S10 – S20 H10-H20		Grado ceramico whisker non rivestito per velocità di taglio da medie a ridotte con acciaio HSS, materiali ad alto tenore di cromo e leghe a base di cobalto anche con taglio interrotto. Buona resistenza all'usura, resistenza all'usura ad intaglio e stabilità termica.
CW1800	S10 – S25		Grado ceramico whisker non rivestito per cicli che spaziano dalla finitura alla sgrossatura di leghe a base di Ni come Inconel, Nimonic o Hastelloy. Buona resistenza all'usura, resistenza all'usura ad intaglio e stabilità termica.

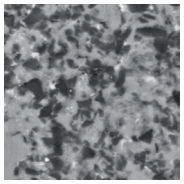
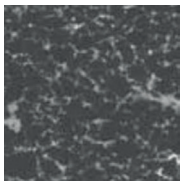
Metallo duro non rivestito

Grado	ISO	Microstruttura	Descrizione gradi
YD101	N05 - N20 K05 - K20		Substrato in metallo duro non rivestito N05–N20/K05–K20 per lavorazioni dalla finitura all´asportazione media di alluminio e altri materiali.
YD201	N10 - N30 K10 - K30		Substrato in metallo duro non rivestito K10–K30/N10–N30 per l´asportazione media di alluminio e altri materiali.

CBN

Grado	ISO	Microstruttura	Descrizione gradi
YCB112	S10 – S20		Grado CBN S10 - S20 brasato non rivestito per la lavorazione di precisione di acciaio temprato e superleghe. Resistenza all'usura e stabilità termica ottimali.

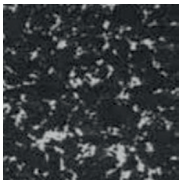
CBN

Grado	ISO	Microstruttura	Descrizione gradi
YCB113	H01 - H10		Grado CBN brasato non rivestito H01–H10 per la finitura di acciaio temprato con taglio continuo. Elevata resistenza all´usura e produttività per alte velocità di taglio.
YCB121	H10 - H25		Grado CBN brasato non rivestito H10–H25 per lavorazioni dalla finitura all´asportazione media di acciaio temprato con taglio da continuo a leggermente interrotto. Buona resistenza all´usura e tenacità per impiego universale.
YCB131	H20 - H35		Grado CBN brasato non rivestito H20–H35 per lavorazioni dalla finitura all´asportazione media di acciaio temprato con taglio interrotto. Buona resistenza all´usura e tenacità ottimale per affidabilità di processo.
YCB113C	H01 - H10		Grado CBN H01 - H10 brasato rivestito per la finitura di acciaio temprato con taglio continuo. Elevata resistenza all'usura e produttività con elevate velocità di taglio.
YCB121C	H10 - H25		Grado CBN H10 - H25 brasato rivestito per lavorazioni dalla finitura all'asportazione media di acciaio temprato con taglio da liscio a leggermente interrotto. Buona resistenza all'usura e buona tenacia per un impiego universale.
YCB131C	H20 - H25		Grado CBN H20 - H35 brasato rivestito per lavorazioni dalla finitura all'asportazione media di acciaio temprato con taglio continuo a leggermente interrotto. Buona resistenza all'usura e tenacia ottimale per un processo sicuro.
YCB215	K10 - K20		Grado CBN K10 - K20 brasato non rivestito per lavorazioni dalla finitura all'asportazione media di materiali in ghisa. Buona resistenza all'usura e conducibilità termica.
YZB630	H20 - H30		Grado CBN integrale H20 - H30 non rivestito per l'asportazione media di acciaio temprato con taglio da leggermente a mediamente interrotto. Buona combinazione di resistenza all'usura e stabilità termica.

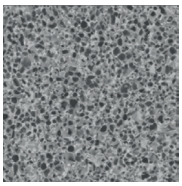
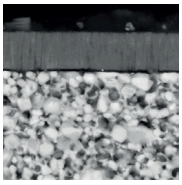
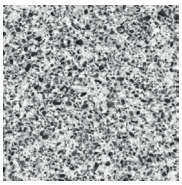
CBN

Grado	ISO	Microstruttura	Descrizione gradi
YZB630C	H20 - H30		Grado CBN integrale H20 - H30 rivestito per l'asportazione media di acciaio temprato con taglio da leggermente a mediamente interrotto. Buona combinazione di resistenza all'usura e stabilità termica.
YZB223	K10 - K25		Grado ceramico misto non rivestito K10–K25/H10–H25 per lavorazioni dalla finitura all´asportazione media di acciaio temprato e ghisa e ghisa sferoidale. Buona resistenza all´usura e tenacità alla rottura.

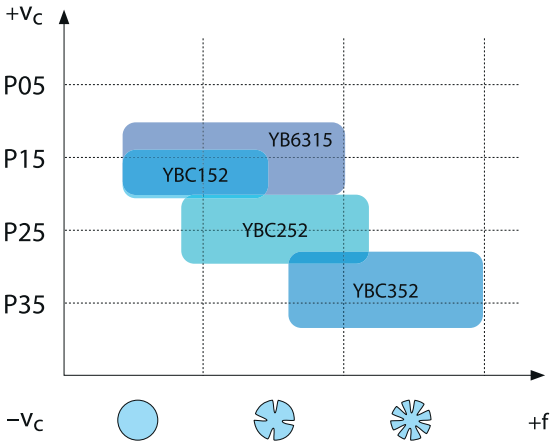
PCD

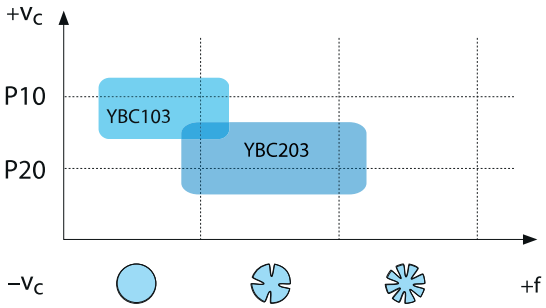
Grado	ISO	Microstruttura	Descrizione gradi
YCD421	N01 - N10		Grado non rivestito in PCD brasato N01-N10 per la finitura di leghe di alluminio con percentuali di Si minori del 12 %, materiali compositi, rame/magnesio e loro leghe. Grado a grana media con buona resistenza all'usura in una vasta gamma di applicazioni.

Cermet

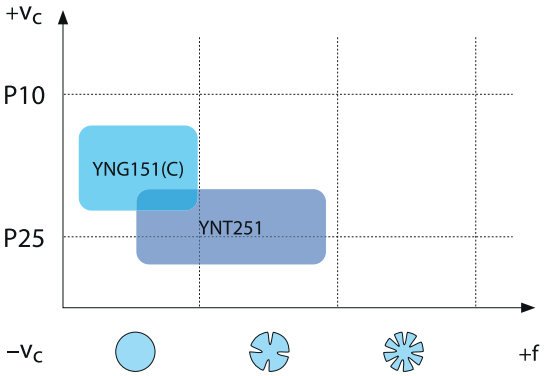
Grado	ISO	Microstruttura	Descrizione gradi
YNG151	P05 – P15		Grado non rivestito in Cermet P05–P15 per la finitura di acciaio e acciaio inossidabile. Buona resistenza alla deformazione plastica. Consente un'ottima finitura superficiale.
YNG151C	P05 – P15		Grado Cermet non rivestito in PVD P05–P15 per la finitura di acciaio e acciaio inossidabile. Buona resistenza all'usura e alla deformazione plastica. Consente un'ottima finitura superficiale.
YNT251	P10 - P25		Grado non rivestito in Cermet P10–P25 per lavorazioni dalla finitura all´asportazione media di acciaio e acciaio inossidabile. Ottima resistenza all´usura e tenacità. Può essere utilizzato anche con taglio leggermente interrotto.

Gradi di metallo duro con rivestimento in CVD per acciaio

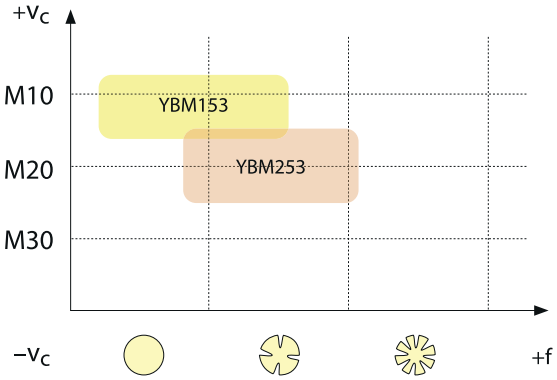




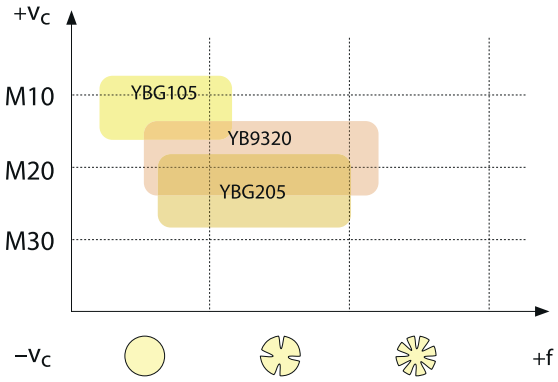
Gradi Cermet per acciaio



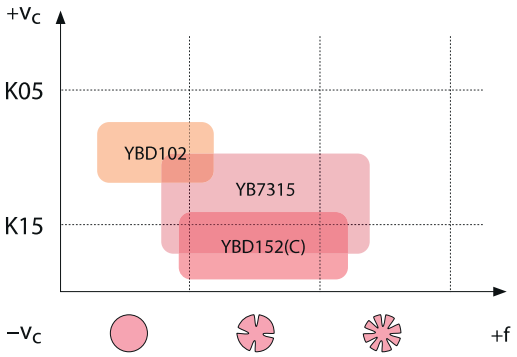
Gradi di metallo duro con rivestimento in CVD per acciaio inossidabile



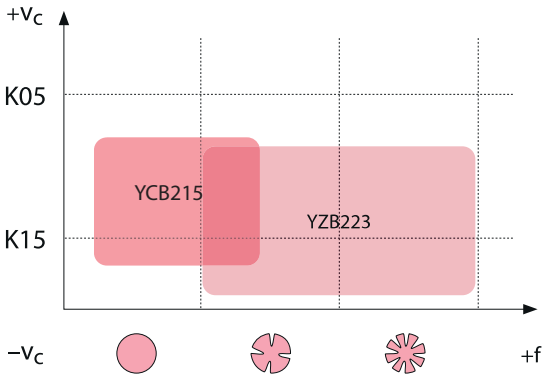
Gradi di metallo duro con rivestimento in PVD per acciaio inossidabile



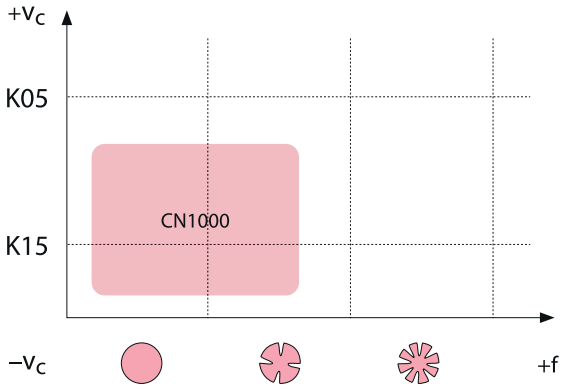
Gradi di metallo duro con rivestimento in CVD per ghisa



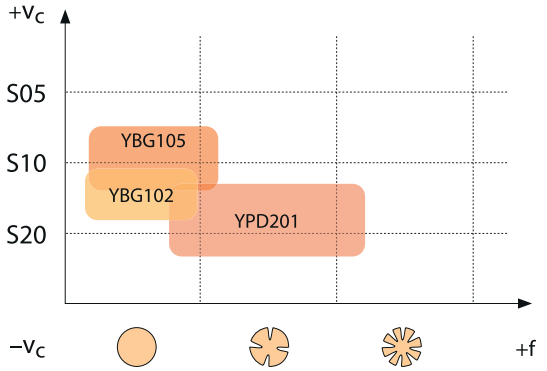
Gradi CBN per ghisa

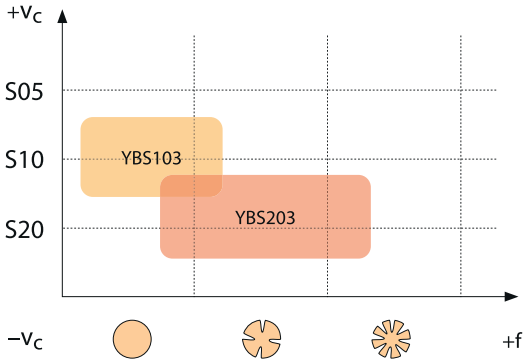


Gradi ceramici per ghisa

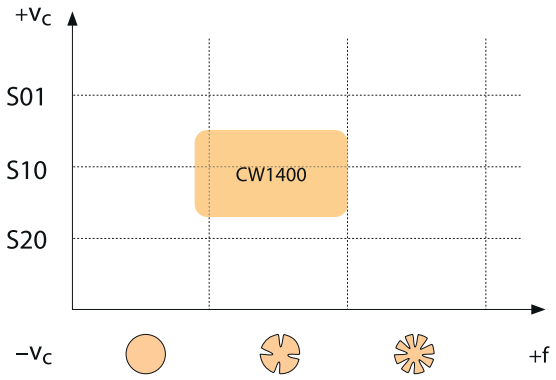


Gradi di metallo duro con rivestimento in PVD per superleghe

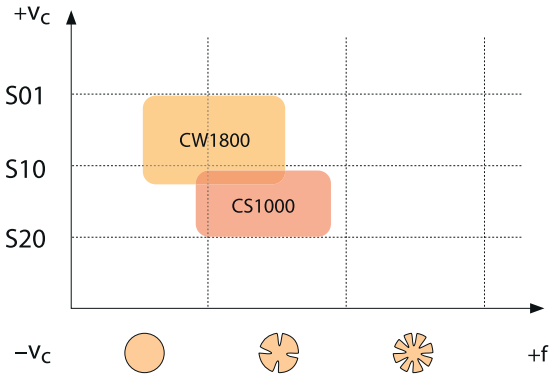




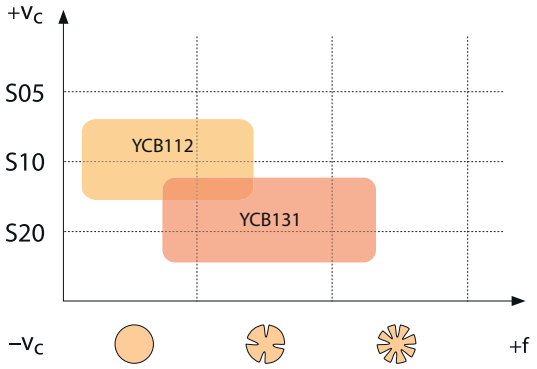
Gradi ceramici per leghe a base di Co/HSS



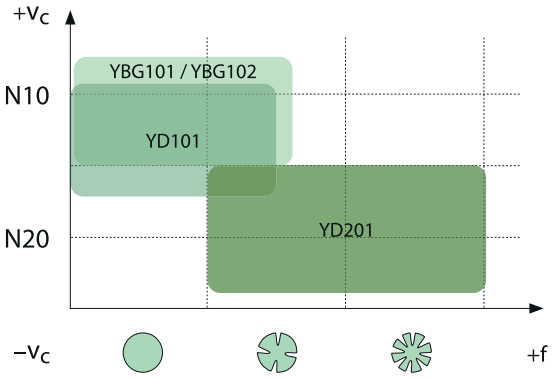
Gradi ceramici per leghe a base di Ni



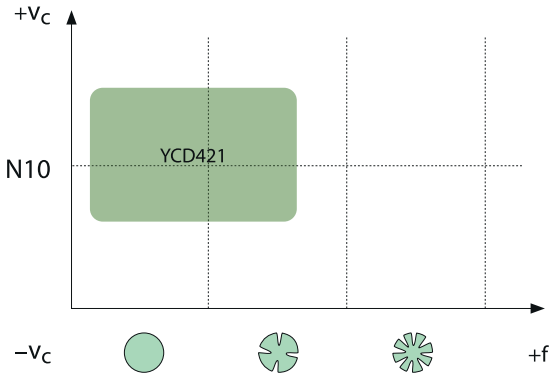
Gradi CBN per superleghe



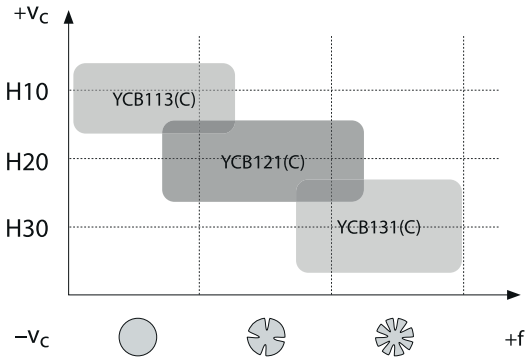
Gradi di metallo duro per metalli non ferrosi



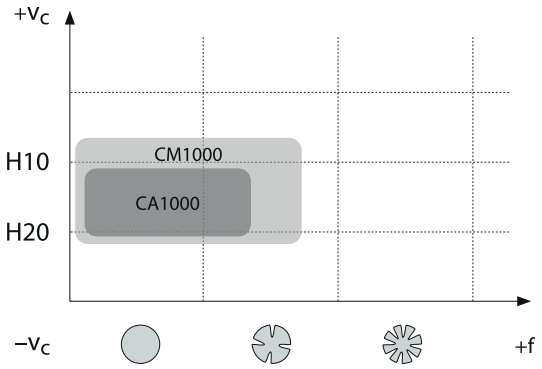
Gradi PCD per metalli non ferrosi



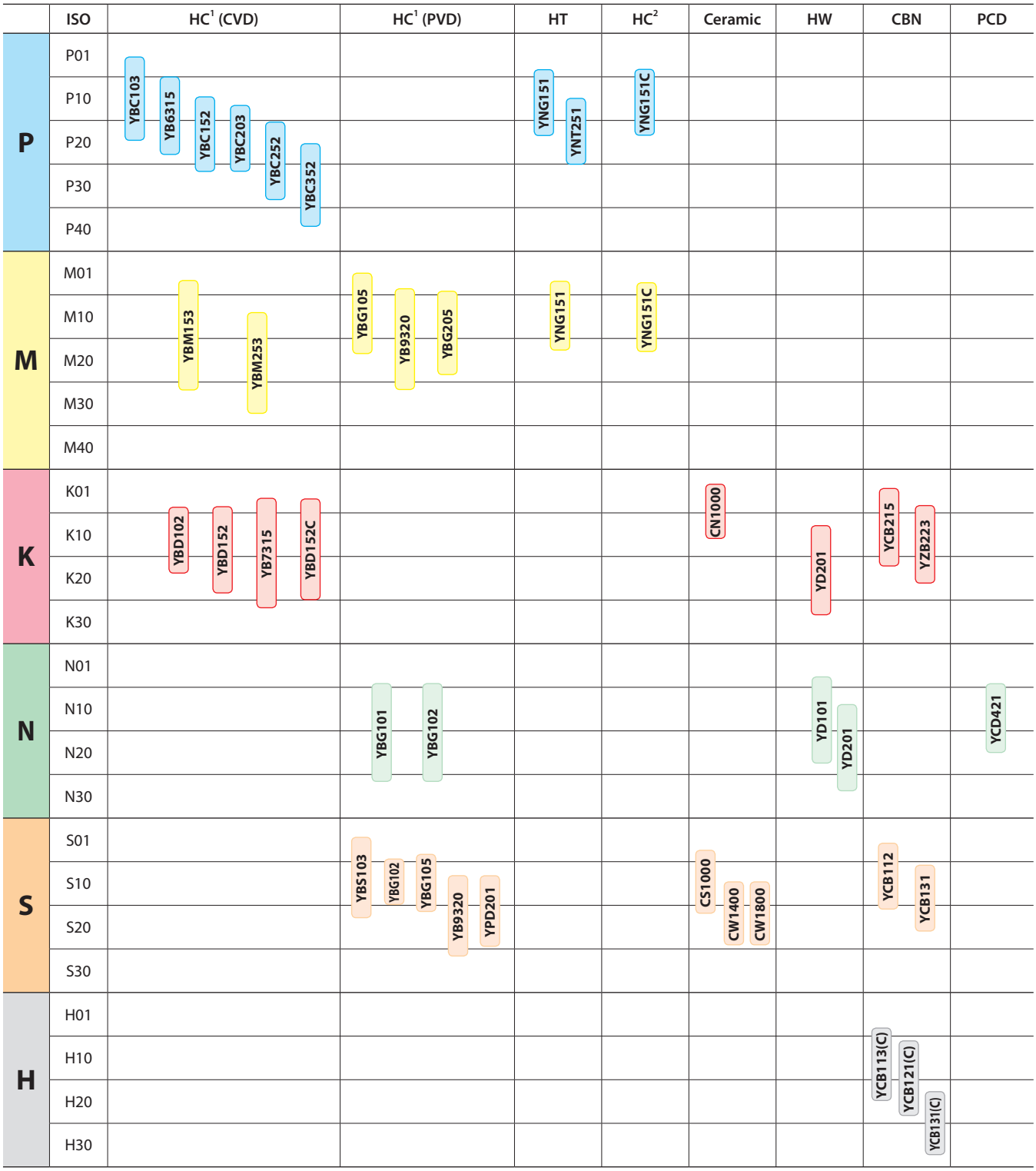
Gradi CBN per acciaio temprato



Gradi ceramici per acciaio temprato



Campi di applicazione dei gradi – lavorazioni di tornitura generiche



P	Acciaio	N	Metalli non ferrosi	HC^1	Carburo cementato rivestito
M	Acciaio inossidabile	S	Materiali a difficile asportazione	HT	Cermet non rivestito
K	Ghisa	H	Materiali ad elevata durezza	HC^2	Cermet rivestito
				HW	Metallo duro non rivestito

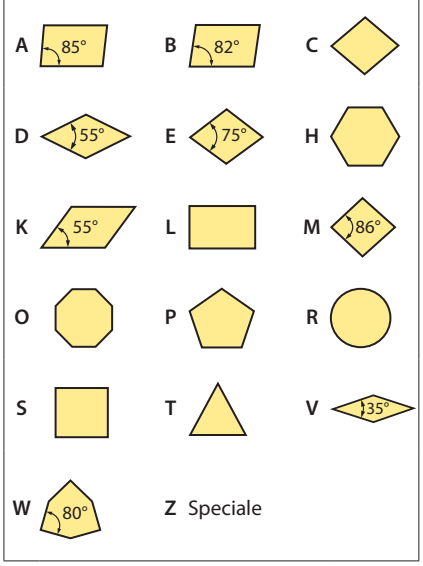
Tornitura generale

Codice ISO – indicazioni generali inserti per tornitura

Standard ISO

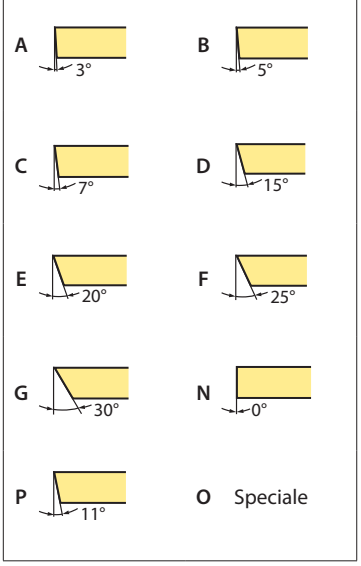
T	N	M	G	22	04	08	(N)	–	DM
1	2	3	4	5	6	7	8		9

Forma dell'inserto



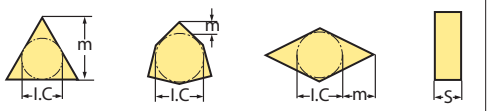
1

Angolo di spoglia inferiore



2

Grado di tolleranza

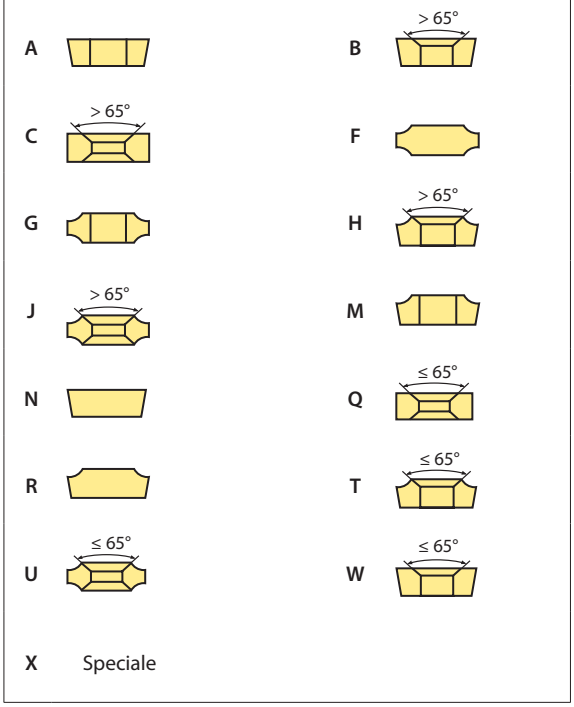


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,15	±0,005	±0,025
K	±0,05–0,15	±0,013	±0,025
L	±0,05–0,15	±0,025	±0,025
M	±0,05–0,15	±0,08–0,20	±0,130
N	±0,05–0,15	±0,08–0,20	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Caratteristiche di fissaggio (metrico)

Forma dell'inserto

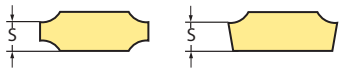


4

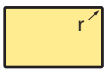
Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto							
	C	D	R	S	T	V	W	K
3,97					06			
5,0			05					
5,56					09			
6,0			06					
6,35	06	07			11	11		
8,0			08					
9,525	09	11	09	09	16	16	06	16
10,0			10					
12,0			12					
12,7	12	15	12	12	22	22	08	
15,875	16		15	15	27			
16,0		19	16					
19,05	19		19	19	33			
20,0			20					
25,0	25	25	25					
25,4			25	25				
31,75			31					
32			32					

5

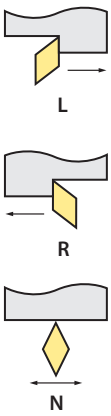
Spessore dell'inserto S [mm]			
			
Code	S	Code	S
00	0,79	**T5**	5,95
T0	0,99	**06**	6,35
01	1,59	**T6**	6,75
T1	1,98	**07**	7,94
02	2,38	**09**	9,52
T2	2,58	**T9**	9,72
03	3,18	**11**	11,11
T3	3,97	**12**	12,70
04	4,76		
T4	4,96		
05	5,56		

6

Raggio di punta r [mm]	
	
Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Speciale
MO	Inserti tondi

7

Direzione di taglio



8

Panoramica rompitrucioli
(da pagina A16)

9

Standard ANSI

T	N	M	G	4	3	2	(N)	–	DM
1	2	3	4	5	6	7	8		9

Cerchio inscritto		
Code	[mm]	Pollici
2	6.35	0.250
3	9.525	0.375
4	12.7	0.500
5	15.875	0.625
6	19.05	0.750
8	25.4	1.000

5

Spessore dell'inserto		
Code	[mm]	Pollici
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3	4.76	0.187
4	6.35	0.250
5	7.94	0.313
6	9.52	0.375

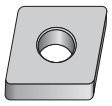
6

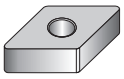
Raggio di punta		
Code	[mm]	Pollici
0	0.2	0.008
1	0.4	0.016
2	0.8	0.031
3	1.2	0.047
4	1.6	0.063
5	2.0	0.079
6	2.4	0.094

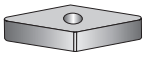
7

Tabella comparativa per inserti per tornitura generale (sistema metrico/imperiale)

Angolo negativo/Inserto

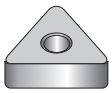
Tipo C Forma dell'inserto 	ISO	Pollici
	090304	321
	090308	322
	120404	431
	120408	432
	120412	433
	120416	434
	160608	542
	160612	543
	160616	544
	190608	642
	190612	643
	190616	644
	190624	646
	250724	856
	250732	858
	250924	866
	250932	868

Tipo D Forma dell'inserto 	ISO	Pollici
	110404	331
	110408	332
	110412	333
	150404	431
	150408	432
	150412	433
	150604	441
	150608	442
	150612	443
	150616	444
	190608	542
	190612	543

Tipo V Forma dell'inserto 	ISO	Pollici
	160404	331
	160408	332
	160412	333

Tipo R Forma dell'inserto 	ISO	Pollici
	0903MO	32
	1204MO	43

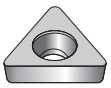
Tipo W Forma dell'inserto 	ISO	Pollici
	06T304	3(2.5)1
	06T308	3(2.5)2
	06T312	3(2.5)3
	060404	331
	060408	332
	060412	333
	080404	431
	080408	432
	080412	433

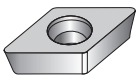
Tipo T Forma dell'inserto 	ISO	Pollici
	113304	221
	110308	222
	160404	331
	160408	332
	160412	333
	220404	431
	220408	432
	220412	433
	220416	434
	270608	542
	270612	543
	270616	544

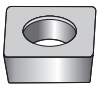
Tipo S Forma dell'inserto 	ISO	Pollici
	090304	321
	090308	322
	090312	323
	120404	431
	120408	432
	120412	433
	120416	434
	150608	542
	150612	543
	150616	544
	190412	633
	190424	636
	190612	643
	190616	644
	250724	856
	250732	858
	250924	866
	250932	868

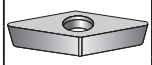
Angolo positivo/Inserto

Tipo C Forma dell'inserto 	ISO	Pollici
	060202	2(1.5)0
	060204	2(1.5)1
	060208	2(1.5)2
	09T302	3(2.5)0
	09T304	3(2.5)1
	09T308	3(2.5)2
	120404	431
	120408	432
	120412	433

Tipo T Forma dell'inserto 	ISO	Pollici
	06T102	1.2(1.2)0
	06T104	1.2(1.2)1
	06T108	1.2(1.2)2
	090202	1.8(1.5)0
	090204	1.8(1.5)1
	090208	1.8(1.5)2
	110202	2(1.5)0
	110204	2(1.5)1
	110208	2(1.5)2
	110302	220
	110304	221
	110308	222
	16T302	30
	16T304	31
	16T308	32
	16T312	33
	160400	330
	220408	432
	220412	433
	220416	434
	270408	532
	27041 2	533
	330612	643
	330616	644

Tipo D Forma dell'inserto 	ISO	Pollici
	070202	2(1.5)0
	070204	2(1.5)1
	070208	2(1.5)2
	11T302	3(2.5)0
	11T304	3(2.5)1
	11T308	3(2.5)2
	11T312	3(2.5)3

Tipo S Forma dell'inserto 	ISO	Pollici
	060204	2(1.5)1
	09T302	3(2.5)0
	09T304	3(2.5)1
	09T308	3(2.5) 2
	120404	431
	120408	432
	120412	433
	150404	531
	150408	532
	150412	533
	190408	632
	190412	633
	190416	634

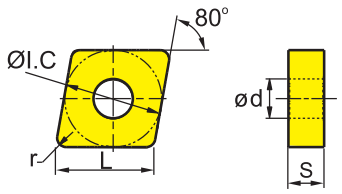
Tipo V Forma dell'inserto 	ISO	Pollici
	110202	2(1.5)0
	110204	2(1.5)1
	110208	2(1.5)2
	110302	220
	110304	221
	110308	222
	160402	330
	160404	331
	160408	332
	160412	333

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNMG	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16

CN** Inserti negativi



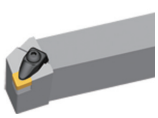
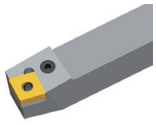
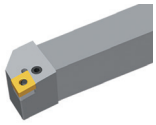
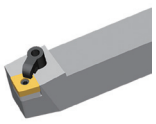
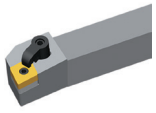
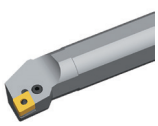
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M							○	◍					○	○	◍	◍	◍	○		○	◍	○		
K									◍	◍	◍	◍												
N													○	○									◍	◍
S													○	○	◍	◍	◍	○					◍	◍
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
WG	**CNMG120404-WG**	0,4	0,25-3,00	0,05-0,25			○																					
	CNMG120408-WG	0,8	0,5-5,0	0,15-0,70			●		●						○													
	CNMG120412-WG	1,2	0,8-6,0	0,20-0,75			●																					
Raschiante																												
ADF	**CNMG120404-ADF**	0,4	0,5-3,0	0,05-0,30		●														●	●							
	CNMG120408-ADF	0,8	0,5-3,0	0,1-0,4		●														○	●			●				
	CNMG120412-ADF	1,2	0,8-3,0	0,15-0,50		○															●			●				
Finitura																												
DF	**CNMG090304-DF**	0,4	0,25-1,50	0,07-0,30			●		●																			
	CNMG090308-DF	0,8	0,3-1,5	0,1-0,3			●		○																			
	CNMG120404-DF	0,4	0,25-1,50	0,07-0,30			●		●																			
	CNMG120408-DF	0,8	0,3-1,5	0,1-0,4			●		●																			
Finitura	**CNMG120412-DF**	1,2	0,35-1,50	0,10-0,35			●		●																			
EF	**CNMG090304-EF**	0,4	0,5-2,0	0,05-0,20							○									●								
	CNMG090308-EF	0,8	0,5-2,0	0,05-0,25							○									●								
	CNMG120404-EF	0,4	0,5-2,5	0,05-0,20							●									●								
	CNMG120408-EF	0,8	0,5-2,5	0,05-0,25							●									●								
Finitura	**CNMG120412-EF**	1,2	0,5-2,5	0,10-0,35							○									○								
SF	**CNMG090304-SF**	0,4	0,05-0,50	0,05-0,30																						●		
	CNMG120404-SF	0,4	0,1-1,5	0,05-0,30																						●		
	CNMG120408-SF	0,8	0,1-1,5	0,10-0,35																						●		
Finitura																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	A***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

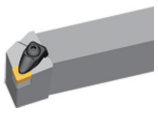
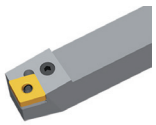
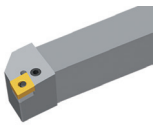
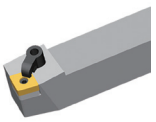
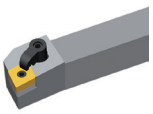
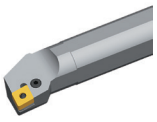
CN**	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16

CN** Inserti negativi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					●	●	●	◉	◉	◉										◉	◉			◉	◉	●		
M											○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K													○	◉	◉	◉												
N																	●	●									●	◉
S																	○	○	◉	◉	◉	◉	○				○	◉
H																												
ISO		r	a_p	f																								
NF	**CNEG120404-NF**	0,4	0,2-2,5	0,05-0,30														○	●								○	
	CNEG120408-NF	0,8	0,2-2,5	0,10-0,35														○	●								○	
	CNEG120412-NF	1,2	0,2-2,5	0,13-0,40														○	●								○	
Finitura																												
XF	**CNMG120404-XF**	0,4	0,5-2,5	0,1-0,25	●		●																					
	CNMG120408-XF	0,8	0,5-2,5	0,1-0,30	●		●																					
	CNMG120412-XF	1,2	0,5-2,5	0,1-0,35	●		●																					
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

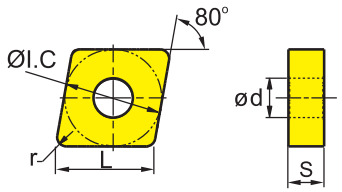
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CNMG	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura



CN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO		r	a_p	f																							
PM	**CNMG090304-PM**		0,4	0,4-4,0	0,1-0,3				●																			
	CNMG090308-PM		0,8	0,5-4,0	0,15-0,50				●																			
	CNMG120404-PM		0,4	0,4-5,5	0,1-0,3			●	●				●		●													
	CNMG120408-PM		0,8	0,5-5,5	0,15-0,50			●	●	●			●		●													
	CNMG120412-PM		1,2	0,8-5,5	0,18-0,60			●	●				●		●													
	CNMG120416-PM		1,6	1,0-5,5	0,23-0,65			●	●				●		●													
	CNMG160608-PM		0,8	0,5-7,2	0,15-0,50			○	●				○		○													
	CNMG160612-PM		1,2	0,8-7,2	0,18-0,60			●	●				●		●													
	CNMG160616-PM		1,6	1,0-7,2	0,23-0,65				●				●		○													
	CNMG190608-PM		0,8	0,5-8,6	0,15-0,50				●																			
	CNMG190612-PM		1,2	0,8-8,6	0,18-0,60				●				○		●													
	CNMG190616-PM		1,6	1,0-8,6	0,23-0,65				○						○													
XM	**CNMG120404-XM**		0,4	1-4,2	0,2-0,3	●		○																				
	CNMG120408-XM		0,8	1-4,2	0,2-0,4	●		●																				
	CNMG120412-XM		1,2	1-4,2	0,2-0,6	●		●																				
	CNMG120416-XM		1,6	1-4,2	0,2-0,65	●		●																				
	CNMG160608-XM		0,8	1-5,6	0,2-0,4	●		●																				
	CNMG160612-XM		1,2	1-5,6	0,2-0,6	●		●																				
	CNMG160616-XM		1,6	1-5,6	0,2-0,65	○		●																				
	CNMG190608-XM		0,8	1-6,65	0,2-0,4	●		●																				
	CNMG190612-XM		1,2	1-6,65	0,2-0,6	○		●																				
	CNMG190616-XM		1,6	1-6,65	0,2-0,65	○		●																				

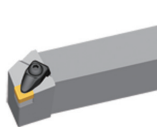
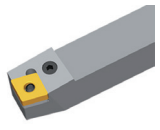
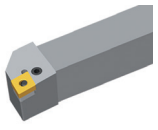
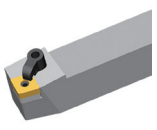
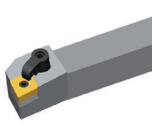
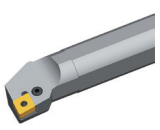

Media Lavor.


Media Lavor.

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	A***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

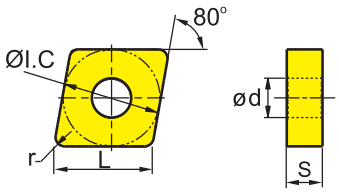
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNMG	L	I.C	S	d
09 03	9,7	9,525	3,18	3,81
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94

CN** Inserti negativi



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
P					●	●	●	●	●	●										●	●			●	●	●		
M											○	●						○	○	●	●	●	○	○	●	○		
K													●	●	●	●												
N																	●	●									●	●
S																		○	○	●	●	●	○				●	●
H																												
DM	**CNMG090304-DM**	0,4	0,4-4,0	0,1-0,3			●		●																			
	CNMG090308-DM	0,8	0,5-4,0	0,15-0,50			●		●																			
	CNMG090312-DM	1,2	0,5-3,0	0,1-0,4					○																			
	CNMG120404-DM	0,4	0,4-5,5	0,1-0,3			●		●																			
	CNMG120408-DM	0,8	0,5-5,5	0,15-0,50		○	●		●	●	○	●																
	CNMG120412-DM	1,2	0,8-5,5	0,18-0,60		○	●		●		○	○																
	CNMG120416-DM	1,6	1,0-5,5	0,23-0,65			○		●																			
	CNMG160608-DM	0,8	0,5-7,2	0,15-0,50			○		●																			
	CNMG160612-DM	1,2	0,8-7,2	0,18-0,60			●		●																			
	CNMG160616-DM	1,6	1,0-7,2	0,23-0,65			●		●																			
	CNMG190608-DM	0,8	0,5-8,6	0,15-0,50			●		●																			
	CNMG190612-DM	1,2	0,8-8,6	0,18-0,60			●		●																			
	CNMG190616-DM	1,6	1,0-8,6	0,23-0,65					●																			
EG	**CNMG120404-EG**	0,4	0,5-4,0	0,05-0,30							●	●								○	●							
	CNMG120408-EG	0,8	0,5-4,0	0,1-0,4							●	●								●	●							
	CNMG120412-EG	1,2	0,5-4,0	0,2-0,5								●								●	●							
EM	**CNMG120404-EM**	0,4	0,5-4,0	0,05-0,30							●	●								●								
	CNMG120408-EM	0,8	0,5-5,7	0,15-0,45							●	●								●								
	CNMG120412-EM	1,2	0,5-5,7	0,25-0,60							●	●								●								
	CNMG160608-EM	0,8	0,5-7,2	0,15-0,45							●	●								●								
	CNMG160612-EM	1,2	0,5-7,2	0,25-0,60							●	●								●								

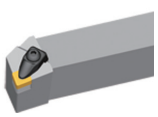
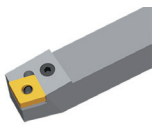
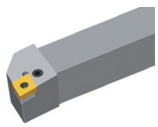
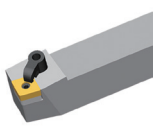
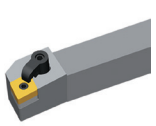
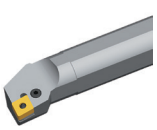
Media Lavor.

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	A***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

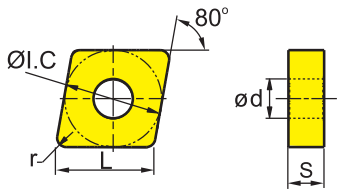
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

CNMG	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16

CN** Inserti negativi



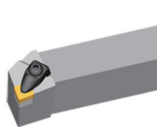
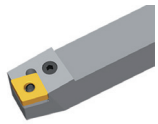
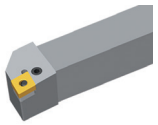
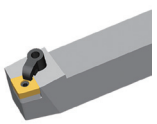
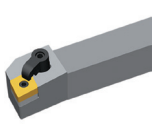
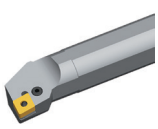
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M							○	◍					○	○	◍	◍	◍	◍	○	○	◍	○		
K									○	◍	◍	◍												
N													○	○									○	◍
S													○	○	◍	◍	◍	◍	○				○	◍
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ZM	**CNMG120404-ZM**	0,4	0,5-3,0	0,05-0,30		●																						
	**CNMG120408-ZM**	0,8	0,5-4,0	0,1-0,5		○																						
Media Lavor.																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

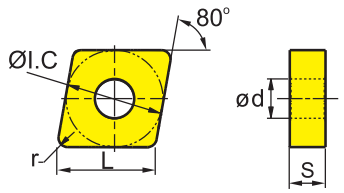
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNMG	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35

CN** Inserti negativi



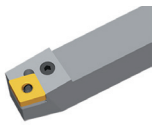
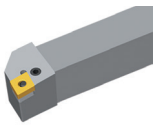
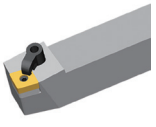
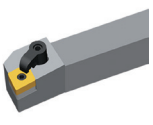
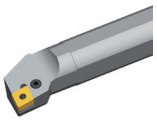
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		◉	◉	○		
M							○	◉					○	○	◉	◉	○	◉	◉	○		
K									○	◉	◉	◉										
N													○	○							○	◉
S													○	○	◉	◉	○	○			○	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NM	**CNMG120404-NM**	0,4	0,2-3,0	0,05-0,30														○	●									
	CNMG120408-NM	0,8	0,2-4,0	0,1-0,5														○	●	●	●						○	
	CNMG120412-NM	1,2	0,2-4,0	0,2-0,6														○	●									
Media Lavor.																												
TC	**CNMG120404-TC**	0,4	0,5-5,0	0,08-0,40										●		●												
	CNMG120408-TC	0,8	0,5-5,0	0,15-0,50										●		●												
	CNMG120412-TC	1,2	0,5-5,0	0,2-0,6										●		●												
	CNMG120416-TC	1,6	0,5-5,0	0,20-0,65										●		○												
	CNMG160608-TC	0,8	1-7	0,15-0,50										●		●												
	CNMG160612-TC	1,2	1-7	0,2-0,6										●		●												
	CNMG160616-TC	1,6	1-7	0,20-0,65										●		○												
TK	**CNMG120408-TK**	0,8	0,2-0,4	0,2-0,4										○														
	CNMG120412-TK	1,2	0,2-0,4	0,2-0,45										○														
	CNMG120416-TK	1,6	0,2-0,4	0,2-0,5										●														
Media Lavor.																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

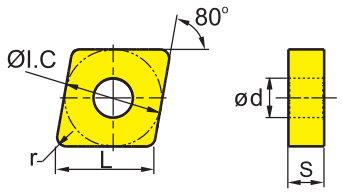
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CNMG	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94
25 09	25,79	25,4	9,525	9,12

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli



CN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**CNMG120408-DR**	0,8	0,7-7,0	0,2-0,5		○	●		●	●			●		●													
	CNMG120412-DR	1,2	1-7	0,25-0,70		○	●		●	●			●		●													
	CNMG120416-DR	1,6	1,5-7,0	0,32-0,75			○		●				○		●													
	CNMG160608-DR	0,8	0,7-8,0	0,2-0,5					●				●		○													
	CNMG160612-DR	1,2	1-8	0,25-0,70		○	●		●	○			●		●													
	CNMG160616-DR	1,6	1,5-8,0	0,3-0,8		○	●		●	●			○		○													
	CNMG190608-DR	0,8	0,7-10,0	0,2-0,5			●		●				○		●													
	CNMG190612-DR	1,2	1-10	0,25-0,70		○	●		●	●			○		●													
	CNMG190616-DR	1,6	1,5-10,0	0,3-0,8			●	●	●	●			○		●													
	CNMG190624-DR	2,4	2-10	0,32-0,90		○			●						○													
	CNMG250924-DR	2,4	2-15	0,4-1,0					●																			
SNR	**CNMG120408-SNR**	0,8	1-3	0,1-0,4															●			●	●					
	CNMG120412-SNR	1,2	1-3	0,2-0,6															●			●	●					
	CNMG160608-SNR	0,8	2-6	0,1-0,4															●			●	●				○	
	CNMG190616-SNR	1,6	2-7	0,2-0,6															○				●				○	

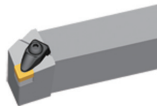
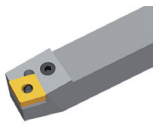
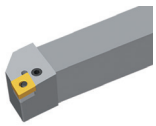
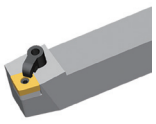
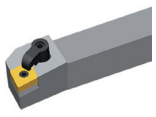
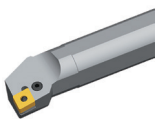
Sgrossatura

Sgrossatura

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

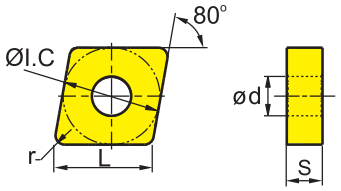
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CN**	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94
25 07	25,79	25,4	7,94	9,12
25 09	25,79	25,4	9,525	9,12

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

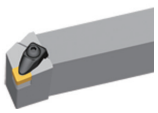
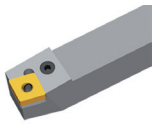
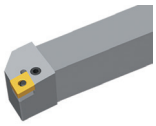
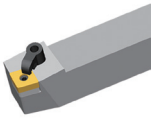
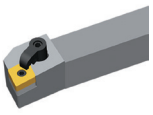
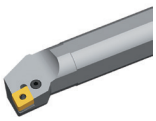


CN** Inserti negativi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					P																				
					M																				
					K																				
					N																				
					S																				
					H																				
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**CNMM120412-DR**		1,2	1,0-7,5	0,25-0,70		○	●		●	●	○	○															
	CNMM160612-DR		1,2	1,0-9,5	0,25-0,70			●		●																		
	CNMM160616-DR		1,6	1,5-9,5	0,32-0,90			●		●	○																	
	CNMM190612-DR		1,2	1-12	0,25-0,70		○	●		●	●		●															
	CNMM190616-DR		1,6	1,5-12,0	0,32-0,90			●		●	●																	
Sgrossatura	**CNMM190624-DR**		2,4	2-12	0,35-1,20		○	●		●																		
	CNMM250924-DR		2,4	2,0-12,5	0,2-1,2			●		●	○																	
ER	**CNMG120408-ER**		0,8	2,0-7,6	0,15-0,55								○															
	CNMG120412-ER		1,2	2,0-7,6	0,25-0,80								○															
	CNMG160612-ER		1,2	2-10	0,35-0,80								○															
	CNMG160616-ER		1,6	2-10	0,45-1,00								○															
Sgrossatura	**CNMG190612-ER**		1,2	2,0-11,4	0,35-1,00					○			○								○							
	CNMG190616-ER		1,6	2,0-11,4	0,45-1,10								○															
ER	**CNMM250724-ER**		2,4	2,0-12,5	0,3-1,4					●																		
	CNMM250732-ER		3,2	2,0-12,5	0,45-1,80					○																		
	CNMM250924-ER		2,4	2,0-12,5	0,3-1,4					●			○															
Sgrossatura	**CNMM250932-ER**		3,2	2,0-12,5	0,45-1,80					●																		

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

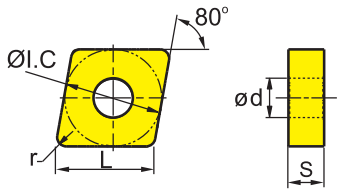
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CNMM	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94
25 09	25,79	25,4	9,525	9,12

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti - Tornitura



CN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201	
	CNMM120408-LR	0,8	1-5	0,1-0,5			●		●																				
	CNMM120412-LR	1,2	2-6	0,2-0,7			●		●			●																	
	CNMM120416-LR	1,6	2,0-6,5	0,25-0,80					●																				
	CNMM160608-LR	0,8	1-7	0,2-0,6			●		●			○																	
	CNMM160612-LR	1,2	1,0-7,5	0,2-0,7			●		●			●																	
	CNMM160616-LR	1,6	1,0-8,5	0,25-0,80	○		●	○	●																				
	CNMM190612-LR	1,2	2,0-10,5	0,2-0,7			●		●																				
	CNMM190616-LR	1,6	2,0-10,5	0,3-1,0			●		●			●																	
	CNMM190624-LR	2,4	2,0-10,5	0,3-1,1			●		○																				
	CNMM250924-LR	2,4	2,0-12,5	0,3-1,2			○		●																				

LR

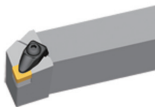
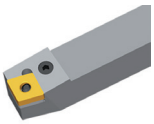
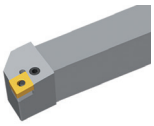
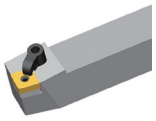
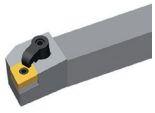
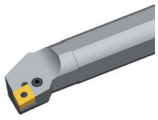


Sgrossatura

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

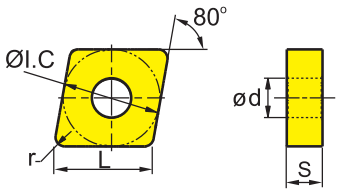
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNMM	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94
25 09	25,79	25,4	9,525	9,12

CN** Inserti negativi



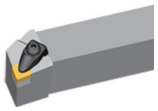
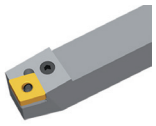
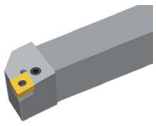
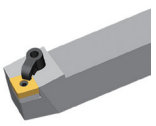
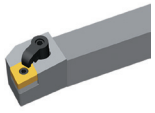
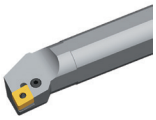
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
M							○	◉					○	○	◉	◉	◉	○	○	◉	○			
K									○	◉	◉	◉												
N													○	○								○	◉	
S													○	○	◉	◉	◉	○				○	◉	
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**CNMM120404**	0,4	0,5-7,0	0,1-0,5																								
	CNMM190612	1,2	0,5-10,5	0,1-0,8																								
Media Lavor.	**CNMM190616**	1,6	0,5-10,5	0,1-1,0																								
HDR	**CNMM120408-HDR**	0,8	1-7	0,2-0,6			●		●																			
	CNMM120412-HDR	1,2	1-7	0,3-0,8			○		●																			
	CNMM120416-HDR	1,6	1-7	0,4-1,0			●		●																			
	CNMM160612-HDR	1,2	1,5-7,5	0,3-0,8			●		●																			
	CNMM160616-HDR	1,6	1,5-8,5	0,4-1,0			○		●																			
	CNMM160624-HDR	2,4	1,5-10,5	0,8-1,2			○		○																			
	CNMM190608-HDR	0,8	2,0-12,5	0,3-0,7			○																					
	CNMM190612-HDR	1,2	2,0-12,5	0,35-0,80			○		●																			
	CNMM190616-HDR	1,6	2,0-12,5	0,5-1,1			○	●	●							○												
	CNMM190624-HDR	2,4	2,0-12,5	0,8-1,2			●		●																			
Sgrossatura	**CNMM250924-HDR**	2,4	2,0-12,5	0,8-1,4			○		●																			
HPR	**CNMM190616-HPR**	1,6	2,0-10,5	0,5-1,0					○																			
	CNMM190624-HPR	2,4	2,0-10,5	0,7-1,4			●		○																			
Sgrossatura	**CNMM250924-HDR**	2,4	2,0-12,5	0,7-1,4					●	●																		

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

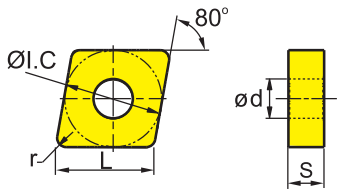
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CN**	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35
19 06	19,3	19,05	6,35	7,94

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

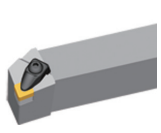
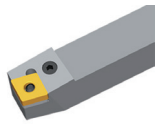
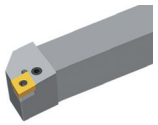
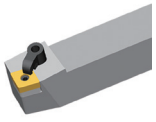
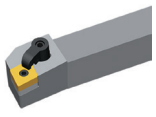
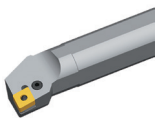


CN** Inserti negativi					HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO		r	a_p	f																							
Flat	**CNMA120404**		0,4	0,2-5,0	0,05-0,40								○															
	CNMA120408		0,8	0,2-5,0	0,05-0,50								●	●	●	●												
	CNMA120412		1,2	0,2-5,0	0,1-0,6								●	●	●	●											○	
	CNMA120416		1,6	0,2-5,0	0,10-0,65								●		●	○												
	CNMA160608		0,8	0,2-7,0	0,1-0,5								○															
	CNMA160612		1,2	0,2-7,0	0,1-0,6								●		●													
	CNMA160616		1,6	0,2-7,0	0,15-0,65								○		●													
	CNMA190612		1,2	0,2-8,0	0,15-0,70								○		●													
	CNMA190616		1,6	0,2-8,0	0,15-0,70								●		●													
Basic	**CNMG120404**		0,4	0,1-5,0	0,05-0,50				○																			
	CNMG120408		0,8	0,1-5,0	0,1-0,6				○						○													
	CNMG120412		1,2	0,1-5,0	0,1-0,7			○	○																			
	CNMG160612		1,2	0,1-7,0	0,1-0,7																							
	CNMG190608		0,8	0,1-8,0	0,1-0,7																							
	CNMG190612		1,2	0,1-8,0	0,1-0,8																							
	CNMG190616		1,6	0,1-8,0	0,1-1,0																							

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

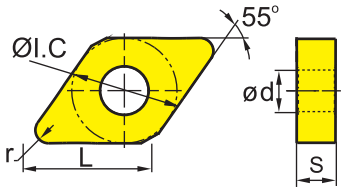
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DN**	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16



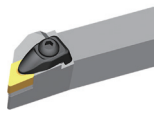
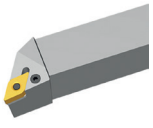
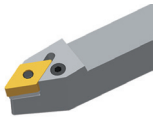
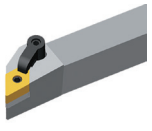
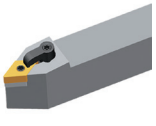
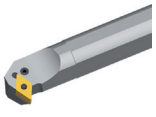
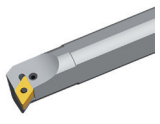
DN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
				P																								
				M																								
				K																								
				N																								
				S																								
				H																								
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
WG	**DNMX110404-WG**	0,4	0,2-1,5	0,08-0,30			○																					
	DNMX110408-WG	0,8	0,5-3,5	0,15-0,50			●		●																			
	DNMX150408-WG	0,8	0,5-5,0	0,15-0,70			○																					
	DNMX150608-WG	0,8	0,5-5,0	0,15-0,70			○		○																			
Raschiante	**DNMX150612-WG**	1,2	0,8-6,0	0,20-0,75			○																					
ADF	**DNMG150604-ADF**	0,4	0,5-6,0	0,15-0,50		○															●				○			
	DNMG150608-ADF	0,8	0,1-4,0	0,08-0,50		○														●	●				○			
	DNMG150612-ADF	1,2	0,5-4,0	0,15-0,50		○															●							
Finitura																												
DF	**DNMG110404-DF**	0,4	0,15-2,00	0,08-0,25			●		●																			
	DNMG110408-DF	0,8	0,15-2,00	0,1-0,3			●		●																			
	DNMG110412-DF	1,2	0,35-1,50	0,15-0,50			○																					
	DNMG150404-DF	0,4	0,15-2,00	0,08-0,25			●		●																			
	DNMG150408-DF	0,8	0,15-2,00	0,1-0,3			●		●																			
	DNMG150412-DF	1,2	0,35-1,50	0,15-0,50					○																			
	DNMG150604-DF	0,4	0,8-6,0	0,18-0,60			●		●																			
	DNMG150608-DF	0,8	0,15-2,00	0,1-0,3			●		●																			
Finitura	**DNMG150612-DF**	1,2	0,2-2,5	0,10-0,35			●																					
SF	**DNMG110404-SF**	0,4	0,05-0,50	0,05-0,25																						●		
	DNMG150404-SF	0,4	0,05-0,50	0,05-0,25																						●		
	DNMG150408-SF	0,8	0,05-0,50	0,10-0,35																						●		
	DNMG150604-SF	0,4	0,05-0,50	0,05-0,25																						●		
Finitura	**DNMG150608-SF**	0,8	0,05-0,50	0,10-0,35																						●		

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

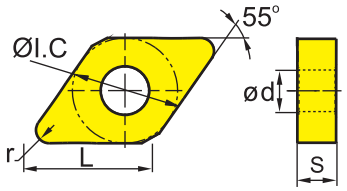
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNMG	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 06	15,5	12,7	6,35	5,16

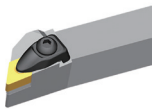
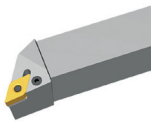
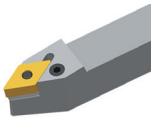
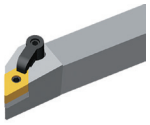
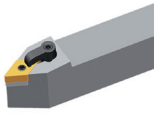
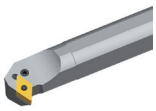
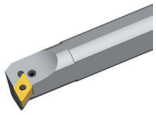


DN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO	r	a_p	f	P																							
					M																							
					K																							
					N																							
					S																							
					H																							
XF	**DNMG110404-XF**	0,4	0,5-2,0	0,1-0,25	●																							
	DNMG110408-XF	0,8	0,5-2,0	0,1-0,30	○																							
	DNMG150604-XF	0,4	0,5-2,5	0,1-0,25	●			●																				
	DNMG150608-XF	0,8	0,5-2,5	0,1-0,30	●			●																				
Finitura	**DNMG150612-XF**	1,2	0,5-2,5	0,1-0,35	●			●																				
XM	**DNMG110404-XM**	0,4	1-3,85	0,2-0,4	●			○																				
	DNMG110408-XM	0,8	1-3,85	0,2-0,4	●			○																				
	DNMG110412-XM	1,2	1-3,85	0,2-0,6	●			○																				
	DNMG150604-XM	0,4	1-5,25	0,2-0,4	●			●																				
	DNMG150608-XM	0,8	1-5,25	0,2-0,4	●			●																				
Media Lavor.	**DNMG150612-XM**	1,2	1-5,25	0,2-0,6	●			●																				
	DNMG150616-XM	1,6	1-5,25	0,2-0,65	●			●																				

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

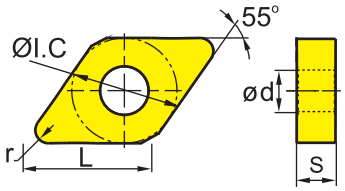
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNMG	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16



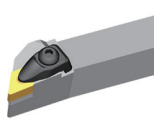
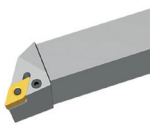
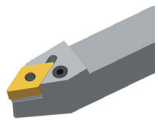
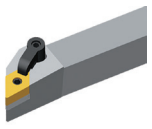
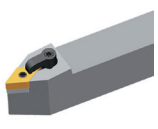
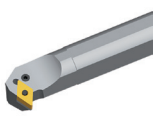
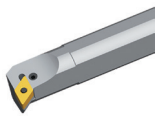
					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
				P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
				M							○	◉					○	○	◉	◉	◉	○	○	◉	○			
				K									○	◉	◉	◉												
				N													○	○									○	◉
				S													○	○	◉	◉	◉	○					○	◉
				H																								
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM	**DNMG110404-DM**		0,4	0,4-5,0	0,1-0,3			●		●																		
	DNMG110408-DM		0,8	0,5-5,0	0,15-0,50			●		●																		
	DNMG110412-DM		1,2	0,8-5,0	0,18-0,50			●		●																		
	DNMG150404-DM		0,4	0,4-6,0	0,1-0,3			●		●																		
	DNMG150408-DM		0,8	0,5-6,0	0,15-0,50			●		●																		
	DNMG150412-DM		1,2	0,8-6,0	0,18-0,60			○		●																		
Media Lavor.	**DNMG150604-DM**		0,4	1-6	0,23-0,65			●		●																		
	DNMG150608-DM		0,8	0,5-6,0	0,15-0,50		○	●		●			●															
	DNMG150612-DM		1,2	0,8-6,0	0,18-0,60		○	●		●																		
	DNMG150616-DM		1,6	1-6	0,23-0,65		○	●		●																		
PM	**DNMG110404-PM**		0,4	0,4-5,0	0,1-0,3					●				○														
	DNMG110408-PM		0,8	0,5-5,0	0,15-0,50			○		●				●														
	DNMG110412-PM		1,2	0,8-5,0	0,18-0,50					○				●														
	DNMG150404-PM		0,4	0,4-6,0	0,1-0,3			○																				
	DNMG150408-PM		0,8	0,5-6,0	0,15-0,50			●		●				●		●												
	DNMG150412-PM		1,2	0,8-6,0	0,18-0,60					○						○												
Media Lavor.	**DNMG150416-PM**		1,6	1-6	0,23-0,65					○																		
	DNMG150604-PM		0,4	0,4-6,0	0,1-0,3			●		●				●		○												
	DNMG150608-PM		0,8	0,5-6,0	0,15-0,50			●		●	●			●		●												
	DNMG150612-PM		1,2	0,8-6,0	0,18-0,60			●		●				●		●												
	DNMG150616-PM		1,6	1-6	0,23-0,65					●																		

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

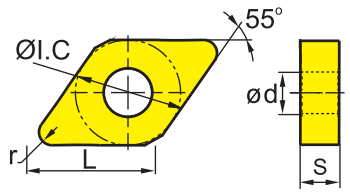
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNMG	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16

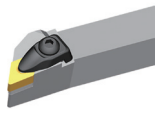
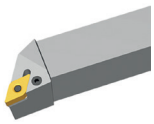
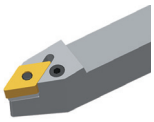
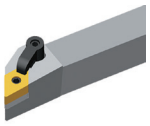
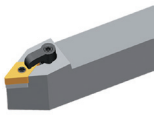
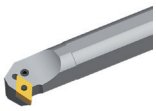
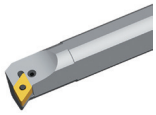


DN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M											○	◍					○	○	◍	◍	◍	◍	○	○	◍	○		
K													○	◍	◍	◍												
N																	○	○									○	◍
S																	○	○	◍	◍	◍	◍	○				○	◍
H																												
ISO		r	a_p	f																								
ZM	**DNMG150612-ZM**	1,2	1,0-5,5	0,15-0,60		○			●																			
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

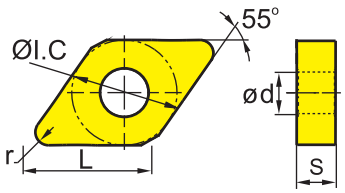
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DN**	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16

DN** Inserti negativi



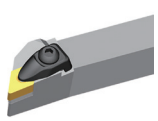
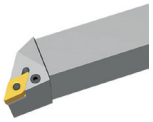
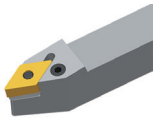
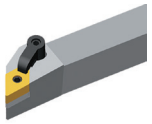
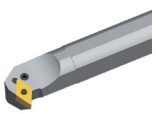
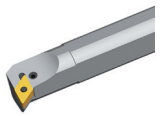
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	●	●	●										●	●			●	●	●		
M							○	○						○	○	○	○	○	○	○	○	○		
K									●	●	●	●												
N													●	●									●	●
S														○	○	○	○	○	○				○	○
H																								

	ISO	r	a_p	f
EF	**DNMG110404-EF**	0,4	0,1-1,5	0,05-0,20
	DNMG110408-EF	0,8	0,1-1,5	0,1-0,4
	DNMG150404-EF	0,4	0,1-1,5	0,05-0,30
	DNMG150408-EF	0,8	0,1-1,5	0,1-0,4
	DNMG150604-EF	0,4	0,1-1,5	0,05-0,30
	DNMG150608-EF	0,8	0,1-1,5	0,1-0,4
Finitura	**DNMG150612-EF**	1,2	0,1-1,5	0,15-0,50
FM	**DNMG150604L-FM**	0,4	0,5-3,0	0,05-0,30
	DNMG150604R-FM	0,4	0,5-3,0	0,05-0,30
	DNMG150608L-FM	0,8	0,5-3,0	0,1-0,5
	DNMG150608R-FM	0,8	0,5-3,0	0,1-0,5
Finitura				
NF	**DNEG150404-NF**	0,4	0,2-3,0	0,05-0,30
	DNEG150408-NF	0,8	0,2-3,0	0,1-0,4
	DNEG150604-NF	0,4	0,2-3,0	0,05-0,30
	DNEG150608-NF	0,8	0,2-3,0	0,1-0,4
Finitura				
NGF	**DNEG150608-NGF**	0,8	0,2-3,0	0,05-0,40
	DNEG150612-NGF	1,2	0,2-3,0	0,1-0,5
Finitura				

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

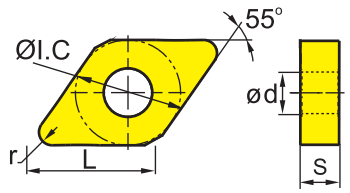
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DNMG	L	I.C	S	d
11 04	11,6	9,525	4,76	3,81
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

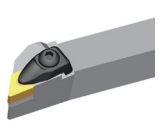
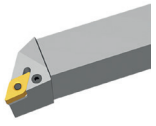
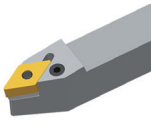
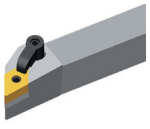
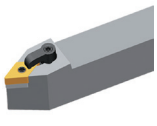
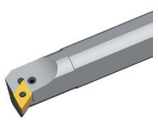


DN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201	
	ISO		r	a_p	f																								
EG	**DNMG150604-EG**		0,4	1-3	0,05-0,30						●										●								
	DNMG150608-EG		0,8	1-3	0,1-0,4						●	○								●	●								
	DNMG150612-EG		1,2	1-3	0,2-0,6						●	●								●	●								
Media Lavor.																													
EM	**DNMG110404-EM**		0,4	0,5-4,4	0,05-0,30						●									●									
	DNMG110408-EM		0,8	0,5-4,4	0,10-0,45						●									●									
	DNMG150404-EM		0,4	0,5-6,4	0,05-0,30						○									○									
	DNMG150408-EM		0,8	0,5-6,4	0,10-0,45						○									●									
	DNMG150412-EM		1,2	0,5-6,4	0,1-0,6						○																		
Media Lavor.	**DNMG150604-EM**		0,4	0,2-6,4	0,05-0,30						●	●								●									
	DNMG150608-EM		0,8	0,5-6,4	0,10-0,45						●	●								●									
	DNMG150612-EM		1,2	0,5-6,4	0,1-0,6						●	●								●									
NM	**DNMG150412-NM**		1,2	0,2-4,0	0,2-0,6													○											
	DNMG150608-NM		0,8	0,2-4,0	0,1-0,4														●										
	DNMG150612-NM		1,2	0,2-4,0	0,2-0,6													○	●										
Media Lavor.																													
TC	**DNMG150608-TC**		0,8	0,5-5,0	0,15-0,40									●		●													
	DNMG150612-TC		1,2	0,5-5,0	0,2-0,6									●		○													
Media Lavor.																													

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

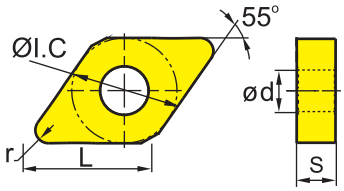
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	A***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNMG	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16



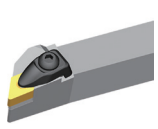
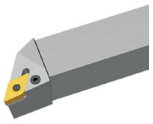
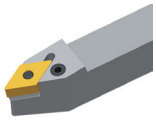
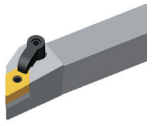
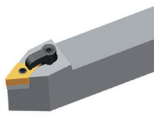
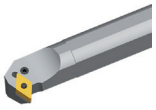
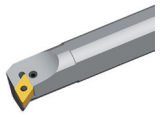
DN** Inserti negativi		HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
TK	**DNMG150608-TK**	0,8	0,2-0,4	0,2-0,4										○													
	DNMG150612-TK	1,2	0,2-0,4	0,2-0,45										○													
Media Lavor.																											
DR	**DNMG150608-DR**	0,8	1-6	0,2-0,5			●		●				●		●													
	DNMG150612-DR	1,2	1-6	0,25-0,70			●		●				●		●													
	DNMG150616-DR	1,6	1-6	0,32-0,75			●						●		○													
Sgrossatura																											
SNR	**DNMG150608-SNR**	0,8	0,2-6,0	0,1-0,5															●		○	●						
	DNMG150612-SNR	1,2	0,2-6,0	0,2-0,6															○		○	●						
Sgrossatura																												

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

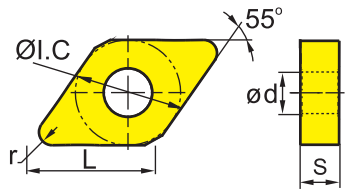
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DN**	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16



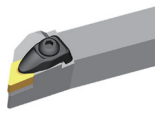
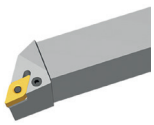
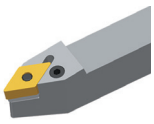
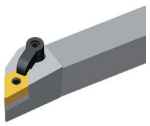
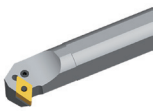
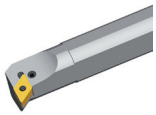
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	○	○	◉	○		
K									●	◉	◉	◉											
N													●	●								●	◉
S													○	○	◉	◉	◉	○				○	◉
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**DNMA150604**	0,4	0,2-6,0	0,1-0,3									●		○													
	DNMA150608	0,8	0,2-6,0	0,1-0,6									●		●													
	DNMA150612	1,2	0,2-6,0	0,15-0,70									●		●													
Media Lavor.	**DNMA150616**	1,6	0,2-6,0	0,2-0,8											○													
ER	**DNMG150608-ER**	0,8	2-6	0,15-0,55								○																
	DNMG150612-ER	1,2	2-6	0,25-0,80								○																
Sgrossatura																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

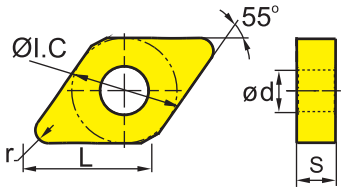
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNMM	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16

Inserti - Tornitura

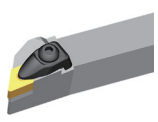
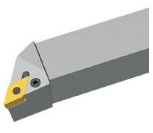
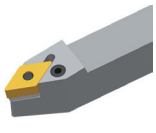
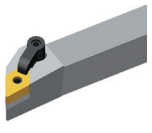
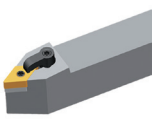
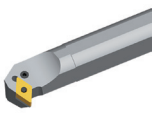
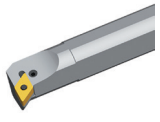


DN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					P																					
					M																					
					K																					
					N																					
					S																					
					H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR	**DNMM150608-DR**	0,8	0,7-6,0	0,20-0,55			●		●																		
	DNMM150612-DR	1,2	1-6	0,25-0,70			●		●	●																	
	DNMM150616-DR	1,6	1,5-6,0	0,32-0,90			●		●																		
Sgrossatura																											
ER	**DNMM150608-ER**	0,8	0,7-6,0	0,20-0,55							○																
	DNMM150612-ER	1,2	1-6	0,25-0,70								○															
Sgrossatura																											
HDR	**DNMM150608-HDR**	0,8	1-7	0,25-0,60			●		○																		
	DNMM150612-HDR	1,2	1-7	0,3-0,8			○																				
	DNMM150616-HDR	1,6	1,5-7,0	0,4-1,0			○																				
Sgrossatura																											
LR	**DNMM150608-LR**	0,8	2-6	0,1-0,6			●		●			●															
	DNMM150612-LR	1,2	2-6	0,2-0,8					●			○															
	DNMM150616-LR	1,6	2-6	0,25-1,00			●		●																		
Sgrossatura																											

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

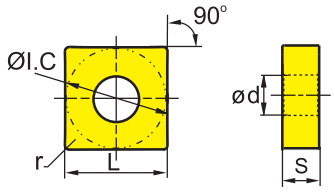
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16

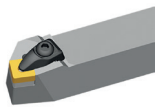
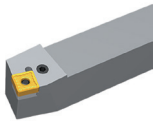
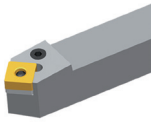
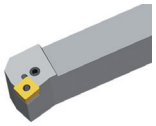
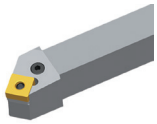
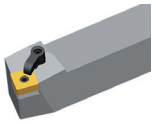
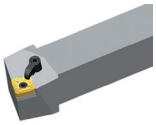


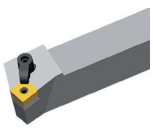
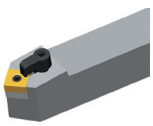
SN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◎	◎	◎											◎	◎		○	◎	○		
M											○	◎					○	○	◎	◎	◎	○	○	○	◎	○		
K													◎	◎	◎	◎												
N																	○	○									◎	◎
S																	○	○	◎	◎	◎	○					○	◎
H																												
ISO		r	a_p	f																								
ADF	**SNMG120404-ADF**	0,4	0,5-5,0	0,1-0,3	●															●							
	SNMG120408-ADF	0,8	0,5-5,0	0,12-0,50	●															●							
	SNMG120412-ADF	1,2	1-5	0,2-0,6	●															●							
Finitura																												
DF	**SNMG120408-DF**	0,8	0,3-1,5	0,1-0,4			●	●																				
	SNMG120412-DF	1,2	0,35-1,50	0,15-0,50			●	●																				
Finitura																												
SF	**SNMG090304-SF**	0,4	0,05-0,50	0,05-0,20																					●			
	SNMG090308-SF	0,8	0,05-0,50	0,10-0,35																					○			
	SNMG120404-SF	0,4	0,05-0,50	0,05-0,20																					○			
	SNMG120408-SF	0,8	0,05-0,50	0,10-0,35																					○			
Finitura																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

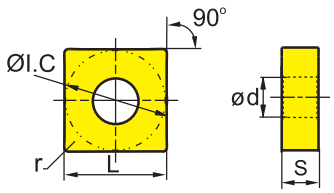
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35



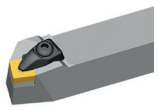
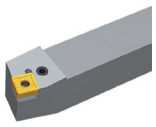
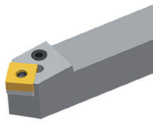
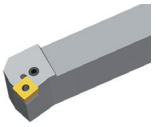
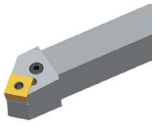
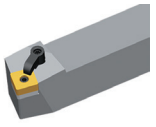
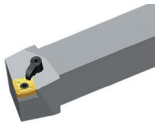
SN** Inserti negativi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
				P																					
				M																					
				K																					
				N																					
				S																					
				H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF	**SNMG090304-EF**	0,4	0,5-2,0	0,05-0,30							●									●								
	SNMG090308-EF	0,8	0,5-2,0	0,05-0,40							●									●								
	SNMG090312-EF	1,2	0,5-2,0	0,05-0,45							○																	
	SNMG120404-EF	0,4	0,8-3,0	0,05-0,30																●								
	SNMG120408-EF	0,8	0,8-3,0	0,1-0,4																●								
Finitura	**SNMG120412-EF**	1,2	0,8-3,0	0,15-0,45							○									●								
	SNMG150608-EF	0,8	1-4	0,1-0,4							○																	
	SNMG150612-EF	1,2	1-4	0,15-0,45							○																	

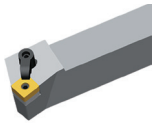
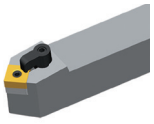
● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

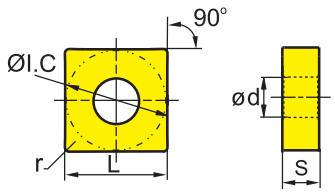
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMG	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94



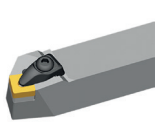
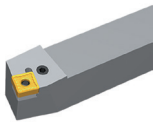
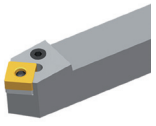
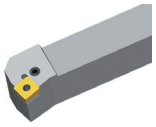
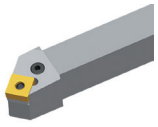
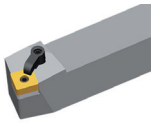
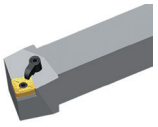
					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF	**SNMG120404-XF**		0,4	0,5-2,5	0,1-0,25	●			●																			
	SNMG120408-XF		0,8	0,5-2,5	0,1-0,30	●			●																			
Finitura																												
XM	**SNMG120404-XM**		0,4	1-4,2	0,2-0,4	○			○																			
	SNMG120408-XM		0,8	1-4,2	0,2-0,4	●			●																			
	SNMG120412-XM		1,2	1-4,2	0,2-0,6	●			●																			
	SNMG120416-XM		1,6	1-4,2	0,2-0,65	○			○																			
	SNMG150608-XM		0,8	1-5,25	0,2-0,4	●			●																			
	SNMG150612-XM		1,2	1-5,25	0,2-0,6	●			●																			
	SNMG150616-XM		1,6	1-5,25	0,2-0,65	○			●																			
	SNMG190608-XM		0,8	1-6,65	0,2-0,4	○			○																			
	SNMG190612-XM		1,2	1-6,65	0,2-0,6	○			○																			
	SNMG190616-XM		1,6	1-6,65	0,2-0,65	○			○																			
	SNMG190624-XM		2,4	1-6,65	0,2-1,2	○			○																			

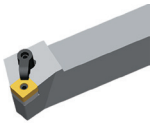
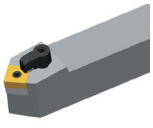
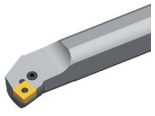
Media Lavor.

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

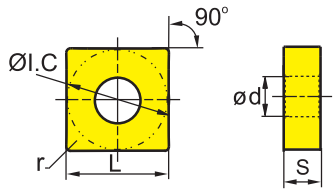
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura



SN** Inserti negativi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					P																				
					M																				
					K																				
					N																				
					S																				
					H																				
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
PM	**SNMG090304-PM**	0,4	0,4-4,5	0,1-0,3					○																		
	SNMG090308-PM	0,8	0,5-4,5	0,15-0,50					○				●		●												
	SNMG090312-PM	1,2	0,6-4,5	0,2-0,6					○																		
	SNMG120404-PM	0,4	0,4-6,0	0,1-0,3			●		○						○												
	SNMG120408-PM	0,8	0,5-6,0	0,15-0,50			●		●				○		●												
	SNMG120412-PM	1,2	0,8-6,0	0,18-0,60			●		●				○		●												
	SNMG120416-PM	1,6	1-6	0,23-0,65			○		○				○		○												
	SNMG150608-PM	0,8	0,7-7,5	0,14-0,50			○		○																		
	SNMG150612-PM	1,2	0,8-7,5	0,18-0,60			○		●				●		●												
	SNMG190612-PM	1,2	1,0-7,5	0,20-0,65			○		●				●		●												

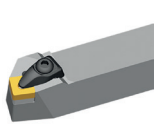
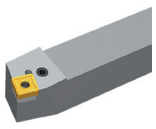
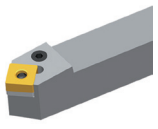
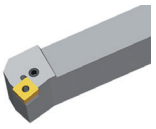
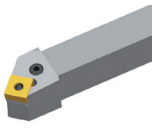
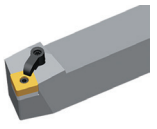
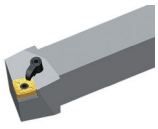


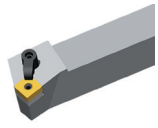
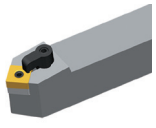
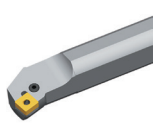
Media Lavor.

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

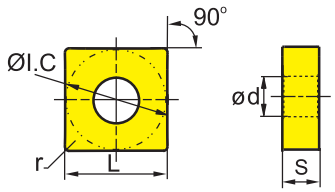
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SNMG	L	I.C	S	d
09 03	9,525	9,525	3,18	3,81
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

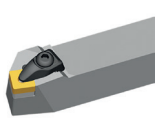
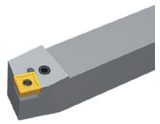
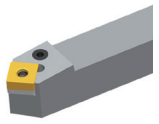
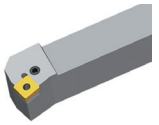
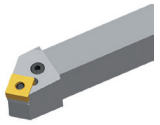
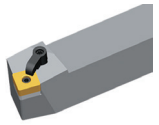
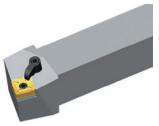


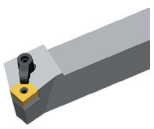
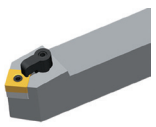
SN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM		**SNMG090304-DM**	0,4	0,4-4,5	0,1-0,3			●	●																			
		SNMG090308-DM	0,8	0,5-4,5	0,15-0,50			●	●																			
		SNMG120404-DM	0,4	0,4-6,0	0,1-0,3			●	●																			
		SNMG120408-DM	0,8	0,5-6,0	0,15-0,50			●	●	○																		
		SNMG120412-DM	1,2	0,8-6,0	0,18-0,60			●	●																			
		SNMG120416-DM	1,6	1-6	0,23-0,65			○	●																			
Media Lavor.		**SNMG150608-DM**	0,8	0,8-7,5	0,1-0,5			●	●																			
		SNMG150612-DM	1,2	0,8-7,5	0,18-0,60			●	●																			
		SNMG190612-DM	1,2	1-9	0,18-0,60			●	●																			
		SNMG190616-DM	1,6	1-9	0,23-0,65			○	●																			
EG		**SNMG120408-EG**	0,8	0,5-4,0	0,1-0,5								●								●	●						
		SNMG120412-EG	1,2	0,5-4,0	0,2-0,6								●									●						
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

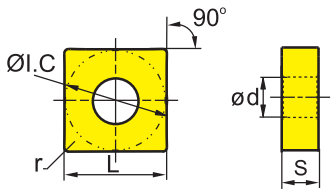
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMG	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35



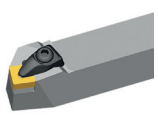
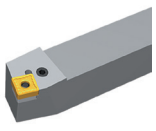
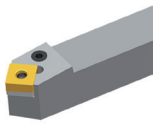
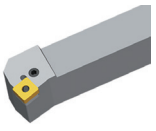
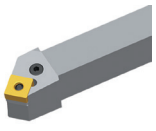
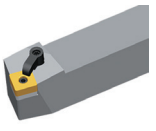
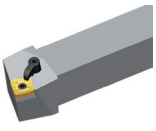
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	○	○	◉	○		
K									○	◉	◉	◉											
N													○	○								○	◉
S													○	○	◉	◉	◉	○				○	◉
H																							

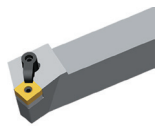
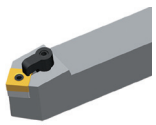
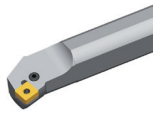
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EM	**SNMG120404-EM**	0,4	0,50-6,35	0,05-0,30								○								●								
	SNMG120408-EM	0,8	0,50-6,35	0,20-0,45							●	●								●								
	SNMG120412-EM	1,2	0,50-6,35	0,25-0,60							●	●								●								
	SNMG120416-EM	1,6	0,50-6,35	0,30-0,75								○																
Media Lavor.	**SNMG150612-EM**	1,2	0,5-8,0	0,25-0,60							○	●								●								
	SNMG150616-EM	1,6	0,5-8,0	0,30-0,75								○								●								
TC	**SNMG120404-TC**	0,4	0,5-5,0	0,08-0,25										●														
	SNMG120408-TC	0,8	0,5-5,0	0,15-0,40										●		●												
	SNMG120412-TC	1,2	0,5-5,0	0,2-0,5										●		●												
Media Lavor.	**SNMG150616-TC**	1,6	1-7	0,2-0,7										●														
TK	**SNMG120412-TK**	1,2	0,2-0,4	0,2-0,45										●														
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

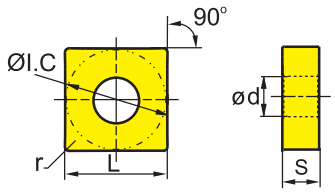
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SNMG	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94
25 09	25,4	25,4	9,525	9,12

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

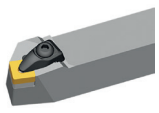
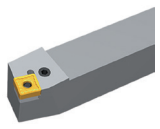
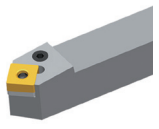
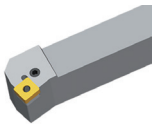
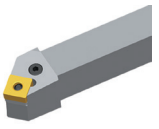
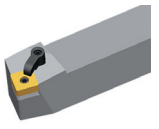
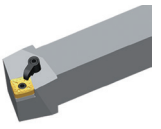


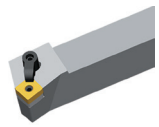
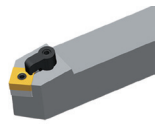
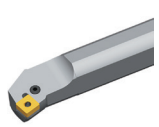
SN** Inserti negativi						HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW		
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
ISO		r	a_p	f		YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201	
NM	**SNMG120408-NM**	0,8	0,5-5,0	0,1-0,4														○	●								○		
	SNMG120412-NM	1,2	0,5-5,0	0,15-0,50															○										
Media Lavor.																													
DR	**SNMG120408-DR**	0,8	0,7-7,0	0,2-0,5				○		●				●		●													
	SNMG120412-DR	1,2	1-7	0,25-0,70				●		●	●			○		●													
	SNMG120416-DR	1,6	1,5-7,0	0,32-0,75				○		●				●		●													
	SNMG150612-DR	1,2	1-8	0,25-0,70						●				○		●													
	SNMG150616-DR	1,6	1,5-8,0	0,3-0,8				○		●				○		○													
	SNMG190612-DR	1,2	1-10	0,25-0,70				●		●	●					●													
Sgrossatura	**SNMG190616-DR**	1,6	1,5-10,0	0,3-0,8	○			●	●	●	●			○		●													
	SNMG190624-DR	2,4	2-10	0,32-0,90						●	○																		
	SNMG250924-DR	2,4	2-15	0,4-1,2						●	○																		

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

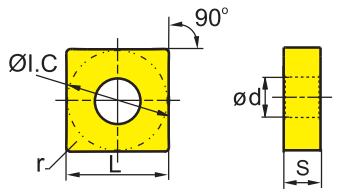
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMG	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94

SN** Inserti negativi



	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
ER	**SNMG120408-ER**	0,8	2,0-7,6	0,20-0,55							○	○																
	SNMG120412-ER	1,2	2,0-7,6	0,3-0,6							○	○																
	SNMG150612-ER	1,2	2,0-9,6	0,3-0,6							○	○																
	SNMG190612-ER	1,2	2,0-11,4	0,3-0,6								○																
	SNMG190616-ER	1,6	2,0-11,4	0,35-0,80							○	○																
SNR	**SNMG120408-SNR**	0,8	1-4	0,2-0,6															●				●					

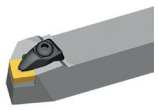
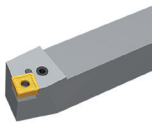
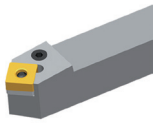
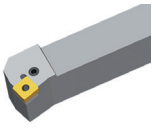
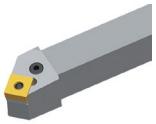
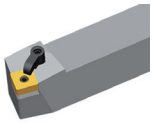
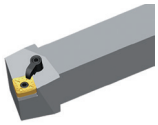
Sgrossatura

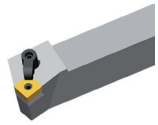
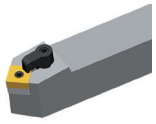
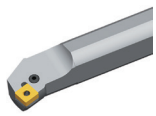
Sgrossatura

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

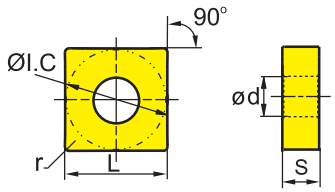
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SNMM	L	I.C	S	d
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94
25 07	25,4	25,4	7,94	9,12
25 09	25,4	25,4	9,525	9,12

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

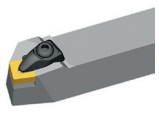
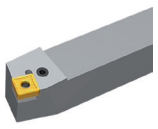
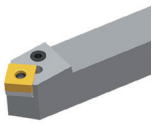
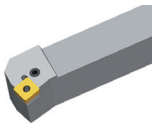
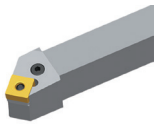
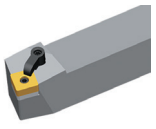
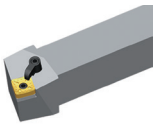


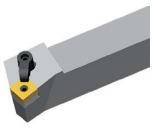
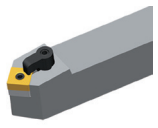
SN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201	
	ISO		r	a_p	f																								
DR	**SNMM150612-DR**		1,2	1-7	0,25-0,60					●																			
	SNMM150616-DR		1,6	1,5-9,0	0,32-0,90			○		●	●																		
	SNMM190608-DR		0,8	2,0-10,5	0,25-0,50					○																			
	SNMM190612-DR		1,2	2,0-10,5	0,25-0,60			●		●	●																		
	SNMM190616-DR		1,6	2,0-10,5	0,35-0,90			●		●	●																		
Sgrossatura	**SNMM190624-DR**		2,4	2,0-10,5	0,4-1,1			●	●	●																			
	SNMM250716-DR		1,6	2,5-12,5	0,4-1,0					●																			
	SNMM250724-DR		2,4	2,5-12,5	0,5-1,2			○		●																			
	SNMM250924-DR		2,4	2,5-12,5	0,5-1,2					●	●																		
ER	**SNMM250724-ER**		2,4	2,8-18,0	0,45-1,40					●		○	●																
	SNMM250732-ER		3,2	2,8-18,0	0,32-1,40					●																			
	SNMM250924-ER		2,4	2,8-18,0	0,45-1,40					●	○		○																
Sgrossatura	**SNMM250932-ER**		3,2	2,8-18,0	0,55-1,80					●																			

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN
Kr: 75°	Kr: 45°
	
A258	A259

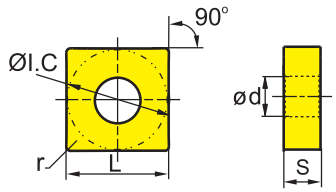
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMM	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94
25 09	25,4	25,4	9,525	9,12

SN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							○	◉				○	○	◉	◉	◉	○	○	◉	○		
K									●	◉	◉	◉										
N													●	●							●	◉
S													●	●	◉	◉	◉	●			●	◉
H																						

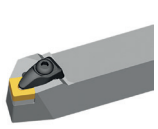
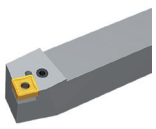
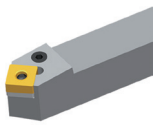
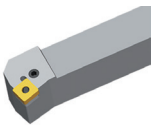
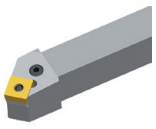
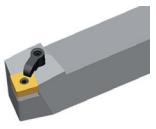
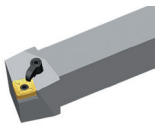
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LR  Sgrossatura	**SNMM120408-LR**	0,8	1-6	0,1-0,5			○		●																			
	SNMM120412-LR	1,2	1-6	0,2-0,6			○		●																			
	SNMM120416-LR	1,6	1-6	0,25-0,70					○																			
	SNMM150612-LR	1,2	1,5-7,0	0,1-0,5					●																			
	SNMM150616-LR	1,6	1,5-7,0	0,1-0,5			○		○																			
	SNMM190612-LR	1,2	2-10	0,25-0,70			○		●																			
	SNMM190616-LR	1,6	2-10	0,3-1,0			○		●																			
	SNMM190624-LR	2,4	2-10	0,3-1,1			○		●																			
	SNMM250924-LR	2,4	3,0-12,5	0,3-1,2			○		●	○																		

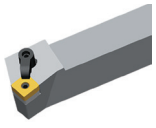
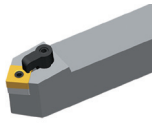
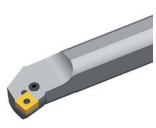
● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

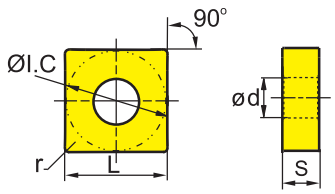
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SNMM	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94
25 07	25,4	25,4	7,94	9,12
25 09	25,4	25,4	9,525	9,12

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

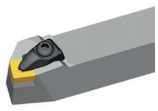
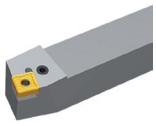
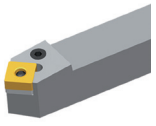
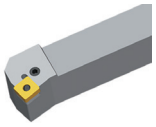
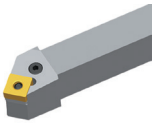
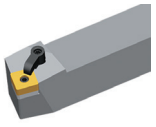
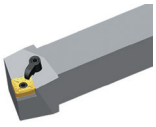


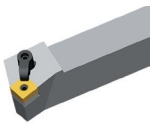
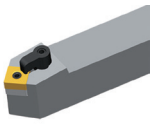
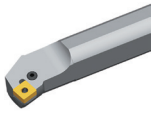
SN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT			HC²	HW		
				P	●	●	●	❁	❁	❁									❁	❁				●	❁		●			
				M							○	❁					○	○	❁	❁	❁	○	●	❁		○				
				K									●	❁	❁	❁														
				N													●	●											●	❁
				S													●	○	❁	❁	❁	○						●	❁
				H																										
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201		
HDR	**SNMM120408-HDR**		0,8	1-6	0,1-0,6					●																				
	SNMM120412-HDR		1,2	1,5-6,0	0,2-0,7					○																				
	SNMM150608-HDR		0,8	1-7	0,2-0,6						○																				
	SNMM150612-HDR		1,2	1-7	0,25-0,70			●		●																				
	SNMM150616-HDR		1,6	1,5-9,0	0,32-1,00					○																				
	SNMM190612-HDR		1,2	2,0-10,5	0,25-0,70			○		○																				
Sgrossatura	**SNMM190616-HDR**		1,6	2,0-10,5	0,35-1,00			●		●			○																	
	SNMM190624-HDR		2,4	2,0-10,5	0,4-1,2			●		●																				
	SNMM250724-HDR		2,4	2,5-12,5	0,5-1,4					●																				
	SNMM250924-HDR		2,4	2,5-12,5	0,5-1,4			●		●	●																			

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

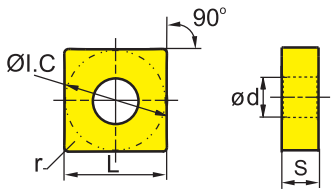
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMM	L	I.C	S	d
19 06	19,05	19,05	6,35	7,94
25 09	25,4	25,4	9,525	9,12



	SN** Inserti negativi				HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
					P																				
					M																				
					K																				
					N																				
					S																				
					H																				
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HPR	**SNMM190616-HPR**		1,6	2,0-10,5	0,35-1,00					●																
	SNMM190624-HPR		2,4	2,0-10,5	0,4-1,2			○		●																
	SNMM250924-HPR		2,4	2,0-12,5	0,5-1,4			○		●	●															

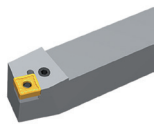
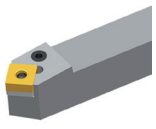
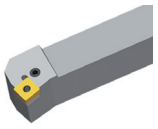
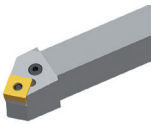
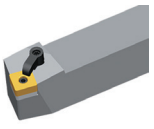
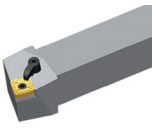
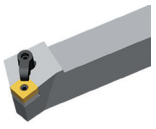
Sgrossatura

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

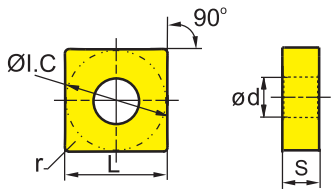
PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L	MSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°	Kr: 75°
						
A242	A244	A245	A246	A256	A257	A258

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SNMG	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
25 07	25,4	25,4	7,94	9,12
25 09	25,4	25,4	9,525	9,12

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

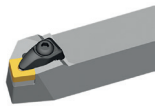
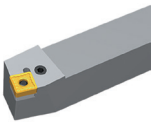
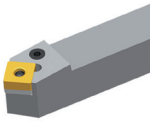
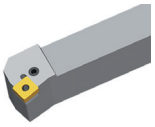
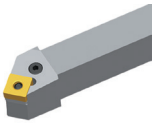
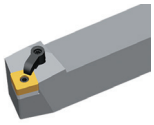
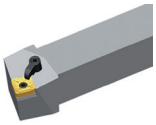


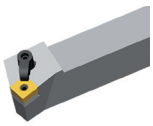
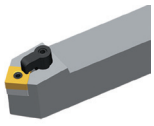
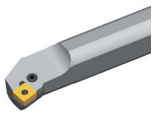
					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
				P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
				M							○	◉					○	○	◉	◉	◉	○	○	◉	○			
				K									◉	◉	◉	◉													
				N													○	○									◉	◉	
				S													○	○	◉	◉	◉	○					○	◉	
				H																									
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**SNMG120408**		0,8	0,5-6,0	0,1-0,6			●		●																		
	SNMG120412		1,2	0,5-6,0	0,1-0,7			○		○																		
	SNMG250724		2,4	1-9	0,1-1,1																							
	SNMG250924		2,4	1-9	0,1-1,1																							
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

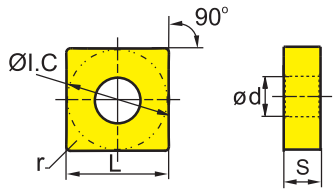
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SN**	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16
15 06	15,875	15,875	6,35	6,35
19 06	19,05	19,05	6,35	7,94
25 07	25,4	25,4	7,94	9,12

SN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							○	◉				○	○	◉	◉	◉	○	○	◉	○		
K									●	◉	◉	◉										
N												●	●								●	◉
S												●	●	◉	◉	◉	●				●	◉
H																						

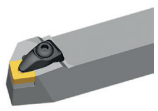
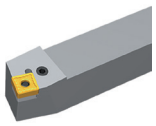
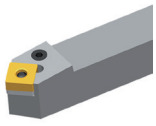
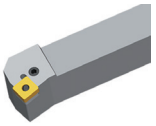
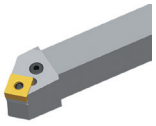
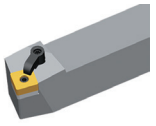
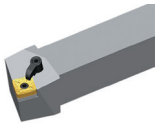
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**SNMA120408**	0,8	0,5-5,0	0,1-0,5									●	●	●													
	SNMA120412	1,2	0,5-5,0	0,2-0,7									○	○	●	○												
	SNMA120416	1,6	0,5-5,0	0,2-1,0									○	●	○													
	SNMA150608	0,8	0,8-7,0	0,1-0,5											○													
	SNMA150612	1,2	0,8-7,0	0,2-0,7											●													
	SNMA190612	1,2	0,8-7,0	0,2-0,7									○		●													
	SNMA190616	1,6	0,8-7,0	0,3-0,8									○		●													
Basic	**SNMM250724-1**	2,4	2,0-12,5	0,3-1,2					●	●																		

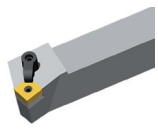
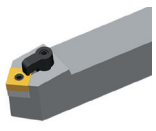
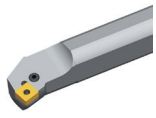
● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

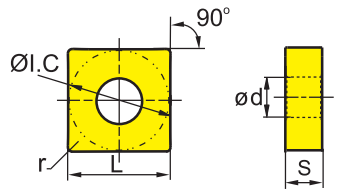
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNMM	L	I.C	S	d
19 06	19,05	19,05	6,35	7,94
25 09	25,4	25,4	9,525	9,12

SN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◍	◍	◍										◍	◍			●	◍	●		
M							○	◍					○	○	◍	◍	◍	◍	○	○	◍	○		
K									◍	◍	◍	◍												
N													●	●									◍	◍
S													○	○	◍	◍	◍	◍	○				○	◍
H																								

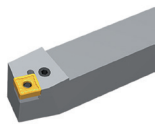
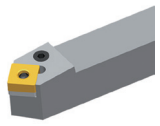
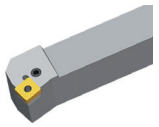
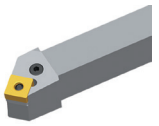
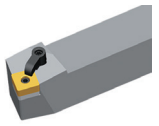
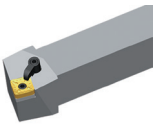
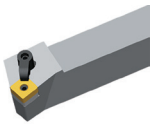
	ISO	r	a_p	f
Basic 	**SNMM190612**	1,2	1,5-10,5	0,2-0,7
	SNMM190616	1,6	0,5-10,5	0,2-1,0
	SNMM250924	2,4	2,0-12,5	0,3-1,2

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L	MSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°	Kr: 75°
						
A242	A244	A245	A246	A256	A257	A258

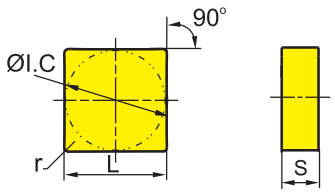
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNUN	L	I.C	S
12 04	12,7	12,7	4,76
19 04	19,05	19,05	4,76

SN** Inserti negativi



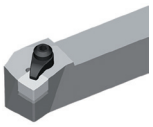
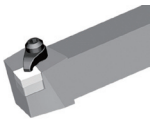
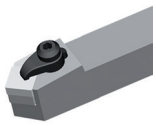
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	○	○	○									○	○		○	○	●		
M							●	○				●	●	○	○	○	○	●	○	○		
K									●	○	○	○										
N													●	●							○	○
S													●	○	○	○	○	○			○	○
H																						

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**SNUN120408**	0,8	0,7-6,0	0,2-0,5											●													
	SNUN120412	1,2	0,7-6,0	0,25-0,60									○		○													
	SNUN190412	1,2	0,9-6,0	0,25-0,60																							○	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

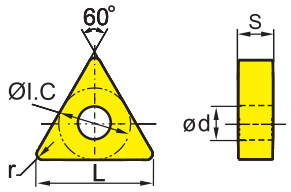
CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
		
A296	A297	A299

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

TN**	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

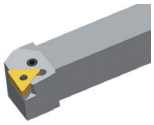
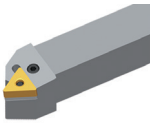
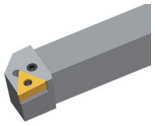
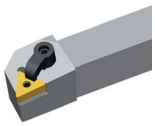
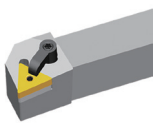
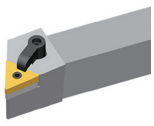


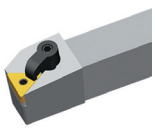
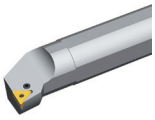
TN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◉	◉	◉											◉	◉		○	◉	○		
M											○	◉					○	○	◉	◉	◉	○	○	○	◉	○		
K													◉	◉	◉	◉												
N																	○	○									○	◉
S																	○	○	◉	◉	◉	◉	○				○	◉
H																												
WG	**TNMX160408-WG**	0,8	0,5-5,0	0,15-0,70			●																					
	TNMX160412-WG	1,2	0,8-6,0	0,20-0,75			○																					
Raschiante																												
ADF	**TNMG160404-ADF**	0,4	0,5-5,0	0,05-0,30		●															●				●			
	TNMG160408-ADF	0,8	0,5-5,0	0,1-0,4		●														○	●				●			
	TNMG160412-ADF	1,2	0,5-5,0	0,2-0,5		●															●							
Finitura																												
DF	**TNMG160404-DF**	0,4	0,15-2,00	0,08-0,25			●		●																			
	TNMG160408-DF	0,8	0,15-2,00	0,1-0,3			●		●																			
	TNMG160412-DF	1,2	0,35-1,50	0,15-0,50			●		●																			
	TNMG220408-DF	0,8	0,3-1,5	0,1-0,4			●		●																			
Finitura	**TNMG220412-DF**	1,2	0,35-1,50	0,15-0,50			●																					

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

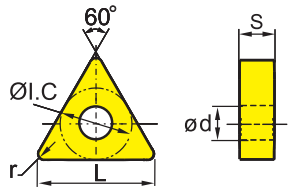
MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81

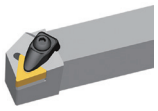
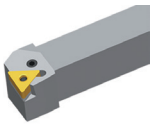
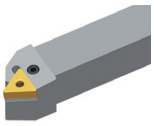
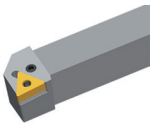
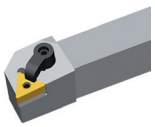
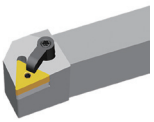
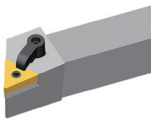


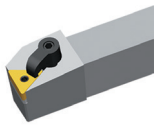
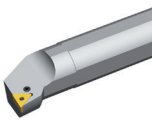
TN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					●	●	●	◉	◉	◉											◉	◉		●	◉	●		
M											○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K													●	◉	◉	◉												
N																	●	●									●	◉
S																	○	○	◉	◉	◉	◉	○				○	◉
H																												
ISO		r	a_p	f																								
SF	**TNMG160404-SF**	0,4	0,05-1,00	0,05-0,30																			○		●		
	TNMG160408-SF	0,8	0,05-1,00	0,05-0,40																					●		
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

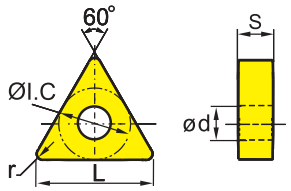
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
11 03	11	6,35	3,18	2,26
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

TN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
M							○	◉				○	○	◉	◉	◉	◉	○	○	◉	○			
K									◉	◉	◉	◉												
N												○	○										○	◉
S												○	○	◉	◉	◉	◉	○					○	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF	**TNMG110304-EF**	0,4	0,1-1,0	0,05-0,20																●								
	TNMG110308-EF	0,8	0,1-1,0	0,05-0,40																●								
	TNMG160404-EF	0,4	0,1-1,5	0,05-0,30							●									●								
	TNMG160408-EF	0,8	0,1-1,5	0,1-0,4							●									●								
	TNMG160412-EF	1,2	0,2-2,5	0,15-0,40							○									●								
	TNMG220404-EF	0,4	0,5-2,5	0,05-0,25							○									●								
	TNMG220408-EF	0,8	0,5-2,5	0,1-0,4							○									●								

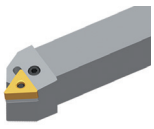
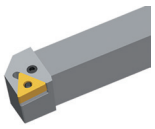
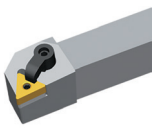
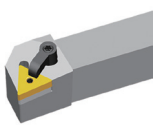
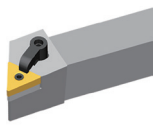


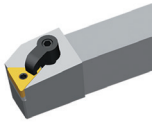
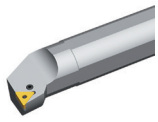
Finitura

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

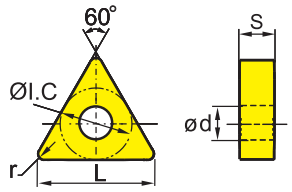
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

TN** Inserti negativi



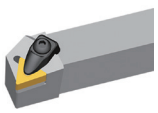
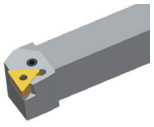
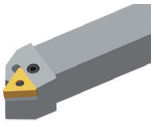
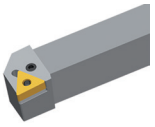
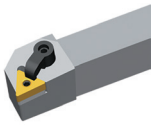
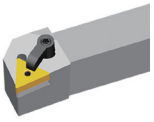
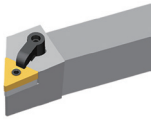
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			◉	◉	○		
M							○	◉						○	○	◉	◉	◉	○	◉	○		
K									○	◉	◉	◉											
N													○	○								○	◉
S													○	○	◉	◉	◉	○				○	◉
H																							

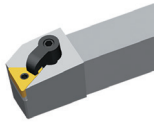
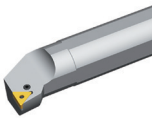
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
FM Finitura	**TNMG160404L-FM**	0,4	0,5-3,0	0,1-0,3					●											●								
	TNMG160404R-FM	0,4	0,5-3,0	0,1-0,3			○		●											●								
	TNMG160408L-FM	0,8	0,5-3,0	0,15-0,50			○		●											●								
	TNMG160408R-FM	0,8	0,5-3,0	0,15-0,50			●		●											●								
XM Media Lavor.	**TNMG160404-XM**	0,4	1-5,6	0,2-0,4	●			○																				
	TNMG160408-XM	0,8	1-5,6	0,2-0,4	●			●																				
	TNMG160412-XM	1,2	1-5,6	0,2-0,6	●			●																				
	TNMG160416-XM	1,6	1-5,6	0,2-0,65	○			●																				
	TNMG220408-XM	0,8	1-7,7	0,2-0,4	●			●																				
	TNMG220412-XM	1,2	1-7,7	0,2-0,6	●			●																				
	TNMG220416-XM	1,6	1-7,7	0,2-0,65	○			●																				

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

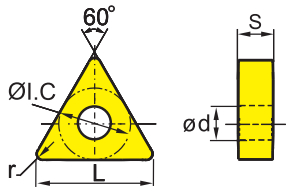
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TNMG	L	I.C	S	d
11 03	11	6,35	3,18	2,26
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

TN** Inserti negativi



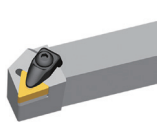
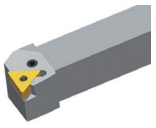
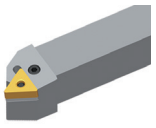
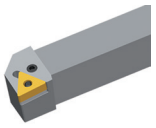
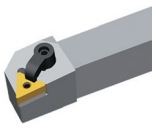
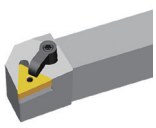
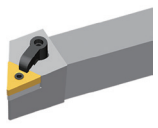
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
M							○	◉					○	○	◉	◉	◉	○	○	◉	○			
K									◉	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	○					○	◉
H																								

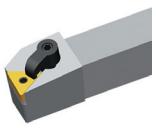
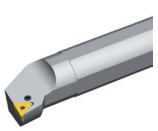
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM	**TNMG110308-DM**	0,8	0,3-3,0	0,1-0,4			○		●																			
	TNMG160404-DM	0,4	0,4-5,0	0,1-0,3			●		●			●																
	TNMG160408-DM	0,8	0,5-5,0	0,15-0,50			●		●			○																
	TNMG160412-DM	1,2	0,8-5,0	0,18-0,60			●		●																			
	TNMG220404-DM	0,4	0,4-6,6	0,1-0,3			●		●																			
Media Lavor.	**TNMG220408-DM**	0,8	0,5-6,6	0,15-0,50			●		●																			
	TNMG220412-DM	1,2	0,8-6,6	0,18-0,60			●		●																			
	TNMG220416-DM	1,6	1,0-6,6	0,23-0,65			●		●																			
PM	**TNMG110304-PM**	0,4	0,4-3,0	0,1-0,3					●																			
	TNMG110308-PM	0,8	0,4-3,0	0,15-0,40					●																			
	TNMG160404-PM	0,4	0,4-5,0	0,1-0,3			●		●				●		●													
	TNMG160408-PM	0,8	0,5-5,0	0,15-0,50			●		●				●		●													
	TNMG160412-PM	1,2	0,8-5,0	0,18-0,60			●		●				○		○													
Media Lavor.	**TNMG220408-PM**	0,8	0,5-6,6	0,15-0,50			○		●				●		●													
	TNMG220412-PM	1,2	0,8-6,6	0,18-0,60			○		●				●		●													
	TNMG220416-PM	1,6	1,0-6,6	0,23-0,65					○						○													

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

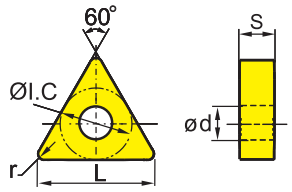
MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81

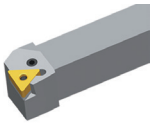
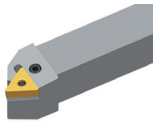
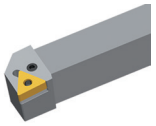
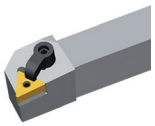
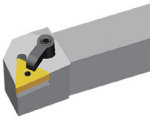
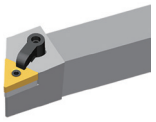


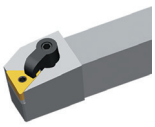
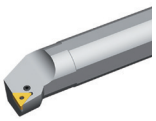
TN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◎	◎	◎										◎	◎			○	◎	○		
M											○	◎					○	○	◎	◎	◎			○	◎	○		
K													○	◎	◎	◎												
N																	○	○									○	◎
S																	○	○	◎	◎	◎						○	◎
H																												
ISO			r	a_p																								
ZM	**TNMG160404-ZM**		0,4	0,5-5,0	0,08-0,30	●																						
	TNMG160408-ZM		0,8	0,5-5,0	0,1-0,4	●																						
	TNMG160412-ZM		1,2	0,5-5,0	0,1-0,6	●																						
Media Lavor.																												
SNR	**TNMG160408-SNR**		0,8	1-5,6	0,1-0,5																	●						
Sgrossatura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

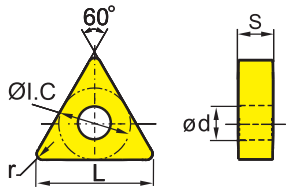
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16

TN** Inserti negativi



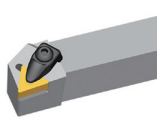
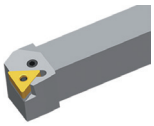
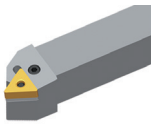
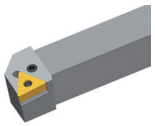
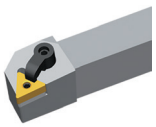
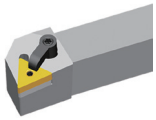
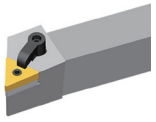
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○		
M							○	◉				○	○	◉	◉	◉	○		○	◉	○		
K									◉	◉	◉	◉											
N												○	○									○	◉
S												○	○	◉	◉	◉	○					○	◉
H																							

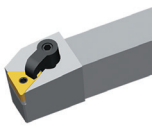
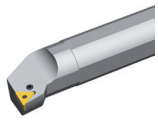
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EG	**TNMG160404-EG**	0,4	0,5-4,0	0,1-0,3																	●							
	TNMG160408-EG	0,8	0,5-4,0	0,1-0,4							●	●								●	●							
	TNMG160412-EG	1,2	0,5-4,0	0,15-0,50								●								●								
Media Lavor.																												
EM	**TNMG160404-EM**	0,4	0,5-4,8	0,05-0,30							●	○								●								
	TNMG160408-EM	0,8	0,5-4,8	0,10-0,45							●	●								●								
	TNMG160412-EM	1,2	0,5-4,8	0,1-0,6							●	●								●								
	TNMG220408-EM	0,8	0,5-6,6	0,10-0,45							●	●								●								
Media Lavor.	**TNMG220412-EM**	1,2	0,5-6,6	0,1-0,6							○	●								●								
	TNMG220416-EM	1,6	0,5-6,6	0,10-0,65								●								●								
TC	**TNMG160404-TC**	0,4	0,5-3,0	0,05-0,20										●		●												
	TNMG160408-TC	0,8	0,5-3,0	0,08-0,25										●		●												
	TNMG160412-TC	1,2	1-3	0,1-0,3										●		●												
	TNMG220412-TC	1,2	1-6	0,15-0,40										●		●												
Media Lavor.	**TNMG220416-TC**	1,6	1-6	0,2-0,5										●														

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

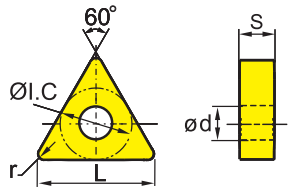
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16
27 06	27,5	15,875	6,35	6,35

TN** Inserti negativi



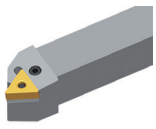
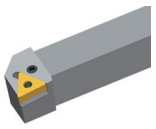
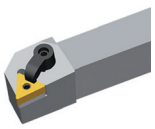
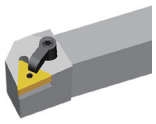
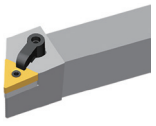
	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉								◉	◉		○	◉	○		
M						○	◉				○	○	◉	◉	◉	○	○	◉	○		
K								○	◉	◉	◉										
N											○	○								○	◉
S											○	○	◉	◉	◉	○				○	◉
H																					

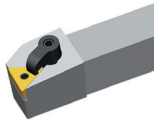
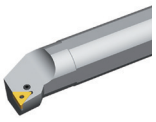
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR Sgrossatura	**TNMG160408-DR**	0,8	0,7-6,0	0,20-0,55			●		●				●		●													
	TNMG160412-DR	1,2	1-6	0,25-0,65			●		●				○		●													
	TNMG220408-DR	0,8	0,7-7,0	0,20-0,55					●						○													
	TNMG220412-DR	1,2	1-7	0,25-0,65			○		●						●													
	TNMG220416-DR	1,6	1,5-7,0	0,32-0,75					●				○		●													
	TNMG270608-DR	0,8	1,5-12,0	0,35-0,55																								
	TNMG270612-DR	1,2	2-12	0,35-0,75					○																			

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

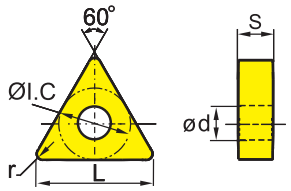
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TN**	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16
27 06	27,5	15,875	6,35	5,16

TN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○			
M							○	◉					○	○	◉	◉	◉	○	○	◉	○			
K									○	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	○					○	◉
H																								

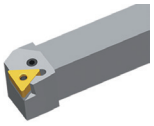
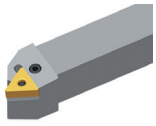
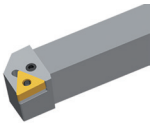
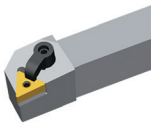
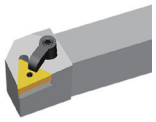
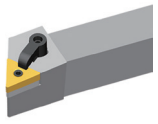
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DR Sgrossatura	**TNMM160408-DR**	0,8	0,7-6,0	0,20-0,55			○		●																			
	TNMM160412-DR	1,2	1-6	0,25-0,70			○																					
	TNMM220408-DR	0,8	0,7-8,0	0,20-0,55			○		○																			
	TNMM220412-DR	1,2	1-8	0,25-0,70					●																			
	TNMM220416-DR	1,6	1,5-8,0	0,32-0,90					○																			
	TNMM270612-DR	1,2	2,5-11,0	0,25-0,70					○																			
	TNMM270616-DR	1,6	2,5-11,0	0,3-0,9					○																			
ER Sgrossatura	**TNMG160408-ER**	0,8	2,0-5,6	0,15-0,55								○																
	TNMG160412-ER	1,2	2,0-5,6	0,15-0,60								○																
	TNMG220408-ER	0,8	2,0-7,7	0,15-0,55								○																
	TNMG220412-ER	1,2	2,0-7,7	0,15-0,60								○																
LR Sgrossatura	**TNMM160408-LR**	0,8	1-5	0,1-0,5			●		●			●																
	TNMM160412-LR	1,2	1,5-6,0	0,1-0,6			○		○			○																

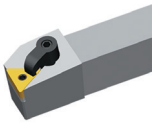
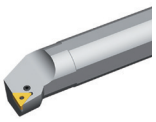
● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

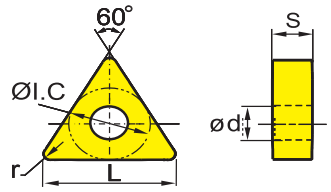
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMM	L	I.C	S	d
22 04	22	12,7	4,76	5,16
27 06	27,5	15,875	6,35	6,35

TN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◍	◍	◍									◍	◍			○	◍	○		
M							○	◍				○	○	◍	◍	◍	◍	○	○	◍	○		
K									◍	◍	◍	◍											
N												○	○									○	◍
S												○	○	◍	◍	◍	◍	○				○	◍
H																							

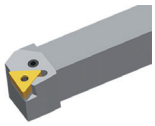
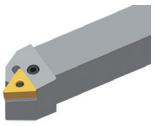
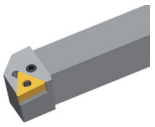
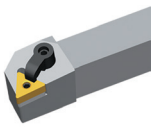
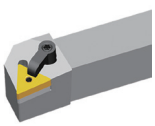
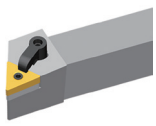
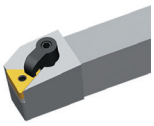
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HDR	**TNMM220412-HDR**	1,2	2-9	0,25-0,80			○																					
	TNMM220416-HDR	1,6	2-9	0,35-1,00					○																			
	TNMM270616-HDR	1,6	2-6	0,35-1,00					●																			
Alta asp.	**TNMM270624-HDR**	2,4	2-7	0,4-1,2					●			○																

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L	MTFNR/L
Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°	Kr: 91°
						
A247	A248	A249	A260	A261	A262	A263

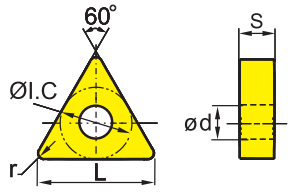
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNMG	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16
27 06	27,5	15,875	6,35	6,35
33 09	33	19,05	9,525	7,94

TN** Inserti negativi

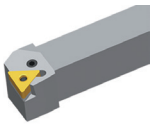
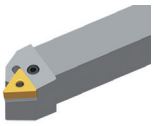
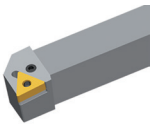
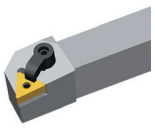
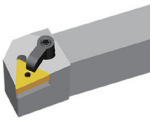
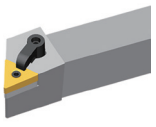


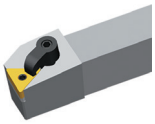
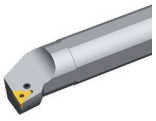
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					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
	P				●	●	●	◉	◉	❁											◉	◉		◉	◉	●		
	M										○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
	K												●	◉	◉	❁												
	N																●	●									●	◉
	S																○	○	◉	◉	◉	◉	○				○	◉
	H																											
Basic	**TNMG160404**	0,4	0,2-4,0	0,05-0,20					○																			
	TNMG160408	0,8	0,2-4,0	0,08-0,30			●		●																			
	TNMG160412	1,2	0,2-4,0	0,1-0,4			●																					
	TNMG220404	0,4	0,2-6,0	0,05-0,20					○																			
	TNMG220408	0,8	0,2-6,0	0,1-0,3																								
	TNMG220416	1,6	0,2-6,0	0,1-0,5					○																			
Media Lavor.	**TNMG270612**	1,2	0,2-9,0	0,1-0,5					○																			
	TNMG270616	1,6	0,2-9,0	0,1-0,5					○																			
	TNMG330916	1,6	0,2-11,0	0,1-0,5					○																			
	TNMG330924	2,4	0,2-11,0	0,1-0,7																								

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

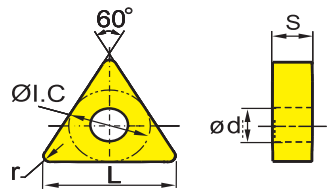
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TN**	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81
22 04	22	12,7	4,76	5,16
27 06	27,5	15,875	6,35	6,35

TN** Inserti negativi



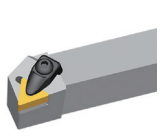
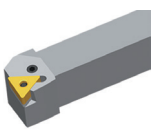
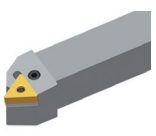
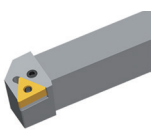
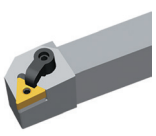
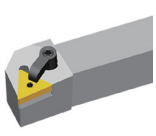
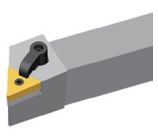
	HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		○	◉	○		
M							○	◉						○	○	◉	◉	◉	○	○		
K									●	◉	◉	◉										
N													○	○							○	◉
S													○	○	◉	◉	◉	○			○	◉
H																						

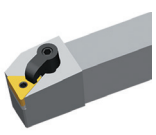
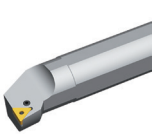
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**TNMA160404**	0,4	0,2-4,0	0,05-0,20									○		●													
	TNMA160408	0,8	0,2-4,0	0,08-0,30									●	●	●													
	TNMA160412	1,2	0,2-4,0	0,1-0,4									○		●													
	TNMA160416	1,6	0,5-4,0	0,05-0,50									○		○													
	TNMA220404	0,4	0,2-6,0	0,05-0,20											●													
	TNMA220408	0,8	0,2-6,0	0,1-0,3									●		●													
	TNMA220412	1,2	0,2-6,0	0,1-0,4											●	●												
	TNMA220416	1,6	0,2-6,0	0,1-0,5												○												
Basic	**TNMM160404**	0,4	0,2-7,0	0,05-0,60					○																			
	TNMM160408	0,8	0,5-7,0	0,05-0,60					○																			
	TNMM220408	0,8	0,5-7,0	0,05-0,60					○																			
	TNMM220412	1,2	1-7	0,1-0,6																								
	TNMM220416	1,6	0,5-7,0	0,05-0,60					○																			
	TNMM270616	1,6	0,5-6,5	0,05-0,70					○																			

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

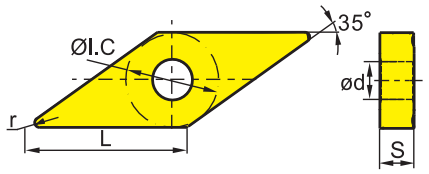
MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VN**	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

Inserti - Tornitura

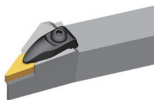
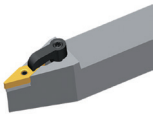
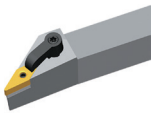


VN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					P																					
					M																					
					K																					
					N																					
					S																					
					H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ADF	**VNMG160404-ADF**	0,4	0,5-2,5	0,1-0,3		●															●							
	VNMG160408-ADF	0,8	0,5-2,5	0,1-0,5		●															●							
Finitura																												
DF	**VNMG160404-DF**	0,4	0,25-1,50	0,07-0,30			○		●																			
	VNMG160408-DF	0,8	0,3-1,5	0,1-0,4			●		●																			
Finitura																												
EF	**VNMG160404-EF**	0,4	0,1-1,5	0,05-0,25							●									●								
	VNMG160408-EF	0,8	0,2-2,5	0,08-0,35							●									●								
	VNMG160412-EF	1,2	0,2-2,5	0,10-0,45							○																	
Finitura																												
NF	**VNEG160404-NF**	0,4	0,2-4,0	0,05-0,30															●								○	
	VNEG160408-NF	0,8	0,2-4,0	0,05-0,50															●								○	
Finitura																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

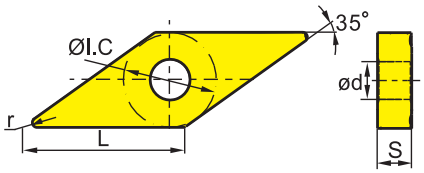
DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VN**	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

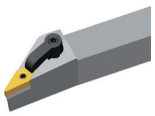


VN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◎	◎	◎										◎	◎			○	◎	○		
M											○	◎					○	○	◎	◎	◎	◎	○	○	◎	○		
K													●	◎	◎	◎												
N																	●	●									◎	◎
S																	●	●	◎	◎	◎	◎	●				●	◎
H																												
ISO		r	a_p	f																								
NGF	**VNEG160408-NGF**	0,8	0,2-3,0	0,1-0,3															●									
	VNEG160412-NGF	1,2	0,2-3,0	0,1-0,5															○									
Finitura																												
SF	**VNMG160404-SF**	0,4	0,05-3,00	0,05-0,20																						●		
	VNMG160408-SF	0,8	0,05-3,00	0,05-0,35																						○		
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

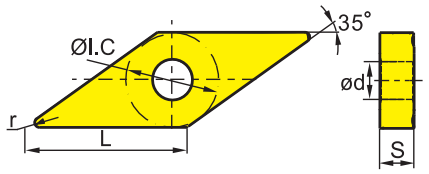
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VNMG	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

VN** Inserti negativi



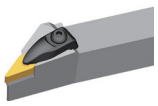
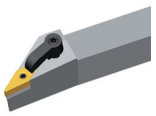
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○		
M							○	◉				○	○	◉	◉	◉	○	○	◉	○			
K									○	◉	◉	◉											
N												○	○									○	◉
S												○	○	◉	◉	◉	○					○	◉
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
XF	**VNMG160404-XF**	0,4	0,5-2,5	0,1-0,25	●																							
	VNMG160408-XF	0,8	0,5-2,5	0,1-0,30	●																							
	VNMG160412-XF	1,2	0,5-2,5	0,1-0,35	●																							
Finitura																												
XM	**VNMG160404-XM**	0,4	1-5,6	0,2-0,4	●			○																				
	VNMG160408-XM	0,8	1-5,6	0,2-0,4	●			●																				
	VNMG160412-XM	1,2	1-5,6	0,2-0,6	●			●																				
Media Lavor.	**VNMG160416-XM**	1,6	1-5,6	0,2-0,65	○			○																				

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

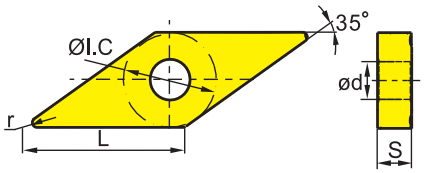
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VNMG	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

VN** Inserti negativi



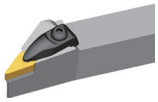
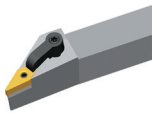
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							◐	◉					◐	●	◉	◉	◉	◉	●	◐	◉	●		
K									◉	◉	◉	◉												
N													●	●									●	◉
S													●	●	◉	◉	◉	◉	●				●	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**VNMG160404**	0,4	0,2-6,0	0,05-0,60			○																					
	VNMG160408	0,8	0,2-6,0	0,08-0,60			○																					
Media Lavor.																												
DM	**VNMG160408-DM**	0,8	0,5-4,0	0,15-0,50			●		●																			
	VNMG160412-DM	1,2	0,8-4,0	0,18-0,60			●		●																			
Media Lavor.																												
EM	**VNMG160404-EM**	0,4	0,2-3,0	0,05-0,30							●									●								
	VNMG160408-EM	0,8	0,5-4,0	0,10-0,45							●									●								
Media Lavor.																												
NM	**VNMG160412-NM**	1,2	0,2-4,0	0,05-0,40															●									
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

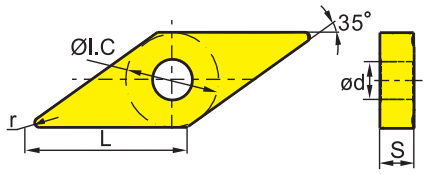
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VNMG	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

VN** Inserti negativi



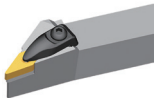
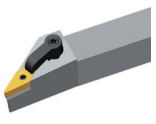
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		○	◉	○		
M							○	◉				○	○	◉	◉		○	◉	○			
K									○	◉	◉	◉										
N												○	○								○	◉
S													○	○	◉	◉					○	◉
H																						

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
PM	**VNMG160404-PM**	0,4	0,4-4,0	0,13-0,40			●		●				●		○													
	VNMG160408-PM	0,8	0,5-4,0	0,15-0,50			●		●				●		●													
	VNMG160412-PM	1,2	0,8-4,0	0,18-0,60					●				●															
Media Lavor.																												
TC	**VNMG160404-TC**	0,4	0,5-2,0	0,05-0,20										●		●												
	VNMG160408-TC	0,8	0,5-2,0	0,08-0,25										●		●												
	VNMG160412-TC	1,2	0,5-3,0	0,08-0,30										●		●												
Media Lavor.																												
ZM	**VNMG160404-ZM**	0,4	0,5-3,0	0,08-0,30		○																						
	VNMG160408-ZM	0,8	0,5-3,0	0,1-0,4		●																						
Media Lavor.																												
SNR	**VNMG160408-SNR**	0,8	0,2-2,0	0,1-0,4															●		○	●						
	VNMG160412-SNR	1,2	0,2-2,0	0,1-0,5															●		○	●						
Sgrossatura																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

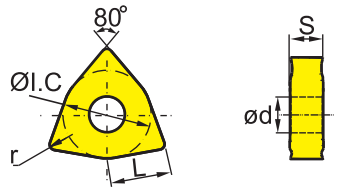
DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

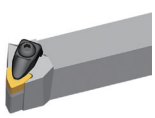
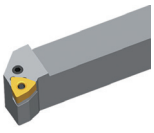
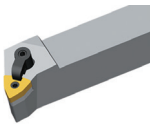


WN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
ADF		**WNMG080404-ADF**	0,4	0,2-2,5	0,05-0,30		●															●			●			
		WNMG080408-ADF	0,8	0,5-2,5	0,05-0,40		●														○	●			●			
		WNMG080412-ADF	1,2	0,5-2,5	0,05-0,50		●															●						
Finitura																												
DF		**WNMG060404-DF**	0,4	0,15-2,00	0,08-0,25			●		●																		
		WNMG060408-DF	0,8	0,15-2,00	0,1-0,3			●		●																		
		WNMG080404-DF	0,4	0,15-2,00	0,08-0,25			●		●																		
		WNMG080408-DF	0,8	0,15-2,00	0,1-0,3			●		○																		
Finitura		**WNMG080412-DF**	1,2	0,2-2,5	0,10-0,35			●		●																		
SF		**WNMG060404-SF**	0,4	0,05-0,50	0,05-0,20																					●		
		WNMG060408-SF	0,8	0,05-0,50	0,05-0,35																					●		
		WNMG06T304-SF	0,4	0,05-0,50	0,05-0,20																					●		
		WNMG06T308-SF	0,8	0,05-0,50	0,05-0,35																					●		
		WNMG080404-SF	0,4	0,05-0,50	0,05-0,20																					●		
Finitura		**WNMG080408-SF**	0,8	0,05-0,50	0,05-0,35																					●		

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

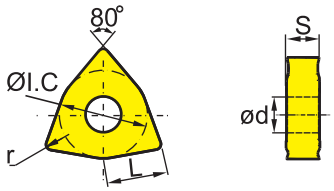
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

WN**	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** Inserti negativi



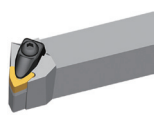
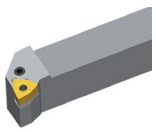
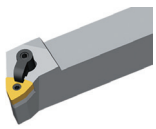
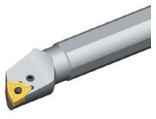
		ISO	r	a_p	f	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
						YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
WG		**WNMG080408-WG**	0,8	0,5-5,0	0,15-0,70			●		●																		
		WNMG080412-WG	1,2	0,8-6,0	0,20-0,75			●		○																		
Raschiante																												
EF		**WNMG060404-EF**	0,4	0,1-1,5	0,05-0,30							○								●								
		WNMG060408-EF	0,8	0,1-1,5	0,1-0,4							○								●								
		WNMG06T308-EF	0,8	0,1-1,5	0,1-0,4															●								
		WNMG080404-EF	0,4	0,1-1,5	0,05-0,30							●								●								
Finitura		**WNMG080408-EF**	0,8	0,1-1,5	0,1-0,4							●							○		●								
NF		**WNEG080404-NF**	0,4	0,2-3,0	0,05-0,30														○	●								
		WNEG080408-NF	0,8	0,2-2,5	0,05-0,30															●								
Finitura																												
NF		**WNMG060408-NF**	0,8	0,2-2,5	0,05-0,30															●								
Finitura																												

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

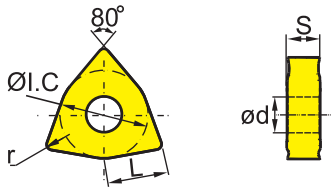
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

WNMG	L	I.C	S	d
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

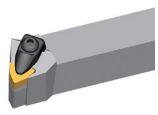
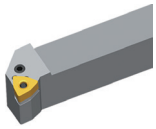
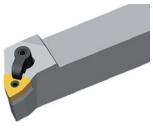


WN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO	r	a_p	f																								
XF	**WNMG060404-XF**	0,4	0,5-2,0	0,1-0,25	●																							
	WNMG060408-XF	0,8	0,5-2,0	0,1-0,30	●																							
	WNMG080408-XF	0,8	0,5-2,5	0,1-0,30	●																							
	WNMG080412-XF	1,2	0,5-2,5	0,1-0,35	●																							
Schlichten																												
XM	**WNMG060404-XM**	0,4	1-2,1	0,2-0,4	●			○																				
	WNMG060408-XM	0,8	1-2,1	0,2-0,4	●			●																				
	WNMG060412-XM	1,2	1-2,1	0,2-0,6	●			●																				
	WNMG080404-XM	0,4	1-2,8	0,2-0,4	●			●																				
	WNMG080408-XM	0,8	1-2,8	0,2-0,4	●			●																				
Mittl. Bearb.	**WNMG080412-XM**	1,2	1-2,8	0,2-0,6	●			●																				
	WNMG080416-XM	1,6	1-2,8	0,2-0,65	○			○																				

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

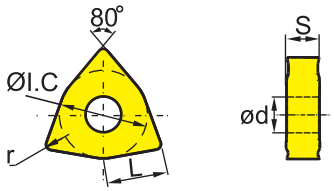
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

WNMG	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

WN** Inserti negativi



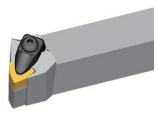
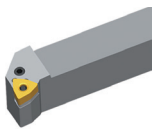
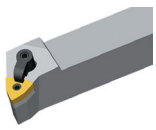
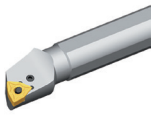
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		○	◉	○		
M							○	◉					○	○	◉	◉	○	○	◉	○		
K									○	◉	◉	◉										
N													○	○							○	◉
S													○	○	◉	◉	◉	○			○	◉
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
DM Media Lavor.	**WNMG060408-DM**	0,8	0,5-3,0	0,15-0,50			●		●																			
	WNMG060412-DM	1,2	0,8-3,0	0,18-0,60		○	●		●																			
	WNMG06T308-DM	0,8	0,5-3,0	0,15-0,15					○																			
	WNMG080404-DM	0,4	0,5-4,0	0,1-0,4			●		●																			
	WNMG080408-DM	0,8	0,5-4,0	0,15-0,50		○	●		●	●		●																
	WNMG080412-DM	1,2	0,8-4,0	0,18-0,60		○	●		●																			
	WNMG080416-DM	1,6	1-4	0,23-0,65			●		●																			
EG Media Lavor.	**WNMG080408-EG**	0,8	0,5-4,0	0,05-0,40							○	●								●	●							
	WNMG080412-EG	1,2	0,5-4,0	0,05-0,60							○	●								●	●							
EM Media Lavor.	**WNMG060404-EM**	0,4	0,5-3,0	0,05-0,30							○	●								●								
	WNMG060408-EM	0,8	0,5-3,0	0,1-0,5							●	●								●								
	WNMG06T304-EM	0,4	0,5-3,0	0,05-0,30							●																	
	WNMG06T308-EM	0,8	0,5-3,0	0,1-0,5							●																	
	WNMG06T312-EM	1,2	0,5-3,0	0,1-0,7							○									○								
	WNMG080404-EM	0,4	1-4	0,05-0,30							●	●								●								
	WNMG080408-EM	0,8	1-4	0,1-0,5							●	●								●								
	WNMG080412-EM	1,2	1-4	0,1-0,7							●	●								●								

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

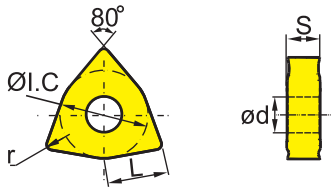
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

WNMG	L	I.C	S	d
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

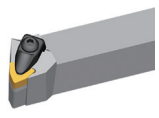
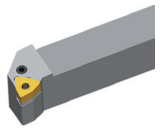
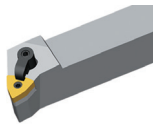
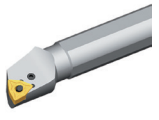


WN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO		r	a_p	f																							
PM	**WNMG060408-PM**		0,8	0,5-3,0	0,15-0,50		●		●				●		●													
	WNMG060412-PM		1,2	0,8-3,0	0,18-0,60		●		○				○															
	WNMG080404-PM		0,4	0,4-4,0	0,12-0,40		●		●				●		●													
	WNMG080408-PM		0,8	0,5-4,0	0,15-0,50		●		●	●			●		●													
Media Lavor.	**WNMG080412-PM**		1,2	0,8-4,0	0,18-0,60		●		●				●		●													
	WNMG080416-PM		1,6	1-4	0,23-0,65				●				●		●													
ZM	**WNMG080408-ZM**		0,8	0,5-4,0	0,1-0,5	●																						
	WNMG080412-ZM		1,2	1,0-5,5	0,15-0,60	●																						
Media Lavor.																												
SNR	**WNMG080408-SNR**		0,8	1-3	0,1-0,5														○			●	○					
	WNMG080412-SNR		1,2	1-3	0,2-0,6																	●						
Sgrossatura																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

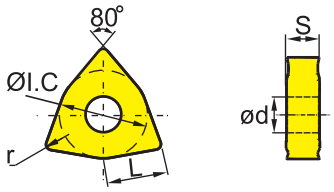
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

WNMG	L	I.C	S	d
08 04	8,7	12,7	4,76	5,16

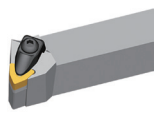
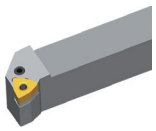
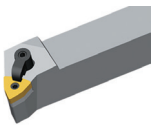
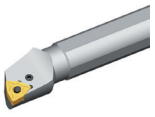


WN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
				P	●	●	●	◉	◉	◉									◉	◉			●	◉	●		
				M							●	◉				●	●	◉	◉	◉	◉	●	◉	●		
				K									◉	◉	◉	◉											
				N												●	●									●	◉
				S												●	●	◉	◉	◉	●					●	◉
				H																							
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
NM	**WNMG080404-NM**		0,4	0,2-3,0	0,05-0,30													●									
	WNMG080408-NM		0,8	0,2-3,0	0,1-0,3												●	●	○								
	WNMG080412-NM		1,2	0,2-4,0	0,1-0,4												●	●									
Media Lavor.																											
TC	**WNMG080404-TC**		0,4	0,5-3,0	0,08-0,25									●		○											
	WNMG080408-TC		0,8	0,5-4,0	0,15-0,40									●		●											
	WNMG080412-TC		1,2	0,5-4,0	0,2-0,6									●		●											
Media Lavor.																											
TK	**WNMG080408-TK**		0,8	0,2-0,4	0,2-0,4									●													
	WNMG080412-TK		1,2	0,2-0,4	0,2-0,45									○													
	WNMG080416-TK		1,6	0,2-0,4	0,2-0,5									○													
Media Lavor.																											

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

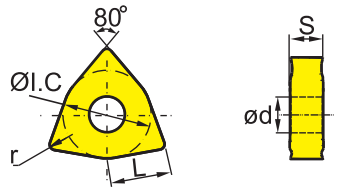
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

WN**	L	I.C	S	d
06 T3	6,5	9,525	3,97	3,81
06 04	6,5	9,525	4,76	3,81
08 04	8,7	12,7	4,76	5,16

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

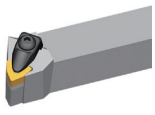
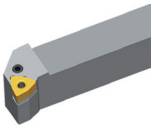
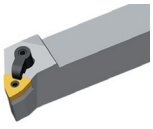


WN** Inserti negativi					HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO		r	a_p	f																							
DR	**WNMG060408-DR**		0,8	0,7-3,5	0,20-0,45		●		●				●		●													
	WNMG060412-DR		1,2	0,8-3,5	0,25-0,55		●		●				○		○													
	WNMG080408-DR		0,8	0,7-5,0	0,20-0,55		●		●	●			●		●													
	WNMG080412-DR		1,2	1-5	0,25-0,70	○	●		●	●			●		●													
Sgrossatura	**WNMG080416-DR**		1,6	1,5-5,0	0,32-0,75		○		●				●		○													
Flat	**WNMA060408**		0,8	0,5-3,0	0,1-0,3								●		●													
	WNMA060412		1,2	0,5-3,0	0,15-0,30										●													
	WNMA06T308		0,8	0,5-3,0	0,1-0,3																							
	WNMA080404		0,4	0,5-4,0	0,08-0,25								○		●	○												
	WNMA080408		0,8	0,5-4,0	0,15-0,30								●		●	●												
	WNMA080412		1,2	0,5-5,0	0,15-0,30								●	○	●	●												
	WNMA080416		1,6	0,5-5,0	0,2-0,5								○	○		○												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

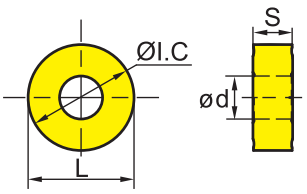
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RNMG	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16

RN** Inserti negativi



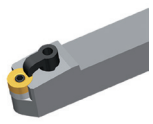
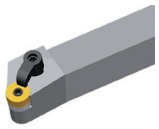
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	○	○	○									○	○		●	○	●		
M							●	○				●	●	○	○	○	●	●	○	●		
K									●	○	○	○										
N													●	●							●	○
S													●	●	○	○	●				●	○
H																						

	ISO	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**RNMG120400**	0,5-7,0	0,1-1,8											○	○												
Media Lavor.																											

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

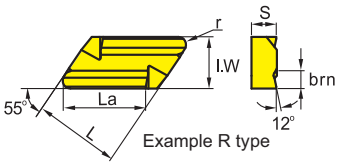
MRDNN	MRGNR/L
	
A267	A268

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

KNUX	L	I.W	S
16 04		9,525	4,76



KN** Inserti negativi		HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	P	○	○	○	◐	◐	◐									◐	◐			○	◐	○		
	M							○	◐					○	○	◐	◐	◐	○	○	◐	○		
	K									◐	◐	◐	◐											
	N													○	○								◐	◐
	S													○	○	◐	◐	◐	○				◐	◐
	H																							

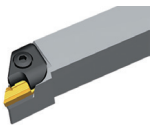
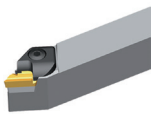
ISO		La	brn	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YB5103	YNG151	YNT251	YNG151C	YD101	YD201
KNUX	**KNUX160405L11**	16	2,2	0,5	0,2-6,0	0,05-0,70					●																		○	
	KNUX160405L12	16	2,2	0,5	0,2-6,0	0,05-0,70																								
	KNUX160405R11	16	2,2	0,5	0,2-6,0	0,05-0,70					●																		○	
	KNUX160405R12	16	2,2	0,5	0,2-6,0	0,05-0,70																								
	KNUX160410L11	16	2,2	1	0,2-6,0	0,05-0,70																								
Finitura	**KNUX160410L12**	16	2,2	1	0,2-6,0	0,05-0,70			○																					
	KNUX160410R11	16	2,2	1	0,2-6,0	0,05-0,70					●																			
	KNUX160410R12	16	2,2	1	0,2-6,0	0,05-0,70																								

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

CKJNR/L	CKNNR/L
Kr: 93°	Kr: 63°
	
A290	A291

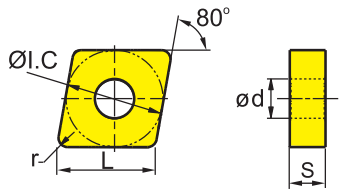
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CN**	L	I.C	S	d
19 07	19,3	19,05	7,94	7,93
19 11	19,3	19,05	11	7,8

CN** Inserti negativi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◔	◔	◔									◔	◔		○	◔	○		
M							○	◔				○	○	◔	◔	◔	○	○	◔	○		
K									○	◔	◔	◔										
N												○	○								○	◔
S													○	○	◔	◔	◔	○			○	◔
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
RF	**CNMG191140-RF**	4	1,0-5,5	0,20-0,60			●																					
Finitura																												
RF	**CNMM190740-RF**	4	1,0-5,5	0,20-0,60			●																					
	CNMM191140-RF	4	1,0-5,5	0,20-0,60			●																					
Finitura																												
RH	**CNMM190740-RH**	4	1,5-7,0	0,35-1,20			●		●																			
	CNMM191140-RH	4	1,5-7,0	0,35-1,20			●		●																			
Sgrossatura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

PCLNR/L

Kr: 95°



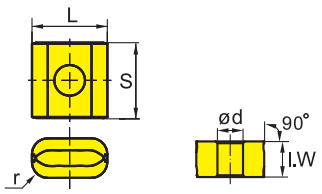
A318

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

LNUX	L	I.C	S	d
19 19	19,05	10	19,05	6,35
30 19	30	10	19,05	6,35

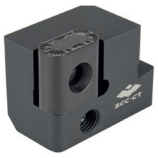


LN** Inserti negativi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◌	◌	◌										◌	◌			○	◌	○		
M											○	◌					○	○	◌	◌	◌	◌	○	○	◌	○		
K													○	◌	◌	◌												
N																	○	○									◌	◌
S																	○	○	◌	◌	◌	◌	○				○	◌
H																												
ISO		r	a_p	f																								
RF	**LNUX191940-RF**	4	1,0-5,5	0,20-0,60			●		●																			
	LNUX301940-RF	4	1,0-6,0	0,20-0,70			●		○																			
Alta asp.																												
RH	**LNUX191940-RH**	4	1,5-7,0	0,35-1,20			●		●																			
	LNUX301940-RH	4	1,5-8,0	0,35-1,40			●		●																			
Alta asp.																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

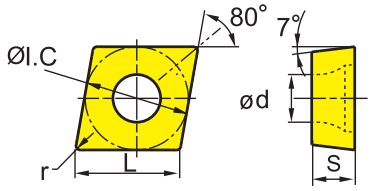
PLANR/L	PLFNR/L
Kr: 90°	Kr: 90°
	
A316	A317

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CCGT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4

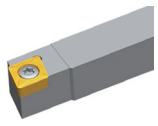
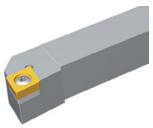
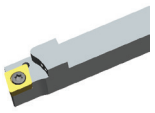
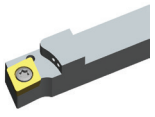
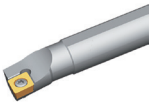
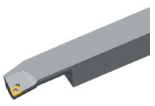


CC** Inserti positivi					HC¹ (CVD)									HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	P				○	○	○	◉	◉	◉											◉			○	◉	○		
	M										○	◉					○	○			◉	◉	◉	○	◉	○		
	K												◉	◉	◉	◉												
	N																○	○									○	◉
	S																○	○			◉	◉	○				○	◉
	H																											
ISO			r	a_p	f																							
SF	**CCGT060202-SF**		0,2	0,05-2,00	0,05-0,18																			●		●		
	CCGT060204-SF		0,4	0,05-2,00	0,05-0,35																			●	●	●		
	CCGT09T304-SF		0,4	0,05-2,00	0,05-0,35																			●	●	●		
Finitura																												
USF	**CCGT060202L-USF**		0,2	0,05-2,00	0,05-0,18															○								
	CCGT060204L-USF		0,4	0,05-2,00	0,05-0,35															○								
	CCGT09T301L-USF		0,1	0,2-2,0	0,01-0,08																●							
	CCGT09T302L-USF		0,2	0,2-2,0	0,05-0,18															●								
Finitura	**CCGT09T304L-USF**		0,4	0,2-2,0	0,05-0,20															○								
USF	**CCGT09T304R-USF**		0,4	0,2-2,0	0,05-0,20															○								
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	S***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

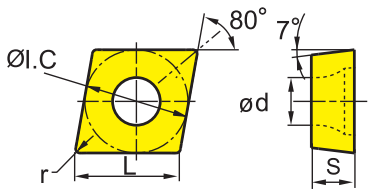
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CCMT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

CC** Inserti positivi



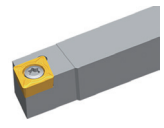
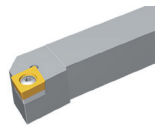
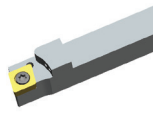
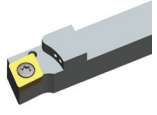
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K									○	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**CCMT060204-AHF**	0,4	0,2-2,5	0,05-0,20		●															●		●	●				
	CCMT060208-AHF	0,8	0,3-2,5	0,05-0,30		○															●							
	CCMT09T302-AHF	0,2	0,08-2,00	0,04-0,15																						●		
	CCMT09T304-AHF	0,4	0,2-3,0	0,05-0,30		●														○	●		○		●			
	CCMT09T308-AHF	0,8	0,3-3,0	0,05-0,40		●														○	●				●			
Finitura	**CCMT120404-AHF**	0,4	0,5-4,0	0,05-0,30		○														○	●							
	CCMT120408-AHF	0,8	0,8-4,0	0,08-0,40		●															●							
HF	**CCMT060202-HF**	0,2	0,06-1,70	0,03-0,11			●		●																			
	CCMT060204-HF	0,4	0,1-1,7	0,05-0,17			●		●						○													
	CCMT060208-HF	0,8	0,1-1,7	0,05-0,30			○		●																	●		
	CCMT09T302-HF	0,2	0,08-2,00	0,04-0,15			●		●															○				
	CCMT09T304-HF	0,4	0,11-2,00	0,06-0,23			●		●				○		●													
Finitura	**CCMT09T308-HF**	0,8	0,15-2,00	0,08-0,30			●		●				○		●													
	CCMT120404-HF	0,4	0,14-2,40	0,07-0,27			●		●																			
	CCMT120408-HF	0,8	0,2-3,0	0,08-0,30			●		○																			

● In magazino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E*-SCLCR/L**
Kr: 95°

A355

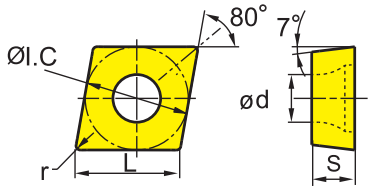
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CCMT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

CC** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◎	◎	◉									◎	◎		○	◎	○		
M						○	◎						○	○	◎	◎	◎	○	◎	○		
K								●	◎	◎	◎											
N												●	●								●	◎
S												●	●	◎	◎	◎	●				●	◎
H																						

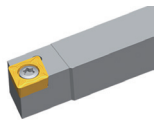
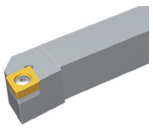
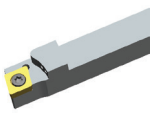
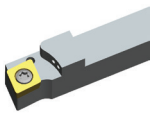
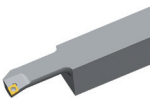
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF Finitura	**CCMT060202-EF**	0,2	0,06-1,70	0,03-0,11							●									●								
	CCMT060204-EF	0,4	0,1-1,7	0,05-0,17							●									●								
	CCMT09T302-EF	0,2	0,08-2,00	0,04-0,15							○									●								
	CCMT09T304-EF	0,4	0,11-2,00	0,06-0,23							●								○	●								
	CCMT09T308-EF	0,8	0,15-2,00	0,08-0,30							●								○	●								
	CCMT120404-EF	0,4	0,14-2,40	0,07-0,27							●									●								
	CCMT120408-EF	0,8	0,2-3,0	0,1-0,3							●									●								
XF Finitura	**CCMT060202-XF**	0,2	0,5-1,5	0,08-0,15				●																				
	CCMT060208-XF	0,8	0,5-1,5	0,08-0,20	●																							
	CCMT09T302-XF	0,2	0,5-2,0	0,08-0,15	●			●																				
	CCMT09T308-XF	0,8	0,5-2,0	0,08-0,25	●			○																				

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

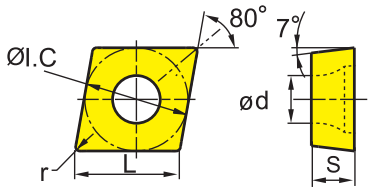
A355

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CCMT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

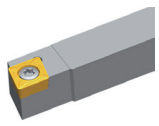
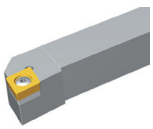
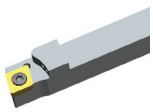
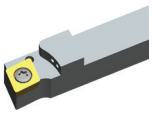


CC** Inserti positivi					HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
	ISO		r	a_p	f																							
EM	**CCMT060204-EM**		0,4	0,2-2,4	0,06-0,17						●	●								●								
	CCMT060208-EM		0,8	0,4-2,4	0,08-0,23						●	○								●								
	CCMT09T304-EM		0,4	0,25-3,00	0,08-0,23						●	●								●								
	CCMT09T308-EM		0,8	0,5-3,0	0,1-0,3						●	●								●								
	CCMT120404-EM		0,4	0,3-3,6	0,09-0,27							●								●								
	CCMT120408-EM		0,8	0,6-3,6	0,12-0,36						●	●								●								
Media Lavor.	**CCMT120412-EM**		1,2	0,72-3,60	0,14-0,43							○																
XM	**CCMT09T304-XM**		0,4	1-2,5	0,15-0,3	●		○																				
	CCMT09T308-XM		0,8	1-2,5	0,15-0,35	●		●																				
	CCMT09T312-XM		1,2	1-2,5	0,15-0,4	●		●																				
	CCMT120404-XM		0,4	1-3,0	0,15-0,3	○		○																				
Media Lavor.	**CCMT120408-XM**		0,8	1-3,0	0,15-0,35	○		○																				
	CCMT120412-XM		1,2	1-3,0	0,15-0,4	○		○																				

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

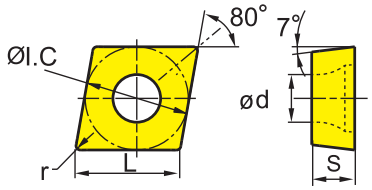
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CCMT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

CC** Inserti positivi



	HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉								◉	◉		○	◉	○		
M						○	◉				○	○	◉	◉	◉	○	○	◉	○		
K								○	◉	◉											
N											○	○								○	◉
S											○	○	◉	◉	◉	○				○	◉
H																					

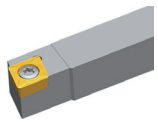
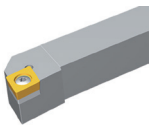
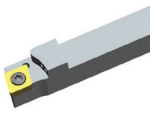
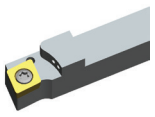
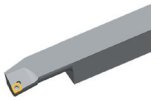
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HM	**CCMT060204-HM**	0,4	0,2-2,4	0,06-0,17			●		●			●	●		●													
	CCMT060208-HM	0,8	0,2-3,0	0,08-0,20			●		●				●		●													
	CCMT09T304-HM	0,4	0,25-3,00	0,08-0,23			●		●			●	●		●													
	CCMT09T308-HM	0,8	0,5-3,0	0,1-0,3			●		●			●	●		●													
	CCMT120404-HM	0,4	0,3-3,6	0,09-0,27			●		●				○		●													
	CCMT120408-HM	0,8	0,6-3,6	0,12-0,36			●		●				●		●													
	CCMT120412-HM	1,2	0,72-3,60	0,14-0,43			●		○				○															

Media Lavor.

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

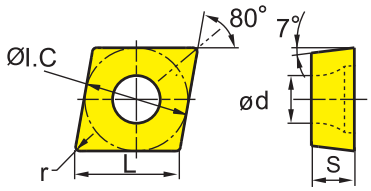
E*-SCLCR/L**
Kr: 95°

A355

CC**	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli



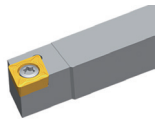
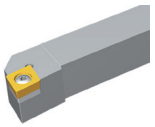
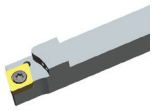
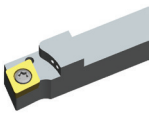
CC** Inserti positivi					HC¹ (CVD)										HC¹ (PVD)							HT		HC²		HW		
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201		
P					●	●	●	◉	◉	◉										◉	◉			●	◉	●				
M											○	◉					○	○	◉	◉	◉	◉	○	○	◉	○				
K													◉	◉	◉	◉														
N																	●	●									●	◉		
S																	◉	◉	◉	◉	◉	◉	◉				◉	◉		
H																														
ISO			r	a_p	f																									
Basic	**CCMW09T304**		0,4	0,1-5,0	0,05-0,50																							○		
	CCMW120404		0,4	0,2-5,0	0,05-0,50																						○	○		
	CCMW120408		0,8	0,5-5,0	0,08-0,50										○															
Media Lavor.																														
TC	**CCMT060204-TC**		0,4	0,5-3,0	0,1-0,3									○		●														
	CCMT09T304-TC		0,4	0,5-3,0	0,1-0,3									○		●														
	CCMT09T308-TC		0,8	0,5-3,0	0,1-0,4									●		●														
	CCMT120404-TC		0,4	1-4	0,1-0,3									●		●														
Media Lavor.	**CCMT120408-TC**		0,8	1-4	0,1-0,4									●		●														
HR	**CCMT060204-HR**		0,4	0,5-3,0	0,05-0,24		●	●																						
	CCMT060208-HR		0,8	0,8-3,2	0,09-0,26		●	○							●															
	CCMT09T304-HR		0,4	0,2-4,0	0,05-0,30		●	●							●															
	CCMT09T308-HR		0,8	1-4	0,12-0,35		●	●					●		●															
Sgrossatura	**CCMT120408-HR**		0,8	1,2-4,8	0,14-0,42		●	●					●		●															
	CCMT120412-HR		1,2	1,44-4,80	0,17-0,50		●	●					○																	

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E*-SCLCR/L**
Kr: 95°

A355

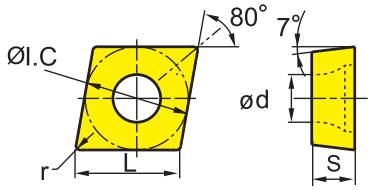
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CCGX	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

CC** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◎	◎	◍									◎	◎		○	◎	○		
M							○	◎				○	○	◎	◎	◎	○	○	◎	○		
K									●	◉	◉											
N												●	●								●	◎
S												●	●	◎	◎	◎	●				●	◎
H																						

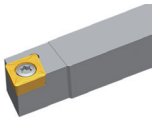
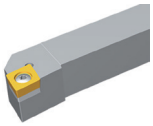
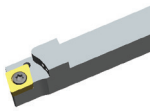
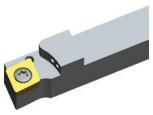
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LC Lavorazione Al.	**CCGX060202-LC**	0,2	0,3-3,0	0,05-0,15													●										●	
	CCGX060204-LC	0,4	0,5-3,0	0,1-0,3													●										●	
	CCGX09T302-LC	0,2	0,5-4,0	0,1-0,2													●										●	
	CCGX09T304-LC	0,4	0,5-5,0	0,1-0,3													●										●	
	CCGX09T308-LC	0,8	0,5-5,0	0,15-0,60													●										●	
	CCGX120404-LC	0,4	0,5-7,0	0,1-0,3													●										●	
	CCGX120408-LC	0,8	0,5-7,0	0,15-0,60													●										●	
LH Lavorazione Al.	**CCGX060202-LH**	0,2	0,3-3,0	0,05-0,15														●									●	
	CCGX060204-LH	0,4	0,5-3,0	0,1-0,3														●									●	
	CCGX060208-LH	0,8	0,6-3,0	0,15-0,40																							●	
	CCGX09T302-LH	0,2	0,4-5,0	0,05-0,15														●									●	
	CCGX09T304-LH	0,4	0,5-5,0	0,1-0,3														●									●	
	CCGX09T308-LH	0,8	0,5-5,0	0,15-0,60														●									●	
	CCGX120402-LH	0,2	0,4-7,0	0,05-0,15														○									○	
	CCGX120404-LH	0,4	0,5-7,0	0,1-0,3														●									●	
	CCGX120408-LH	0,8	0,5-7,0	0,15-0,60														●									●	
	CCGX120412-LH	1,2	0,5-7,0	0,15-0,80														○									●	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

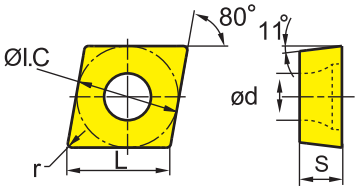
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CP**	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4

CP** Inserti positivi



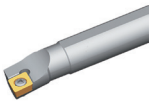
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							●	◉				●	●	◉	◉	◉	●	●	◉	●		
K									●	◉	◉	◉										
N													●	●							●	◉
S													●	●	◉	◉	◉	●			●	◉
H																						

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HF	**CPMT060204-HF**	0,4	0,1-1,5	0,04-0,18			○								○					○								
	**CPMT060208-HF**	0,8	0,1-1,5	0,05-0,25																○								
Finitura																												
SF	**CPGT060202-SF**	0,2	0,05-2,00	0,05-0,25																				○		○		
	**CPGT060204-SF**	0,4	0,05-2,00	0,05-0,35																				●		●		
Finitura	**CPGT09T304-SF**	0,4	0,05-2,00	0,05-0,35																				●		●		
Flat	**CPGW060204**	0,4	0,5-1,5	0,05-0,40																							○	
																												
Media Lavor.																												
HM	**CPMT09T304-HM**	0,4	0,2-3,5	0,05-0,35																●								
	**CPMT09T308-HM**	0,8	0,2-3,5	0,10-0,55					○																			
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

S***-SCLPR/L	C***-SCLPR/L
Kr: 95°	Kr: 95°
	
A348	A354

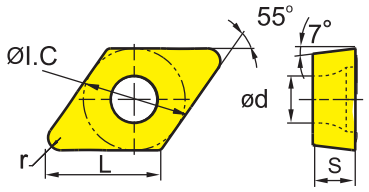
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DC**	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



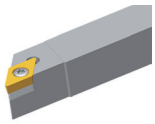
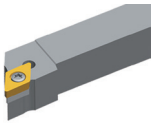
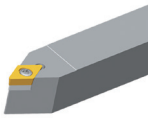
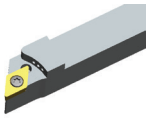
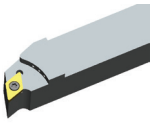
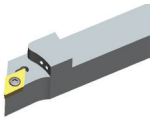
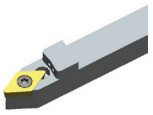
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○		
M							○	◉				○	○	◉	◉	◉	○		○	◉	○		
K									◉	◉	◉	◉											
N												○	○									○	◉
S												○	○	◉	◉	◉	○					○	◉
H																							

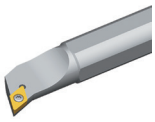
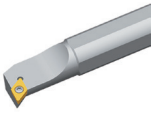
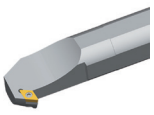
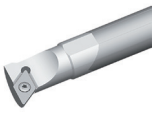
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**DCMT070204-AHF**	0,4	0,2-2,5	0,05-0,20		○														○	●				●			
	DCMT11T302-AHF	0,2	0,5-3,0	0,05-0,15		○														●	●				●	●		
	DCMT11T304-AHF	0,4	0,5-3,0	0,05-0,30		●														●	●				●			
	DCMT11T308-AHF	0,8	0,5-3,0	0,05-0,40		●															●				●	●		
Finitura																												
SF	**DCGT070202-SF**	0,2	0,05-1,50	0,05-0,15																				●	●	○		
	DCGT070204-SF	0,4	0,05-1,50	0,05-0,20																				○		●		
	DCGT070208-SF	0,8	0,05-1,50	0,05-0,30																						●		
	DCGT11T302-SF	0,2	0,05-2,00	0,05-0,15														○						○	●	●		
Finitura	**DCGT11T304-SF**	0,4	0,05-2,00	0,05-0,20																				●	●	●		
	DCGT11T308-SF	0,8	0,05-2,00	0,05-0,30																				●		●		

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

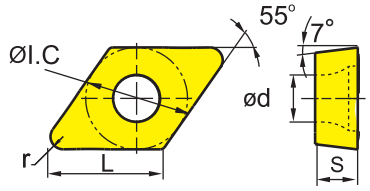
Tornitura generale Inserti positivi

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

DCMT	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



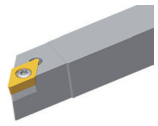
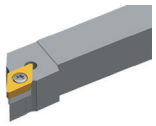
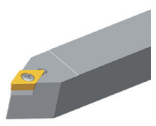
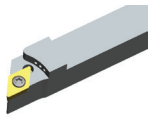
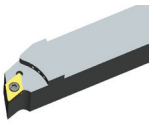
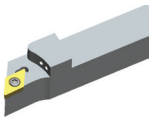
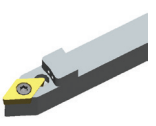
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉		○	◉	○		
M							○	◉				○	○	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉											
N												○	○								○	◉
S												○	○	◉	◉	◉	○				○	◉
H																						

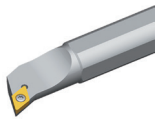
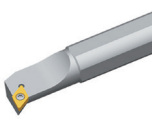
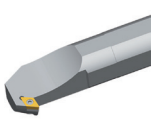
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EF	**DCMT070202-EF**	0,2	0,06-1,50	0,03-0,11							○									○								
	DCMT070204-EF	0,4	0,08-1,50	0,05-0,17							●									●								
	DCMT11T302-EF	0,2	0,08-2,00	0,04-0,15							○									●								
	DCMT11T304-EF	0,4	0,11-2,00	0,06-0,23							●									●								
Finitura	**DCMT11T308-EF**	0,8	0,15-2,00	0,08-0,30							●								●	●								
HF	**DCMT070202-HF**	0,2	0,06-1,50	0,03-0,11			○		●																			
	DCMT070204-HF	0,4	0,08-1,50	0,05-0,17			●		●																			
	DCMT070208-HF	0,8	0,08-1,50	0,05-0,30			●		○																			
	DCMT11T302-HF	0,2	0,08-2,00	0,04-0,15			○		●											○								
Finitura	**DCMT11T304-HF**	0,4	0,11-2,00	0,06-0,23			●		●				○		●													
	DCMT11T308-HF	0,8	0,15-2,00	0,08-0,30			●		●				●															
XF	**DCMT070202-XF**	0,2	0,5-1,5	0,08-0,15				○																				
	DCMT070204-XF	0,4	0,5-1,5	0,08-0,15	○																							
	DCMT070208-XF	0,8	0,5-1,5	0,08-0,25	○																							
	DCMT11T304-XF	0,4	0,5-2,0	0,08-0,15	○																							
Finitura	**DCMT11T308-XF**	0,8	0,5-2,0	0,08-0,25	○																							

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

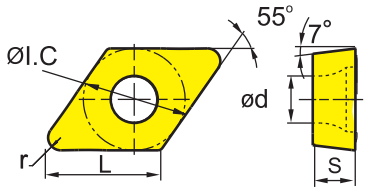
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DCMT	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



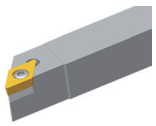
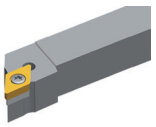
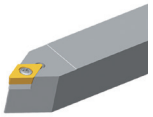
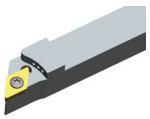
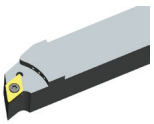
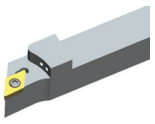
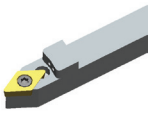
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	○	○	○	◉	○		
K									◉	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	○					○	◉
H																								

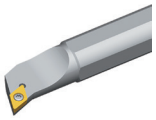
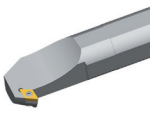
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
EM	**DCMT070204-EM**	0,4	0,19-2,25	0,06-0,17							●	●								●								
	DCMT070208-EM	0,8	0,38-2,25	0,08-0,23							●	○								●								
	DCMT11T304-EM	0,4	0,25-3,00	0,08-0,23							●	●								●								
Media Lavor.	**DCMT11T308-EM**	0,8	0,5-3,0	0,1-0,3							●	●								●								
XM	**DCMT11T304-XM**	0,4	1-2,5	0,15-0,3	●			○																				
	DCMT11T308-XM	0,8	1-2,5	0,15-0,35	●			●																				
	DCMT11T312-XM	1,2	1-2,5	0,15-0,4	●			●																				
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

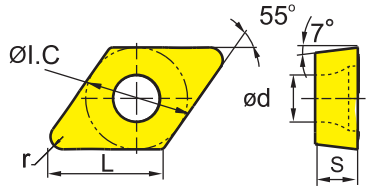
S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

DCMT	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

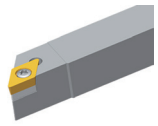
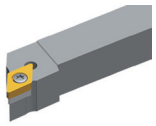
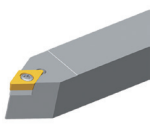
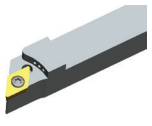
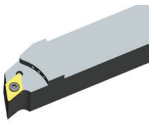
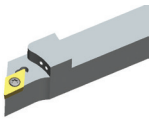
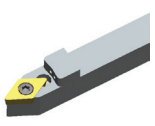


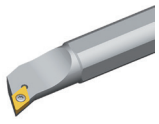
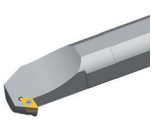
DC** Inserti positivi		HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
		YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P		○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M								○	◉								○	◉	◉	○	○	◉	○		
K										○	◉	◉	◉												
N														○	○									○	◉
S														○	○		◉	◉	◉	○				○	◉
H																									
ISO																									
HM	DCMT070204-HM	0,4	0,19-2,25	0,06-0,17		○	●	●				●	●				●								
	DCMT070208-HM	0,8	0,38-2,25	0,08-0,23			●	●				●	●												
	DCMT11T304-HM	0,4	0,25-3,00	0,08-0,23		○	●	●				●	●					●							
	DCMT11T308-HM	0,8	0,5-3,0	0,1-0,3			●	●				●	●					●							
Media Lavor.	DCMT11T312-HM	1,2	0,6-3,0	0,12-0,36				○				○	○												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

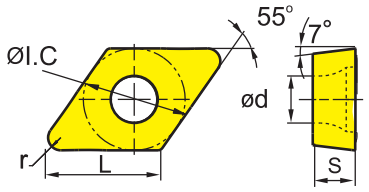
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

DC**	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



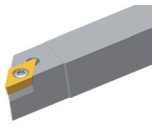
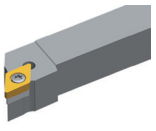
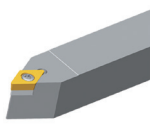
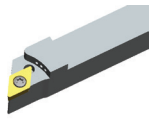
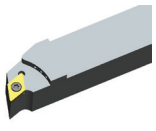
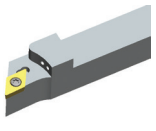
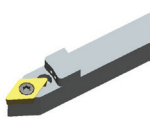
	HC¹ (CVD)										HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	⊛	⊛	⊛								⊛	⊛			○	⊛	○		
M							○	⊛			○	○	⊛	⊛	⊛	○		○	⊛	○		
K									●	⊛	⊛	⊛										
N											●	●									●	⊛
S											○	○	⊛	⊛	⊛	○					○	⊛
H																						

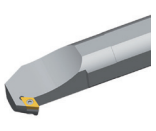
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**DCMW11T304**	0,4	0,5-5,0	0,05-0,20									○															
	DCMW11T308	0,8	0,4-5,0	0,1-0,4									○															
Media Lavor.																												
HR	**DCMT11T304-HR**	0,4	1-4	0,1-0,3			○		●				●		●													
	DCMT11T308-HR	0,8	1-4	0,12-0,35			●		●				●		●													
	DCMT11T312-HR	1,2	1,2-4,0	0,14-0,42			○		●				○															
Sgrossatura																												
LC	**DCGX070201-LC**	0,1	0,3-4,0	0,05-0,10																							●	
	DCGX070202-LC	0,2	0,3-4,0	0,05-0,15													●										●	
	DCGX070204-LC	0,4	0,5-4,0	0,1-0,3													●										●	
	DCGX11T302-LC	0,2	0,3-5,5	0,05-0,15													●										●	
Lavorazione Al.	**DCGX11T304-LC**	0,4	0,5-5,5	0,1-0,3													●										●	
	DCGX11T308-LC	0,8	0,5-5,5	0,15-0,60													●										●	

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

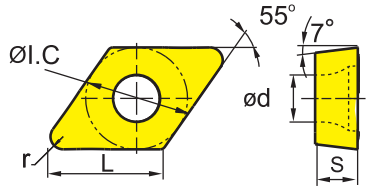
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DCGX	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



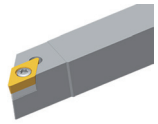
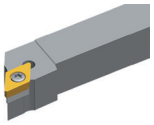
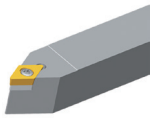
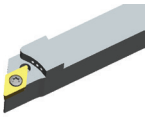
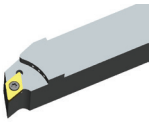
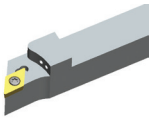
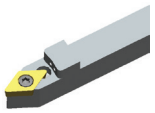
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉		●	◉	●		
M							●	◉				●	●	◉	◉	◉	●	●	◉	●		
K									●	◉	◉	◉										
N												●	●								●	◉
S												●	●	◉	◉	◉	●				●	◉
H																						

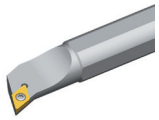
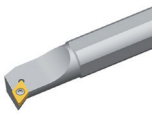
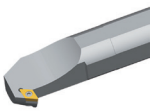
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LH  Lavorazione Al.	**DCGX070202-LH**	0,2	0,3-4,0	0,05-0,15														●									●	
	DCGX070204-LH	0,4	0,5-4,0	0,1-0,3														●									●	
	DCGX070208-LH	0,8	0,5-4,0	0,15-0,60														○									●	
	DCGX11T302-LH	0,2	0,3-5,5	0,05-0,15														●									●	
	DCGX11T304-LH	0,4	0,5-5,5	0,1-0,3														●									●	
	DCGX11T308-LH	0,8	0,5-5,5	0,15-0,60														●									●	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

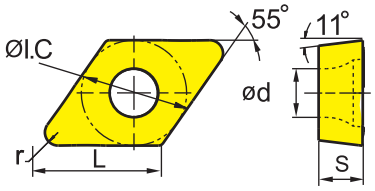
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DPGT	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DP** Inserti positivi



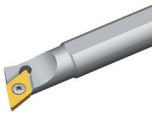
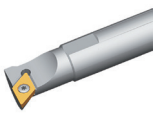
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◎	◎	◎									◎	◎			○	◎	○		
M							○	◎					○	○	◎	◎	◎	○	○	◎	○		
K									◎	◎	◎	◎											
N													○	○								○	◎
S													○	○	◎	◎	◎	○				○	◎
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**DPGT070202-SF**	0,2	0,05-2,00	0,05-0,15																				○		●		
	DPGT070204-SF	0,4	0,05-2,00	0,05-0,30																				●		●		
	DPGT11T304-SF	0,4	0,05-2,00	0,1-0,3																				●		●		
Finitura	**DPGT11T308-SF**	0,8	0,05-2,00	0,1-0,4																				○		○		

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

S***-SDQPR/L	S***-SDUPR/L	C***-SDQPR/L
Kr: 107°30'	Kr: 93°	Kr: 107°30'
		
A349	A350	A356

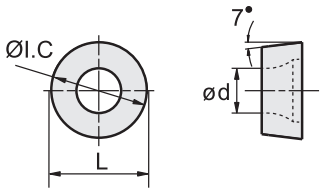
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

RC**	L	I.C	S	d
08 03	8	8	3,18	3,36
10 T3	10	10	3,97	3,6
12 04	12	12	4,76	44,4
16 06	16	16	6,35	5,5
20 06	20	20	6,35	6,5
25 07	25	25	7,94	7,7

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

RC** Inserti positivi



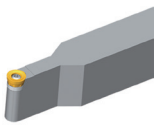
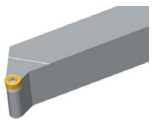
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			◉	◉	○		
M							○	◉						○	○	◉	◉	◉	○	○	◉	○		
K									○	◉	◉	◉												
N													○	○									○	◉
S														○	○	◉	◉	◉	○				○	◉
H																								

ISO		a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**RCMT0803MO**	0,5-3,0	0,1-0,4					●				●															
	RCMT10T3MO	0,5-4,0	0,1-0,5					○				●															
	RCMT1204MO	0,8-5,0	0,1-0,6			○		●				●		●													
	RCMT1606MO	1-6	0,1-0,8			●		●			○	●															
Media Lavor.	**RCMT2006MO**	1,2-8,0	0,1-1,0			○		●																			
	RCMT2507MO	1,4-10,0	0,1-1,2			○		○																			
LH	**RCGX0803MO-LH**	1-4	0,2-0,5																							●	
	RCGX1204MO-LH	1,2-5,0	0,2-0,6																							●	
Lavorazione Al.																											

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SRDCN	SRGCR/L
	
A288	A289

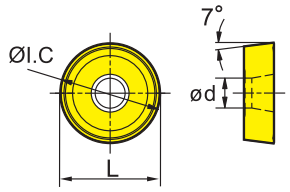
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

RCMX	L	I.C	S	d
08 03	8	8	3,18	3,36
10 03	10	10	3,18	4,4
12 04	12	12	4,76	4,4
16 06	16	16	6,35	5,5
20 06	20	20	6,35	6,5
25 07	25	25	7,94	7,2
32 09	32	32	9,52	10,2

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

RC** Inserti positivi



	HC[1] (CVD)											HC[1] (PVD)							HT		HC[2]	HW	
P	●	●	●	◔	◔	◔									◔	◔			●	◔	●		
M							○	◔					○	○	◔	◔	◔	○	○	◔	○		
K									◔	◔	◔	◔											
N													●	●								◔	◔
S													◔	◔	◔	◔	◔	◔				◔	◔
H																							

	ISO	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic  Sgross. leggera	**RCMX0803MO**	0,5-4,0	0,1-0,5					●																			
	RCMX1003MO	0,5-5,0	0,1-0,6					●																			
	RCMX1204MO	1-6	0,1-0,8			○		●																			
	RCMX1606MO	1-7	0,2-0,9			○		●			○								○								
	RCMX2006MO	1-9	0,2-1,0			●		●						●													
	RCMX2507MO	2-10	0,25-1,20					●																			
	RCMX3209MO	2-13	0,25-1,40			○		●																			
Basic  Sgross. leggera	**RCMX2507MO-1**	2-9	0,1-0,4			○																					
Basic  Sgross. leggera	**RCMX3209MO-PV**	3-12	0,1-0,4			○		●																			

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

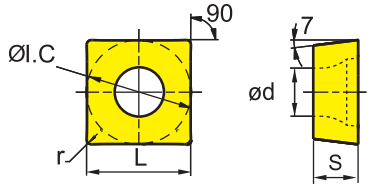
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SCMT	L	I.C	S	d
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,56

SC** Inserti positivi



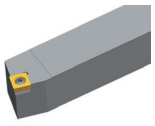
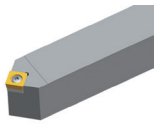
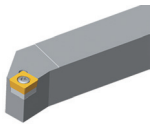
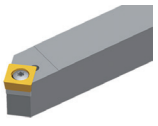
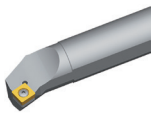
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBC152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	○		○	◉	○		
K									◉	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	○					○	◉
H																								

	ISO	r	a_p	f																				
AHF	**SCMT09T304-AHF**	0,4	0,5-3,0	0,05-0,30		●												●			○			
	**SCMT09T308-AHF**	0,8	0,5-3,0	0,05-0,40		●												●			●			
Finitura																								
EF	**SCMT09T302-EF**	0,2	0,07-2,00	0,05-0,15													●							
	**SCMT09T304-EF**	0,4	0,11-2,00	0,06-0,23													●							
Finitura	**SCMT09T308-EF**	0,8	0,15-2,00	0,08-0,30													●							
EM	**SCMT09T304-EM**	0,4	0,25-3,00	0,08-0,23						○	○						●							
	**SCMT09T308-EM**	0,8	0,5-3,0	0,1-0,3						●	●						●							
Finitura	**SCMT120404-EM**	0,4	0,3-3,6	0,09-0,27						○	○						●							
	SCMT120408-EM	0,8	0,6-3,6	0,12-0,36						○	○						●							
	SCMT120412-EM	1,2	0,72-3,60	0,14-0,43							○						●							
XF	**SCMT09T304-XF**	0,4	0,5-2,0	0,08-0,25	●																			
	**SCMT09T308-XF**	0,8	0,5-2,0	0,08-0,30	●			○																
Finitura																								

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

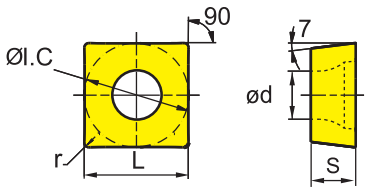
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SCMT	L	I.C	S	d
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,56

SC** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◉	◉	◉										◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉	◉												
N													○	○									○	◉
S													○	○	◉	◉	◉	◉	○				○	◉
H																								

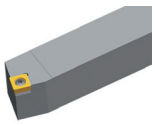
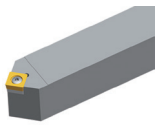
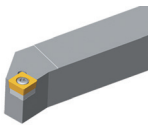
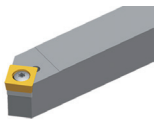
	ISO	r	a_p	f
HF	**SCMT09T302-HF**	0,2	0,15-2,00	0,05-0,15
	SCMT09T304-HF	0,4	0,11-2,00	0,05-0,23
	SCMT09T308-HF	0,8	0,15-2,00	0,05-0,30
Finitura				
HM	**SCMT09T304-HM**	0,4	0,25-3,00	0,08-0,23
	SCMT09T308-HM	0,8	0,5-3,0	0,1-0,3
	SCMT120404-HM	0,4	0,3-3,6	0,09-0,27
	SCMT120408-HM	0,8	0,6-3,6	0,12-0,36
Media Lavor.	**SCMT120412-HM**	1,2	0,72-3,60	0,14-0,43
XM	**SCMT09T304-XM**	0,4	1-2,5	0,15-0,3
	SCMT09T308-XM	0,8	1-2,5	0,15-0,35
	SCMT09T312-XM	1,2	1-2,5	0,15-0,4
	SCMT120408-XM	0,8	1-3,0	0,15-0,35
Media Lavor.	**SCMT120412-XM**	1,2	1-3,0	0,15-0,4

◉ In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

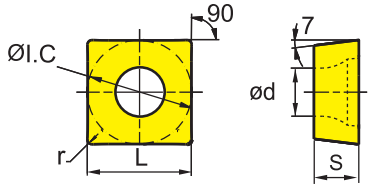
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SC**	L	I.C	S	d
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,55,56

SC** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	❁	❁	❁										❁	❁			○	❁	○		
M							○	❁						○	○	❁	❁	❁	○	○	❁	○		
K									○	❁	❁	❁												
N													○	○									○	❁
S													○	○	❁	❁	❁	❁	○				○	❁
H																								

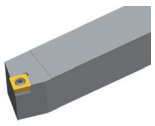
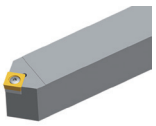
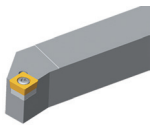
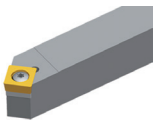
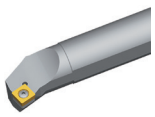
	ISO	r	a_p	f
HR	**SCMT09T304-HR**	0,4	0,2-4,0	0,05-0,40
	SCMT09T308-HR	0,8	1-4	0,12-0,35
	SCMT09T312-HR	1,2	1,2-4,0	0,14-0,42
	SCMT120404-HR	0,4	0,5-4,0	0,05-0,50
Sgrossatura	**SCMT120408-HR**	0,8	1,2-4,8	0,14-0,42
	SCMT120412-HR	1,2	1,44-4,80	0,17-0,50
LC	**SCGX09T304-LC**	0,4	0,5-5,0	0,1-0,5
	SCGX09T308-LC	0,8	0,5-5,0	0,15-0,60
Lavorazione Al.	**SCGX120408-LC**	0,8	1-7	0,15-0,60

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

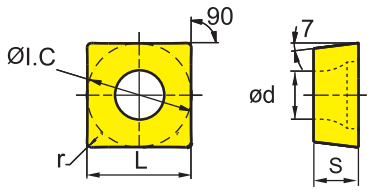
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SCGX	L	I.C	S	d
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,56

SC** Inserti positivi



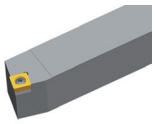
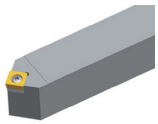
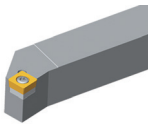
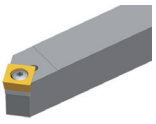
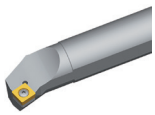
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉			●	◉	●		
M							●	◉					●	●	◉	◉	◉	●	●	◉	●		
K									●	◉	◉	◉											
N													●	●								●	◉
S													●	●	◉	◉	◉	●				●	◉
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LH	**SCGX09T302-LH**	0,2	0,5-4,0	0,05-0,15														○									●	
	SCGX09T304-LH	0,4	0,5-4,0	0,1-0,3																							●	
	SCGX09T308-LH	0,8	0,5-4,0	0,15-0,60																							●	
	SCGX120408-LH	0,8	0,5-5,0	0,15-0,60														○									●	
Lavorazione Al.																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SSBCR/L	SSDCN	SSKCR/L	SSSCR/L	S***-SSKCR/L
Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°
				
A279	A280	A281	A282	A339

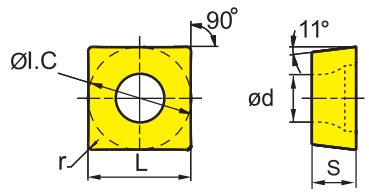
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMW	L	I.C	S	d
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,56

SP** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	●	●	●	○	○	○									○	○		●	○	●		
M							○	○				○	○	○	○	○	○	○	○	○		
K									●	○	○	○										
N													●	●							○	○
S													○	○	○	○	○	○			○	○
H																						

ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Flat	**SPMW09T304**	0,4	0,5-4,0	0,1-0,4											○													
	SPMW09T308	0,8	0,5-4,0	0,2-0,4											○													
	SPMW120408	0,8	1-6	0,3-0,6											○													

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

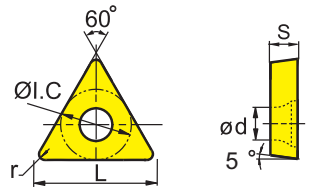
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TBGH	L	I.C	S	d
06 01	6,87	3,97	1,59	2,2

TB** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	◎	◎	◎										◎	◎			○	◎	○		
M							○	◎						○	○	◎	◎	◎	○	○	◎	○		
K									○	◎	◎	◎												
N													○	○									○	◎
S														○	○	◎	◎	◎	○				○	◎
H																								

ISO		r	a_p	f
	**TBGH060102L**	0,2	0,5-3,5	0,05-0,40
	TBGH060104L	0,4	0,5-3,5	0,05-0,40

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

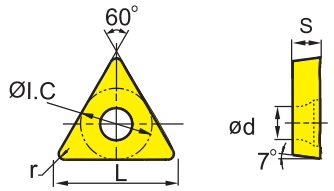
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TCGT	L	I.C	S	d
06 T1	6,87	3,97	1,98	2,2
09 02	9,63	5,56	2,38	2,5
11 03	11	6,35	3,18	2,8

TC** Inserti positivi



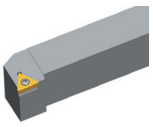
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◍	◍	◍									◍	◍		○	◍	○		
M							○	◍				○	○	◍	◍	◍	○	○	◍	○		
K									○	◍	◍	◍										
N												○	○								○	◍
S												○	○	◍	◍	◍	○				○	◍
H																						

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF Finitura	**TCGT06T102-SF**	0,2	0,05-2,00	0,05-0,15																						●		
	TCGT090202-SF	0,2	0,05-2,00	0,05-0,15																				○		○		
	TCGT090204-SF	0,4	0,05-2,00	0,1-0,3																						●		
	TCGT090208-SF	0,8	0,05-2,00	0,10-0,35																						●		
	TCGT110302-SF	0,2	0,05-2,00	0,05-0,15																						○		
	TCGT110304-SF	0,4	0,05-2,00	0,1-0,3																				●		●		
	TCGT110308-SF	0,8	0,05-2,00	0,10-0,35																						○		

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

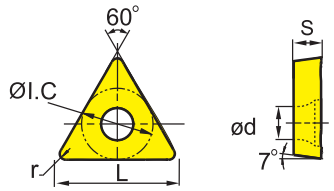
STGCR/L	E***-STFCR/L
Kr: 91°	Kr: 90°
	
A285	A361

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TCMT	L	I.C	S	d
09 02	9,63	5,56	2,38	2,5
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura

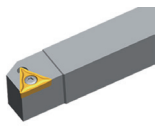
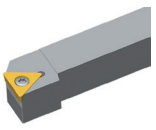
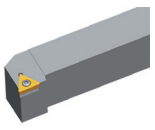
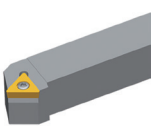


TC** Inserti positivi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					P																							
					M																							
					K																							
					N																							
					S																							
					H																							
	ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**TCMT110204-AHF**		0,4	0,2-2,5	0,05-0,30		●															●						
	TCMT110208-AHF		0,8	0,2-2,5	0,1-0,4		●															●						
	TCMT16T304-AHF		0,4	0,5-3,0	0,05-0,30		●															●						
	TCMT16T308-AHF		0,8	0,5-3,5	0,1-0,4		●															●						
Finitura																												
HF	**TCMT090202-HF**		0,2	0,06-1,70	0,03-0,13			○		●														○				
	TCMT090204-HF		0,4	0,1-1,7	0,05-0,19			○		●																		
	TCMT090208-HF		0,8	0,15-1,70	0,10-0,25					○																		
	TCMT110202-HF		0,2	0,08-2,00	0,05-0,20					●																		
	TCMT110204-HF		0,4	0,1-2,0	0,05-0,30			○		●						○												
	TCMT110208-HF		0,8	0,1-2,0	0,05-0,35			●		●				●														
Finitura	**TCMT16T304-HF**		0,4	0,11-2,00	0,05-0,23			○		●																		
	TCMT16T308-HF		0,8	0,2-3,5	0,05-0,30																							
XF	**TCMT090202-XF**		0,2	0,5-1,5	0,08-0,15				○																			
	TCMT090204-XF		0,4	0,5-1,5	0,08-0,20	●																						
	TCMT110202-XF		0,2	0,5-2,0	0,08-0,15				○																			
	TCMT110204-XF		0,4	0,5-2,0	0,08-0,20	●																						
	TCMT110208-XF		0,8	0,5-2,5	0,08-0,25	●																						
Finitura	**TCMT16T304-XF**		0,4	0,5-2,5	0,08-0,20	●																						
	TCMT16T308-XF		0,8	0,5-2,5	0,08-0,25	●																						

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

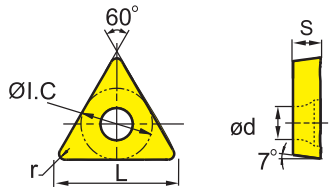
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TCMT	L	I.C	S	d
09 02	9,63	5,56	2,38	2,5
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

TC** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							○	◉					○	○	◉	◉	◉	◉	○	○	◉	○		
K									●	◉	◉	◉												
N													●	●									●	◉
S													●	●	◉	◉	◉	◉	●				●	◉
H																								

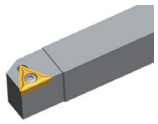
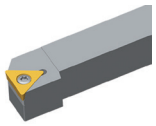
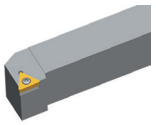
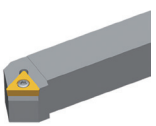
	ISO	r	a_p	f
EF	**TCMT090202-EF**	0,2	0,06-1,70	0,03-0,13
	TCMT090204-EF	0,4	0,1-1,7	0,05-0,19
	TCMT110202-EF	0,2	0,2-2,0	0,05-0,13
	TCMT110204-EF	0,4	0,2-2,0	0,05-0,20
	TCMT16T304-EF	0,4	0,3-3,0	0,05-0,23
Finitura	**TCMT16T308-EF**	0,8	0,3-3,0	0,1-0,4
EM	**TCMT090204-EM**	0,4	0,19-2,25	0,06-0,17
	TCMT110204-EM	0,4	0,2-2,7	0,05-0,30
	TCMT110208-EM	0,8	0,8-2,7	0,08-0,30
	TCMT16T304-EM	0,4	0,25-3,00	0,08-0,23
Media Lavor.	**TCMT16T308-EM**	0,8	0,5-3,0	0,1-0,3
XM	**TCMT16T304-XM**	0,4	1-3,0	0,15-0,3
	TCMT16T308-XM	0,8	1-3,0	0,15-0,35
	TCMT16T312-XM	1,2	1-3,0	0,15-0,4
Media Lavor.				

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

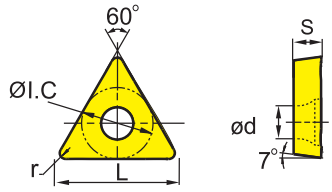
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TC**	L	I.C	S	d
09 02	9,63	5,56	2,38	2,5
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4
22 04	22	12,7	4,76	5,5

TC** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW		
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							●	◉						●	●	◉	◉	◉	●	●	◉	●		
K									●	◉	◉	◉												
N													●	●									●	◉
S														●	●	◉	◉	◉	●				●	◉
H																								

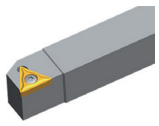
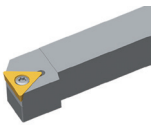
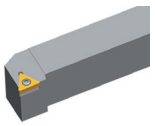
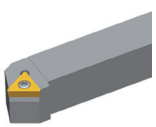
	ISO	r	a_p	f																					
Flat	**TCMW16T308**	0,8	0,5-5,0	0,05-0,60									○												
Media Lavor.																									
HM	**TCMT090204-HM**	0,4	0,19-2,25	0,06-0,17			●	●				●	●												
	TCMT090208-HM	0,8	0,38-2,25	0,08-0,23			○	○					○												
	TCMT110204-HM	0,4	0,2-2,7	0,07-0,20			●	●				●	●												
	TCMT110208-HM	0,8	0,5-2,7	0,1-0,3			●	●					●												
	TCMT16T304-HM	0,4	0,25-3,00	0,08-0,23			●	●				●	●												
Media Lavor.	**TCMT16T308-HM**	0,8	0,5-3,0	0,1-0,3			●	●				●	●												
	TCMT16T312-HM	1,2	0,6-3,0	0,12-0,36			○	●																	
HR	**TCMT090204-HR**	0,4	0,5-3,0	0,1-0,3				○																	
	TCMT090208-HR	0,8	0,5-3,5	0,08-0,50				○					○												
	TCMT110204-HR	0,4	0,5-3,0	0,1-0,4				●																	
	TCMT110208-HR	0,8	1-4	0,1-0,5				●																	
	TCMT16T304-HR	0,4	0,5-4,0	0,1-0,4				●			●														
Sgrossatura	**TCMT16T308-HR**	0,8	1-4	0,12-0,35				●			●		●												
	TCMT16T312-HR	1,2	1,2-4,0	0,14-0,42			○				○		●												
	TCMT220408-HR	0,8	1,2-4,8	0,14-0,42			○	●					●												

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

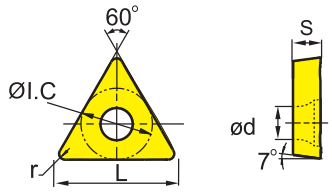
STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TCMT	L	I.C	S	d
22 04	22	12,7	4,76	5,5

Inserti - Tornitura



TC** Inserti positivi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
				P	○	○	○	◉	◉	◉								◉	◉			○	◉	○		
				M							○	◉				○	○	◉	◉	◉	○	○	◉	○		
				K									●	◉	◉	◉											
				N																					◉	◉
				S												○	○	◉	◉	◉	○				◉	◉
				H																						
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
Basic	**TCMT220408**	0,8	1,2-4,8	0,14-0,42									●															

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

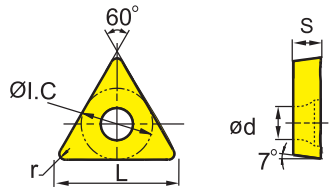
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TCGX	L	I.C	S	d
09 02	9,63	5,56	2,38	2,5
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TC** Inserti positivi



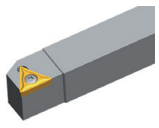
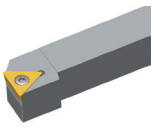
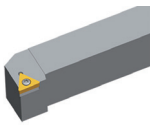
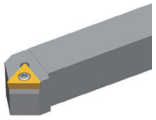
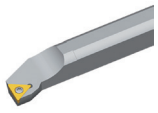
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
					HC¹ (CVD)												HC¹ (PVD)							HT		HC²	HW	
	P				○	○	○	◉	◉	◉										◉	◉			◉	◉	○		
	M										○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
	K												●	◉	◉	◉												
	N																◉	◉									◉	◉
	S																	○	○	◉	◉	◉	○				◉	◉
	H																											
LC	**TCGX090202-LC**	0,2	0,3-4,0	0,05-0,15													●										●	
	TCGX090204-LC	0,4	0,5-4,0	0,1-0,3													●										●	
	TCGX110202-LC	0,2	0,3-5,0	0,05-0,15													●										●	
	TCGX110204-LC	0,4	0,5-5,0	0,1-0,3													●										●	
	TCGX110208-LC	0,8	0,5-5,0	0,15-0,60													●										●	
	TCGX16T304-LC	0,4	0,5-7,0	0,1-0,3																							●	
	TCGX16T308-LC	0,8	0,5-7,0	0,15-0,60													●										●	
LH	**TCGX090202-LH**	0,2	0,3-4,0	0,05-0,15														○									●	
	TCGX090204-LH	0,4	0,5-4,0	0,1-0,3																							●	
	TCGX110202-LH	0,2	0,3-5,0	0,05-0,15														○									●	
	TCGX110204-LH	0,4	0,5-5,0	0,1-0,3														●									●	
	TCGX110208-LH	0,8	0,5-5,0	0,15-0,60																							●	
	TCGX16T302-LH	0,2	0,5-7,0	0,05-0,15																							●	
	TCGX16T304-LH	0,4	0,5-7,0	0,1-0,3														○									●	
	TCGX16T308-LH	0,8	0,5-7,0	0,15-0,60														○									●	

LC / LH — Lavorazione Al.

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

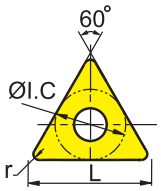
STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TPGH	L	I.C	S	d
09 02	9,63	5,56	2,38	2,8
11 03	11	6,35	3,18	3,18

TP** Inserti positivi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
				P	○	○	○	◉	◉	◉								◉	◉		○	◉	○		
				M							○	◉				○	○	◉	◉	◉	○	◉	○		
				K									◉	◉	◉										
				N												○	○							○	◉
				S												○	○	◉	◉	◉	○			○	◉
				H																					
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
 Finitura	**TPGH090202L**	0,2	0,2-3,0	0,05-0,15													●					●	●			
	TPGH090204L	0,4	0,2-3,0	0,05-0,30													●					●	●			
	TPGH110302L	0,2	0,2-3,5	0,05-0,15													●					●	●			
	TPGH110304L	0,4	0,2-3,5	0,05-0,30													●					●	●			

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

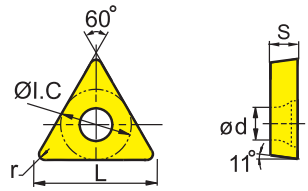
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TPGT	L	I.C	S	d
09 02	9,63	5,56	2,38	2,5
11 03	11	6,35	3,18	2,8

TP** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P	●	●	●	◉	◉	◉										◉	◉			●	◉	●		
M							○	◉						○	○	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉	◉												
N													●	●									●	◉
S														○	○	◉	◉	◉	○				○	◉
H																								

	ISO	r	a_p	f
SF	**TPGT090202-SF**	0,2	0,05-2,00	0,05-0,15
	TPGT090204-SF	0,4	0,05-2,00	0,05-0,25
	TPGT090208-SF	0,8	0,05-2,00	0,05-0,35
	TPGT110302-SF	0,2	0,05-2,00	0,05-0,15
Finitura	**TPGT110304-SF**	0,4	0,05-2,00	0,05-0,25
	TPGT110308-SF	0,8	0,05-2,00	0,05-0,35

	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF																								
																				●		●		
														○						●		●		
																				●				
																				●		●		
Finitura																				○		●		
																						●		

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

S***-STUPR/L	C***-STUPR/L	E***-STFPR/L
Kr: 93°	Kr: 93°	Kr: 90°
		
A351	A360	A362

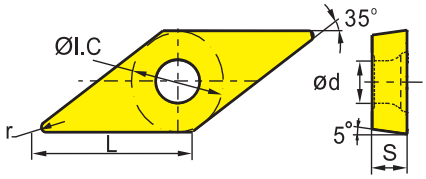
Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VBMT	L	I.C	S	d
11 02	11	6,35	2,38	2,8
11 03	11	6,35	3,18	2,8
16 04	16,5	9,525	4,76	4,4

VB** Inserti positivi



	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	✿	✿	✿									✿	✿		○	✿	○		
M							○	✿					○	○	✿	✿	○	○	✿	○		
K									✿	✿	✿	✿										
N													○	○							○	✿
S													○	○	✿	✿	○	○			○	✿
H																						

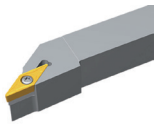
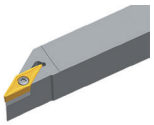
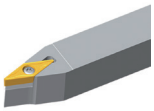
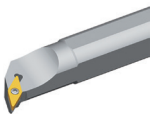
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
AHF	**VBMT160404-AHF**	0,4	0,2-3,0	0,05-0,30		●															●						
	VBMT160408-AHF	0,8	0,8-3,5	0,08-0,40		●															●						
Finitura																												
EF	**VBMT110302-EF**	0,2	0,06-1,70	0,03-0,13																●								
	VBMT110304-EF	0,4	0,1-1,7	0,05-0,19							●									●								
	VBMT110308-EF	0,8	0,13-1,70	0,07-0,26							●									○								
	VBMT160404-EF	0,4	0,1-1,8	0,05-0,20							●									●								
Finitura	**VBMT160408-EF**	0,8	0,14-1,80	0,07-0,27							●									●								
XF	**VBMT110202-XF**	0,2	0,5-2,0	0,08-0,20				○																				
	VBMT110204-XF	0,4	0,5-2,0	0,08-0,20	●																							
	VBMT110302-XF	0,2	0,5-2,0	0,08-0,20				○																				
	VBMT110304-XF	0,4	0,5-2,0	0,08-0,20	●																							
Finitura	**VBMT160404-XF**	0,4	0,5-2,5	0,08-0,20	●																							
	VBMT160408-XF	0,8	0,5-2,5	0,08-0,25	●																							

● In magazzino ○ Su richiesta

disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

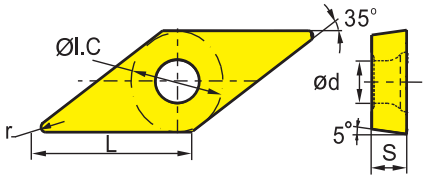
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VB**	L	I.C	S	d
11 02	11	6,35	2,38	2,8
16 04	16,5	9,525	4,76	4,4

VB** Inserti positivi



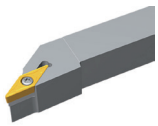
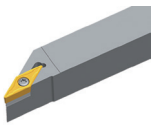
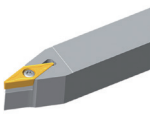
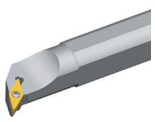
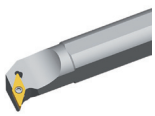
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	●	●	●	◉	◉	◉									◉	◉			●	◉	●		
M							○	◉				○	○	◉	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉	◉											
N												●	●									◉	◉
S													○	○	◉	◉	◉	○				◉	◉
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HF	**VBMT110202-HF**	0,2	0,2-2,0	0,05-0,15																								
	VBMT110204-HF	0,4	0,2-2,0	0,05-0,35																						○		
	VBMT110208-HF	0,8	0,2-2,0	0,05-0,40																								
Finitura																												
NF	**VBET160404-NF**	0,4	0,2-3,0	0,05-0,30														○	●									
	VBET160408-NF	0,8	0,2-3,0	0,08-0,40														○	●									
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

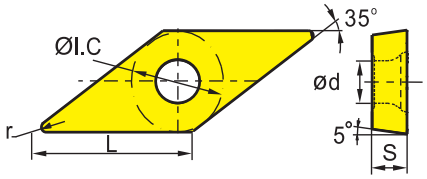
SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VBGT	L	I.C	S	d
11 03	11	6,35	3,18	2,8

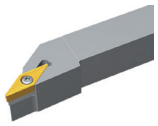
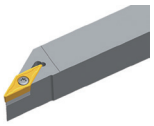
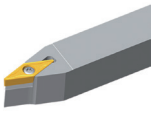


VB** Inserti positivi					HC¹ (CVD)										HC¹ (PVD)						HT		HC²	HW	
				P	●	●	●	◉	◉	◉									◉	◉			●	◉	●		
				M							●	◉											●	◉	●		
				K									●	◉	◉	◉											
				N													●	●								●	◉
				S													●	●	◉	◉	◉	●				●	◉
				H																							
ISO		r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
SF	**VBGT110302-SF**	0,2	0,05-2,00	0,05-0,15																				○	○	●		
	VBGT110304-SF	0,4	0,05-2,00	0,05-0,20																					○	●		
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SVJBR/L	SVABR/L	SVVBN	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 93°
			
A274	A275	A276	A347

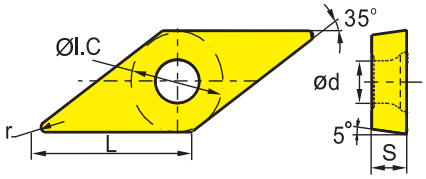
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VB**	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,5	9,525	4,76	4,4

VB** Inserti positivi



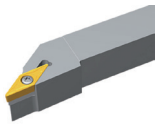
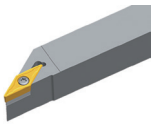
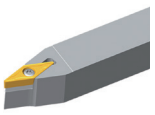
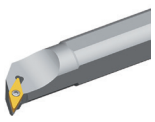
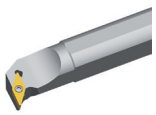
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YB5103	YNG151	YNT251	YNG151C	YD101	YD201
P	○	○	○	⊛	⊛	⊛										⊛	⊛			○	⊛	○		
M							○	⊛					○	○	⊛	⊛	⊛	○	○	○	⊛	○		
K									○	⊛	⊛	⊛												
N													○	○									○	⊛
S													○	○	⊛	⊛	⊛	○					○	⊛
H																								

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YB5103	YNG151	YNT251	YNG151C	YD101	YD201
NGF	**VBET160408-NGF**	0,8	0,2-3,0	0,08-0,30															●									
	VBET160412-NGF	1,2	0,2-3,0	0,1-0,4															●									
Finitura																												
EM	**VBMT110304-EM**	0,4	0,15-2,00	0,07-0,20							●									●								
	VBMT110308-EM	0,8	0,2-2,0	0,09-0,27			○				●									●								
	VBMT160404-EM	0,4	0,23-2,70	0,07-0,20							●									●								
Media Lavor.	**VBMT160408-EM**	0,8	0,45-2,70	0,09-0,27							●									●								
HM	**VBMT160404-HM**	0,4	0,23-2,70	0,07-0,20			●		●		●		●															
	VBMT160408-HM	0,8	0,45-2,70	0,09-0,27			●		●		●	●	●		●												○	
Media Lavor.	**VBMT160412-HM**	1,2	0,54-2,70	0,11-0,32			●		●																			
XM	**VBMT160404-XM**	0,4	1-2,5	0,15-0,25	●		○																					
	VBMT160408-XM	0,8	1-2,5	0,15-0,3	●		○																					
	VBMT160412-XM	1,2	1-2,5	0,15-0,35	●		○																					
Media Lavor.																												

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

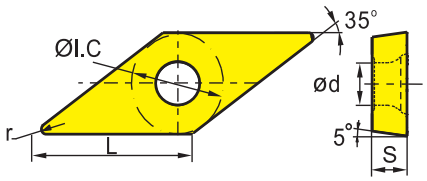
SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VBMT	L	I.C	S	d
16 04	16,5	9,525	4,76	4,4

Inserti - Tornitura

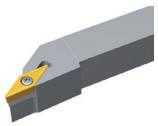
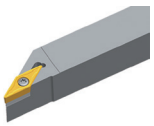
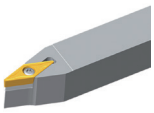
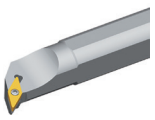


VB** Inserti positivi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
HR	**VBMT160404-HR**	0,4	0,5-3,0	0,1-0,3			●		●																		
	VBMT160408-HR	0,8	0,9-3,6	0,11-0,32			○		●																		
	VBMT160412-HR	1,2	1,08-3,60	0,13-0,38			○		●																		
Sgrossatura																											
SNR	**VBMT160408-SNR**	0,8	0,5-4,0	0,1-0,3															●				○				
	VBMT160412-SNR	1,2	0,5-4,0	0,3-0,6															●			○	○				
Sgrossatura																											

● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

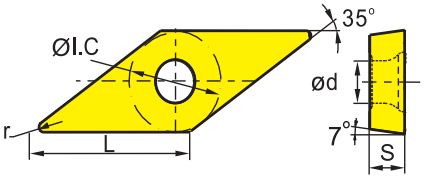
SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCGT	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,5	9,525	4,76	4,4

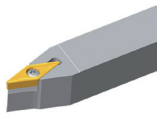
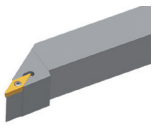
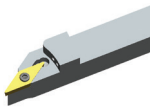
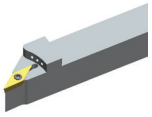
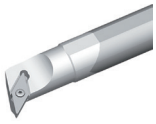


VC** Inserti positivi					HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					○	○	○	◍	◍	◍										◍	◍			○	◍	○		
M											○	◍					○	○	◍	◍	◍	◍	○	○	◍	○		
K													○	◍	◍	◍												
N																	○	○									○	◍
S																		○	○	◍	◍	◍	○				○	◍
H																												
ISO		r	a_p	f																								
HF	**VCGT110304-HF**	0,4	0,2-2,0	0,05-0,30																○								
Finitura																												
NF	**VCGT160408-NF**	0,8	0,2-2,0	0,1-0,4															●									
Finitura																												
SF	**VCGT110302-SF**	0,2	0,05-1,00	0,05-0,15																				●	●	●		
	VCGT110304-SF	0,4	0,05-1,00	0,05-0,25														○		●				●	○	●		
	VCGT160404-SF	0,4	0,05-1,50	0,05-0,25																						●		
Finitura																												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

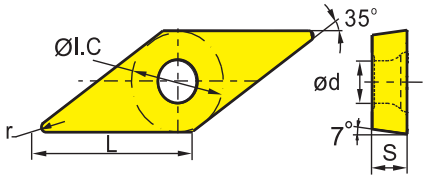
Tornitura generale Inserti positivi

Inserti - Tornitura/Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCGX	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4
22 05	22	12,7	5,56	5,5

VC ** Inserti - Tornitura/Fresatura



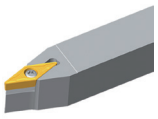
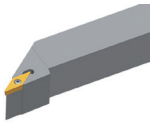
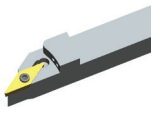
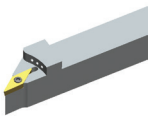
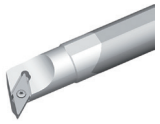
	HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
P	○	○	○	◍	◍	◍									◍	◍			○	◍	○		
M							○	◍				○	○	◍	◍	◍	○	○	◍		○		
K									●	◍	◍	◍											
N												●	●									●	◍
S												●	○	◍	◍	◍	●					●	◍
H																							

	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LC	**VCGX110301-LC**	0,1	0,3-3,0	0,05-0,10													●			●							●	
	VCGX110302-LC	0,2	0,3-3,0	0,05-0,15													●			○							●	
	VCGX110304-LC	0,4	0,5-3,0	0,1-0,3													●										●	
	VCGX110308-LC	0,8	1-3	0,1-0,5													●										●	
	VCGX160404-LC	0,4	0,5-5,0	0,1-0,3													●										●	
Lavorazione Al.	**VCGX160408-LC**	0,8	0,5-5,0	0,15-0,60													●										●	
	VCGX160412-LC	1,2	0,5-5,0	0,15-0,80													○										●	
	VCGX220530-LC	3	0,5-7,0	0,25-1,00													●										○	●

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

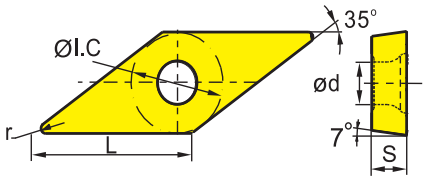
Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VCGX	L	I.C	S	d
11 02	11	6,35	2,38	2,8
11 03	11	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4
22 05	22	12,7	5,56	5,5

Inserti - Tornitura/Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VC ** Inserti - Tornitura/Fresatura



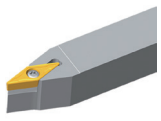
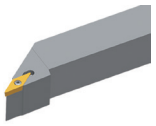
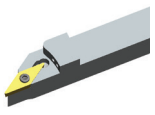
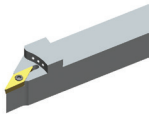
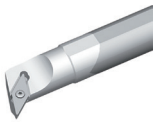
	HC¹ (CVD)											HC¹ (PVD)							HT		HC²	HW	
P	○	○	○	◉	◉	◉									◉	◉			○	◉	○		
M							○	◉					○	○	◉	◉	◉	○	○	◉	○		
K									◉	◉	◉	◉											
N												○	○									○	◉
S													○	○	◉	◉	◉	○				○	◉
H																							

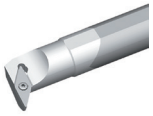
	ISO	r	a_p	f	YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
LH	**VCGX110204-LH**	0,4	0,5-3,0	0,1-0,3														●									●	
	VCGX110301-LH	0,1	0,5-3,0	0,05-0,10																							●	●
	VCGX110302-LH	0,2	0,3-3,0	0,05-0,15														●									●	○
	VCGX110304-LH	0,4	0,5-3,0	0,1-0,3														●									●	○
	VCGX110308-LH	0,8	0,5-3,0	0,15-0,60														○									●	
	VCGX160402-LH	0,2	0,5-5,0	0,05-0,10														●									●	
Lavorazione Al.	**VCGX160404-LH**	0,4	0,5-5,0	0,1-0,3														●									●	
	VCGX160408-LH	0,8	0,5-5,0	0,15-0,60														●									●	
	VCGX160412-LH	1,2	0,5-5,0	0,15-0,80														○									●	
	VCGX220530-LH	3	0,5-7,0	0,25-1,00														○									●	○

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

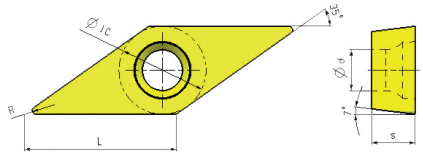
C***-SVUCR/L
Kr: 93°

A364

Codice sistema A48 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCMT	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16	9,525	4,76	4,4



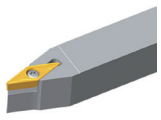
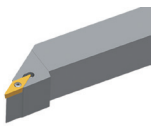
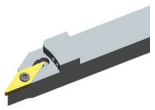
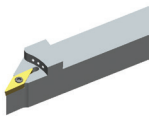
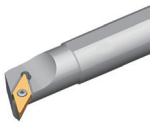
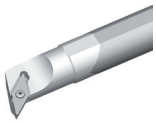
VC** Inserti positivi					HC¹ (CVD)											HC¹ (PVD)						HT		HC²	HW	
					YBC103	YB6315	YBC152	YBC203	YBC252	YBC352	YBM153	YBM253	YBD102	YB7315	YBD152	YBD152C	YBG101	YBG102	YBG105	YBG205	YB9320	YPD201	YBS103	YNG151	YNT251	YNG151C	YD101	YD201
P					●	●	●	◉	◉	◉										◉	◉			◉	◉	●	◉	◉
M											○	◉					○	○	◉	◉	◉	◉	○	◉	◉	○		
K													●	◉	◉	◉												
N																	●	●									●	◉
S																	○	○	◉	◉	◉	◉	○				○	◉
H																												
ISO		r	a_p	f																								
XF	**VCMT110302-XF**	0,2	0,5-2,0	0,08-0,20				○																				
	VCMT110304-XF	0,4	0,5-2,0	0,08-0,20	●																							
	VCMT110308-XF	0,8	0,5-2,0	0,08-0,25	●																							
	VCMT160404-XF	0,4	0,5-2,5	0,08-0,20	●																							
Finitura	**VCMT160408-XF**	0,8	0,5-2,5	0,08-0,25	●																							
EF	**VCMT160404-EF**	0,4	0,5-2,5	0,05-0,20																●								
Media Lavor.																												
EM	**VCMT160404-EM**	0,4	0,5-2,5	0,05-0,35							○									●								
	VCMT160408-EM	0,8	0,5-2,5	0,10-0,45							○									●								
Media Lavor.																												
XM	**VCMT160412-XM**	1,2	1-2,5	0,15-0,35	○			○																				
Media Lavor.																												

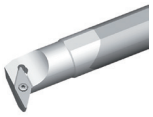
● In magazzino ○ Su richiesta
disponibili YBC152F, YBC252F, YBM153F, YBM253F

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema A48 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

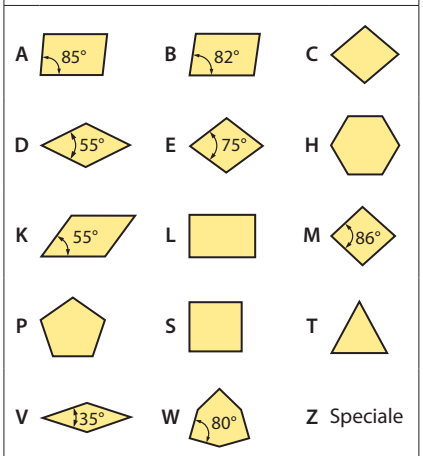
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

Codice sistema > A48 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

Tornitura generale Codice ISO – inserti PCBN & PCD

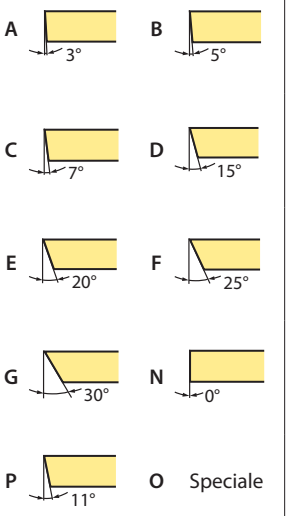
C	N	G	A	12	04	08	T	020	20	–	2	(W)
1	2	3	4	5	6	7	8	9	10		11	12

Forma dell'inserto



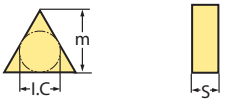
1

Angolo di spoglia inferiore



2

Grado di tolleranza

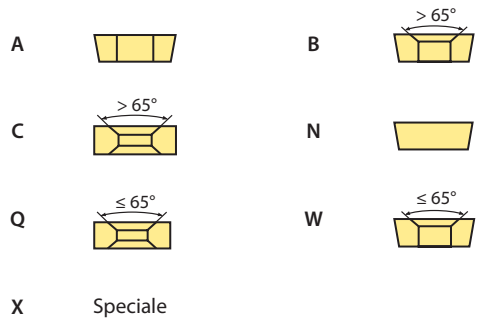


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,15	±0,005	±0,025
K	±0,05–0,15	±0,013	±0,025
L	±0,05–0,15	±0,025	±0,025
M	±0,05–0,15	±0,08–0,20	±0,130
N	±0,05–0,15	±0,08–0,20	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Caratteristiche di fissaggio (metrico)

Forma dell'inserto



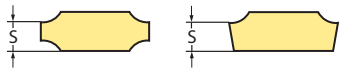
4

Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto C	D	S	T	V	W
3,97				06		
5,0						
5,56				09		
6,0						
6,35	06	07		11	11	
8,0						
9,525	09	11	09	16	16	06
10,0						
12,0						
12,7	12	15	12	22	22	08
15,875	16		15	27		
16,0		19				
19,05	19		19	33		
20,0						
25,0	25	25				
25,4			25			
31,75						
32						

5

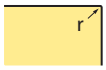
Spessore dell'inserto S [mm]



Code	S	Code	S
02	2,38	**06**	6,35
T2	2,58	**T6**	6,75
03	3,18	**07**	7,94
T3	3,97	**09**	9,52
04	4,76	**T9**	9,72
T4	4,96	**11**	11,11
05	5,56	**12**	12,70
T5	5,95		

6

Raggio di punta r [mm]



Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Speciale
MO	Inserto rotondo

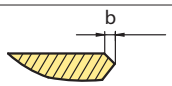
7

Versione del tagliente

Code	Tagliente	Forma dell'inserto
E	Arrotondato	
F	Spigolo vivo	
T	Smusso	
S	Smusso + Arrotondamento	

8

Larghezza smusso b [mm]



Code	b
010	0,10
015	0,15
020	0,20
025	0,25
030	0,30
035	0,35
040	0,40
045	0,45
050	0,50
100	1,00
200	2,00

9

Angolo dello smusso α



Code	α
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

10

Numero taglienti

Code	Forma
1	
2	
3	
4	

11

Extra

Code	Descrizione
W	Wiper
HS	Riporto -FULL FACE- unilaterale
M	Nicchia per fissaggio (CBN integrale)
CB	Rompitruciolo (CBN)
MED	Rompitruciolo per finitura – taglio medio (PCD)
ROF	Rompitruciolo per taglio medio – sgrossatura (PCD)
L (L/R)	Riporto tagliente completo (PCD)

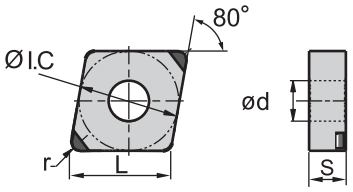
12

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNGA	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16

Inserti - Tornitura (CBN)

CN** Inserti negativi



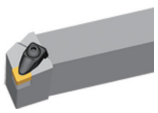
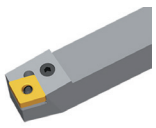
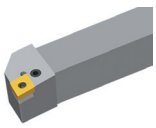
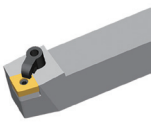
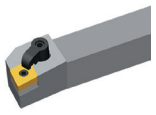
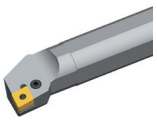
	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○		
H	○ ❁ ❁	○ ❁ ❁	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**CNGA120402S01020-2**	0,2	0,08-0,50	0,05-0,15			○			○		
	CNGA120402S01225-2	0,2	0,08-0,50	0,05-0,15		○			○			
	CNGA120404E-2	0,4	0,08-0,50	0,05-0,20	○			○				
	CNGA120404S01020-2	0,4	0,08-0,50	0,05-0,20			●			○		○
	CNGA120404S01225-2	0,4	0,08-0,50	0,05-0,20		●			○			
	CNGA120408E-2	0,8	0,08-0,50	0,05-0,25	○			○				
	CNGA120408S01525-2	0,8	0,08-0,50	0,05-0,25		●		●	●			
	CNGA120408S02020-2	0,8	0,08-0,50	0,05-0,25			●			●		
	CNGA120412E-2	1,2	0,08-0,50	0,05-0,30	○			○				
	CNGA120412S01020-2	1,2	0,08-0,50	0,05-0,30								●
	CNGA120412S01525-2	1,2	0,08-0,50	0,05-0,30		●		●	●			
	CNGA120412S02020-2	1,2	0,08-0,50	0,05-0,30			●			○		
	CNGA120416S01020-2	1,6	0,08-0,50	0,05-0,35								○
	CNGA120416S01525-2	1,6	0,08-0,50	0,05-0,35		○		○	○			
	CNGA120416S02020-2	1,6	0,08-0,50	0,05-0,35			○			○		
	**CNGA120408S01525-2W**	0,8	0,08-0,50	0,05-0,25		●		○	○			
	CNGA120408S02020-2W	0,8	0,08-0,50	0,05-0,25						○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

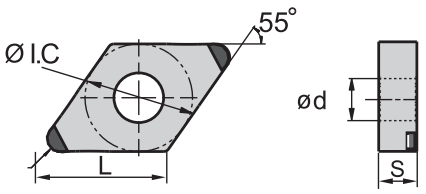
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNGA	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16

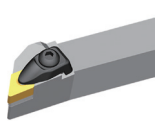
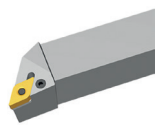
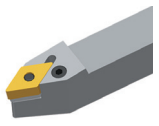
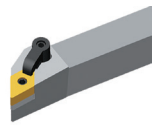
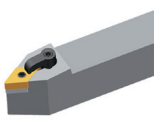
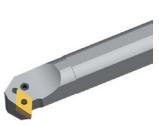
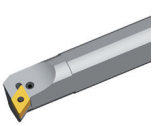


DN** Inserti negativi					BL (CBN)				BC (CBN)			BH (CBN)
					YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
P												
M												
K												○
N												
S					○			⊛				
H						○	⊛	⊛	○	⊛	⊛	
	ISO		r	a_p	f							
	DNGA150604E-2		0,4	0,08-0,50	0,05-0,20	○		○				
	DNGA150604S01020-2		0,4	0,08-0,50	0,05-0,20		○			○		○
	DNGA150604S01225-2		0,4	0,08-0,50	0,05-0,20	○		○	○			
	DNGA150608E-2		0,8	0,08-0,50	0,05-0,25	○		○				
	DNGA150608S01020-2		0,8	0,08-0,50	0,05-0,25							○
	DNGA150608S01525-2		0,8	0,08-0,50	0,05-0,25	●		●	●			
	DNGA150608S02020-2		0,8	0,08-0,50	0,05-0,25		●			●		
	DNGA150612S01020-2		1,2	0,08-0,50	0,05-0,30							○
	DNGA150612S01525-2		1,2	0,08-0,50	0,05-0,30	●		○	○			
	DNGA150612S02020-2		1,2	0,08-0,50	0,05-0,30		●			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

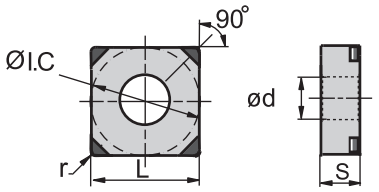
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

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Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SNGA	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16

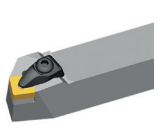
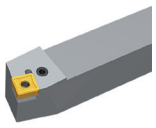
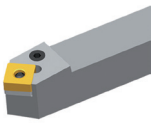
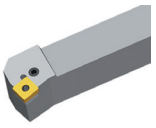
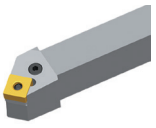
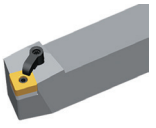
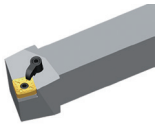
Inserti - Tornitura (CBN)

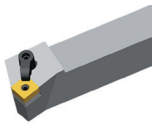
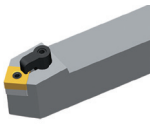
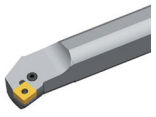
SN** Inserti negativi						BL (CBN)				BC (CBN)			BH (CBN)
						YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	SNGA120408S01020-4	0,8	0,08-0,50	0,05-0,25									○
	SNGA120408S01525-4	0,8	0,08-0,50	0,05-0,25		○		○		○			
	SNGA120408S02020-4	0,8	0,08-0,50	0,05-0,25			○				○		
	SNGA120412S01020-4	1,2	0,08-0,50	0,05-0,30									○
	SNGA120412S01525-4	1,2	0,08-0,50	0,05-0,30		○		○		○			
	SNGA120412S02020-4	1,2	0,08-0,50	0,05-0,30			○				○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

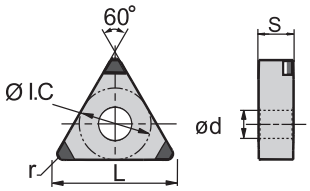
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

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TNGA	L	I.C	S	d
16 04	16,5	9,525	4,76	3,81

Inserti - Tornitura (CBN)

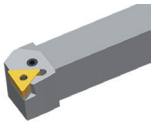
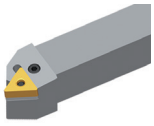
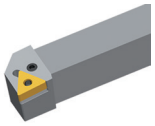
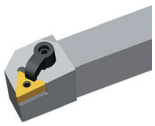
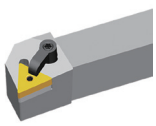
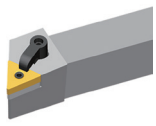
Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

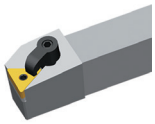
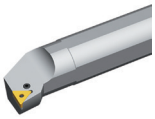
TN** Inserti negativi					BL (CBN)				BC (CBN)			BH (CBN)
												
				P								
				M								
				K								○
				N								
				S	○			◎				
				H		○	◎	◉	○	◎	◉	
	ISO		r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**TNGA160404S01020-3**		0,4	0,08-0,50	0,05-0,20			○			○		○
	TNGA160404S01225-3		0,4	0,08-0,50	0,05-0,20		○			○			
	TNGA160408S01020-3		0,8	0,08-0,50	0,05-0,25								○
	TNGA160408S01525-3		0,8	0,08-0,50	0,05-0,25		○		○	○			
	TNGA160408S02020-3		0,8	0,08-0,50	0,05-0,25			●			○		
	TNGA160412S01020-3		1,2	0,08-0,50	0,05-0,30								○
	TNGA160412S01525-3		1,2	0,08-0,50	0,05-0,30		○		○	○			
	TNGA160412S02020-3		1,2	0,08-0,50	0,05-0,30			○			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

DTGNR/L	**PTFNR/L**	**PTTNR/L**	**PTGNR/L**	**MTGNR/L**	**MTJNR/L**	**MTJNR/L-Z**
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

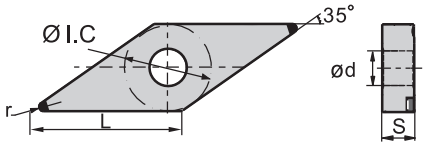
MTFNR/L	**S***-PTFNR/L**
Kr: 91°	Kr: 90°
	
A263	A330

Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VNGA	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

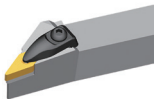
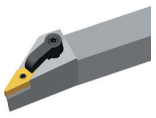
Inserti - Tornitura (CBN)

VN** Inserti negativi					BL (CBN)				BC (CBN)			BH (CBN)
												
				P								
				M								
				K								○
				N								
				S	○		◎					
				H		○	◎	◉	○	◎	◉	
	ISO		r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**VNGA160404S01020-2**		0,4	0,08-0,50	0,05-0,20			●			○		○
	VNGA160404S01225-2		0,4	0,08-0,50	0,05-0,20		●			○			
	VNGA160408S01020-2		0,8	0,08-0,50	0,05-0,25								○
	VNGA160408S01525-2		0,8	0,08-0,50	0,05-0,25		●			○			
	VNGA160408S02020-2		0,8	0,08-0,50	0,05-0,25			●			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

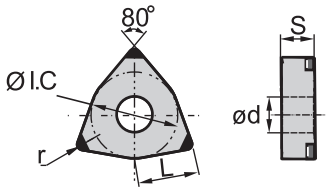
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

WNGA	L	I.C	S	d
08 04	8,69	12,7	4,76	5,16

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (CBN)

WN** Inserti negativi



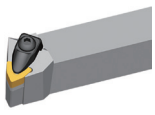
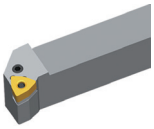
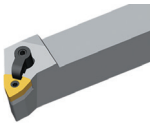
	BL (CBN)				BC (CBN)			BH (CBN)
	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
P								
M								
K								●
N								
S	●			○				
H		●	○	○	●	○	○	

ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
WNGA080404S01020-3	0,4	0,08-0,50	0,05-0,20			○			○		○
WNGA080404S01225-3	0,4	0,08-0,50	0,05-0,20		○			○			
WNGA080408S01020-3	0,8	0,08-0,50	0,05-0,25								○
WNGA080408S01525-3	0,8	0,08-0,50	0,05-0,25		○			○			
WNGA080408S02020-3	0,8	0,08-0,50	0,05-0,25			○			○		
WNGA080412S01020-3	1,2	0,08-0,50	0,05-0,30								○
WNGA080412S01525-3	1,2	0,08-0,50	0,05-0,30		○		○	○			
WNGA080412S02020-3	1,2	0,08-0,50	0,05-0,30			○			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

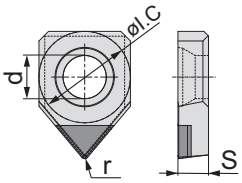
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

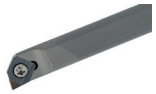
ZNEX	I.C	S	d
04 01	4,76	1,59	2,3

Inserti - Tornitura (CBN)

ZN** Inserti negativi					BL (CBN)				BC (CBN)			BH (CBN)
				P								
				M								
				K								●
				N								
				S	○			◌				
				H		○	◌	◌	○	◌	◌	
	ISO		r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**ZNEX040102S01515**		0,2	0,08-0,50	0,05-0,15		○	○					
	ZNEX040104S01515		0,4	0,08-0,50	0,05-0,20		○	○					

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

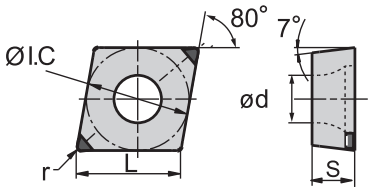
Portautensile
SZLNR/L
Kr: 95°

A365

Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CCGW	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,5

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (CBN)



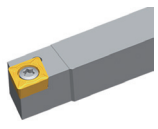
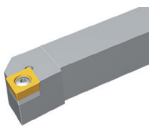
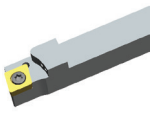
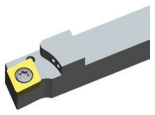
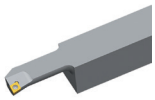
CC** Inserti positivi					BL (CBN)				BC (CBN)			BH (CBN)
					YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
P												
M												
K												○
N												
S					○			◉				
H						●	◉	◉	○	◉	◉	
	ISO	r	a_p	f								
	CCGW060202S01020-2	0,2	0,08-0,50	0,05-0,20			○			○		○
	CCGW060202S01225-2	0,2	0,08-0,50	0,05-0,200,05-0,15		○			○			
	CCGW060204S01020-2	0,4	0,08-0,50	0,05-0,20			○			○		○
	CCGW060204S01225-2	0,4	0,08-0,50	0,05-0,20		○			○			
	CCGW060208S01020-2	0,8	0,08-0,50	0,05-0,25								○
	CCGW060208S01525-2	0,8	0,08-0,50	0,05-0,25		○			○			
	CCGW060208S02020-2	0,8	0,08-0,50	0,05-0,25			○			○		
	CCGW09T302S01020-2	0,2	0,08-0,50	0,05-0,15			○			○		○
	CCGW09T302S01225-2	0,2	0,08-0,50	0,05-0,15		○			○			
	CCGW09T304E-2	0,4	0,08-0,50	0,05-0,20	○			○				
	CCGW09T304S01020-2	0,4	0,08-0,50	0,05-0,20			●			○		○
	CCGW09T304S01225-2	0,4	0,08-0,50	0,05-0,20		●			○			
	**CCGW09T308E-2**	0,8	0,08-0,50	0,05-0,25	○			○				
	CCGW09T308S01020-2	0,8	0,08-0,50	0,05-0,25								●
	CCGW09T308S01525-2	0,8	0,08-0,50	0,05-0,25		●		○	○			
	CCGW09T308S02020-2	0,8	0,08-0,50	0,05-0,25			●			●		
	CCGW09T312E-2	1,2	0,08-0,50	0,05-0,30	○			○				
	CCGW120404S01020-2	0,4	0,08-0,50	0,05-0,20			○			○		○
	CCGW120404S01225-2	0,4	0,08-0,50	0,05-0,20		○			○			
	CCGW120408S01020-2	0,8	0,08-0,50	0,05-0,25								○
	CCGW120408S01525-2	0,8	0,08-0,50	0,05-0,25		○		○	○			
	CCGW120408S02020-2	0,8	0,08-0,50	0,05-0,25			○			○		
	CCGW120412S01020-2	1,2	0,08-0,50	0,05-0,30								○
	CCGW120412S01525-2	1,2	0,08-0,50	0,05-0,30		○		○	○			
	CCGW120412S02020-2	1,2	0,08-0,50	0,05-0,30			○			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

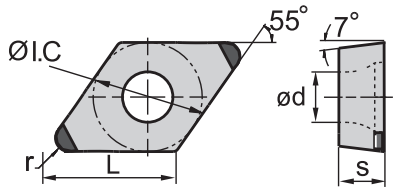
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DCGW	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



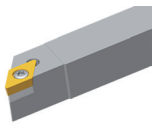
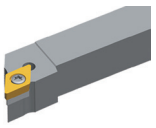
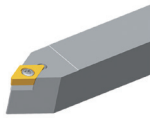
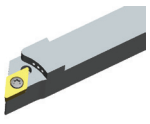
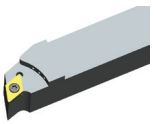
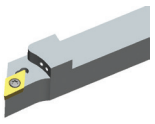
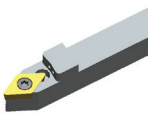
	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			○
N			
S	○	◈	
H	○ ◈ ◈	○ ◈ ◈	

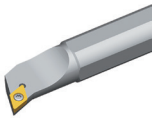
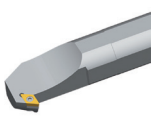
ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
DCGW070202S01020-2	0,2	0,08-0,50	0,05-0,15			●			○		
DCGW070202S01225-2	0,2	0,08-0,50	0,05-0,15		○			○			
DCGW070204S01020-2	0,4	0,08-0,50	0,05-0,20			●			○		○
DCGW070204S01225-2	0,4	0,08-0,50	0,05-0,20		●			○			
DCGW070208S01020-2	0,8	0,08-0,50	0,05-0,25								○
DCGW070208S01525-2	0,8	0,08-0,50	0,05-0,25		●			○			
DCGW070208S02020-2	0,8	0,08-0,50	0,05-0,25			●			○		
DCGW11T302S01020-2	0,2	0,08-0,50	0,05-0,15			○			○		○
DCGW11T302S01225-2	0,2	0,08-0,50	0,05-0,15		○			○			
DCGW11T304E-2	0,4	0,08-0,50	0,05-0,20	○			○				
DCGW11T304S01020-2	0,4	0,08-0,50	0,05-0,20			●			○		●
DCGW11T304S01225-2	0,4	0,08-0,50	0,05-0,20		●			○			
DCGW11T308E-2	0,8	0,08-0,50	0,05-0,25	○			○				
DCGW11T308S01020-2	0,8	0,08-0,50	0,05-0,25								●
DCGW11T308S01525-2	0,8	0,08-0,50	0,05-0,25		●		○	●			
DCGW11T308S02020-2	0,8	0,08-0,50	0,05-0,25			●			●		
DCGW11T312E-2	1,2	0,08-0,50	0,05-0,30	○			○				

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

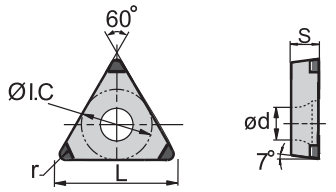
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Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TCGW	L	I.C	S	d
11 02	11	6,35	2,38	2,5
16 T3	16,5	9,525	3,97	4,4

TC** Inserti positivi



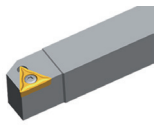
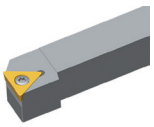
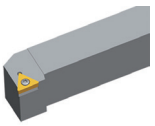
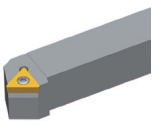
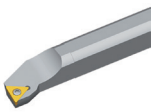
	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			●
N			
S	○		
H	○ ❁ ❁	○ ❁ ❁	

ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
TCGW110204S01020-3	0,4	0,08-0,50	0,05-0,20			○			○		○
TCGW110204S01225-3	0,4	0,08-0,50	0,05-0,20		○			○			
TCGW110208S01020-3	0,8	0,08-0,50	0,05-0,25								○
TCGW110208S01525-3	0,8	0,08-0,50	0,05-0,25		○			○			
TCGW110208S02020-3	0,8	0,08-0,50	0,05-0,25			○			○		
TCGW16T304S01020-3	0,4	0,08-0,50	0,05-0,20			●			○		○
TCGW16T304S01225-3	0,4	0,08-0,50	0,05-0,20		●			○			
TCGW16T308S01020-3	0,8	0,08-0,50	0,05-0,25								○
TCGW16T308S01525-3	0,8	0,08-0,50	0,05-0,25		●			○			
TCGW16T308S02020-3	0,8	0,08-0,50	0,05-0,25			●			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

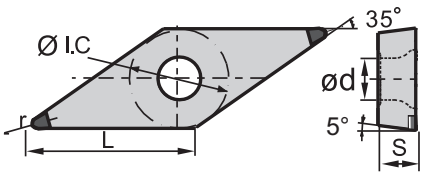
STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

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VBGW	L	I.C	S	d
16 04	16,6	9,525	4,76	4,4

Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

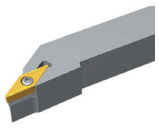
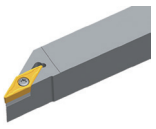
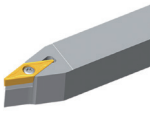
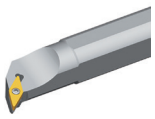
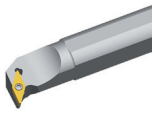


VB** Inserti positivi					BL (CBN)				BC (CBN)			BH (CBN)
	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	VBGW160404S01020-2	0,4	0,08-0,50	0,05-0,20			●			○		○
	VBGW160404S01225-2	0,4	0,08-0,50	0,05-0,20		●			○			
	VBGW160408S01020-2	0,8	0,08-0,50	0,05-0,25								○
	VBGW160408S01525-2	0,8	0,08-0,50	0,05-0,25		●			○			
	VBGW160408S02020-2	0,8	0,08-0,50	0,05-0,25			●			○		

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

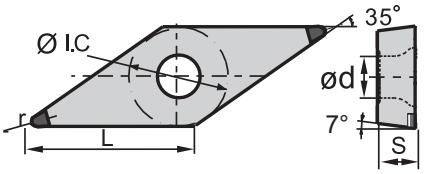
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Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCGW	L	I.C	S	d
11 03	11,1	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4

VC** Inserti positivi



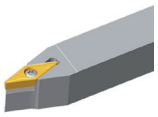
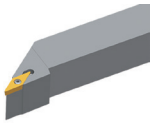
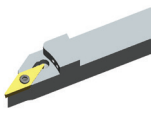
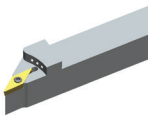
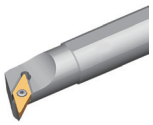
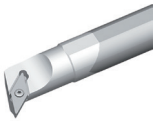
	BL (CBN)	BC (CBN)	BH (CBN)
P			
M			
K			○
N			
S	○	◎	
H	○ ◎ ◎	○ ◎ ◎	

	ISO	r	a_p	f	YCB112	YCB113	YCB121	YCB131	YCB113C	YCB121C	YCB131C	YCB215
	**VCGW110302E-2**	0,2	0,08-0,50	0,05-0,15	○			○				
	VCGW110304E-2	0,4	0,08-0,50	0,05-0,20	○			○				
	VCGW160404E-2	0,4	0,08-0,50	0,05-0,20	○			○				
	VCGW160404S01020-2	0,4	0,08-0,50	0,05-0,20			●			○		○
	VCGW160404S01225-2	0,4	0,08-0,50	0,05-0,20		●			○			
	VCGW160408E-2	0,8	0,08-0,50	0,05-0,25	○			○				
	VCGW160408S01020-2	0,8	0,08-0,50	0,05-0,25								○
	VCGW160408S01525-2	0,8	0,08-0,50	0,05-0,25		●			○			
	VCGW160408S02020-2	0,8	0,08-0,50	0,05-0,25			●			○		
	VCGW160412E-2	1,2	0,08-0,50	0,05-0,30	○			○				

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

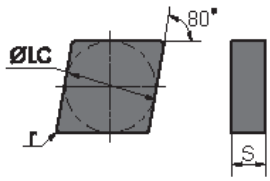
C***-SVUCR/L
Kr: 93°

A364

Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNGN	L	I.C	S
09 03	9,7	9,525	3,18
12 04	12,9	12,7	4,76

CN** Inserti negativi						BL (CBN)	BC (CBN)	BH (CBN)
					P			
					M			
					K			⊛
					N			
					S			
					H	⊛	⊛	
	ISO	r	a_p	f		YZB630	YZB630C	YZB223
	**CNGN090308S01525**	0,8	0,5-2,0	0,3-0,5		○	○	
	CNGN090308T01525	0,8	0,5-2,0	0,3-0,5				○
	CNGN090312S01525	1,2	0,5-2,0	0,3-0,5		○	○	
	CNGN090312T01525	1,2	0,5-2,0	0,3-0,5				○
	CNGN120408S01525	0,8	0,5-2,0	0,3-0,5		○	○	
	CNGN120408T01525	0,8	0,5-2,0	0,3-0,5				●
	CNGN120412S01525	1,2	0,5-2,0	0,3-0,5		●	○	
	CNGN120412T01525	1,2	0,5-2,0	0,3-0,5				●
	CNGN120416S01525	1,6	0,5-2,0	0,3-0,5		○	○	
	**CNGN120408T01525-M**	0,8	0,5-2,0	0,3-0,5				○
	CNGN120412T01525-M	1,2	0,5-2,0	0,3-0,5				○
	CNGN120416T01525-M	1,6	0,5-2,0	0,3-0,5				○

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile
CCLNR/L
Kr: 95°

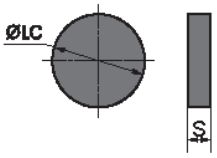
A292

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Inserti - Tornitura (CBN)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RNGN	I.C	S
09 03	9,525	3,18
12 04	12,7	4,76

RN** Inserti negativi				BL (CBN)	BC (CBN)	BH (CBN)
			P			
			M			
			K			○
			N			
			S			
			H	○	○	
ISO		a_p	f	YZB630	YZB630C	YZB223
	**RNGN090300S01525**	0,5-2,0	0,3-0,5	○	○	
	RNGN090300T01525	0,5-2,0	0,3-0,5			○
	RNGN120400S01525	0,5-2,0	0,3-0,5	○	○	
	RNGN120400T01525	0,5-2,0	0,3-0,5			●

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

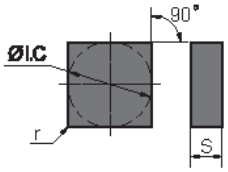
Portautensile
CRDNN

A298

SNGN	L	I.C	S
12 04	12,7	12,7	4,76

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

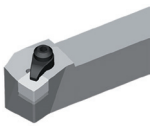
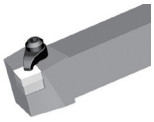
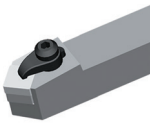
Inserti - Tornitura (CBN)

SN** Inserti negativi						BL (CBN)	BC (CBN)	BH (CBN)
					P			
					M			
					K			⊛
					N			
					S			
					H	⊛	⊛	
	ISO	r	a_p	f		YZB630	YZB630C	YZB223
	**SNGN120408S01525**	0,8	0,5-2,0	0,3-0,5		○	○	
	SNGN120408T01525	0,8	0,5-2,0	0,3-0,5				●
	SNGN120412S01525	1,2	0,5-2,0	0,3-0,5		○	○	
	SNGN120412T01525	1,2	0,5-2,0	0,3-0,5				○
	SNGN120416T01525	1,6	0,5-2,0	0,3-0,5				●
	**SNGN120412T01525-M**	1,2	0,5-2,0	0,3-0,5				○
	SNGN120416T01525-M	1,6	0,5-2,0	0,3-0,5				●

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

Portautensile

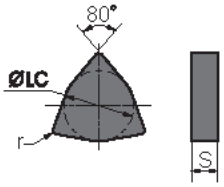
CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
		
A296	A297	A299

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Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

WNGN	L	I.C	S
08 04	8,69	12,7	4,76

Inserti - Tornitura (CBN)

WN** Inserti negativi						BL (CBN)	BC (CBN)	BH (CBN)
					P			
					M			
					K			⊛
					N			
					S			
					H	⊛	⊛	
ISO		r	a_p	f		YZB630	YZB630C	YZB223
	**WNGN080408T01525**	0,8	0,5-2,0	0,3-0,5				○
	WNGN080412T01525	1,2	0,5-2,0	0,3-0,5				○
	WNGN080416T01525	1,6	0,5-2,0	0,3-0,5				○
	**WNGN080408T01525-M**	0,8	0,5-2,0	0,3-0,5				○
	WNGN080412T01525-M	1,2	0,5-2,0	0,3-0,5				○
	WNGN080416T01525-M	1,6	0,5-2,0	0,3-0,5				○

● In magazzino ○ Su richiesta

BL CBN con ridotto contenuto di CBN
BC CBN rivestito
BH CBN con elevato contenuto di CBN

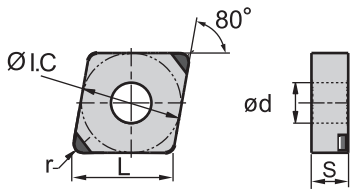
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

CNGA	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16

Inserti - Tornitura (PCD)

CN** Inserti negativi



DP

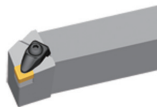
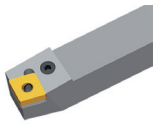
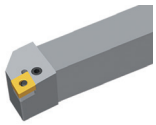
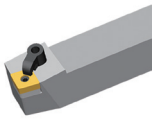
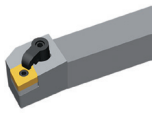
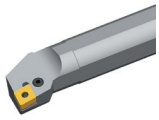
P
M
K
N
S
H

ISO	r	a_p	f	YCD421
CNGA120402F-1	0,2	0,08-0,50	0,05-0,15	○
CNGA120404F-1	0,4	0,08-0,50	0,05-0,20	○
CNGA120408F-1	0,8	0,08-0,50	0,05-0,25	○
CNGA120412F-1	1,2	0,08-0,50	0,05-0,30	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

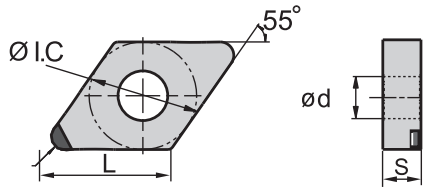
Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNGA	L	I.C	S	d
15 06	15,5	12,7	6,35	5,16

DN** Inserti negativi



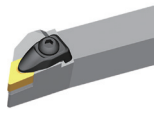
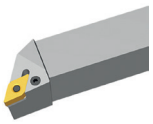
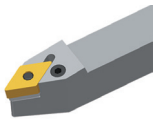
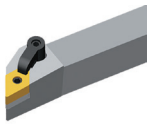
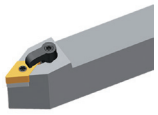
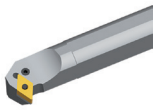
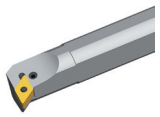
	ISO	r	a_p	f	YCD421
	**DNGA150602F-1**	0,2	0,08-0,50	0,05-0,15	○
	DNGA150604F-1	0,4	0,08-0,50	0,05-0,20	○
	DNGA150608F-1	0,8	0,08-0,50	0,05-0,25	○

P M K N S H — DP

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

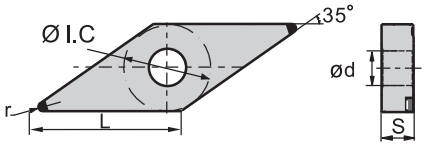
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VNGA	L	I.C	S	d
16 04	16,6	9,525	4,76	3,81

VN** Inserti negativi



P	
M	
K	
N	○
S	
H	

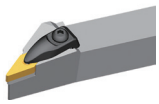
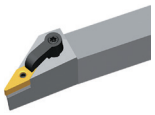
DP

	ISO	r	a_p	f	YCD421
	**VNGA160402F-1**	0,2	0,08-0,50	0,05-0,15	○
	VNGA160404F-1	0,4	0,08-0,50	0,05-0,20	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

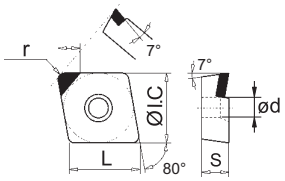
Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

CCGT	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

Inserti - Tornitura (PCD)

CC** Inserti positivi



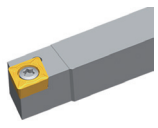
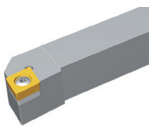
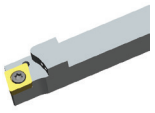
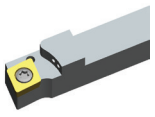
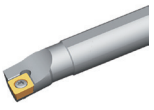
	P	M	K	N	S	H
DP				○		

	ISO	r	a_p	f	YCD421
	**CCGT060202F-1**	0,2	0,05-0,50	0,05-0,15	○
	CCGT060204F-1	0,4	0,08-0,50	0,05-0,20	●
	CCGT060208F-1	0,8	0,08-0,50	0,05-0,25	○
	CCGT09T302F-1	0,2	0,08-0,50	0,05-0,15	○
	CCGT09T304F-1	0,4	0,08-0,50	0,05-0,20	○
	CCGT09T308F-1	0,8	0,08-0,50	0,05-0,25	○
	CCGT120402F-1	0,2	0,08-0,50	0,05-0,15	○
	CCGT120404F-1	0,4	0,08-0,50	0,05-0,20	○
	CCGT120408F-1	0,8	0,08-0,50	0,05-0,25	○
	**CCGT060204F-1MED**	0,4	0,08-0,50	0,05-0,20	○
	CCGT060208F-1MED	0,8	0,08-0,50	0,05-0,25	○
	CCGT09T302F-1MED	0,2	0,08-0,50	0,05-0,15	○
	CCGT09T304F-1MED	0,4	0,08-0,50	0,05-0,20	○
	CCGT09T308F-1MED	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

A355

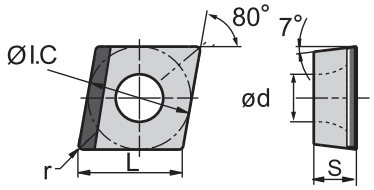
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CCGT	L	I.C	S	d
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

CC** Inserti positivi



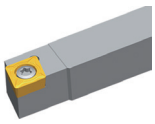
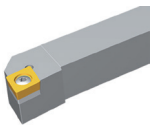
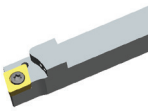
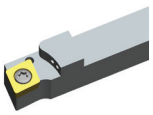
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**CCGT09T308-LL**	0,8	0,08-0,50	0,05-0,25	○
	CCGT09T308-LR	0,8	0,08-0,50	0,05-0,25	○
	CCGT120404-LL	0,4	0,08-0,50	0,05-0,20	○
	CCGT120404-LR	0,4	0,08-0,50	0,05-0,20	○
	CCGT120408-LL	0,8	0,08-0,50	0,05-0,25	○
	CCGT120408-LR	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E*-SCLCR/L**
Kr: 95°

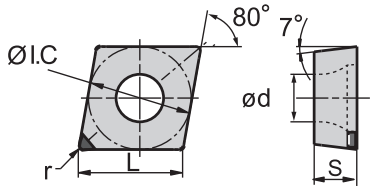
A355

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

CCGW	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

Inserti - Tornitura (PCD)

CC** Inserti positivi



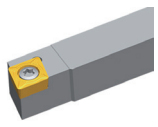
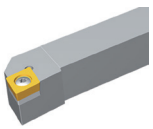
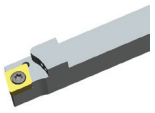
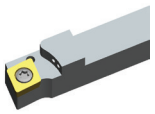
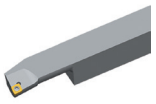
DP

	ISO	r	a_p	f	YCD421
P					
M					
K					
N					○
S					
H					
	**CCGW060202F-1**	0,2	0,08-0,50	0,05-0,15	○
	CCGW060204F-1	0,4	0,08-0,50	0,05-0,20	○
	CCGW09T304F-1	0,4	0,08-0,50	0,05-0,20	●
	CCGW09T308F-1	0,8	0,08-0,50	0,05-0,25	●
	CCGW120404F-1	0,4	0,08-0,50	0,05-0,20	●
	CCGW120408F-1	0,8	0,08-0,50	0,05-0,25	●

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SCACR/L	**SCLCR/L**	**SCACR/L-SC**	**SCLCR/L-SC**	**A***-SCLCR/L**	**S***-SCFCR/L**	**S***-SCLCR**
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E*-SCLCR/L**
Kr: 95°

A355

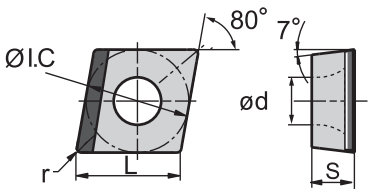
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CCGW	L	I.C	S	d
06 02	6,4	6,35	2,38	2,8
09 T3	9,7	9,525	3,97	4,4
12 04	12,9	12,7	4,76	5,56

CC** Inserti positivi



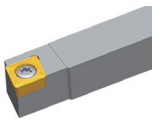
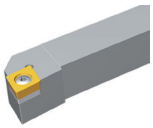
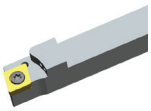
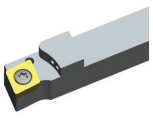
	ISO	r	a_p	f	YCD421
	CCGW060204-LL	0,2	0,08-0,50	0,05-0,20	○
	CCGW060204-LR	0,4	0,08-0,50	0,05-0,20	○
	CCGW09T304-LL	0,4	0,08-0,50	0,05-0,20	○
	CCGW09T304-LR	0,4	0,08-0,50	0,05-0,20	○
	**CCGW09T308-LL**	0,8	0,08-0,50	0,05-0,25	○
	CCGW09T308-LR	0,8	0,08-0,50	0,05-0,25	○
	CCGW120404-LL	0,4	0,08-0,50	0,05-0,20	○
	CCGW120404-LR	0,4	0,08-0,50	0,05-0,20	○
	CCGW120408-LL	0,8	0,08-0,50	0,05-0,25	○
	CCGW120408-LR	0,8	0,08-0,50	0,05-0,25	○

DP: P, M, K, **N** ○, S, H

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SCACR/L	SCLCR/L	SCACR/L-SC	SCLCR/L-SC	A***-SCLCR/L	S***-SCFCR/L	S***-SCLCR
Kr: 90°	Kr: 95°	Kr: 90°	Kr: 95°	Kr: 95°	Kr: 90°	Kr: 95°
						
A269	A270	A306	A307	A334	A352	A353

E***-SCLCR/L
Kr: 95°

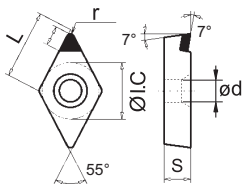
A355

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DCGT	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



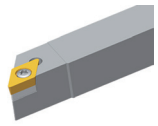
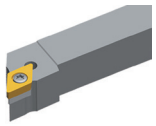
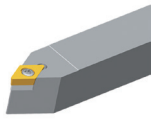
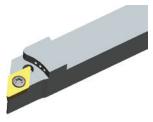
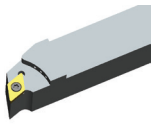
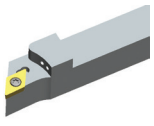
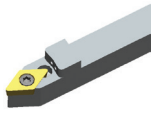
	P	M	K	N	S	H
DP				○		

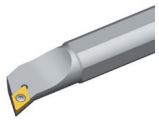
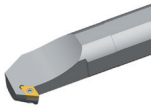
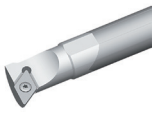
	ISO	r	a_p	f	YCD421
	**DCGT070202F-1**	0,2	0,08-0,50	0,05-0,15	○
	DCGT070204F-1	0,4	0,08-0,50	0,05-0,20	○
	DCGT11T302F-1	0,2	0,08-0,50	0,05-0,15	●
	DCGT11T304F-1	0,4	0,08-0,50	0,05-0,20	●
	DCGT11T308F-1	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

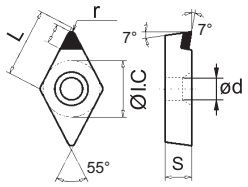
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DCGT	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi

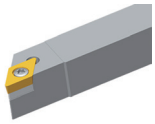
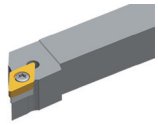
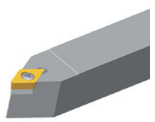
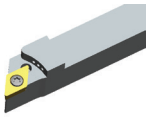
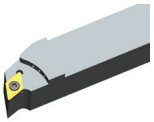
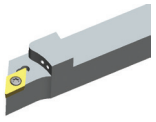
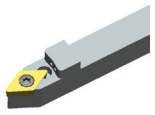


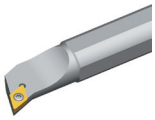
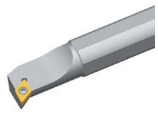
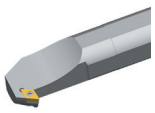
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	DCGT070204F-1MED	0,4	0,08-0,50	0,05-0,20	○
	DCGT070208F-1MED	0,8	0,08-0,50	0,05-0,25	○
	**DCGT11T302F-1MED**	0,2	0,08-0,50	0,05-0,15	○
	DCGT11T304F-1MED	0,4	0,08-0,50	0,05-0,20	○
	DCGT11T308F-1MED	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

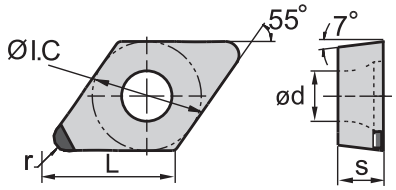
Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DCGW	L	I.C	S	d
07 02	7,8	6,35	2,38	2,8
11 T3	11,6	9,525	3,97	4,4

DC** Inserti positivi



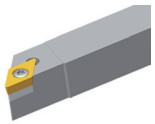
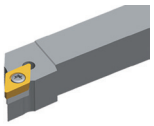
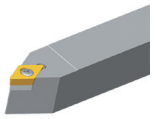
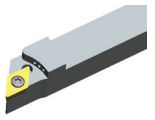
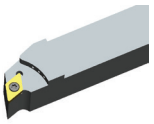
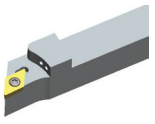
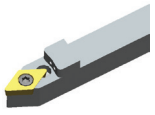
	DP
P	
M	
K	
N	○
S	
H	

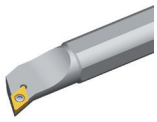
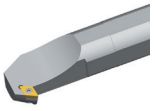
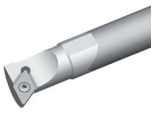
	ISO	r	a_p	f	YCD421
	**DCGW070202F-1**	0,2	0,08-0,50	0,05-0,15	●
	DCGW070204F-1	0,4	0,08-0,50	0,05-0,20	●
	DCGW070208F-1	0,8	0,08-0,50	0,05-0,25	○
	DCGW11T302F-1	0,2	0,08-0,50	0,05-0,15	●
	DCGW11T304F-1	0,4	0,08-0,50	0,05-0,20	●

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SDACR/L	SDJCR/L	SDNCN	SDACR/L-SC	SDHCR/L-SC	SDJCR/L-SC	SDNCN-SC
Kr: 90°	Kr: 93°	Kr: 62°30'	Kr: 90°	Kr: 107°30'	Kr: 93°	Kr: 62°30'
						
A271	A272	A273	A308	A309	A310	A311

S***-SDQCR/L	A***-SDUCR/L	S***-SDZCR/L	E***-SDQCR/L
Kr: 107°30'	Kr: 93°	Kr: 85°	Kr: 107°30'
			
A336	A337	A338	A357

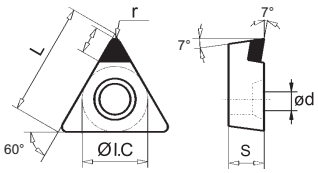
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TCGT	L	I.C	S	d
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

TC** Inserti positivi



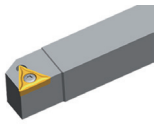
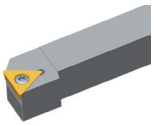
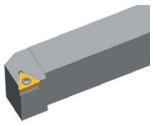
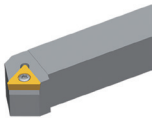
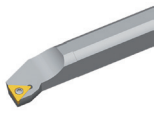
DP

	ISO	r	a_p	f	YCD421
	TCGT110202F-1	0,2	0,08-0,50	0,05-0,15	○
	TCGT110204F-1	0,4	0,08-0,50	0,05-0,20	○
	**TCGT110208F-1**	0,8	0,08-0,50	0,05-0,25	○
	TCGT16T302F-1	0,2	0,08-0,50	0,05-0,15	○
	TCGT16T304F-1	0,4	0,08-0,50	0,05-0,20	○
	TCGT16T308F-1	0,8	0,08-0,50	0,05-0,25	○
	TCGT110202F-1MED	0,2	0,08-0,50	0,05-0,15	○
	TCGT110204F-1MED	0,4	0,08-0,50	0,05-0,20	○
	**TCGT110208F-1MED**	0,8	0,08-0,50	0,05-0,25	○
	TCGT16T302F-1MED	0,2	0,08-0,50	0,05-0,15	○
	TCGT16T304F-1MED	0,4	0,08-0,50	0,05-0,20	○
	TCGT16T308F-1MED	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

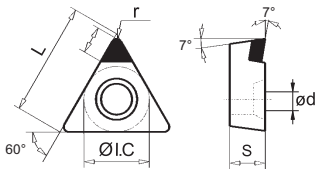
STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

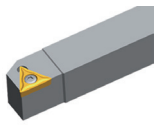
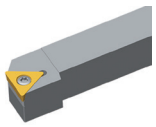
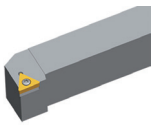
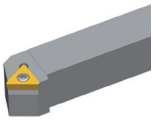
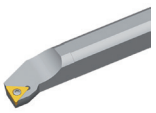
TCGT	L	I.C	S	d
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

TC** Inserti positivi					DP
					P
					M
					K
					N ○
					S
					H
ISO		r	a_p	f	YCD421
	**TCGT110202-L**	0,2	0,08-0,50	0,05-0,15	○
	TCGT110204-L	0,4	0,08-0,50	0,05-0,20	○
	TCGT110208-L	0,8	0,08-0,50	0,05-0,25	○
	TCGT16T302-L	0,2	0,08-0,50	0,05-0,15	○
	TCGT16T304-L	0,4	0,08-0,50	0,05-0,20	○
	TCGT16T308-L	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

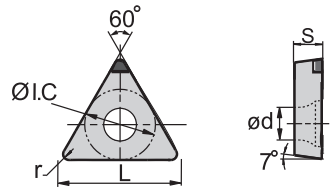
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

TCGW	L	I.C	S	d
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

TC** Inserti positivi



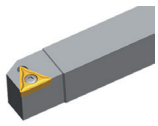
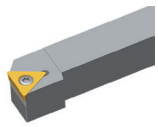
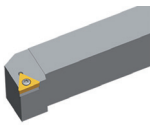
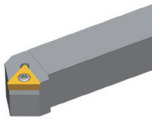
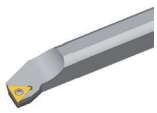
	DP
P	
M	
K	
N	●
S	
H	

	ISO	r	a_p	f	YCD421
	**TCGW110202F-1**	0,2	0,08-0,50	0,05-0,15	○
	TCGW110204F-1	0,4	0,08-0,50	0,05-0,20	●
	TCGW110208F-1	0,8	0,08-0,50	0,05-0,25	○
	TCGW16T304F-1	0,4	0,08-0,50	0,05-0,20	●
	TCGW16T308F-1	0,8	0,08-0,50	0,05-0,25	○
	TCGW16T312F-1	1,2	0,08-0,50	0,05-0,30	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

STACR/L	STFCR/L	STGCR/L	STTCR/L	S***-STFCR/L	E***-STFCR/L
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

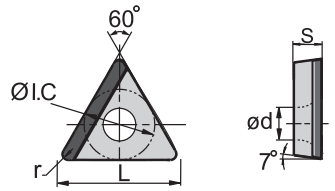
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TCGW	L	I.C	S	d
11 02	11	6,35	2,38	2,8
16 T3	16,5	9,525	3,97	4,4

TC** Inserti positivi



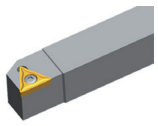
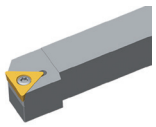
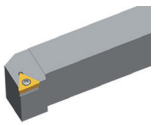
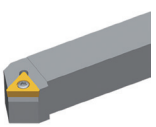
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**TCGW110202-L**	0,2	0,08-0,50	0,05-0,15	○
	TCGW110204-L	0,4	0,08-0,50	0,05-0,20	○
	TCGW110208-L	0,8	0,08-0,50	0,05-0,25	○
	TCGW16T302-L	0,2	0,08-0,50	0,05-0,15	○
	TCGW16T304-L	0,4	0,08-0,50	0,05-0,20	○
	TCGW16T308-L	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

STACR/L	**STFCR/L**	**STGCR/L**	**STTCR/L**	**S***-STFCR/L**	**E***-STFCR/L**
Kr: 90°	Kr: 91°	Kr: 91°	Kr: 60°	Kr: 91°	Kr: 90°
					
A283	A284	A285	A286	A341	A361

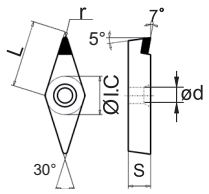
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VBGT	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4

VB** Inserti positivi



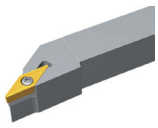
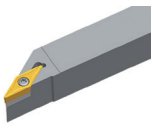
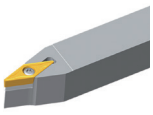
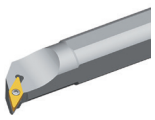
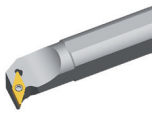
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VBGT110302F-1**	0,2	0,08-0,50	0,05-0,15	○
	VBGT110304F-1	0,4	0,08-0,50	0,05-0,20	○
	VBGT110308F-1	0,8	0,08-0,50	0,05-0,25	○
	VBGT160402F-1	0,2	0,08-0,50	0,05-0,15	○
	VBGT160404F-1	0,4	0,08-0,50	0,05-0,20	○
	VBGT160408F-1	0,8	0,08-0,50	0,05-0,25	○
	**VBGT160404F-1MED**	0,4	0,08-0,50	0,05-0,20	○
	VBGT160408F-1MED	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

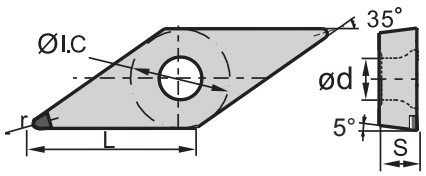
Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VBGW	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4

VB** Inserti positivi



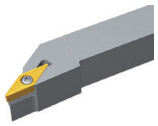
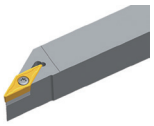
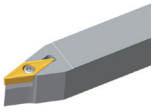
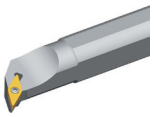
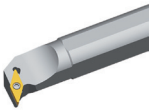
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VBGW110302F-1**	0,2	0,08-0,50	0,05-0,15	○
	VBGW110304F-1	0,4	0,08-0,50	0,05-0,20	●
	VBGW160402F-1	0,2	0,08-0,50	0,05-0,15	○
	VBGW160404F-1	0,4	0,08-0,50	0,05-0,20	●
	VBGW160408F-1	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

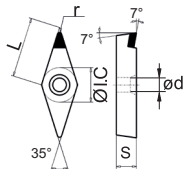
SVJBR/L	SVABR/L	SVVBN	S***-SVQBR/L	S***-SVUBR/L	S***-SVXBR/L
Kr: 93°	Kr: 90°	Kr: 72°30'	Kr: 107°30'	Kr: 93°	Kr: 93°
					
A274	A275	A276	A345	A346	A347

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCGT	L	I.C	S	d
11 02	11	6,35	2,38	2,8
16 04	16,6	9,525	4,76	4,4

VC** Inserti positivi



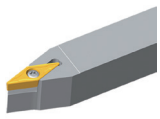
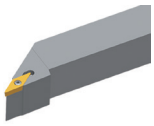
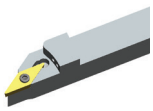
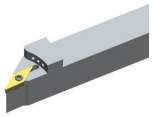
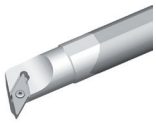
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VCGT110202F-1**	0,2	0,08-0,50	0,05-0,15	○
	VCGT110204F-1	0,4	0,08-0,50	0,05-0,20	○
	VCGT160402F-1	0,2	0,08-0,50	0,05-0,15	○
	VCGT160404F-1	0,4	0,08-0,50	0,05-0,20	○
	VCGT160408F-1	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

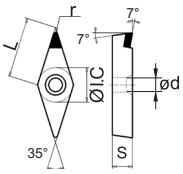
Codice sistema A158 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCGT	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4

VC** Inserti positivi



DP

P
M
K
N
S
H

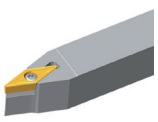
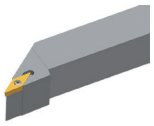
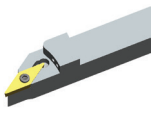
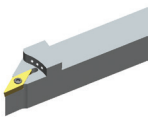
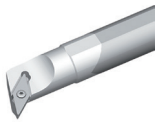
ISO	r	a_p	f	YCD421
VCGT110302F-1MED	0,2	0,08-0,50	0,05-0,15	○
VCGT110304F-1MED	0,4	0,08-0,50	0,05-0,20	○
VCGT160404F-1MED	0,4	0,08-0,50	0,05-0,20	○
VCGT160408F-1MED	0,8	0,08-0,50	0,05-0,25	○
VCGT160412F-1MED	1,2	0,08-0,50	0,05-0,30	○

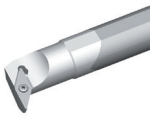


● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

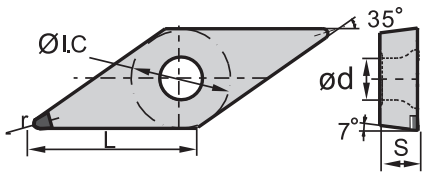
C***-SVUCR/L
Kr: 93°

A364

Inserti - Tornitura (PCD)

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

VCGW	L	I.C	S	d
11 03	11	6,35	3,18	2,8
16 04	16,6	9,525	4,76	4,4

VC** Inserti positivi



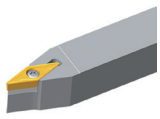
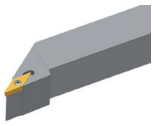
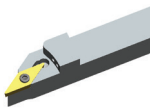
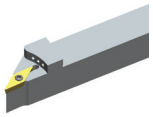
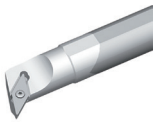
	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VCGW110302F-1**	0,2	0,08-0,50	0,05-0,15	○
	VCGW110304F-1	0,4	0,08-0,50	0,05-0,20	○
	VCGW160404F-1	0,4	0,08-0,50	0,05-0,20	○
	VCGW160408F-1	0,8	0,08-0,50	0,05-0,25	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

Portautensile

SVVCN	SVJCR/L	SVACR/L-SC	SVJCR/L-SC	S***-SVQCR/L	S***-SVUCR/L	C***-SVQCR/L
Kr: 72°30'	Kr: 93°	Kr: 90°	Kr: 93°	Kr: 107°30'	Kr: 93°	Kr: 107°30'
						
A277	A278	A312	A313	A343	A344	A363

C***-SVUCR/L
Kr: 93°

A364

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

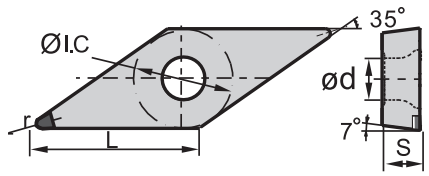
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (PCD)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VCGX	L	I.C	S	d
22 05	22	12,7	5,56	5,5

VC** Inserti positivi



	DP
P	
M	
K	
N	○
S	
H	

	ISO	r	a_p	f	YCD421
	**VCGX220530-1**	3	0,5-7,0	0,25-1,00	○

● In magazzino ○ Su richiesta

DP Diamante policristallino

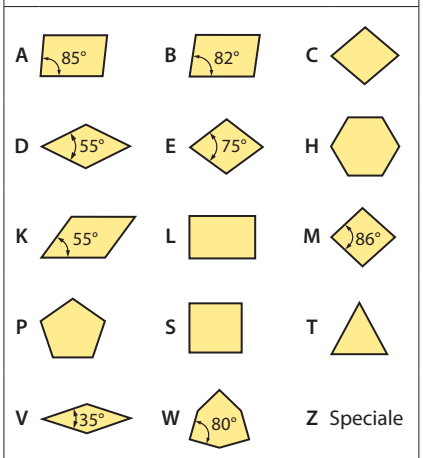
Codice sistema A158 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Note

Tornitura generale Codice ISO – inserti ceramici

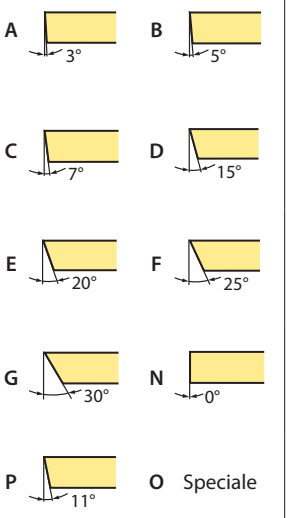
T	N	G	A	12	04	08	T	020	20
1	2	3	4	5	6	7	8	9	10

Forma dell'inserto



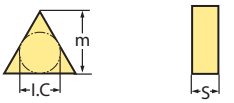
1

Angolo di spoglia inferiore



2

Grado di tolleranza

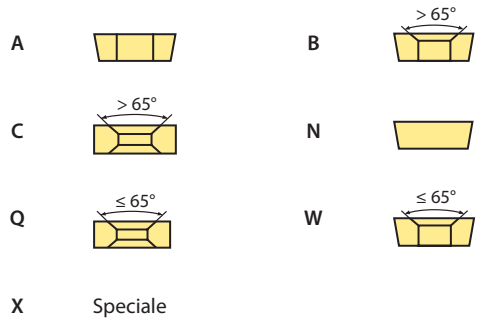


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,15	±0,005	±0,025
K	±0,05–0,15	±0,013	±0,025
L	±0,05–0,15	±0,025	±0,025
M	±0,05–0,15	±0,08–0,20	±0,130
N	±0,05–0,15	±0,08–0,20	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Caratteristiche di fissaggio (metrico)

Forma dell'inserto



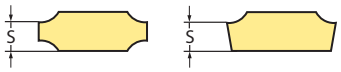
4

Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto C	D	S	T	V	W
3,97				06		
5,0						
5,56				09		
6,0						
6,35	06	07		11	11	
8,0						
9,525	09	11	09	16	16	06
10,0						
12,0						
12,7	12	15	12	22	22	08
15,875	16		15	27		
16,0		19				
19,05	19		19	33		
20,0						
25,0	25	25				
25,4			25			
31,75						
32						

5

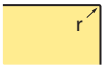
Spessore dell'inserto S [mm]



Code	S	Code	S
02	2,38	**06**	6,35
T2	2,58	**T6**	6,75
03	3,18	**07**	7,94
T3	3,97	**09**	9,52
04	4,76	**T9**	9,72
T4	4,96	**11**	11,11
05	5,56	**12**	12,70
T5	5,95		

6

Raggio di punta r [mm]



Code	r
00	–
02	0,2
04	0,4
08	0,8
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
X	Speciale
MO	Inserti tondi

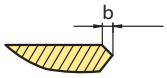
7

Versione del tagliente

Code	Tagliente	Forma dell'inserto
E	Arrotondato	
F	Spigolo vivo	
T	Smusso	
S	Smusso + Arrotondamento	

8

Larghezza smusso b [mm]



Code	b
010	0,10
015	0,15
020	0,20
025	0,25
030	0,30
035	0,35
040	0,40
045	0,45
050	0,50
100	1,00
200	2,00

9

Angolo dello smusso α



Code	α
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

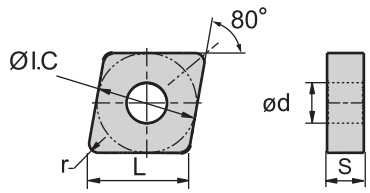
10

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNGA	L	I.C	S	d
12 04	12,9	12,7	4,76	5,16
16 06	16,1	15,875	6,35	6,35

CN** Inserti negativi



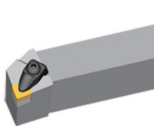
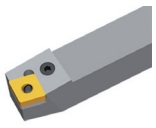
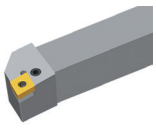
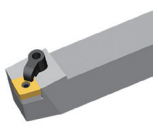
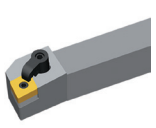
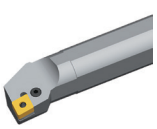
	CM	CC	CN	CR
P	○			
M				
K	○		⊛	
N				
S			○	⊛ ⊛
H		◯		

ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
CNGA120404S02020	0,4	0,1-0,3	0,08-0,25		●		
CNGA120404T01020	0,4	0,1-0,3	0,08-0,25		○		
CNGA120404T02020	0,4	0,1-0,3	0,08-0,25	○	●	●	
CNGA120408S01520	0,8	0,1-0,25	0,5-2,5				○
CNGA120408S02020	0,8	0,1-0,4	0,1-0,3		●		
CNGA120408T00520	0,8	0,1-0,25	0,5-2,5				○ ●
CNGA120408T01020	0,8	0,1-0,4	0,1-0,3		○		
CNGA120408T02020	0,8	0,1-0,4	0,1-0,3	○	●	○	
CNGA120412S01520	1,2	0,1-0,3	0,5-2,5				○
CNGA120412S02020	1,2	0,1-0,5	0,1-0,3		●		
CNGA120412T00520	1,2	0,1-0,3	0,5-2,5				○
CNGA120412T02020	1,2	0,1-0,5	0,1-0,3	○	○	●	
CNGA120416S01520	1,6	0,1-0,35	0,5-3,0				○
CNGA120416T00520	1,6	0,1-0,35	0,5-3,0				○ ○
CNGA160612T02020	1,2	0,2-2,0	0,1-0,3			●	

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

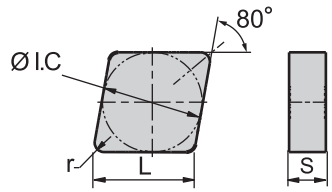
DCLNR/L	PCBNR/L	PCLNR/L	MCBNR/L	MCLNR/L	S***-PCLNR/L
Kr: 95°	Kr: 75°	Kr: 95°	Kr: 75°	Kr: 95°	Kr: 95°
					
A230	A237	A238	A252	A253	A324

Codice sistema A198 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CNGN	L	I.C	S
12 04	12,9	12,7	4,76
12 07	12,9	12,7	7,94
16 07	16,1	15,875	7,94
16 06	16,1	15,875	6,35

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (Ceramici)

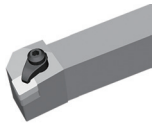


CN** Inserti negativi					CM		CC		CN		CR	
				P	●							
				M								
				K	●				◉			
				N								
				S						●	◉	◉
				H			○					
	ISO	r	a_p	f	CA1000		CM1000		CN1000	CS1000	CW1400	CW1800
	CNGN120404T00520	0,4	0,1-0,25	0,5-2,0								○
	CNGN120404T02020	0,4	0,1-0,3	0,08-0,25	○							
	CNGN120408S01520	0,8	0,1-0,25	0,5-2,5							○	
	CNGN120408S02020	0,8	0,1-0,4	0,1-0,3			○					
	CNGN120408T00520	0,8	0,1-0,25	0,5-2,5								●
	CNGN120408T02020	0,8	0,1-0,4	0,1-0,3	●				●			
	CNGN120412S01520	1,2	0,1-0,3	0,5-2,5							○	
	CNGN120412T00520	1,2	0,1-0,3	0,5-2,5								●
	CNGN120412T02020	1,2	0,1-0,5	0,1-0,3	○				○			
	CNGN120416S01520	1,6	0,1-0,35	0,5-3,0							○	
	CNGN120416T00520	1,6	0,1-0,35	0,5-3,0								●
	CNGN120416T02020	1,6	0,5-2,0	0,1-0,35					○			
	CNGN120708S01520	0,8	0,1-0,25	0,5-2,5							○	
	**CNGN120708T00520**	0,8	0,1-0,25	0,5-2,5								●
	CNGN120708T02020	0,8	0,1-0,4	0,1-0,3	○							
	CNGN120712S01520	1,2	0,1-0,3	0,5-2,5							○	
	CNGN120712S02025	1,2	0,1-0,3	0,5-2,5								○
	CNGN120712T00520	1,2	0,1-0,3	0,5-2,5								●
	CNGN120712T00525	1,2	0,1-0,3	0,5-2,5						○	○	○
	CNGN120712T02020	1,2	0,1-0,5	0,1-0,3	●				○			
	CNGN120716S01520	1,6	0,1-0,35	0,5-3,0							○	
	CNGN120716T00520	1,6	0,1-0,35	0,5-3,0								○
	CNGN120716T01520	1,6	0,1-0,35	0,5-3,0							○	
	CNGN120716T02020	1,6	0,1-0,6	0,1-0,4	○				○			
	CNGN160616T02020	1,6	0,1-0,6	0,1-0,4	○							
	CNGN160712T01525	1,2	0,2-2,0	0,1-0,3					○			
	CNGN160716T01525	1,6	0,1-0,6	0,1-0,4	○							
	CNGN160716T02020	1,6	0,5-2,0	0,1-0,35					○			

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Codice sistema > A198 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

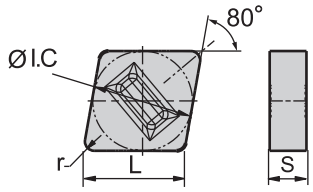
Portautensile
CCLNR/L
Kr: 95°

A292

Codice sistema > A198 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNGX	L	I.C	S
12 07	12,9	12,7	7,94

CN** Inserti negativi						CM		CC		CN		CR	
					P	○							
					M								
					K	○				⊛			
					N								
					S					●		⊛	⊛
					H			○					
ISO		r	a_p	f		CA1000		CM1000		CN1000	CS1000	CW1400	CW1800
	**CNGX120712T02020**	1,2	0,2-2,0	0,1-0,3						●			
	CNGX120716T02020	1,6	0,5-2,0	0,1-0,35						○			

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile
JCLNR/L
Kr: 95°

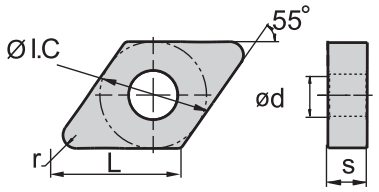
A300

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

DNGA	L	I.C	S	d
15 04	15,5	12,7	4,76	5,16
15 06	15,5	12,7	6,35	5,16



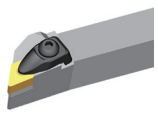
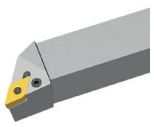
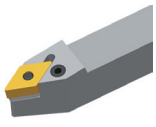
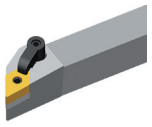
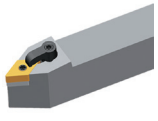
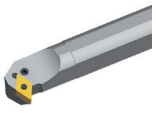
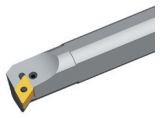
DN** Inserti negativi		CM	CC	CN	CR
	P	○			
	M				
	K	○		⊛	
	N				
	S			●	⊛ ⊛
	H		◯		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	DNGA150404T02020	0,4	0,1-0,3	0,08-0,25		○		
	DNGA150408S01520	0,8	0,1-0,25	0,5-2,5				○
	DNGA150408T00520	0,8	0,1-0,25	0,5-2,5				●
	DNGA150408T02020	0,8	0,1-0,4	0,1-0,3		○		
	DNGA150412S01520	1,2	0,1-0,3	0,5-2,5				○
	DNGA150412T00520	1,2	0,1-0,3	0,5-2,5				●
	DNGA150412T02020	1,2	0,1-0,5	0,1-0,3		○	○	○
	DNGA150416S01520	1,6	0,1-0,35	0,5-3,0				○
	**DNGA150416T00520**	1,6	0,1-0,35	0,5-3,0				○
	DNGA150604S02020	0,4	0,1-0,3	0,08-0,25		●		
	DNGA150604T01020	0,4	0,1-0,3	0,08-0,25		○		
	DNGA150604T02020	0,4	0,1-0,3	0,08-0,25		●	○	
	DNGA150608S02020	0,8	0,1-0,4	0,1-0,3		●		
	DNGA150608T02020	0,8	0,1-0,4	0,1-0,3		○	●	
	DNGA150612S02020	1,2	0,1-0,5	0,1-0,3		●		
	DNGA150612T01020	1,2	0,1-0,5	0,1-0,3		○		
	DNGA150612T02020	1,2	0,1-0,5	0,1-0,3		●	○	
	DNGA150616T02020	1,6	0,5-2,0	0,1-0,35			○	

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

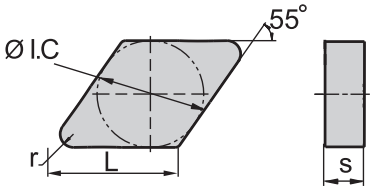
DDJNR/L	PDJNR/L	PDNNR/L	MDJNR/L	MDPNN	S***-PDSNR/L	S***-PDUNR/L
Kr: 93°	Kr: 93°	Kr: 63°	Kr: 93°	Kr: 62°30'	Kr: 62°30'	Kr: 93°
						
A231	A240	A241	A254	A255	A326	A327

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (Ceramici)

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

DNGN	L	I.C	S
15 07	15,5	12,7	7,94
15 04	15,5	12,7	4,76



DN** Inserti negativi		CM	CC	CN	CR
	P	○			
	M				
	K	○		⊛	
	N				
	S			○	⊛ ⊛
	H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	DNGN150408S01520	0,8	0,1-0,25	0,5-2,5				○
	DNGN150408T00520	0,8	0,1-0,25	0,5-2,5				●
	DNGN150408T02020	0,8	0,1-0,4	0,1-0,3	○	○		
	DNGN150412S01520	1,2	0,1-0,3	0,5-2,5				○
	DNGN150412T00520	1,2	0,1-0,3	0,5-2,5				●
	DNGN150412T02020	1,2	0,1-0,5	0,1-0,3	○			
	DNGN150416S01520	1,6	0,1-0,35	0,5-3,0				○
	DNGN150416T00520	1,6	0,1-0,35	0,5-3,0				○
	DNGN150704T02020	0,4	0,1-0,3	0,08-0,25	○		○	
	DNGN150708T01520	0,8	0,1-0,25	0,5-2,5				○
	DNGN150708T02020	0,8	0,1-0,4	0,1-0,3	●		○	
	DNGN150712T02020	1,2	0,1-0,5	0,1-0,3	○		○	
	DNGN150716T01520	1,6	0,1-0,35	0,5-3,0				○
	DNGN150716T02020	1,6	0,1-0,6	0,1-0,4	○			

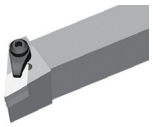
● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

CDJNR/L

Kr: 93°



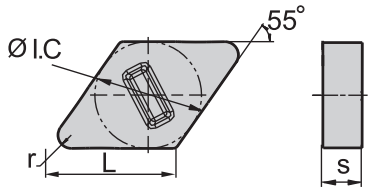
A294

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

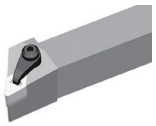
DNGX	L	I.C	S
15 07	15,5	12,7	7,94

Inserti - Tornitura (Ceramici)

DN** Inserti negativi					CM	CC	CN	CR
				P	●			
				M				
				K	●		◉	
				N				
				S			●	◉ ◉
				H		○		
ISO		r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**DNGX150708T02020**	0,8	0,15-1,5	0,1-025			○	
	DNGX150712T02020	1,2	0,2-2,0	0,1-0,3			○	
	DNGX150716T02020	1,6	0,5-2,0	0,1-0,35			○	

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

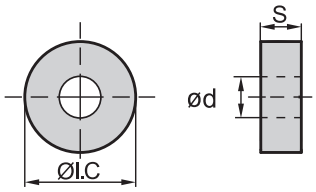
Portautensile
JDJNR/L
Kr: 93°

A301

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RNGA	I.C	S	d
12 04	12,7	4,76	



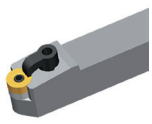
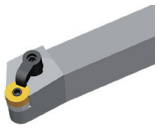
RN** Inserti negativi					CM	CC	CN	CR
				P	○			
				M				
				K	○		⊛	
				N				
				S			○	⊛ ⊛
				H		○		
ISO		a_p	f		CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	RNGA120400T02020	0,1-0,6	0,1-0,4		○	○		



● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

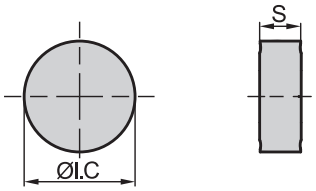
MRDNN	MRGNR/L
	
A267	A268

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

RNGN	I.C	S
06 03	6,35	3,18
09 04	9,525	4,76
09 03	9,525	3,18
12 04	12,7	4,76
12 07	12,7	7,94
15 07	15,875	7,94
19 07	19,05	7,94
25 07	25,4	7,94
25 10	25,4	10,05

● Buone condizioni di lavorazione
✲ Condizioni di lavorazione normali
✲ Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (Ceramici)



RN** Inserti negativi		CM	CC	CN	CR
	P	●			
	M				
	K	●		✲	
	N				
	S			●	✲ ✲
	H		○		

ISO	a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
RNGN060300T01020	0,1-0,3	0,08-0,25	○	○				
RNGN090300S01520	0,1-0,3	0,5-2,5						○
RNGN090300T00520	0,1-0,3	0,5-2,5					○	○
RNGN090300T02020	0,1-0,3	0,1-0,3	○					
RNGN090400S01520	0,1-0,3	0,5-2,5					○	
RNGN090400T00520	0,1-0,3	0,5-2,5						○
RNGN090400T02020	0,1-0,3	0,1-0,3	○					
RNGN120400S01520	0,1-0,35	0,5-3,0					○	
RNGN120400S02020	0,1-0,6	0,1-0,4		●				
RNGN120400T00520	0,1-0,35	0,5-3,0						●
RNGN120400T01020	0,5-2,0	0,1-0,2				○		
RNGN120400T01525	0,1-0,6	0,1-0,4		○				
RNGN120400T02020	0,1-0,6	0,1-0,4	○		○			
RNGN120700S01520	0,1-0,35	0,5-3,0					○	
RNGN120700S02020	0,1-0,6	0,1-0,4		●				
RNGN120700T00520	0,1-0,35	0,5-3,0					●	●
RNGN120700T00525	0,1-0,35	0,5-3,0				○	○	○
RNGN120700T01520	0,1-0,35	0,5-3,0					○	
RNGN120700T01525	0,2-2,0	0,1-0,3			○			
RNGN120700T02020	0,2-2,0	0,1-0,3	●		●			
RNGN150700T02020	0,1-0,6	0,1-0,5	○					
RNGN190700S01520	0,1-0,4	0,5-3,0					○	
RNGN190700T00520	0,1-0,4	0,5-3,0						○
RNGN190700T03020	0,1-0,7	0,1-0,5	○					
RNGN250700T19015	0,1-0,7	0,1-0,8	○					
RNGN251000T05020	0,1-0,7	0,1-0,5	○					

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Codice sistema A198 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Portautensile
CRDNN



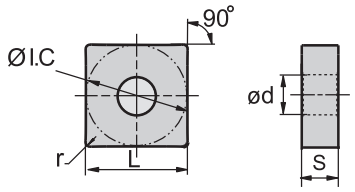
A298

Codice sistema > A198 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNGA	L	I.C	S	d
12 04	12,7	12,7	4,76	5,16

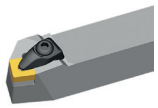
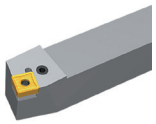
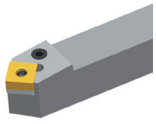
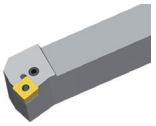
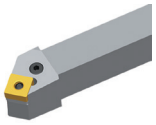
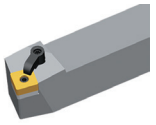
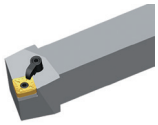
Inserti - Tornitura (Ceramici)

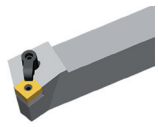
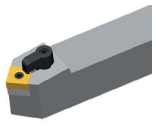
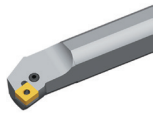
SN** Inserti negativi					CM	CC	CN	CR
				P	●			
				M				
				K	●		◉	
				N				
				S			●	◉ ◉
				H		○		
ISO		r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**SNGA120404T02020**	0,4	0,1-1,0	0,1-0,2			○	
	SNGA120408S02020	0,8	0,1-0,4	0,1-0,3		○		
	SNGA120408T02020	0,8	0,1-0,4	0,1-0,3	○	○	○	
	SNGA120412T02020	1,2	0,2-2,0	0,1-0,3			○	

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

DSBNR/L	PSBNR/L	PSDNN	PSKNR/L	PSSNR/L	MSBNR/L	MSRNR/L
Kr: 75°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 45°	Kr: 75°	Kr: 75°
						
A232	A242	A244	A245	A246	A256	A257

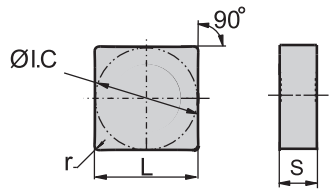
MSKNR/L	MSDNN	S***-PSKNR/L
Kr: 75°	Kr: 45°	Kr: 75°
		
A258	A259	A329

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SNGN	L	I.C	S
12 07	12,7	12,7	7,94
12 04	12,7	12,7	4,76
15 07	15,875	15,875	7,94
19 07	19,05	19,05	7,94

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (Ceramici)



SN** Inserti negativi		CM	CC	CN	CR
	P	○			
	M				
	K	○		◉	
	N				
	S			◉	◉ ◉
	H		○		

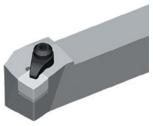
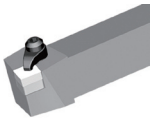
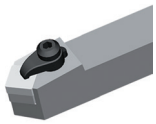
	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	SNGN120404T02020	0,4	0,1-0,3	0,08-0,25	○			
	SNGN120408S01520	0,8	0,1-0,25	0,5-2,5				○
	SNGN120408S02020	0,8	0,1-0,4	0,1-0,3		○		
	SNGN120408T00520	0,8	0,15-1,5	0,1-025			○	●
	SNGN120408T02020	0,8	0,1-0,4	0,1-0,3	○		●	
	SNGN120412S01520	1,2	0,1-0,3	0,5-2,5				○
	SNGN120412T00520	1,2	0,1-0,3	0,5-2,5				●
	SNGN120412T02020	1,2	0,1-0,5	0,1-0,3	○		○	
	SNGN120416S01520	1,6	0,1-0,35	0,5-3,0				○
	SNGN120416T00520	1,6	0,1-0,35	0,5-3,0				○
	SNGN120416T02020	1,6	0,1-0,6	0,1-0,4	○		○	
	SNGN120704T02020	0,4	0,1-0,3	0,08-0,25	●			
	SNGN120708S01520	0,8	0,1-0,25	0,5-2,5				○
	SNGN120708T00520	0,8	0,1-0,25	0,5-2,5				●
	SNGN120708T02020	0,8	0,1-0,4	0,1-0,3	○	○	○	
	SNGN120712S01520	1,2	0,1-0,3	0,5-2,5				○
	SNGN120712T00520	1,2	0,1-0,3	0,5-2,5				●
	SNGN120712T02020	1,2	0,1-0,5	0,1-0,3	○	○	●	
	SNGN120716S01520	1,6	0,1-0,35	0,5-3,0				○
	SNGN120716T00520	1,6	0,1-0,35	0,5-3,0				○
	SNGN120716T01520	1,6	0,1-0,35	0,5-3,0				○
	SNGN120716T02020	1,6	0,1-0,6	0,1-0,4	○			
	SNGN150708T02020	0,8	0,1-0,4	0,1-0,3	○			
	SNGN150712T02020	1,2	0,1-0,5	0,1-0,3	●		○	
	SNGN150716T02020	1,6	0,1-0,6	0,1-0,4	●		○	
	SNGN190716S02030	1,6	0,5-2,0	0,1-0,35			○	
	SNGN190716T03020	1,6	0,1-0,6	0,1-0,4	○			

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Portautensile

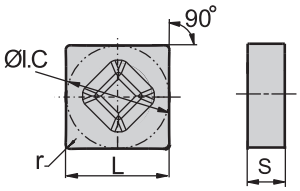
CSKNR/L	CSRNR/L	CSDNN
Kr: 75°	Kr: 75°	Kr: 45°
		
A296	A297	A299

Codice sistema > A198 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

Inserti - Tornitura (Ceramici)

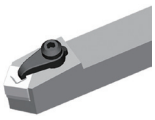
- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SNGX	L	I.C	S
12 07	12,7	12,7	7,94

SN** Inserti negativi						CM		CC		CN		CR	
					P	○							
					M								
					K	○				⊛			
					N								
					S					●		⊛	⊛
					H			○					
ISO		r	a_p	f		CA1000		CM1000		CN1000	CS1000	CW1400	CW1800
	**SNGX120712T02020**	1,2	0,2-2,0	0,1-0,3						○			
	SNGX120716T02020	1,6	0,5-2,0	0,1-0,35						○			

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile
JSDNN
Kr: 45°

A302

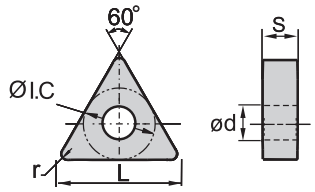
Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TNGA	L	I.C	S	d
16 04	16,5	9,525	4,76	3,86
22 04	22	12,7	4,76	5,16

TN** Inserti negativi



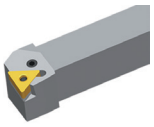
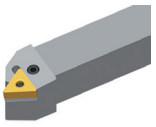
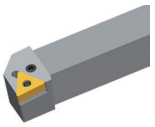
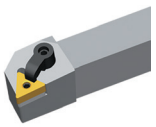
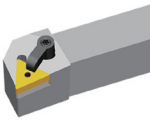
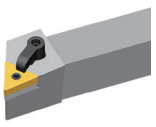
	CM	CC	CN	CR
P	○			
M				
K	○		✱	
N				
S			○	✱ ✱
H		○		

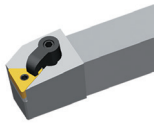
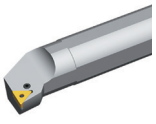
	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**TNGA160404S02020**	0,4	0,1-0,3	0,08-0,25		●		
	TNGA160404T01020	0,4	0,1-0,3	0,08-0,25		○	●	
	TNGA160404T02020	0,4	0,1-0,3	0,08-0,25		○		
	TNGA160408S02020	0,8	0,1-0,4	0,1-0,3		●		
	TNGA160408T02020	0,8	0,1-0,4	0,1-0,3		○	●	
	TNGA160412T02020	1,2	0,1-0,5	0,1-0,3		○	●	
	TNGA220408T02020	0,8	0,15-1,5	0,1-025			○	
	TNGA220412T02020	1,2	0,2-2,0	0,1-0,3			○	
	TNGA220416T02020	1,6	0,5-2,0	0,1-0,35			○	

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

DTGNR/L	PTFNR/L	PTTNR/L	PTGNR/L	MTGNR/L	MTJNR/L	MTJNR/L-Z
Kr: 91°	Kr: 91°	Kr: 60°	Kr: 90°	Kr: 90°	Kr: 93°	Kr: 93°
						
A233	A247	A248	A249	A260	A261	A262

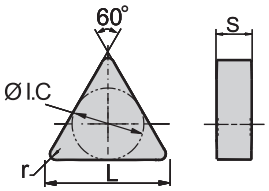
MTFNR/L	S***-PTFNR/L
Kr: 91°	Kr: 90°
	
A263	A330

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

TNGN	L	I.C	S
16 04	16,5	9,525	4,76
16 07	16,5	9,525	7,94
22 04	22	12,7	4,76

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (Ceramici)

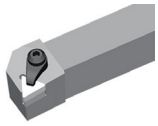
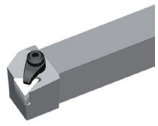


TN** Inserti negativi					CM	CC	CN		CR	
				P	●					
				M						
				K	●		⊛			
				N						
				S			●		⊛	⊛
				H		○				
	ISO	r	a_p	f	CA1000	CM1000	CN1000	CS1000	CW1400	CW1800
	TNGN160404T02020	0,4	0,1-0,3	0,08-0,25	○					
	TNGN160408S02020	0,8	0,1-0,4	0,1-0,3		○				
	TNGN160408T02020	0,8	0,1-0,4	0,1-0,3	○		○			
	TNGN160412T02020	1,2	0,1-0,5	0,1-0,3	○		○			
	TNGN160416T02020	1,6	0,5-2,0	0,1-0,35			○			
	TNGN160708T02020	0,8	0,15-1,5	0,1-025			○			
	TNGN160712T02020	1,2	0,1-0,5	0,1-0,3	○					
	TNGN220408T02020	0,8	0,1-0,4	0,1-0,3	○		○			
	TNGN220412T02020	1,2	0,1-0,5	0,1-0,3	○		○			
	TNGN220416T02020	1,6	0,1-0,6	0,1-0,4	○		○			

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

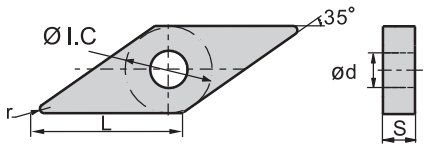
CTJNR/L	CTUNR/L
Kr: 93°	Kr: 93°
	
A293	A295

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

VNGA	L	I.C	S	d
16 07	16,6	9,525	7,94	3,81
16 04	16,6	9,525	4,76	3,81

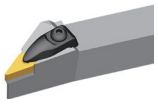
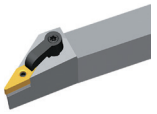


VN** Inserti negativi					CM	CC	CN	CR
					P ○			
					M			
					K ○		✻	
					N			
					S		●	✻ ✻
					H	○		
	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**VNGA160404S02020**	0,4	0,1-0,3	0,08-0,25		●		
	VNGA160404T01020	0,4	0,1-0,3	0,08-0,25		○		
	VNGA160408S02020	0,4	0,1-0,4	0,1-0,3		●		
	VNGA160408T01020	0,8	0,1-0,4	0,1-0,3		○		
	VNGA160408T02020	0,8	0,1-0,4	0,1-0,3		●		
	VNGA160708S02020	0,8	0,1-0,4	0,1-0,3		●		

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

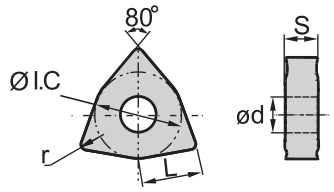
DVVNN	DVJNR/L	MVVNN	MVJNR/L
Kr: 72°30'	Kr: 93°	Kr: 72°30'	Kr: 93°
			
A234	A235	A264	A265

Codice sistema A198 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

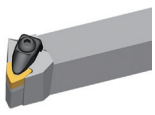
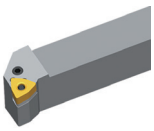
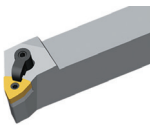
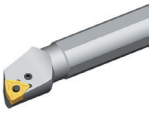
WNGA	L	I.C	S	d
08 04	8,69	12,7	4,76	5,16

WN** Inserti negativi					CM	CC	CN	CR
				P	○			
				M				
				K	○		⊛	
				N				
				S			○	⊛ ⊛
				H		◯		
	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**WNGA080404T01020**	0,4	0,1-0,3	0,08-0,25		○		
	WNGA080404T02020	0,4	0,1-0,3	0,08-0,25		○		
	WNGA080408S02020	0,8	0,1-0,4	0,1-0,3		○		
	WNGA080408T02020	0,8	0,1-0,4	0,1-0,3		○	●	
	WNGA080412S02020	1,2	0,1-0,5	0,1-0,3		○		
	WNGA080412T02020	1,2	0,1-0,5	0,1-0,3		○	●	
	WNGA080416T01525	1,6	0,5-2,0	0,1-0,35			○	
	WNGA080416T02020	1,6	0,5-2,0	0,1-0,35			●	

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Portautensile

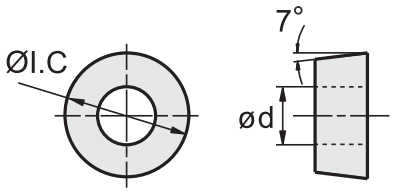
DWLNR/L	PWLNR/L	MWLNR/L	S***-PWLNR/L
Kr: 95°	Kr: 95°	Kr: 95°	Kr: 95°
			
A236	A251	A266	A332

Codice sistema A198 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

RCGX	I.C	S	d
06 06	6	6,35	
06 07	6	7,94	
06 04	6	4,76	
09 07	9	7,94	
12 07	12	7,94	
19 10	19	10	

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Tornitura (Ceramici)



RC** Inserti positivi				CM	CC	CN	CR
			P	○			
			M				
			K	○		⊛	
			N				
			S			●	⊛ ⊛
			H		○		
ISO		a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**RCGX060400S01520**	0,1-0,25	0,5-2,5				○
	RCGX060400T00520	0,1-0,25	0,5-2,5				○
	RCGX060600S02020	0,1-0,3	0,08-0,25	○			
	RCGX060600T01020	0,1-0,25	0,5-2,5				○
	RCGX060700T00525	0,1-0,25	0,5-2,5			○	○ ○
	RCGX090700S01520	0,1-0,3	0,5-2,5				○
	RCGX090700T00520	0,1-0,3	0,5-2,5				○
	RCGX090700T00525	0,1-0,3	0,5-2,5			○	○ ○
	RCGX090700T20015	0,1-0,3	0,1-0,3	○			
	RCGX120700E	0,5-2,0	0,1-0,2			○	
	RCGX120700S01020	0,5-2,0	0,1-0,2			○	
	RCGX120700S01520	0,1-0,35	0,5-3,0				○
	RCGX120700T00520	0,1-0,35	0,5-3,0				○
	RCGX120700T00525	0,1-0,35	0,5-3,0			○	○ ○
	RCGX120700T01020	0,1-0,35	0,5-3,0		○		○
	RCGX191000T02020	0,1-0,6	0,1-0,5		○		

● In magazzino ○ Su richiesta

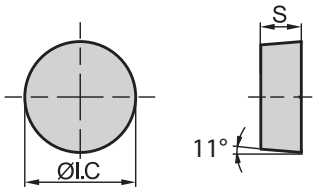
CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Codice sistema A198 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RPGN	I.C	S
12 04	12,7	4,76

Inserti - Tornitura (Ceramici)



RP** Inserti positivi				CM	CC	CN	CR
			P	○			
			M				
			K	○		⊛	
			N				
			S			●	⊛ ⊛
			H		○		
ISO		a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	RPGN120400S01520	0,1-0,35	0,5-3,0				○
	RPGN120400T00520	0,1-0,35	0,5-3,0				○

● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

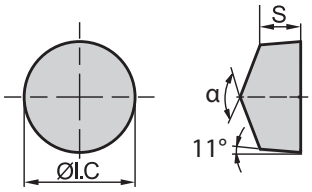
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

Codice sistema > A198 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RPGX	I.C	S
09 07	9,525	7,94

Inserti - Tornitura (Ceramici)



RP** Inserti positivi				CM	CC	CN	CR
			P	○			
			M				
			K	○		◉	
			N				
			S			●	◉ ◉
			H		○		
ISO		a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	RPGX090700T00525	0,1-0,3	0,5-2,5				○ ○

● In magazzino ○ Su richiesta

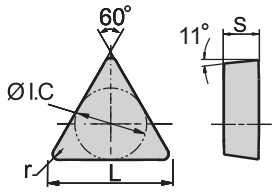
CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Codice sistema > A198 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

Inserti - Tornitura (Ceramici)

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TPGN	L	I.C	S
11 03	11	6,35	3,18
16 03	16,5	9,525	3,18



TP** Inserti positivi		CM	CC	CN	CR
	P	○			
	M				
	K	○		✱	
	N				
	S			●	✱ ✱
	H		○		

	ISO	r	a_p	f	CA1000	CM1000	CN1000 CS1000	CW1400 CW1800
	**TPGN110304T02020**	0,4	0,1-0,3	0,08-0,25		○		
	TPGN160304T01020	0,4	0,1-0,3	0,08-0,25		○		
	TPGN160308T01020	0,8	0,1-0,4	0,1-0,3		○		

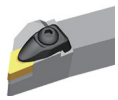
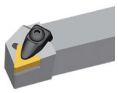
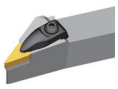
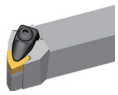
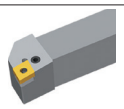
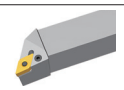
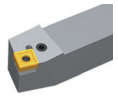
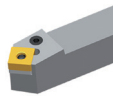
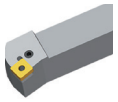
● In magazzino ○ Su richiesta

CM Ceramica mista
CC Ceramica mista, rivestita
CN Ceramica Si3N4
CR Al2O3 ceramica, rinforzata

Codice sistema > A198 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

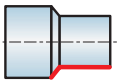
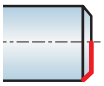
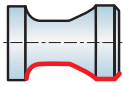
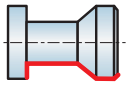
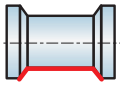
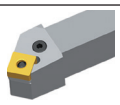
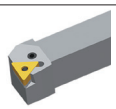
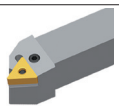
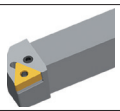
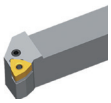
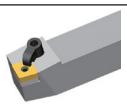
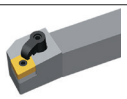
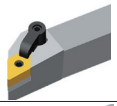
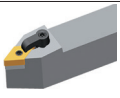
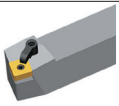
Tornitura generale Panoramica portautensili esterni

Utensili per tornitura esterna

	Portautensile		Applicazione					Pezzo		Pagina
			Lavorazione esterna	Lavorazione planare	Lavorazione di profili	Lavorazione di profili	Lavorazione di profili	Stabile	Instabile	
D	DCLNR/L 95°		●	●				●		A230
	DDJNR/L 93°				●	●	●	●	●	A231
	DSBNR/L 75°		●					●		A232
	DTGNR/L 91°		●					●		A233
	DVVNN 72.5°						●	●		A234
	DVJNR/L 93°				●	●		●	●	A235
	DWLNR/L 95°		●	●				●		A236
P	PCBNR/ L 75°		●					●		A237
	PCLNR/ L 95°		●	●				●		A238
	PDJNR/ L 93°				●	●	●	●	●	A240
	PDNNR/ L 63°						●	●		A241
	PSBNR/ L 75°		●					●		A242
	PSDNN 45°		●				●	●		A244
	PSKNR/ L 75°			●				●		A245

● Raccomandato

Utensili per tornitura esterna

	Portautensile		Applicazione					Pezzo		Pagina
			Lavorazione esterna	Lavorazione planare	Lavorazione di profili	Lavorazione di profili	Lavorazione di profili	Stabile	Instabile	
										
P	PSSNR/ L 45°		●	●				●		A246
P	PTFNR/L 91°			●				●		A247
P	PTTNR/L 60°		●					●		A248
P	PTGNR/L 90°		●					●		A249
P	PWLNR/L 95°		●	●				●		A251
P	PLANR/L 90°		●	●			●	●		A316
P	PLFNR/L 90°		●					●		A317
P	PCLNR/L 95°		●	●				●		A318
M	MCBNR/L 75°		●					●		A252
M	MCLNR/L 95°		●	●				●		A253
M	MDJNR/L 93°				●	●	●	●	●	A254
M	MDPNN 62.5°						●	●		A255
M	MSBNR/L 75°		●					●		A256
M	MSRNR/L 75°		●					●		A257

● Raccomandato

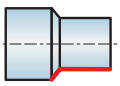
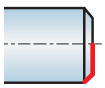
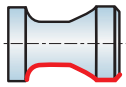
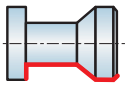
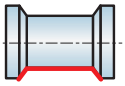
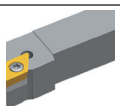
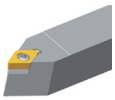
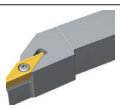
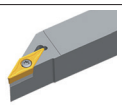
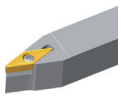
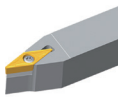
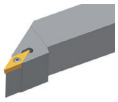
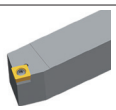
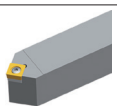
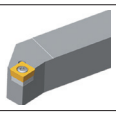
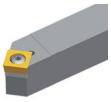
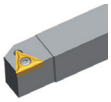
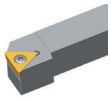
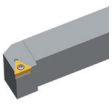
Tornitura generale Panoramica portautensili esterni

Utensili per tornitura esterna

	Portautensile	Applicazione: Lavorazione esterna	Lavorazione planare	Lavorazione di profili	Lavorazione di profili	Lavorazione di profili	Pezzo: Stabile	Instabile	Pagina
M	MSKNR/L 75°		●				●		A258
	MSDNN 45°					●	●		A259
	MTGNR/L 90°	●					●		A260
	MTJNR/L 93°	●					●		A261
	MTJNR/L-Z 93°		●		●		●		A262
	MTFNR/L 91°		●				●		A263
	MVVNN 72,5°					●	●		A264
	MVJNR/L 93°			●	●		●	●	A265
	MWLNR/L 95°	●	●				●		A266
	MRGNR/L –			●			●		A268
	MRDNN –					●	●		A267
S	SCACR/L 90°	●					●	●	A269
	SCLCR/L 95°	●	●				●	●	A270
	SDACR/L 90°				●		●	●	A271

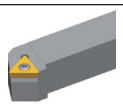
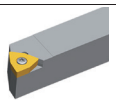
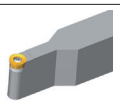
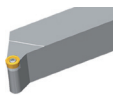
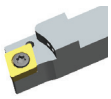
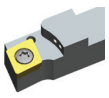
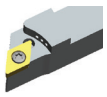
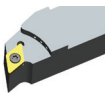
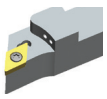
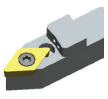
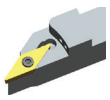
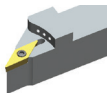
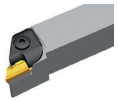
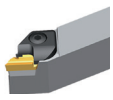
● Raccomandato

Utensili per tornitura esterna

	Portautensile		Applicazione					Pezzo		Pagina
			Lavorazione esterna	Lavorazione planare	Lavorazione di profili	Lavorazione di profili	Lavorazione di profili	Stabile	Instabile	
										
S	SDJCR/L 93°		●			●		●	●	A272
	SDNCN 63°						●	●	●	A273
	SVJBR/L 93°		●			●		●	●	A274
	SVABR/L 90°		●			●		●	●	A275
	SVVBN 72,5°						●	●	●	A276
	SVVCN 72,5°						●	●	●	A277
	SVJCR/L 93°		●			●		●	●	A278
	SSBCR/L 75°		●					●		A279
	SSDCN 45°						●	●		A280
	SSKCR/L 75°			●				●		A281
	SSSCR/L 45°		●					●		A282
	STACR/L 90°		●					●	●	A283
	STFCR/L 91°			●				●		A284
	STGCR/L 91°		●					●	●	A285

● Raccomandato

Utensili per tornitura esterna

Portautensile			Applicazione					Pezzo		Pagina
			Lavorazione esterna	Lavorazione planare	Lavorazione di profili	Lavorazione di profili	Lavorazione di profili	Stabile	Instabile	
S	STTCR/L 60°		●					●		A286
	SWACR/L 90°		●					●	●	A287
	SRDCN –						●	●		A288
	SRGCR/L –				●			●		A289
	SCACR/L-SC 90°		●					●	●	A306
	SCLCR/L-SC 95°		●	●				●	●	A307
	SDACR/L-SC 90°					●		●	●	A308
	SDHCR/L-SC 107°30'					●		●	●	A309
	SDJCR/L-SC 93°		●			●		●	●	A310
	SDNCN-SC 62°30'						●	●	●	A311
	SVACR/L-SC 90°		●			●		●	●	A312
	SVJCR/L-SC 93°		●			●		●	●	A313
C	CKJNR/L 93°		●			●		●		A290
	CKNNR/L 63°						●	●		A291

● Raccomandato

Note

Tornitura generale

Codice ISO – portautensili esterni

P	C	L	N	L	25	25	M	12
1	2	3	4	5	6	7	8	9

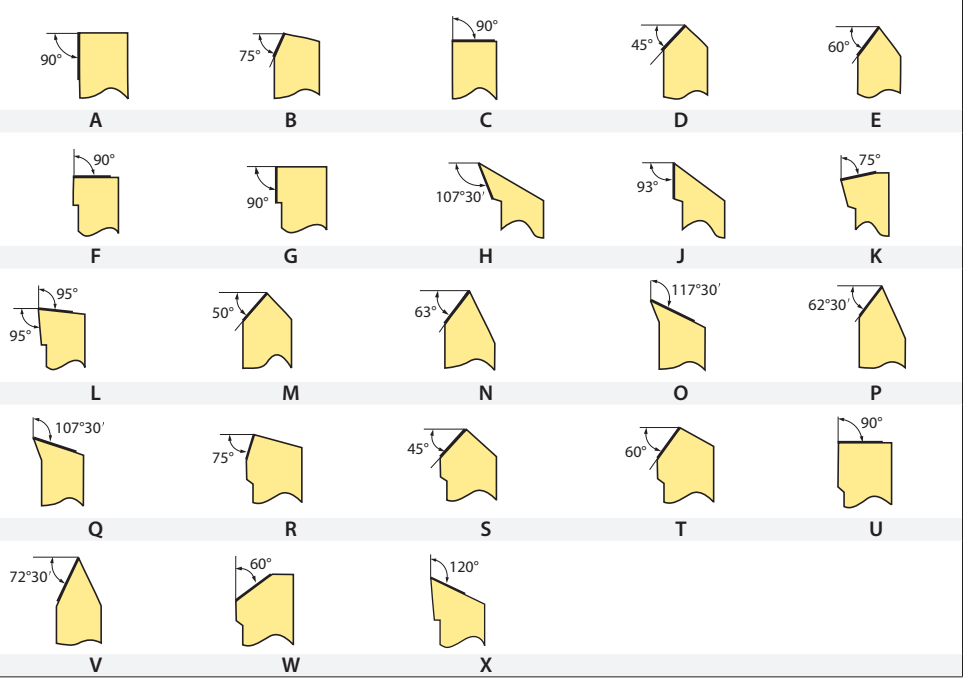
1 Sistema di bloccaggio

Code	Descrizione	
P	Bloccaggio a leva	
M	Sistema di bloccaggio a staffa / perno	
S	Bloccaggio a vite	
C/J	Bloccaggio a staffa	
D	Doppio bloccaggio	

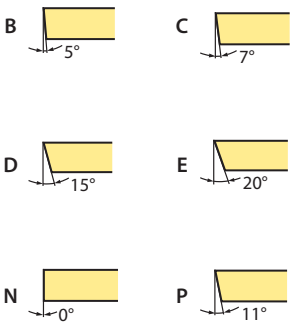
2 Forma dell'inserto

C	
D	
R	
S	
T	
V	
W	

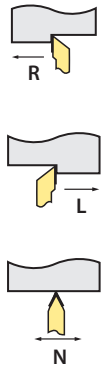
3 Forma portautensile e angolo di regolazione



4 Angolo di spoglia inferiore

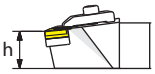


Direzione di taglio



5

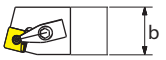
Altezza stelo h [mm]



Code	h
12	12
16	16
20	20
25	25
32	32
40	40
50	50

6

Larghezza stelo b [mm]



Code	b
12	12
16	16
20	20
25	25
32	32
40	40
50	50

7

Lungh. portautensile L [mm]



Code	L
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

8

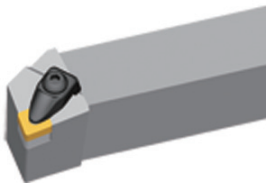
Lunghezza tagliente [mm]

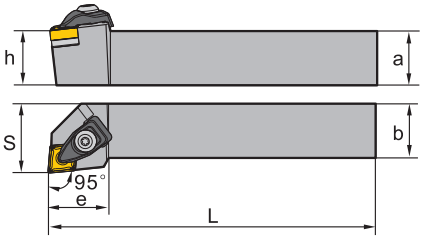
I.C [mm]	Forma dell'inserto						
	C	D	R	S	T	V	W
5,56					**09**		
6,35	**06**	**07**			**11**		
9,525	**09**	**11**	**09**	**09**	**16**	**16**	**06**
12,7	**12**	**15**	**12**	**12**	**22**	**22**	**08**
15,875	**16**	**19**	**15**	**15**	**27**		
19,05	**19**		**19**	**19**	**33**		
25,4	**25**		**25**	**25**	**44**		
32			**32**				

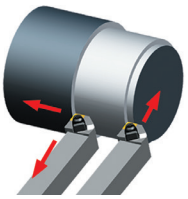
9

CN** Portautensile (esterno) D-Bloccaggio

DCLNR/L Kr: 95°







Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
DCLNR/L1616H09		●	○	16	16	100	16	20	24	CN**0903**
DCLNR/L2020K09		●	●	20	20	125	20	25	24	CN**0903**
DCLNR/L2525M09		●	●	25	25	150	25	32	24	CN**0903**
DCLNR/L2020K12		●	●	20	20	125	20	25	28	CN**1204**
DCLNR/L2525M12		●	●	25	25	150	25	32	28	CN**1204**
DCLNR/L3225P12		●	●	32	25	170	32	32	28	CN**1204**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	CN**0903**	CN**1204**
	h	16-25	20-32
	Staffa	C1RA	C2RA
	Vite (staffa)	CM5×22C (4,0 Nm)	CM6×25C (7,0 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA1	SM6×10XA1
	Sottoplacchetta	C09BM	C12BM
	Molla	SPR6	SPR4
	Chiave (sottoplacchetta)	WH30L	WH40L
	Chiave (staffa)	WH30L	WH40L

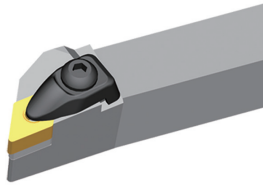
Inserto

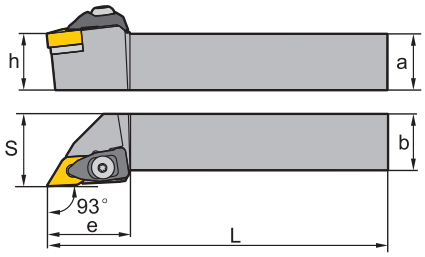
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

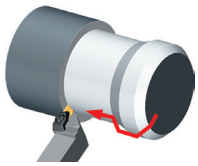
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DN** Portautensile (esterno) D-Bloccaggio

DDJNR/L Kr: 93°







Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
DDJNR/L1616H11		●	●	16	16	100	16	20	30	DN**1104**
DDJNR/L2020K11		●	●	20	20	125	20	25	30	DN**1104**
DDJNR/L2525M11		●	●	25	25	150	25	32	30	DN**1104**
DDJNR/L3225P11		○	○	32	25	170	32	32	30	DN**1104**
DDJNR/L2020K15		●	●	20	20	125	20	25	35	DN**1506**
DDJNR/L2525M15		●	●	25	25	150	25	32	35	DN**1506**
DDJNR/L3232P15		●	●	32	32	170	32	40	35	DN**1506**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	DN**1104**	DN**1506**
	h	**16-32**	**20-32**
	Staffa	C1RA	C2RA
	Vite (staffa)	CM5×22C (4,0 Nm)	CM6×25C (7,0 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA1	SM6×10XA1
	Sottoplacchetta	D11BM	D15BM
	Molla	SPR6	SPR4
	Chiave (sottoplacchetta)	WH30L	WH40L
	Chiave (staffa)	WH30L	WH40L

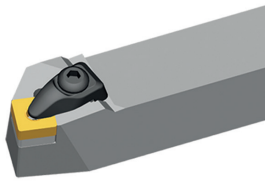
Inserto

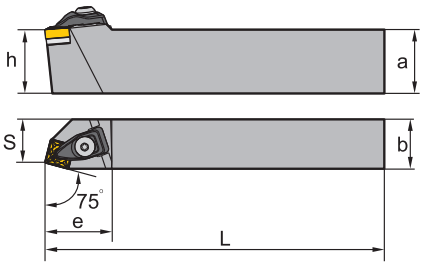
Raschiante	Finitura	Media Lavor.	Sgrossatura	Lavor.- ghisa grigia	PCBN/PCD
A62	A63	A63	A68	A69	A178

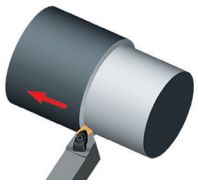
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno) D-Bloccaggio

DSBNR/L Kr: 75°







Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
DSBNR/L1616H09		○		16	16	100	16	13	26	SN**0903**
DSBNR/L2020K12		●	●	20	20	125	20	17	34	SN**1204**
DSBNR/L2525M12		●	●	25	25	150	25	22	34	SN**1204**
DSBNR/L3225P12		●	●	32	25	170	32	22	34	SN**1204**
DSBNR/L3232P15		●	●	32	32	170	32	27	41	SN**1506**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**0903**	SN**1204**	SN**1506**
	h	16	20-32	32
	Staffa	C1RA	C2RA	C3RA
	Vite (staffa)	CM5×22C (4,0 Nm)	CM6×25C (7,0 Nm)	CM6×25C (7,0 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA1	SM6×10XA1	SM6×10XA2
	Sottoplacchetta	S09BM	S12BM	S15BM
	Molla	SPR6	SPR4	SPR4
	Chiave (sottoplacchetta)	WH30L	WH40L	WH40L
	Chiave (staffa)	WH30L	WH40L	WH40L

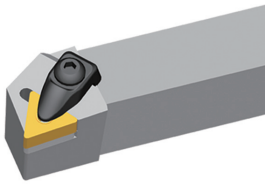
Inserto

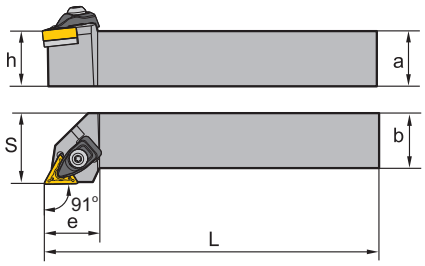
				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

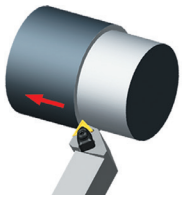
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TN** Portautensile (esterno) D-Bloccaggio

DTGNR/L Kr: 91°







Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
DTGNR/L1616H16		●	●	16	16	100	16	20	25	TN**1604**
DTGNR/L2020K16		●	●	20	20	125	20	25	25	TN**1604**
DTGNR/L2525M16		●	●	25	25	150	25	32	25	TN**1604**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**
	h	16-25
	Staffa	C1RA
	Vite (staffa)	CM5×22C (4,0 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA1
	Sottoplacchetta	T16BM
	Molla	SPR6
	Chiave (sottoplacchetta)	WH30L
	Chiave (staffa)	WH30L

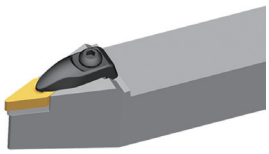
Inserto

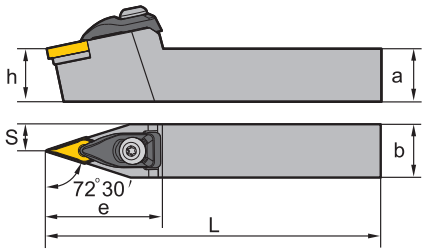
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A87	A88	A90	A92	A99	A163

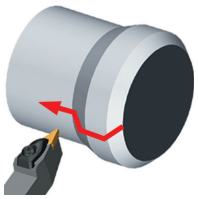
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VN** Portautensile (esterno) D-Bloccaggio

DVVNN Kr: 72°30'







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
DVVNN2020K16		●	20	20	125	20	10	44	VN**1604**
DVVNN2525M16		●	25	25	150	25	12,5	44	VN**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VN**1604****
	h	**20-25**
	Staffa	C6RA
	Vite (staffa)	CM5×22C (4,0 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA1
	Sottoplacchetta	V16BM
	Molla	SPR6
	Chiave (sottoplacchetta)	WH30L
	Chiave (staffa)	WH30L

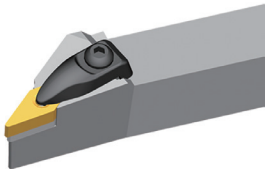
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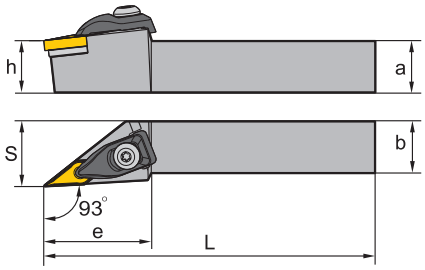
				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A102	A102	A104	A103	A179

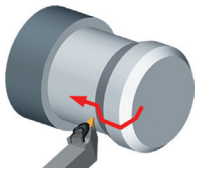
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VN** Portautensile (esterno) D-Bloccaggio

DVJNR/L Kr: 93°







Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
DVJNR/L2020K16		●	●	20	20	125	20	25	41	VN**1604**
DVJNR/L2525M16		●	●	25	25	150	25	32	41	VN**1604**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**VN**1604****
	h	**20-25**
	Staffa	C6RA
	Vite (staffa)	CM5×22C (4,0 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA1
	Sottoplacchetta	V16BM
	Molla	SPR6
	Chiave (staffa)	WH30L
	Chiave (sottoplacchetta)	WH30L

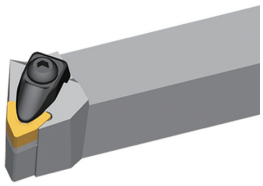
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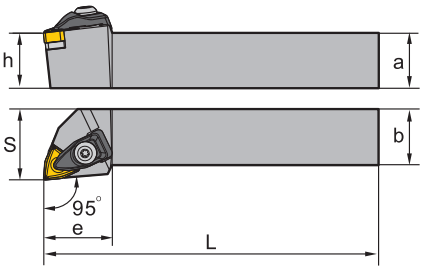
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A102	A102	A104	A103	A179

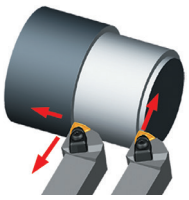
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

WN** Portautensile (esterno) D-Bloccaggio

DWLNR/L Kr: 95°







Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
DWLNR/L1616H06		●	●	16	16	100	16	25	24	WN**0604**
DWLNR/L2020K06		●	●	20	20	125	20	25	24	WN**0604**
DWLNR/L2525M06		●	●	25	25	150	25	32	24	WN**0604**
DWLNR/L2020K08		●	●	20	20	125	20	25	31	WN**0804**
DWLNR/L2525M08		●	●	25	25	150	25	32	31	WN**0804**
DWLNR/L3225P08		●	●	32	25	170	32	32	31	WN**0804**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	WN**0604**	WN**0804**
	h	16-25	20-32
	Staffa	C1RA	C2RA
	Vite (staffa)	CM5×22C (4,0 Nm)	CM6×25C (7,0 Nm)
	Vite (sottoplac-chetta)	SM5×8.65XA1	SM6×10XA1
	Sottoplacchetta	W06BM	W08BM
	Molla	SPR6	SPR4
	Chiave (sotto-placchetta)	WH30L	WH40L
	Chiave (staffa)	WH30L	WH40L

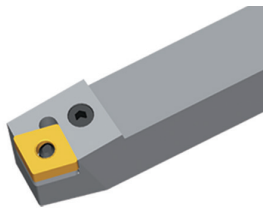
Inserto

					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

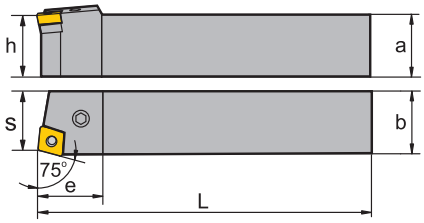
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

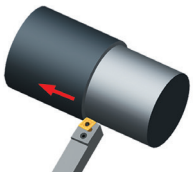
CN** Portautensile (esterno) P-Bloccaggio

PCBNR/L Kr: 75°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PCBNR/L2020K12		●	●	20	20	125	20	17	27	CN**1204**
PCBNR/L2525M12		●	●	25	25	150	25	22	27	CN**1204**
PCBNR/L3232P12		●	●	32	32	170	32	27	27	CN**1204**
PCBNR/L2525M16		●	●	25	25	150	25	22	33	CN**1606**
PCBNR/L3232P16		●	●	32	32	170	32	27	33	CN**1606**
PCBNR/L3232P19		●	●	32	32	170	32	27	38	CN**1906**
PCBNR/L4040S19		●	●	40	40	250	40	35	38	CN**1906**
PCBNR/L4040S2507		●	●	40	40	250	40	35	50	CN**2507**
PCBNR/L4040S2509		●	●	40	40	250	40	35	50	CN**2509**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CN**1204**	CN**1606**	CN**1906**	CN**2507**	CN**2509**
	h	20-32	25-32	32-40	40	40
	Leva di fissaggio	L4	L5	L6	L8	L8
	Vite	LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)	LEM10×27 (16,6 Nm)		
	Vite				LEM12×36A (25,2 Nm)	LEM12×36A (25,2 Nm)
	Sottoplacchetta	C12AP	C16AP	C19AP	C25AP-07	C25AP
	Perno dist (sottoplacchetta)	SP4	SP5	SP6	SP8	SP8
	Chiave	WH30L	WH30L	WH40L	WH50L	WH50L

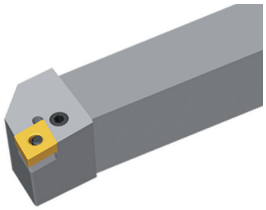
Inserto

					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

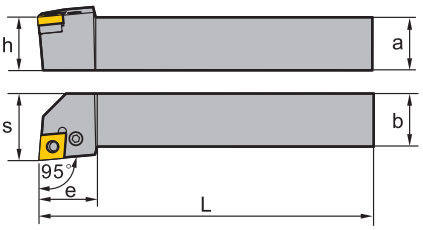
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

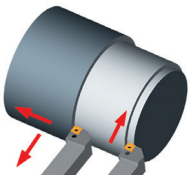
CN** Portautensile (esterno) P-Bloccaggio

PCLNR/L Kr: 95°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PCLNR/L1616H09		●	●	16	16	100	16	20	20	CN**0903**
PCLNR/L2020K09		●	●	20	20	125	20	25	22	CN**0903**
PCLNR/L2525M09		○	●	25	25	150	25	32	22	CN**0903**
PCLNR/L1616H12		○	○	16	16	100	16	20	20	CN**1204**
PCLNR/L2020K12		●	●	20	20	125	20	25	28	CN**1204**
PCLNR/L2525M12		●	●	25	25	150	25	32	28	CN**1204**
PCLNR/L3232P12		●	●	32	32	170	32	40	28	CN**1204**
PCLNR/L2525M16		●	●	25	25	150	25	32	33	CN**1606**
PCLNR/L3232P16		●	●	32	32	170	32	40	33	CN**1606**
PCLNR/L3232P19		●	●	32	32	170	32	40	38	CN**1906**
PCLNR/L4040S19		●	●	40	40	250	40	50	38	CN**1906**
PCLNR/L4040S2507		●	●	40	40	250	40	50	49	CN**2507**
PCLNR/L4040S2509		●	●	40	40	250	40	50	49	CN**2509**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CN**0903**	CN**1204**	CN**1606**	CN**1906**	CN**2507**	CN**2509**
	h	16-25	16-32	25-32	32-40	40	40
	Leva di fissaggio	L3	L4	L5	L6	L8	L8
	Vite		LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)	LEM10×27 (16,6 Nm)		
	Vite	LEM6×13,4A (7,0 Nm)				LEM12×36A (25,2 Nm)	LEM12×36A (25,2 Nm)
	Sottoplacchetta	C09AP	C12AP	C16AP	C19AP	C25AP-07	C25AP
	Perno dist (sottoplacchetta)	SP10	SP4	SP5	SP6	SP8	SP8
	Chiave	WH25L	WH30L	WH30L	WH40L	WH50L	WH50L

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CN** Portautensile (esterno)

Inserto

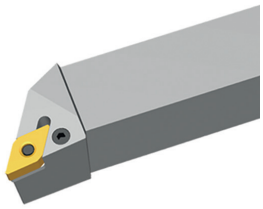
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

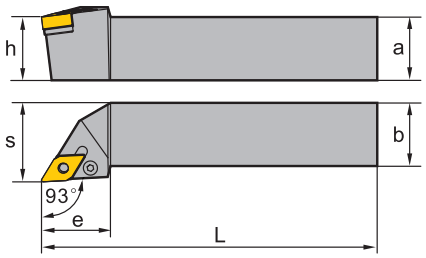
Codice sistema > A228 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

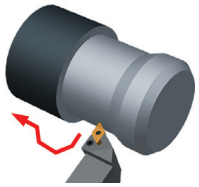
DN** Portautensile (esterno) P-Bloccaggio

PDJNR/L Kr: 93°



Versione destra





Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PDJNR/L1616H11		●	●	16	16	100	16	20	25	DN**1104**
PDJNR/L2020K11		●	●	20	20	125	20	25	25	DN**1104**
PDJNR/L2525M11		●	●	25	25	150	25	32	30	DN**1104**
PDJNR/L2020K15-3		●	○	20	20	125	20	25	35	DN**1504**
PDJNR/L2525M15-3		●	●	25	25	150	25	32	35	DN**1504**
PDJNR/L3232P15-3		●	●	32	32	170	32	40	35	DN**1504**
PDJNR/L2020K15		●	○	20	20	125	20	25	35	DN**1506**
PDJNR/L2525M15		●	●	25	25	150	25	32	35	DN**1506**
PDJNR/L3232P15		●	●	32	32	170	32	40	35	DN**1506**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	DN**1104**	DN**1504**	DN**1506**
	h	16-32	20-32	20-32
	Leva di fissaggio	L3	L4	L4B
	Vite		LEM8×21 (10,2 Nm)	LEM8×21 (10,2 Nm)
	Vite	LEM6×13,4A (7,0 Nm)		
	Sottoplacchetta	D11AP	D15AP	D15AP
	Perno dist (sottoplacchetta)	SP3	SP4	SP4
	Chiave	WH25L	WH30L	WH30L

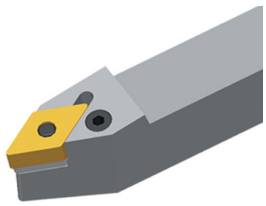
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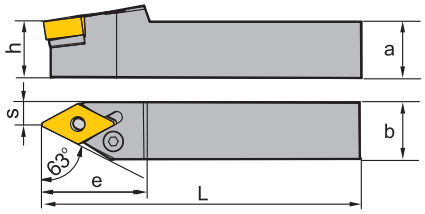
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

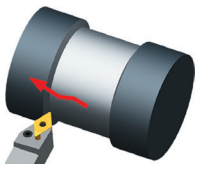
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DN** Portautensile (esterno) P-Bloccaggio

PDNNR/L Kr: 63°







Versione sinistra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PDNNR/L2020K15-3		●	○	20	20	125	20	8	37	DN**1504**
PDNNR/L2525M15-3		●	○	25	25	150	25	12,5	37	DN**1504**
PDNNR/L3232P15-3		●	●	32	32	170	32	16	37	DN**1504**
PDNNR/L2020K15		●	●	20	20	125	20	8	37	DN**1506**
PDNNR/L2525M15		●	●	25	25	150	25	12,5	37	DN**1506**
PDNNR/L3232P15		●	●	32	32	170	32	16	37	DN**1506**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**DN**1504****	**DN**1506****
	h	**20-32**	**20-32**
	Leva di fissaggio	L4	L4B
	Vite	LEM8×21 (10,2 Nm)	LEM8×21 (10,2 Nm)
	Sottoplacchetta	D15AP	D15AP
	Perno dist (sottoplacchetta)	SP4	SP4
	Chiave	WH30L	WH30L

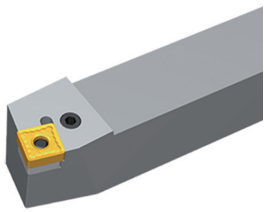
Inserto

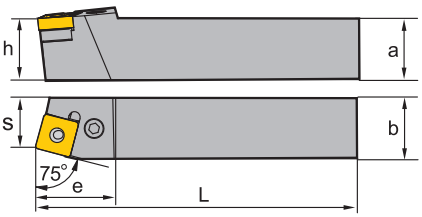
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

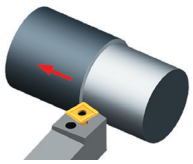
Codice sistema > A228 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

SN** Portautensile (esterno) P-Bloccaggio

PSBNR/L Kr: 75°







Versione destra

Articolo	*	Stock R	Stock L	a	b	L	h	s	e	Inserto
PSBNR/L1616H09		●	○	16	16	100	16	13	21	SN**0903**
PSBNR/L2020K09		●	○	20	20	125	20	17	23	SN**0903**
PSBNR/L2020K12		●	●	20	20	125	20	17	28	SN**1204**
PSBNR/L2525M12		●	●	25	25	125	25	22	28	SN**1204**
PSBNR/L3225P12		●	○	32	25	170	32	22	28	SN**1204**
PSBNR/L3232P12		●	○	32	32	170	32	27	28	SN**1204**
PSBNR/L2525M15		●	○	25	25	150	25	22	35	SN**1506**
PSBNR/L3232P15		●	●	32	32	170	32	27	35	SN**1506**
PSBNR/L3232P19		●	●	32	32	170	32	27	40	SN**1906**
PSBNR/L4040S19		●	●	40	40	250	40	35	40	SN**1906**
PSBNR/L4040S2507		○	○	40	40	250	40	35	48	SN**2507**
PSBNR/L4040S2509		○	○	40	40	250	40	35	48	SN**2509**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	SN**0903**	SN**1204**	SN**1506**	SN**1906**	SN**2507**	SN**2509**
	h	16-20	20-32	25-32	32-40	40	40
	Leva di fissaggio	L3	L4	L5	L6	L8	L8
	Vite		LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)	LEM10×27 (16,6 Nm)		
	Vite	LEM6×13,4A (7,0 Nm)				LEM12×36A (25,2 Nm)	LEM12×36A (25,2 Nm)
	Sottoplacchetta	S09AP	S12AP	S15AP	S19AP	S25AP	
	Sottoplacchetta						S25AP-09
	Perno dist (sottoplacchetta)	SP10	SP4	SP5	SP6	SP8	SP8
	Chiave	WH25L	WH30L	WH30L	WH40L	WH50L	WH50L

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno)

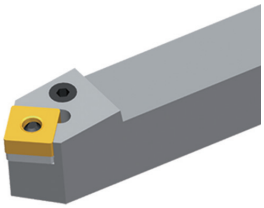
Inserto

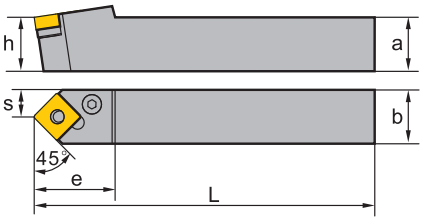
				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

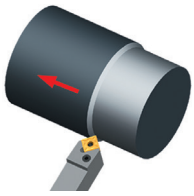
Codice sistema > A228 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

SN** Portautensile (esterno) P-Bloccaggio

PSDNN Kr: 45°







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
PSDNN1212F09		○	12	12	80	12	6	21	SN**0903**
PSDNN1616H09		●	16	16	100	16	8	23	SN**0903**
PSDNN2020K12		●	20	20	125	20	10	30	SN**1204**
PSDNN2525M12		●	20	20	150	20	12,5	30	SN**1204**
PSDNN3232P12		●	32	32	170	32	16	40	SN**1204**
PSDNN2525M15		●	25	25	150	25	12,5	40	SN**1506**
PSDNN3232P15		●	32	32	170	32	16	40	SN**1506**
PSDNN3232P19		●	32	32	170	32	16	40	SN**1906**
PSDNN4040S19		●	40	40	250	40	20	40	SN**1906**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**0903**	SN**0903**	SN**1204**	SN**1506**	SN**1906**
	h	12	16	20-32	25-32	32-40
	Leva di fissaggio	L3B	L3	L3	L5	L6
	Vite	LEM5×12B (4,0 Nm)				
	Vite				LEM8×25 (10,2 Nm)	LEM10×27 (16,6 Nm)
	Vite		LEM6×13,4A (7,0 Nm)	LEM6×13,4A (7,0 Nm)		
	Sottoplacchetta		S09AP	S12AP	S15AP	S19AP
	Perno dist (sottoplacchetta)		SP10	SP10	SP5	SP6
	Chiave		WH25L	WH25L	WH30L	WH40L
	Chiave	WT09IP				

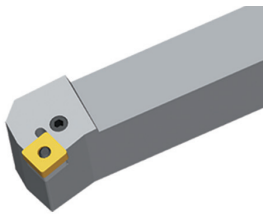
Inserto

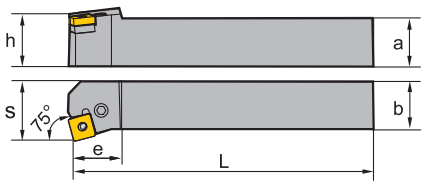
Finitura	Media Lavor.	Sgrossatura	Lavor.- ghisa grigia	PCBN/PCD
A73	A73	A78	A84	A162

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno) P-Bloccaggio

PSKNR/L Kr: 75°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PSKNR/L1616H09		○	○	16	16	100	16	20	17	SN**0903**
PSKNR/L2020K09		●	○	20	20	125	20	25	20	SN**0903**
PSKNR/L2020K12		●	●	20	20	125	20	25	26	SN**1204**
PSKNR/L2525M12		●	●	25	25	150	25	32	26	SN**1204**
PSKNR/L3232P12		●	●	32	32	170	32	40	26	SN**1204**
PSKNR/L2525M15		●	○	25	25	150	25	32	32	SN**1506**
PSKNR/L3232P15		●	●	32	32	170	32	40	32	SN**1506**
PSKNR/L3232P19		●	●	32	32	170	32	40	36	SN**1906**
PSKNR/L4040S19		○	○	40	40	250	40	50	40	SN**1906**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**0903**	SN**1204**	SN**1506**	SN**1906**
	h	16-20	20-32	25-32	32-40
	Leva di fissaggio	L3	L4	L5	L6
	Vite		LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)	LEM10×27 (16,6 Nm)
	Vite	LEM6×13,4A (7,0 Nm)			
	Sottoplacchetta	S09AP	S12AP	S15AP	S19AP
	Perno dist (sottoplacchetta)	SP10	SP4	SP5	SP6
	Chiave	WH25L	WH30L	WH30L	WH40L

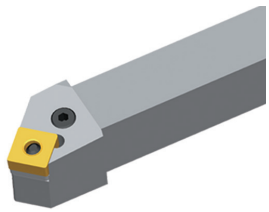
Inserto

				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

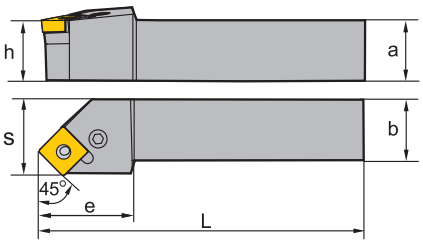
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

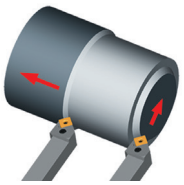
SN** Portautensile (esterno) P-Bloccaggio

PSSNR/L Kr: 45°



Versione destra





Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
PSSNR/L1616H09		●	●	16	16	100	16	20	25	SN**0903**
PSSNR/L2020K12		●	●	20	20	125	20	25	30	SN**1204**
PSSNR/L2525M12		●	●	25	25	150	25	32	30	SN**1204**
PSSNR/L3232P12		●	●	32	32	170	32	40	40	SN**1204**
PSSNR/L2525M15		●	●	25	25	150	25	32	30	SN**1506**
PSSNR/L3232P15		●	●	32	32	170	32	40	40	SN**1506**
PSSNR/L3232P19		●	●	32	32	170	32	40	40	SN**1906**
PSSNR/L4040S19		●	●	40	40	250	40	50	50	SN**1906**
PSSNR/L4040S2507		●	●	40	40	250	40	50	50	SN**2507**
PSSNR/L4040S2509		●	●	40	40	250	40	50	50	SN**2509**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**0903**	SN**1204**	SN**1506**	SN**1906**	SN**2507**	SN**2509**
	h	**16**	**20-32**	**25-32**	**32-40**	**40**	**40**
	Leva di fissaggio	L3	L4	L5	L6	L8	L8
	Vite		LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)	LEM10×27 (16,6 Nm)		
	Vite	LEM6×13,4A (7,0 Nm)				LEM12×36A (25,2 Nm)	LEM12×36A (25,2 Nm)
	Sottoplacchetta	S09AP	S12AP	S15AP	S19AP	S25AP	
	Sottoplacchetta						S25AP-09
	Perno dist (sottoplacchetta)	SP10	SP4	SP5	SP6	SP8	SP8
	Chiave	WH25L	WH30L	WH30L	WH40L	WH50L	WH50L

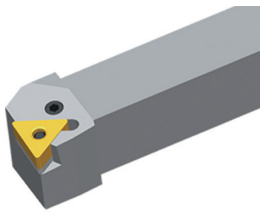
Inserto

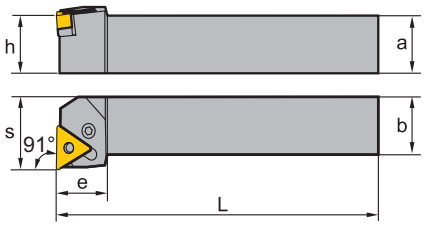
 Finitura	 Media Lavor.	 Sgrossatura	 Lavor.- ghisa grigia	 PCBN/PCD
A73	A73	A78	A84	A162

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TN** Portautensile (esterno) P-Bloccaggio

PTFNR/L Kr: 91°







Versione destra

Articolo	✲	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
PTFNR/L1616H16		●	●	16	16	100	16	20	20	TN**1604**
PTFNR/L2020K16		●	●	20	20	125	20	25	20	TN**1604**
PTFNR/L2525M16		●	●	25	25	150	25	32	20	TN**1604**
PTFNR/L2525M22		●	●	25	25	150	25	32	25	TN**2204**
PTFNR/L3232P22		●	●	32	32	170	32	40	25	TN**2204**
PTFNR/L3232P27		●	○	32	32	170	32	40	34	TN**2706**
PTFNR/L4040S27		○	○	40	40	250	40	50	34	TN**2706**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**	TN**2204**	TN**2706**
	h	**16-25**	**25-32**	**32-40**
	Leva di fissaggio	L3	L4	L5
	Vite		LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)
	Vite	LEM6×13,4A (7,0 Nm)		
	Sottoplacchetta	T16AP	T22AP	T27AP
	Perno dist (sottoplacchetta)	SP3	SP4	SP5
	Chiave	WH25L	WH30L	WH30L

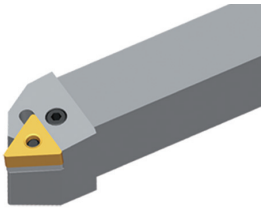
Inserto

						
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Alta asp.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A87	A88	A90	A92	A97	A99	A163

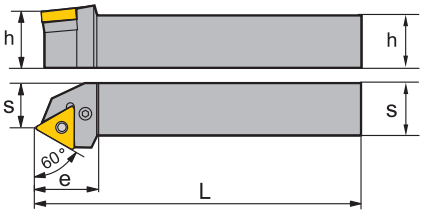
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

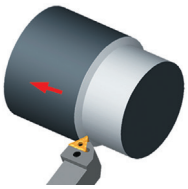
TN** Portautensile (esterno) P-Bloccaggio

PTTNR/L Kr: 60°



Versione destra





Articolo	*	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
PTTNR/L1616H16		●		16	16	100	16	13	25	TN**1604**
PTTNR/L2020K16		●	○	20	20	125	20	17	25	TN**1604**
PTTNR/L2525M22		●	●	25	25	150	20	22	32	TN**2204**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**	TN**2204**
	h	16-25	20
	Leva di fissaggio	L3	L4
	Vite		LEM8×21 (10,2 Nm)
	Vite	LEM6×13,4A (7,0 Nm)	
	Sottoplacchetta	T16AP	T22AP
	Perno dist (sottoplacchetta)	SP3	SP4
	Chiave	WH25L	WH30L

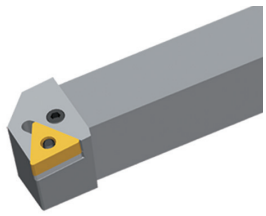
Inserto

 Raschiante	 Finitura	 Media Lavor.	 Sgrossatura	 Alta asp.	 Lavor.- ghisa grigia	 PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

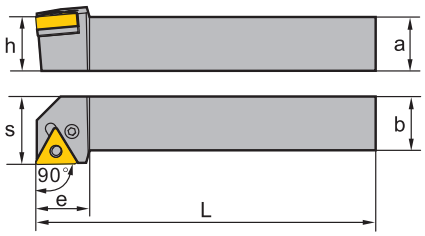
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

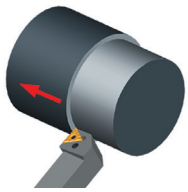
TN** Portautensile (esterno) P-Bloccaggio

PTGNR/L Kr: 90°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PTGNR/L1010E11		●		10	10	70	10	14	16	TN**1103**
PTGNR/L1212F11		●	●	12	12	80	12	16	14	TN**1103**
PTGNR/L1616H11		●		16	16	100	16	20	18	TN**1103**
PTGNR/L2020K11		●	○	20	20	125	20	25	19	TN**1103**
PTGNR/L2525M11		○	○	25	25	150	25	32	20	TN**1103**
PTGNR/L1616H16		●	●	16	16	100	16	20	20	TN**1604**
PTGNR/L2020K16		●	●	20	20	125	20	25	20	TN**1604**
PTGNR/L2525M16		●	●	25	25	150	25	32	20	TN**1604**
PTGNR/L3232P16		●	○	32	32	170	32	40	20	TN**1604**
PTGNR/L2525M22		●	●	25	25	150	25	32	28	TN**2204**
PTGNR/L3232P22		●	●	32	32	170	32	40	28	TN**2204**
PTGNR/L3232P27		●	○	32	32	170	32	40	33	TN**2706**
PTGNR/L4040S27		○	○	40	40	250	40	50	33	TN**2706**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**TN**1103****	**TN**1604****	**TN**2204****	**TN**2706****
	h	**10-25**	**16-32**	**25-32**	**32-40**
	Leva di fissaggio	L2	L3	L4	L5
	Vite	LEM5×9B (4,0 Nm)			
	Vite			LEM8×21 (10,2 Nm)	LEM8×25 (10,2 Nm)
	Vite		LEM6×13,4A (7,0 Nm)		
	Sottoplacchetta		T16AP	T22AP	T27AP
	Perno dist (sottoplacchetta)		SP3	SP4	SP5
	Chiave		WH25L	WH30L	WH30L
	Chiave	WT09IP			

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TN** Portautensile (esterno)

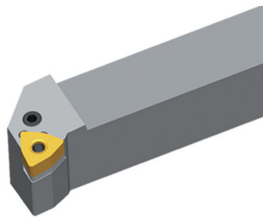
Inserto

 Raschiante	 Finitura	 Media Lavor.	 Sgrossatura	 Alta asp.	 Lavor.- ghisa grigia	 PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

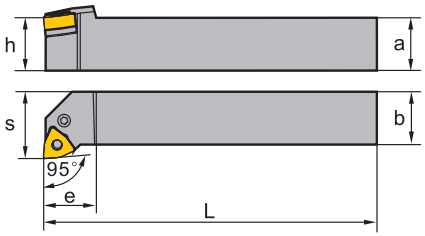
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

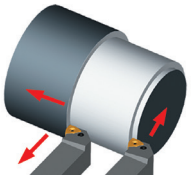
WN** Portautensile (esterno) P-Bloccaggio

PWLNR/L Kr: 95°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
PWLNR/L1616H06		●	●	16	16	100	16	20	20	WN**0604**
PWLNR/L2020K06		●	●	20	20	125	20	25	20	WN**0604**
PWLNR/L2525M06		●	●	25	25	150	25	32	20	WN**0604**
PWLNR/L2020K08		●	●	20	20	125	20	25	26	WN**0804**
PWLNR/L2525M08		●	●	25	25	150	25	32	26	WN**0804**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	WN**0604**	WN**0804**
	h	**16-25**	**20-25**
	Leva di fissaggio	L3	L4
	Vite		LEM8×21 (10,2 Nm)
	Vite	LEM6×13,4A (7,0 Nm)	
	Sottoplacchetta	W06AP	W08AP
	Perno dist (sottoplacchetta)	SP3	SP4
	Chiave	WH25L	WH30L

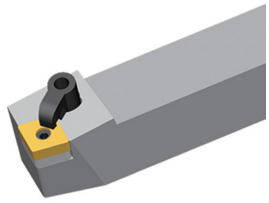
Inserto

					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

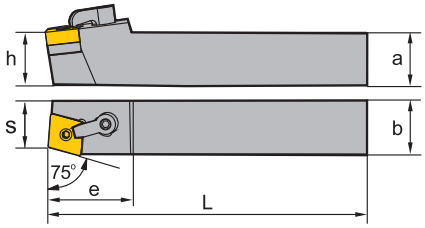
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

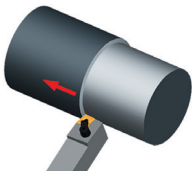
CN** Portautensile (esterno) M-Bloccaggio

MCBNR/L Kr: 75°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MCBNR/L2020K12		●	○	20	20	125	20	17	32	CN**1204**
MCBNR/L2525M12		●	●	25	25	150	20	22	32	CN**1204**
MCBNR/L3225P12		●	●	32	25	170	32	22	32	CN**1204**
MCBNR/L2525M16		○	○	25	25	150	25	22	40	CN**1606**
MCBNR/L3232P16		●	●	32	32	170	32	27	40	CN**1606**
MCBNR/L3232P19		○	○	32	32	170	32	27	45	CN**1906**
MCBNR/L4040R19		○	●	40	40	200	40	35	45	CN**1906**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CN**1204**	CN**1204**	CN**1606**	CN**1906**
	h	20	25-32	25-32	32-40
	Staffa	C1RD	C1RD	C2RD	C5RD
	Perno passante	TM6×17	TM6×17	TM8×21	TM10×21
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)	
	Vite (staffa)				DM8×30X (10,2 Nm)
	Sottoplacchetta	C12BM	C12BM	C16BM	C19BM
	Chiave (perno passante)	WH30L	WH30L	WH30L	WH40L
	Chiave (staffa)	WH30L	WH30L	WH30L	WH40L

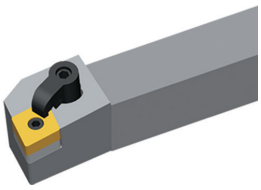
Inserto

					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

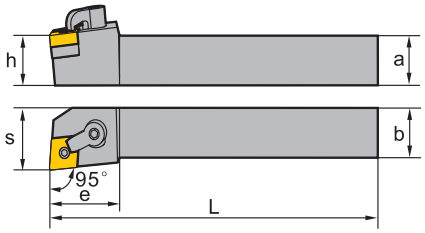
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

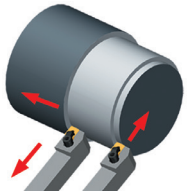
CN** Portautensile (esterno) M-Bloccaggio

MCLNR/L Kr: 95°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MCLNR/L2020K12		●	●	20	20	125	20	25	32	CN**1204**
MCLNR/L2525M12		●	●	25	25	150	25	32	32	CN**1204**
MCLNR/L3225P12		●	●	32	25	170	32	32	32	CN**1204**
MCLNR/L2525M16		●	●	25	25	150	25	32	38	CN**1606**
MCLNR/L3232P16		●	●	32	32	170	32	40	38	CN**1606**
MCLNR/L3232P19		●	●	32	32	170	32	40	45	CN**1906**
MCLNR/L4040R19		●	○	40	40	200	40	50	45	CN**1906**
MCLNR/L4040S25		○	○	40	40	250	40	50	38	CN**2509**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CN**1204**	CN**1204**	CN**1606**	CN**1906**	CN**2509**
	h	20	25-32	25-32	32-40	40
	Staffa	C1RD	C1RD	C2RD	C5RD	C6RD
	Perno passante	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29 (25,2 Nm)
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)		
	Vite (staffa)				DM8×30X (10,2 Nm)	DM10×35X (16,6 Nm)
	Sottoplacchetta	C12BM	C12BM	C16BM	C19BM	
	Sottoplacchetta					C25BM-09
	Chiave (staffa)	WH30L	WH30L	WH30L	WH40L	WH50L
	Chiave (perno passante)	WH30L	WH30L	WH30L	WH40L	WH40L

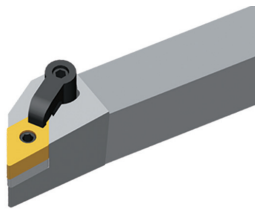
Inserto

					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

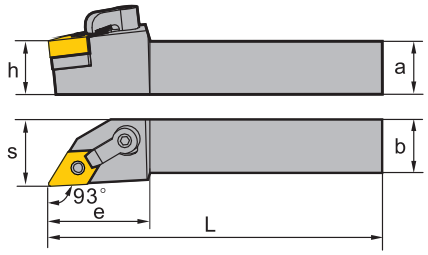
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

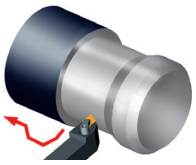
DN** Portautensile (esterno) M-Bloccaggio

MDJNR/L Kr: 93°



Versione destra





Articolo	*	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MDJNR/L2020K11		●	●	20	20	125	20	25	32	DN**1104**
MDJNR/L2525M11		●	●	25	25	150	25	32	32	DN**1104**
MDJNR/L3225P11		●	○	32	25	170	32	32	32	DN**1104**
MDJNR/L2020K15		●	●	20	20	125	20	25	38	DN**1506**
MDJNR/L2525M15		●	●	25	25	150	25	32	38	DN**1506**
MDJNR/L3225P15		●	●	32	25	170	32	32	38	DN**1506**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	DN**1104**	DN**1104**	DN**1506**	DN**1506**
	h	20	25-32	20	25-32
	Staffa	C1RD	C1RD	C2RD	C2RD
	Perno passante	TM5×13	TM5×13	TM6×19	TM6×19
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	D11BM	D11BM	D15BM	D15BM
	Chiave (staffa)	WH30L	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L	WH30L

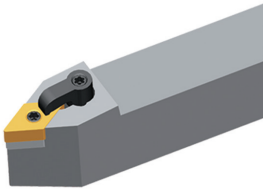
Inserto

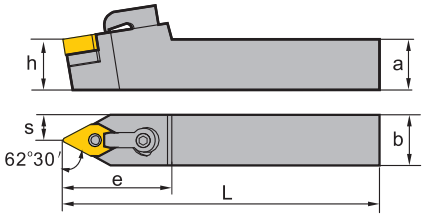
Raschiante	Finitura	Media Lavor.	Sgrossatura	Lavor.- ghisa grigia	PCBN/PCD
A62	A63	A63	A68	A69	A178

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DN** Portautensile (esterno) M-Bloccaggio

MDPNN Kr: 62°30'







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
MDPNN2020K11		●	20	20	125	20	10	35	DN**1104**
MDPNN2525M11		●	25	25	150	25	12,5	35	DN**1104**
MDPNN2020K15		●	20	20	125	20	10	40	DN**1506**
MDPNN2525M15		●	25	25	150	25	12,5	40	DN**1506**
MDPNN3225P15		●	32	25	170	32	12,5	40	DN**1506**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DN**1104**	DN**1104**	DN**1506**	DN**1506**
	h	20	25-32	20	25-32
	Staffa	C1RD	C1RD	C2RD	C2RD
	Perno passante	TM5×13	TM5×13	TM6×19	TM6×19
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	D11BM	D11BM	D15BM	D15BM
	Chiave (staffa)	WH30L	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L	WH30L

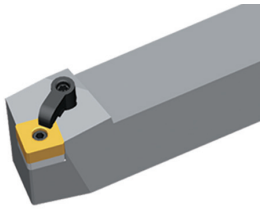
Inserto

					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

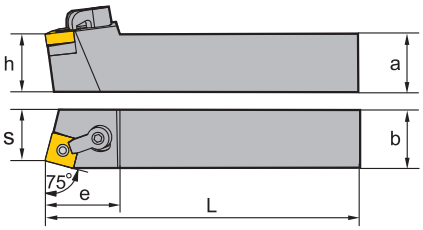
Codice sistema > A228 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

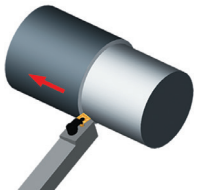
SN** Portautensile (esterno) M-Bloccaggio

MSBNR/L Kr: 75°



Versione destra





Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
MSBNR/L2020K12		●	●	20	20	125	20	17	32	SN**1204**
MSBNR/L2525M12		●	○	25	25	150	25	22	32	SN**1204**
MSBNR/L3225P12			●	32	25	170	32	22	32	SN**1204**
MSBNR/L2525M15		●	○	25	25	150	25	22	38	SN**1506**
MSBNR/L3232P15		●	●	32	32	170	32	29	38	SN**1506**
MSBNR/L4032R15		○		40	32	200	40	27	38	SN**1506**
MSBNR/L3232P19		●	●	32	32	170	32	27	45	SN**1906**
MSBNR/L4040R19		○	●	40	40	200	40	35	45	SN**1906**
MSBNR/L4040R25		●	○	40	40	200	40	35	50	SN**2507**
MSBNR/L4040S2509		○	○	40	40	250	40	35	50	SN**2509**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**1204**	SN**1204**	SN**1506**	SN**1906**	SN**2507**	SN**2509**
	h	20	25-32	25-40	32-40	40	40
	Staffa	C1RD	C1RD	C2RD	C5RD	C6RD	C6RD
	Perno passante	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29	TM12×29
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)			
	Vite (staffa)				DM8×30X (10,2 Nm)	DM10×35X (16,6 Nm)	DM10×35X (16,6 Nm)
	Sottoplacchetta	S12BM	S12BM	S15BM	S19BM	S25BM	S25BM
	Chiave (staffa)	WH30L	WH30L	WH30L	WH40L	WH40L	WH40L
	Chiave (perno passante)	WH31L	WH31L	WH30L	WH40L	WH50L	WH50L

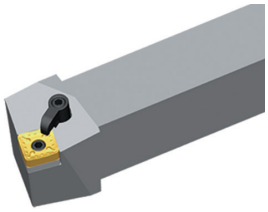
Inserto

				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

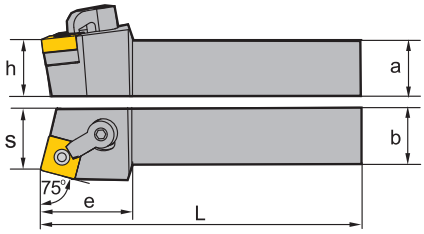
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

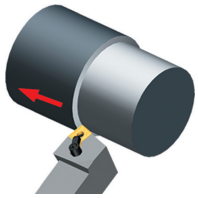
SN** Portautensile (esterno) M-Bloccaggio

MSRNR/L Kr: 75°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MSRNR/L2020K12		●	●	20	20	125	20	22	36	SN**1204**
MSRNR/L2525M12		●	●	25	25	150	25	27	36	SN**1204**
MSRNR/L3225P12			○	32	25	170	32	27	36	SN**1204**
MSRNR/L2525M15		●	○	25	25	150	25	27	40	SN**1506**
MSRNR/L3232P15		●	●	32	32	170	32	35	40	SN**1506**
MSRNR/L4032R15		○		40	32	200	40	35	40	SN**1506**
MSRNR/L3232P19		○	○	32	32	170	32	35	45	SN**1906**
MSRNR/L4040R19		○		40	40	200	40	43	45	SN**1906**
MSRNR/L4040R2509		○	○	40	40	200	40	43	50	SN**2509**
MSRNR/L4040S2509		○	○	40	40	250	40	43	50	SN**2509**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**1204**	SN**1204**	SN**1506**	SN**1906**	SN**2509**
	h	20	25-32	25-40	32-40	40
	Staffa	C1RD	C1RD	C2RD	C5RD	C6RD
	Perno passante	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)		
	Vite (staffa)				DM8×30X (10,2 Nm)	DM10×35X (16,6 Nm)
	Sottoplacchetta	S12BM	S12BM	S15BM	S19BM	S25BM
	Chiave (staffa)	WH30L	WH30L	WH30L	WH40L	WH40L
	Chiave (perno passante)	WH31L	WH31L	WH30L	WH40L	WH50L

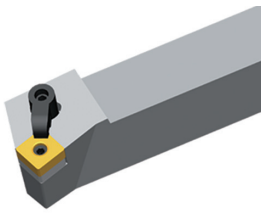
Inserto

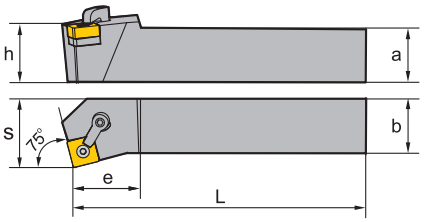
				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SN** Portautensile (esterno) M-Bloccaggio

MSKNR/L Kr: 75°







Versione destra

Articolo	✲	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
MSKNR/L2020K12		●	●	20	20	125	20	25	32	SN**1204**
MSKNR/L2525M12		●	●	25	25	150	25	32	32	SN**1204**
MSKNR/L3225P12		●	○	32	25	170	32	32	32	SN**1204**
MSKNR/L2525M15		●	○	25	25	150	25	32	28	SN**1506**
MSKNR/L3232P15		●	○	32	32	170	32	40	38	SN**1506**
MSKNR/L4032R15			○	40	32	200	40	40	38	SN**1506**
MSKNR/L3232P19		●	●	32	32	170	32	40	45	SN**1906**
MSKNR/L4040R19		○	○	40	40	200	40	50	45	SN**1906**
MSKNR/L4040S2509		○	●	40	40	250	40	50	50	SN**2509**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**1204**	SN**1204**	SN**1506**	SN**1906**	SN**2509**
	h	20	25-32	25-40	32-40	40
	Staffa	C1RD	C1RD	C2RD	C5RD	C6RD
	Perno passante	TM6×17	TM6×17	TM8×21	TM10×21	TM12×29
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)		
	Vite (staffa)				DM8×30X (10,2 Nm)	DM10×35X (16,6 Nm)
	Sottoplacchetta	S12BM	S12BM	S15BM	S19BM	S25BM
	Chiave (staffa)	WH30L	WH30L	WH30L	WH40L	WH40L
	Chiave (perno passante)	WH30L	WH30L	WH30L	WH40L	WH50L

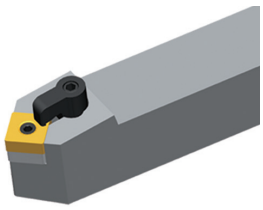
Inserto

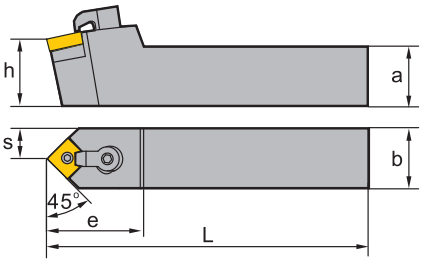
Finitura	Media Lavor.	Sgrossatura	Lavor.- ghisa grigia	PCBN/PCD
A73	A73	A78	A84	A162

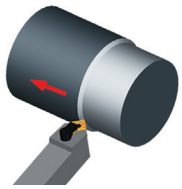
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno) M-Bloccaggio

MSDNN Kr: 45°







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
MSDNN2020K12		●	20	20	125	20	10	35	SN**1204**
MSDNN2525M12		●	25	25	150	25	12,5	35	SN**1204**
MSDNN3225P12		●	32	25	170	32	12,5	35	SN**1204**
MSDNN2525M15		●	25	25	150	25	12,5	42	SN**1506**
MSDNN3232P15		○	32	32	170	32	16	42	SN**1506**
MSDNN4032R15		○	40	32	200	40	16	42	SN**1506**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**1204**	SN**1204**	SN**1506**
	h	20	25-32	25-40
	Staffa	C1RD	C1RD	C2RD
	Perno passante	TM6×17	TM6×17	TM8×21
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	S12BM	S12BM	S15BM
	Chiave (staffa)	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH30L	WH30L	WH30L

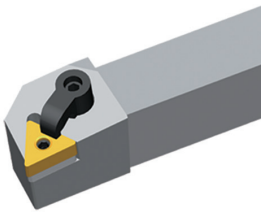
Inserto

				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

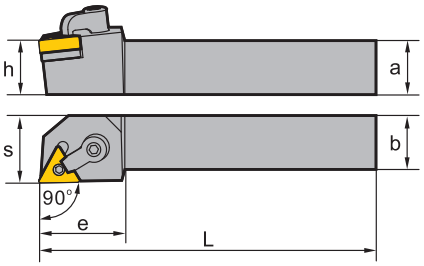
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

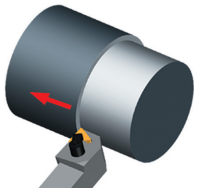
TN** Portautensile (esterno) M-Bloccaggio

MTGNR/L Kr: 90°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MTGNR/L2020K16		●	○	20	20	125	20	25	33	TN**1604**
MTGNR/L2525M16		●	●	25	25	150	25	32	33	TN**1604**
MTGNR/L3225P16		●	○	32	25	170	32	32	33	TN**1604**
MTGNR/L2525M22		●	○	25	25	150	25	32	35	TN**2204**
MTGNR/L3225P22		○	○	32	25	170	32	32	35	TN**2204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Staffa	C1RD	C1RD	C2RD
	Perno passante	TM5×13	TM5×13	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	T16BM	T16BM	T22BM
	Chiave (staffa)	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L

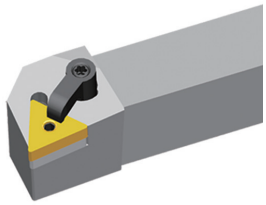
Inserto

						
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Alta asp.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A87	A88	A90	A92	A97	A99	A163

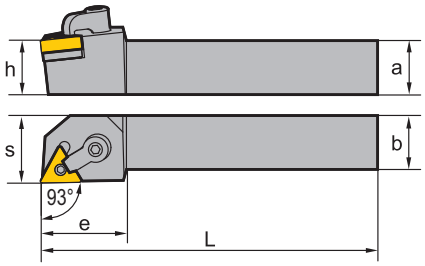
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

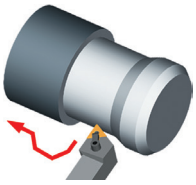
TN** Portautensile (esterno) M-Bloccaggio

MTJNR/L Kr: 93°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MTJNR/L2020K16		●		20	20	125	20	25	32	TN**1604**
MTJNR/L2525M16		○	○	25	25	150	25	32	32	TN**1604**
MTJNR/L3225P16		○		32	25	170	32	32	32	TN**1604**
MTJNR/L2525M22		○		25	25	150	25	32	36	TN**2204**
MTJNR/L3225P22		○	●	32	25	170	32	32	36	TN**2204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Staffa	C1RD	C1RD	C2RD
	Perno passante	TM5×13	TM5×13	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	T16BM	T16BM	T22BM
	Chiave (staffa)	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L

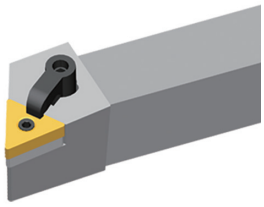
Inserto

Raschiante	Finitura	Media Lavor.	Sgrossatura	Alta asp.	Lavor.- ghisa grigia	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

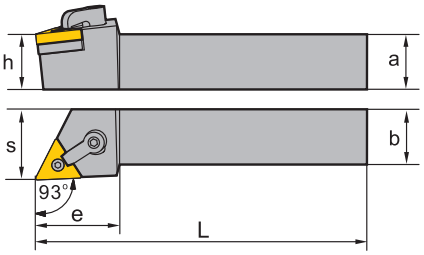
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

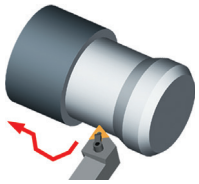
TN** Portautensile (esterno) M-Bloccaggio

MTJNR/L-Z Kr: 93°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MTJNR/L2020K16-Z		●	●	20	20	125	20	25	32	TN**1604**
MTJNR/L2525M16-Z		●	●	25	25	150	25	32	32	TN**1604**
MTJNR/L3225P16-Z		●	○	32	25	170	32	32	32	TN**1604**
MTJNR/L2525M22-Z		●	●	25	25	150	25	32	36	TN**2204**
MTJNR/L3225P22-Z		●	○	32	25	170	32	32	36	TN**2204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Staffa	C1RD	C1RD	C2RD
	Perno passante	TM5×13	TM5×13	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	T16BM	T16BM	T22BM
	Chiave (staffa)	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L

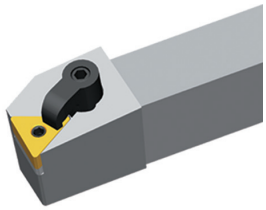
Inserto

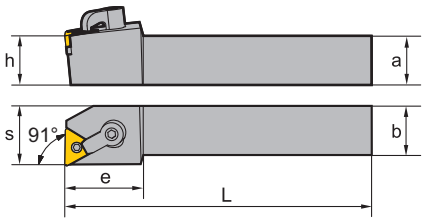
						
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Alta asp.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A87	A88	A90	A92	A97	A99	A163

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TN** Portautensile (esterno) M-Bloccaggio

MTFNR/L Kr: 91°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
MTFNR/L2020K16		●	○	20	20	125	20	25	32	TN**1604**
MTFNR/L2525M16		●	●	25	25	150	25	32	32	TN**1604**
MTFNR/L3225P16		●		32	25	170	32	32	32	TN**1604**
MTFNR/L2525M22		●	○	25	25	150	25	32	36	TN**2204**
MTFNR/L3225P22		●	○	32	25	170	32	32	36	TN**2204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1604**	TN**1604**	TN**2204**
	h	20	25-32	25-32
	Staffa	C1RD	C1RD	C2RD
	Perno passante	TM5×13	TM5×13	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	T16BM	T16BM	T22BM
	Chiave (staffa)	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L

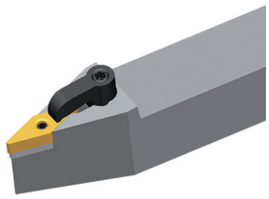
Inserto

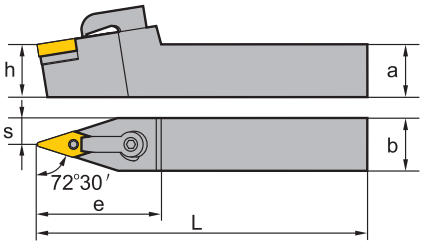
Raschiante	Finitura	Media Lavor.	Sgrossatura	Alta asp.	Lavor.- ghisa grigia	PCBN/PCD
A87	A88	A90	A92	A97	A99	A163

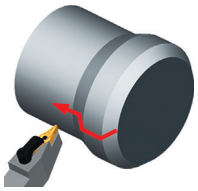
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VN** Portautensile (esterno) M-Bloccaggio

MVVNN Kr: 72°30'







Articolo	✲	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
MVVNN2020K16		●	20	20	125	20	10	45	VN**1604**
MVVNN2525M16		●	25	25	150	25	12,5	45	VN**1604**
MVVNN3225P16		○	32	25	170	32	12,5	45	VN**1604**
MVVNN3232P16		●	32	32	170	32	16	45	VN**1604**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**VN**1604****	**VN**1604****
	h	**20**	**25-32**
	Staffa	C3RD	C3RD
	Perno passante	TM5×13	TM5×13
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	V16BM	V16BM
	Chiave (staffa)	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L

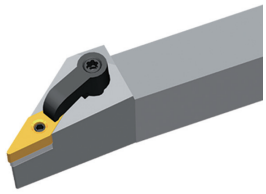
Inserto

				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A102	A102	A104	A103	A179

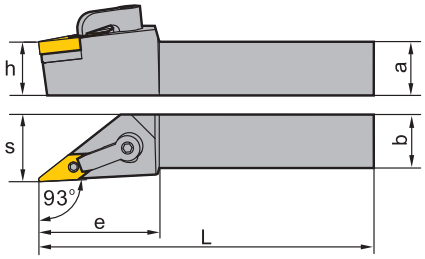
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VN** Portautensile (esterno) M-Bloccaggio

MVJNR/L Kr: 93°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MVJNR/L2020K16		●	●	20	20	125	20	25	45	VN**1604**
MVJNR/L2525M16		●	●	25	25	150	25	32	45	VN**1604**
MVJNR/L3225P16		●	●	32	25	170	32	32	45	VN**1604**
MVJNR/L3232P16		●	●	32	32	170	32	40	45	VN**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VN**1604****	**VN**1604****
	h	**20**	**25-32**
	Staffa	C3RD	C3RD
	Perno passante	TM5×13	TM5×13
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	V16BM	V16BM
	Chiave (staffa)	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L

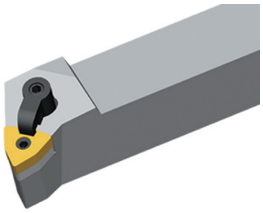
Inserto

Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A102	A102	A104	A103	A179

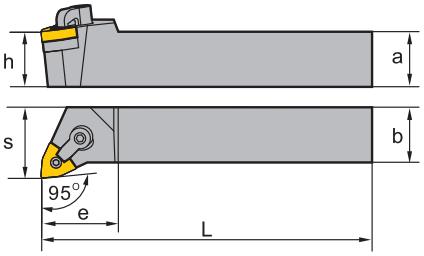
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

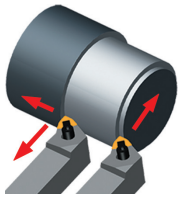
WN** Portautensile (esterno) M-Bloccaggio

MWLNR/L Kr: 95°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MWLNR/L2020K06		●	●	20	20	125	20	25	30	WN**0604**
MWLNR/L2525M06		●	●	25	25	150	25	32	30	WN**0604**
MWLNR/L2020K08		●	●	20	20	125	20	25	30	WN**0804**
MWLNR/L2525M08		●	●	25	25	150	25	32	35	WN**0804**
		○		25	25	170	25	32	35	WN**0804**
MWLNR/L3232P08		●	●	32	32	170	32	40	35	WN**0804**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	WN**0604**	WN**0604**	WN**0804**	WN**0804**
	h	20	25	20	25-32
	Staffa	C1RD	C1RD	C1RD	C1RD
	Perno passante	TM5×13	TM5×13	TM6×17	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	W06BM	W06BM	W08BM	W08BM
	Chiave (staffa)	WH30L	WH30L	WH30L	WH30L
	Chiave (perno passante)	WH20L	WH20L	WH30L	WH30L

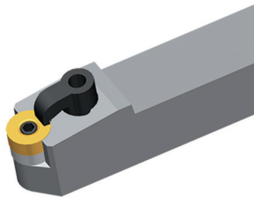
Inserto

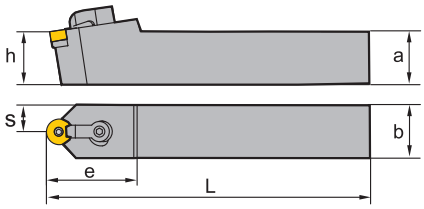
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

RN** Portautensile (esterno) M-Bloccaggio

MRDNN







Versione destra

Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
MRDNN2020K12		○	20	20	125	20	10	35	RN**1204**
MRDNN2525M12		○	25	25	150	25	12,5	35	RN**1204**
MRDNN3225P12		○	32	25	170	32	12,5	35	RN**1204**
MRDNN3232P12		○	32	32	170	32	16	35	RN**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	RN**1204**	RN**1204**
	h	20	25-32
	Staffa	C1RD	C1RD
	Perno passante	TM6×17	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	R12BM	R12BM
	Chiave (staffa)	WH30L	WH30L
	Chiave (perno passante)	WH30L	WH30L

Inserto



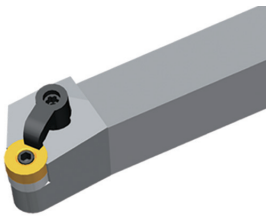
Lavor.- ghisa grigia

A112

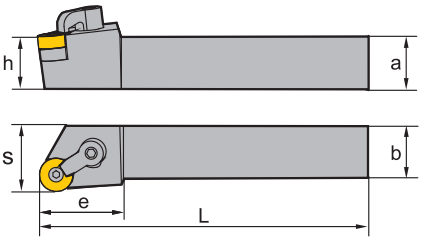
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

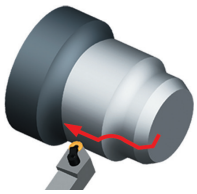
RN** Portautensile (esterno) M-Bloccaggio

MRGNR/L



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
MRGNR/L2020K12		○	○	20	20	125	20	25	32	RN**1204**
MRGNR/L2525M12		○	●	25	25	150	25	32	32	RN**1204**
MRGNR/L3225P12		○	○	32	25	170	32	32	32	RN**1204**
MRGNR/L3232P12		○	○	32	32	170	32	40	32	RN**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**RN**1204****	**RN**1204****
	h	**20**	**25-32**
	Staffa	C1RD	C1RD
	Perno passante	TM6×17	TM6×17
	Vite (staffa)	DM6×25 (7,0 Nm)	DM6×30 (7,0 Nm)
	Sottoplacchetta	R12BM	R12BM
	Chiave (staffa)	WH30L	WH30L
	Chiave (perno passante)	WH30L	WH30L

Inserto



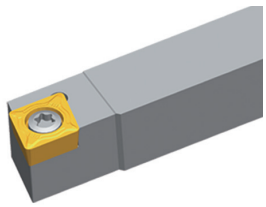
Lavor.- ghisa grigia

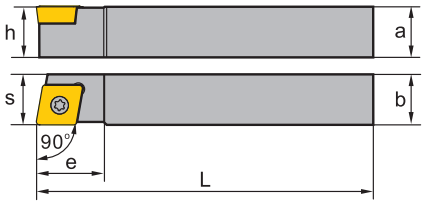
A112

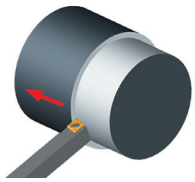
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CC** Portautensile (esterno) S-Bloccaggio

SCACR/L Kr: 90°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SCACR/L1010E06		●	●	10	10	70	10	10,5	10	CC**0602**
SCACR/L1212F09		●	●	12	12	80	12	12,7	16	CC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**CC**0602****	**CC**09T3****
	h	**10**	**12**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP

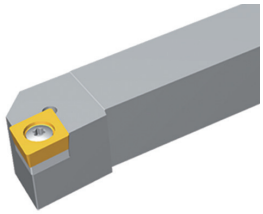
Inserto

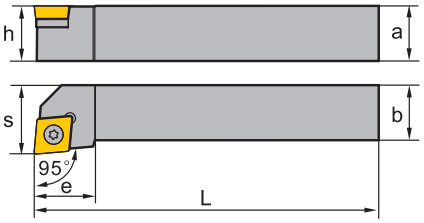
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

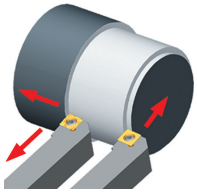
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CC** Portautensile (esterno) S-Bloccaggio

SCLCR/L Kr: 95°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	L_2	e	Inserto
SCLCR/L0808D06		●	●	8	8	60	8	10	10	10	CC**0602**
SCLCR/L1010E06		●	●	10	10	70	10	12	10	10	CC**0602**
SCLCR/L1212F09		●	●	12	12	80	12	16	16	16	CC**09T3**
SCLCR/L1616H09		●	●	16	16	100	16	20	16	16	CC**09T3**
SCLCR/L2020K09		●	●	20	20	125	20	25	25	25	CC**09T3**
SCLCR/L1616H12		●	●	16	16	100	16	20	18	18	CC**1204**
SCLCR/L2020K12		●	●	20	20	125	20	25	25	25	CC**1204**
SCLCR/L2525M12		●	●	25	25	150	25	32	26	26	CC**1204**
SCLCR/L3225P12		○	○	32	25	170	32	32	26	26	CC**1204**
SCLCR/L3232P12		●	●	32	32	170	32	40	28	28	CC**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CC**0602**	CC**09T3**	CC**1204**
	h	8-10	12-20	16-32
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	
	Vite			I60M4×11X (3,4 Nm)
	Vite (sottoplacchetta)			SM6×10XA
	Sottoplacchetta			C12BS
	Chiave (vite)	WT07IP	WT15IP	WT15IP
	Chiave (sotto-placchetta)			WH40L

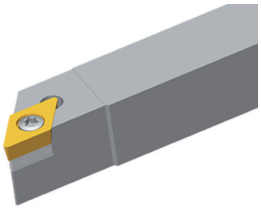
Inserto

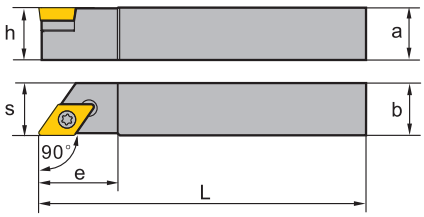
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A116	A119	A121	A122	A121	A180

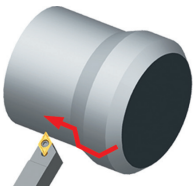
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile (esterno) S-Bloccaggio

SDACR/L Kr: 90°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SDACR/L1010E07		●	●	10	10	70	10	10,5	15	DC**0702**
SDACR/L1212F11		●	●	12	12	80	12	12,5	15	DC**11T3**
SDACR/L1616H11		●	●	16	16	100	16	16,7	24	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DC**0702**	DC**11T3**	DC**11T3**
	h	10	12	16
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)			SM5×8.65XA
	Sottoplacchetta			D11BS
	Chiave (vite)	WT07IP	WT15IP	WT15IP
	Chiave (sottoplacchetta)			WH35L

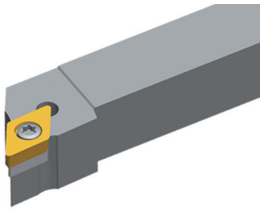
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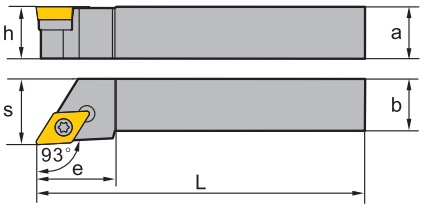
Finitura	Media Lavor.	Sgrossatura	Lavorazione Al.	Lavor.- ghisa grigia	PCBN/PCD
A126	A127	A129	A129	A129	A184

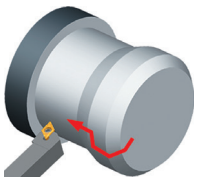
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile (esterno) S-Bloccaggio

SDJCR/L Kr: 93°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
SDJCR/L1010E07		●	●	10	10	70	10	12	15	DC**0702**
SDJCR/L1212F07		●	●	12	12	80	12	16	15	DC**0702**
SDJCR/L1616H07		●	●	16	16	100	16	20	18	DC**0702**
SDJCR/L1616H11		●	●	16	16	100	16	20	24	DC**11T3**
SDJCR/L2020K11		●	●	20	20	125	20	25	24	DC**11T3**
SDJCR/L2525M11		●	●	25	25	150	25	32	29	DC**11T3**
SDJCR/L3225P11		●	●	32	25	170	32	32	29	DC**11T3**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	DC**0702**	DC**11T3**
	h	10-16	16-32
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		D11BS
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sotto-placchetta)		WH35L

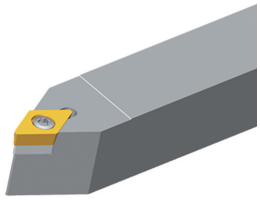
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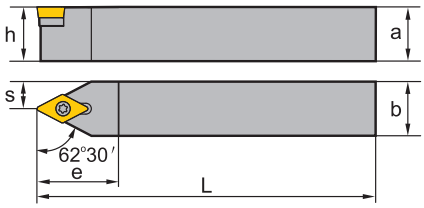
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A126	A127	A129	A129	A129	A184

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile (esterno) S-Bloccaggio

SDNCN Kr: 62°30'







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
SDNCN1010E07		●	10	10	70	10	5	20	DC**0702**
SDNCN1212F07		●	12	12	80	12	6	20	DC**0702**
SDNCN1212H11		●	12	12	100	12	6	30	DC**11T3**
SDNCN1616H11		●	16	16	100	16	8	30	DC**11T3**
SDNCN2020K11		●	20	20	125	20	10	30	DC**11T3**
SDNCN2525M11		●	25	25	150	25	12,5	30	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DC**0702**	DC**11T3**	DC**11T3**
	h	10-12	12	16-25
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)			SM5×8.65XA
	Sottoplacchetta			D11BS
	Chiave (vite)	WT07IP	WT15IP	WT15IP
	Chiave (sottoplacchetta)			WH35L

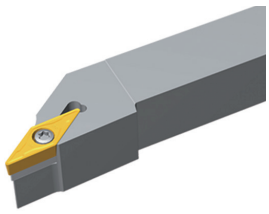
Inserto

Finitura	Media Lavor.	Sgrossatura	Lavorazione Al.	Lavor.- ghisa grigia	PCBN/PCD
A126	A127	A129	A129	A129	A184

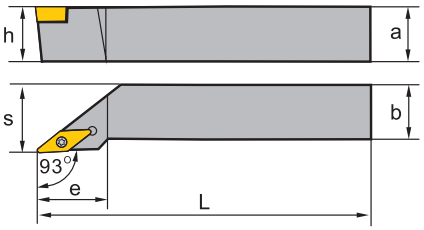
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

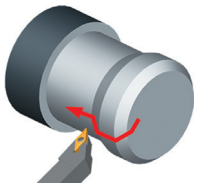
VB** Portautensile (esterno) S-Bloccaggio

SVJBR/L Kr: 93°



Versione destra





Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
SVJBR/L1212F11			●	12	12	80	12	16	27	VB**1103**
SVJBR/L1616H11		●	●	16	16	100	16	20	27	VB**1103**
SVJBR/L2525M11		●	●	25	25	150	25	32	27	VB**1103**
SVJBR/L1616H16		●	●	16	16	100	16	20	36	VB**1604**
SVJBR/L2020K16		●	●	20	20	125	20	25	41	VB**1604**
SVJBR/L2525M16		●	●	25	25	150	25	32	41	VB**1604**
SVJBR/L3225P16		●	●	32	25	170	32	32	41	VB**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	VB**1103**	VB**1604**
	h	**12-25**	**16-32**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		V16BS
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

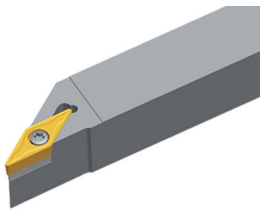
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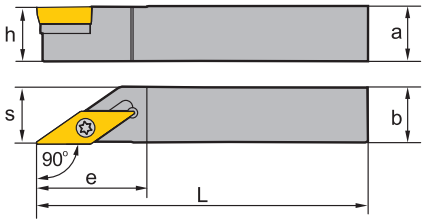
Finitura	Media Lavor.	Sgrossatura	PCBN/PCD
A148	A151	A152	A191

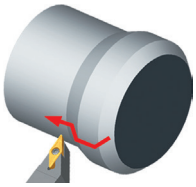
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VB** Portautensile (esterno) S-Bloccaggio

SVABR/L Kr: 90°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SVABR/L1010F11		●	●	10	10	80	10	10,5	28	VB**1103**
SVABR/L1616H16		●	○	16	16	100	16	16,5	28	VB**1604**
SVABR/L2020K16		●	○	20	20	125	20	20,5	28	VB**1604**
SVABR/L2525M16		●	●	25	25	150	25	25,5	28	VB**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VB**1103****	**VB**1604****
	h	**10**	**16-32**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		V16BS
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

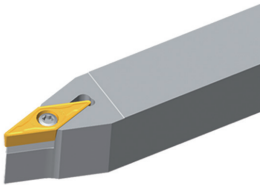
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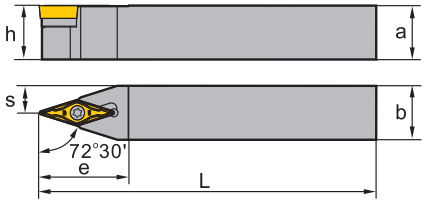
			
Finitura	**Media Lavor.**	**Sgrossatura**	**PCBN/PCD**
A148	A151	A152	A191

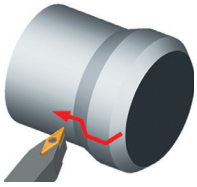
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

VB** Portautensile (esterno) S-Bloccaggio

SVVBN Kr: 72°30'







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
SVVBN1616H11		●	16	16	100	16	8	27	VB**1103**
SVVBN2020K11		●	20	20	125	20	10	30	VB**1103**
SVVBN1616H16		●	16	16	100	16	8	33	VB**1604**
SVVBN2020K16		●	20	20	125	20	10	33	VB**1604**
SVVBN2525M16		●	25	25	150	25	12,5	38	VB**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VB**1103****	**VB**1604****
	h	**12-25**	**16-32**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		V16BS
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sotto-placchetta)		WH35L

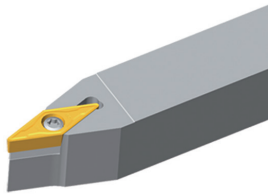
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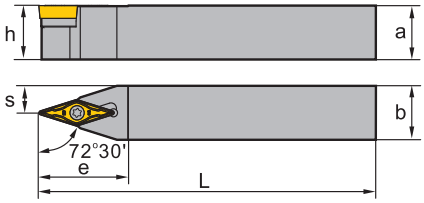
			
Finitura	**Media Lavor.**	**Sgrossatura**	**PCBN/PCD**
A148	A151	A152	A191

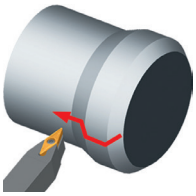
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VC** Portautensile (esterno) S-Bloccaggio

SVVCN Kr: 72°30'







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
SVVCN1212F11		●	12	12	80	12	6	27	VC**1103**
SVVCN1616H11		●	16	16	100	16	8	27	VC**1103**
SVVCN2020K11		●	20	20	125	20	10	30	VC**1103**
SVVCN1212M11		●	12	12	150	12	6	27	VC**1103**
SVVCN2525M11		●	25	25	150	25	12,5	38	VC**1103**
SVVCN1616H16		●	16	16	100	16	8	33	VC**1604**
SVVCN2020K16		●	20	20	125	20	10	33	VC**1604**
SVVCN2525M16		●	25	25	150	25	12,5	38	VC**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	VC**1103**	VC**1604**
	h	12-25	16-32
	Vite	l60M2,5×6,5 (1,0 Nm)	l60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		V16BSC
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

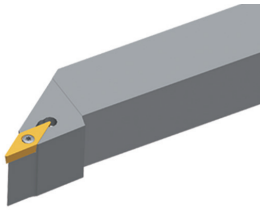
Inserto

Finitura	Media Lavor.	Lavorazione Al.	PCBN/PCD
A156	A156	A154	A193

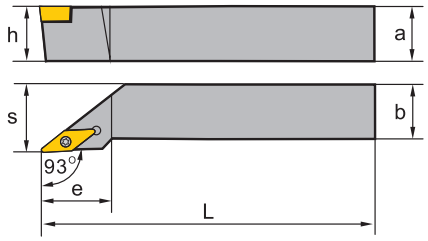
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

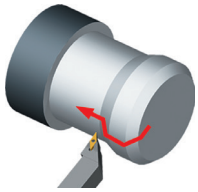
VC** Portautensile (esterno) S-Bloccaggio

SVJCR/L Kr: 93°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SVJCR/L1010E11		●		10	10	70	10	12	22	VC**1103**
SVJCR/L1212F11		●	●	12	12	80	12	16	27	VC**1103**
SVJCR/L1616H11		●	●	16	16	100	16	20	27	VC**1103**
SVJCR/L2020K11		●	●	20	20	125	20	25	27	VC**1103**
SVJCR/L2525M11		●	●	25	25	150	25	32	27	VC**1103**
SVJCR/L1616H16		●	●	16	16	100	16	20	36	VC**1604**
SVJCR/L2020K16		●	●	20	20	125	20	25	41	VC**1604**
SVJCR/L2020M16		●	●	20	20	150	20	25	41	VC**1604**
SVJCR/L2525M16		●	●	25	25	150	20	32	41	VC**1604**
SVJCR/L3225P16		○	○	32	25	170	32	32	41	VC**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	VC**1103**	VC**1604**
	h	**10-25**	**16-32**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		V16BSC
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

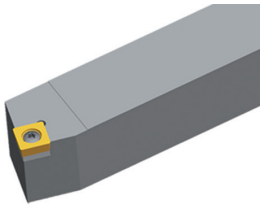
Inserto

Finitura	Media Lavor.	Lavorazione Al.	PCBN/PCD
A156	A156	A154	A193

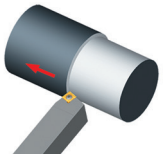
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SC** Barre alesatrici in acciaio S-Bloccaggio

SSBCR/L Kr: 75°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SSBCR/L1212F09		●	●	12	12	80	12	11	16	SC**09T3**
SSBCR/L1616H09		●	●	16	16	100	16	13	16	SC**09T3**
SSBCR/L2020K12		●	●	20	20	125	20	17	25	SC**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SC**09T3**	SC**09T3**	SC**1204**
	h	12	16	20
	Vite	I60M3,5×8 (2,7 Nm)	I60M3,5×8 (2,7 Nm)	
	Vite			I60M4×11X (3,4 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA	SM6×10XA
	Sottoplacchetta		S09BS	S12BS
	Chiave (vite)	WT15IP	WT15IP	WT15IP
	Chiave (sotto-placchetta)		WH35L	WH40L

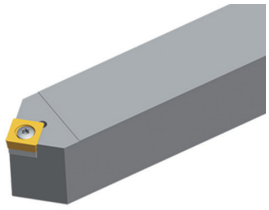
Inserto

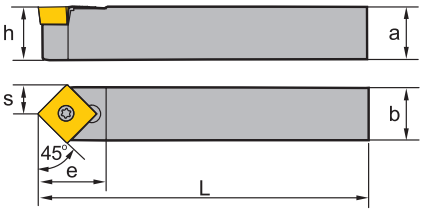
			
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**
A134	A135	A136	A136

Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SC** Barre alesatrici in acciaio S-Bloccaggio

SSDCN Kr: 45°







Versione destra

Articolo	✲	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
SSDCN1212F09		●	12	12	80	12	6	15,5	SC**09T3**
SSDCN1616H09		●	16	16	100	16	8	15,5	SC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	SC**09T3**	SC**09T3**
	h	12	16
	Vite	I60M3,5×8 (2,7 Nm)	I60M3,5×8 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		S09BS
	Chiave (vite)	WT15IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

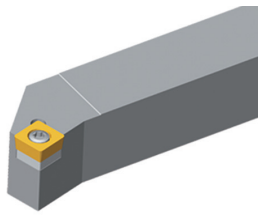
Inserto

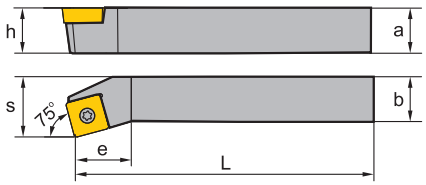
			
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**
A134	A135	A136	A136

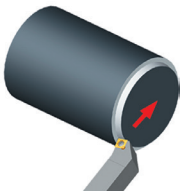
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SC** Barre alesatrici in acciaio S-Bloccaggio

SSKCR/L Kr: 75°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SSKCR/L1616H09		●	●	16	16	100	16	20	13	SC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**SC**09T3****
	h	**16**
	Vite	I60M3,5×8 (2,7 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA
	Sottoplacchetta	S09BS
	Chiave (vite)	WT15IP
	Chiave (sottoplacchetta)	WH35L

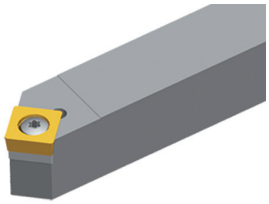
Inserto

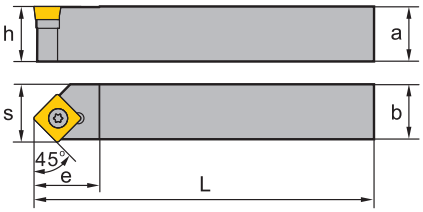
			
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**
A134	A135	A136	A136

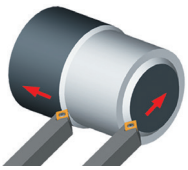
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

SC** Barre alesatrici in acciaio S-Bloccaggio

SSSCR/L Kr: 45°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
SSSCR/L1616H09		●	●	16	16	100	16	17	17	SC**09T3**
SSSCR/L2020K12		●	●	20	20	125	20	21	21	SC**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SC**09T3**	SC**1204**
	h	16	20
	Vite	I60M3,5×12 (2,7 Nm)	
	Vite		I60M4×11X (3,4 Nm)
	Vite (sottoplacchetta)		SM6×10XA
	Sottoplacchetta		S12BS
	Chiave (vite)	WT15IP	WT15IP
	Chiave (sottoplacchetta)		WH40L

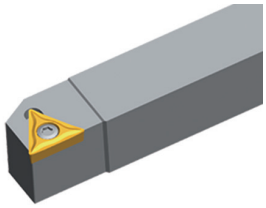
Inserto

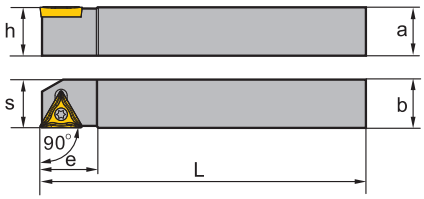
			
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**
A134	A135	A136	A136

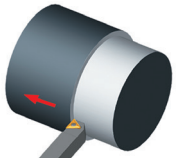
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TC** Portautensile (esterno) S-Bloccaggio

STACR/L Kr: 90°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
STACR/L1212F11		●	●	12	12	80	12	12,5	14	TC**1102**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**TC**1102****
	h	**12**
	Vite	I60M2,5×6,5 (1,0 Nm)
	Chiave (vite)	WT07IP

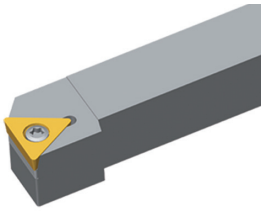
Inserto

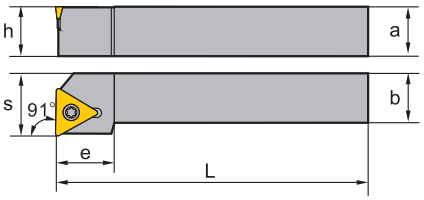
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**PCBN/PCD**
A141	A142	A143	A145	A187

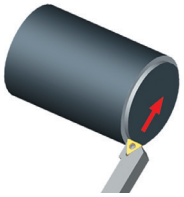
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TC** Portautensile (esterno) S-Bloccaggio

STFCR/L Kr: 91°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
STFCR/L1212F11		●	○	12	12	80	12	16	14	TC**1102**
STFCR/L1616H11		●	○	16	16	100	16	20	14	TC**1102**
STFCR/L1616H16		●	○	16	16	100	16	20	19	TC**16T3**
STFCR/L2020K16		●	●	20	20	125	20	25	19	TC**16T3**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	TC**1102**	TC**16T3**
	h	12-16	16-20
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		T16BS
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sotto-placchetta)		WH35L

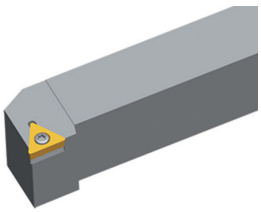
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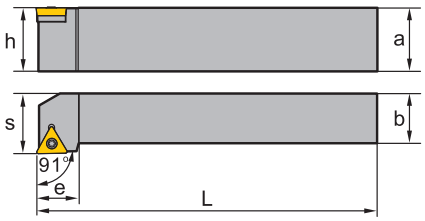
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A141	A142	A143	A145	A143	A187

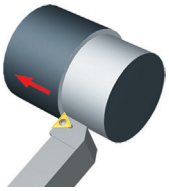
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TC** Portautensile (esterno) S-Bloccaggio

STGCR/L Kr: 91°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
STGCR/L0808D09		○		8	8	60	8	10	11	TC**0902**
STGCR/L1010E09		●	○	10	10	70	10	12	11	TC**0902**
STGCR/L1212F11		●	●	12	12	80	12	16	14	TC**1102**
STGCR/L1616H11		●	●	16	16	100	16	20	16	TC**1102**
STGCR/L2020K16		●	●	20	20	125	20	25	21	TC**16T3**
STGCR/L2525M16		●	●	25	25	150	25	25	21	TC**16T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	TC**0902**	TC**1102**	TC**16T3**
	h	8-10	12-16	20-25
	Vite	I60M2,2×5,5 (0,8 Nm)	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)			SM5×8.65XA
	Sottoplacchetta			T16BS
	Chiave (vite)	WT06IP	WT07IP	WT15IP
	Chiave (sottoplacchetta)			WH35L

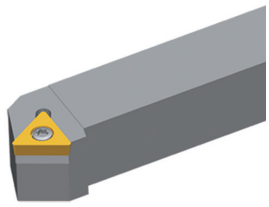
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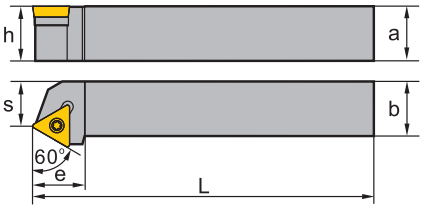
Finitura	Media Lavor.	Sgrossatura	Lavorazione Al.	Lavor.- ghisa grigia	PCBN/PCD
A141	A142	A143	A145	A143	A187

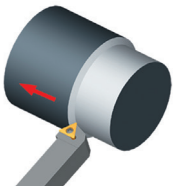
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TC** Portautensile (esterno) S-Bloccaggio

STTCR/L Kr: 60°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto
STTCR/L1616H11		●	○	16	16	100	16	13	14	TC**1102**
STTCR/L1616H16		●	●	16	16	100	16	13	19	TC**16T3**
STTCR/L2020K16		●	●	20	20	125	20	17	19	TC**16T3**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	TC**1102**	TC**16T3**
	h	**16**	**16-20**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		T16BS
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

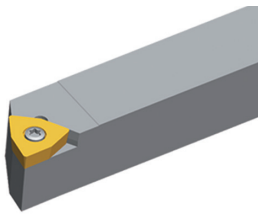
Inserto

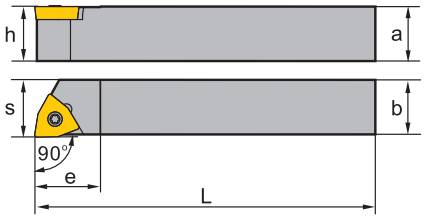
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A141	A142	A143	A145	A143	A187

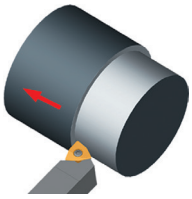
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

WC** Portautensile (esterno) S-Bloccaggio

SWACR/L Kr: 90°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
SWACR/L1010E04		●	○	10	10	70	10	10,5	10	WC**0402**
SWACR/L1212F04		●	○	12	12	80	12	12	14	WC**0402**
SWACR/L1616H06		●	●	16	16	100	16	16,5	20	WC**06T3**
SWACR/L2020K08		●	●	20	20	125	20	20,5	24	WC**0804**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**WC**0402****	**WC**06T3****	**WC**0804****
	h	**10-12**	**16**	**20**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3×7 (1,8 Nm)	I60M3,5×12 (2,7 Nm)
	Chiave (vite)	WT07IP	WT10IP	WT15IP

Inserto



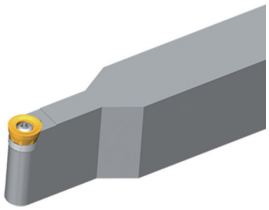
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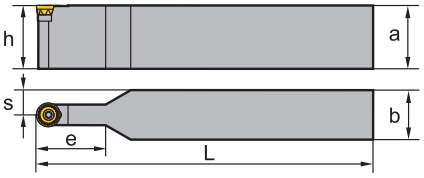
C35

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

RC** Portautensile (esterno) S-Bloccaggio

SRDCN







Articolo	✲	Stock	Dimensioni [mm]						Inserto	
			a	b	L	h	s	e		
SRDCN1616H08		○	16	16	100	16	8	16	RCGX0803MO	RCMT0803MO
SRDCN2020K08		●	20	20	125	20	10	16	RCGX0803MO	RCMT0803MO
SRDCN2020K12		●	20	20	125	20	10	35	RCGX1204MO	RCMT1204MO
SRDCN2525M12		●	25	25	150	25	12,5	35	RCGX1204MO	RCMT1204MO
SRDCN3225P12		●	32	25	170	32	12,5	35	RCGX1204MO	RCMT1204MO
SRDCN2020K10		●	20	20	125	20	10	25	RCMT10T3MO	
SRDCN2525M10		●	25	25	150	25	12,5	25	RCMT10T3MO	
SRDCN3225P16		●	32	25	170	32	12,5	35	RCMT1606MO	
SRDCN3232P16		●	32	32	170	32	16	40	RCMT1606MO	
SRDCN4040S16		●	40	40	250	40	20	50	RCMT1606MO	
SRDCN4040S20		●	40	40	250	40	20	50	RCMT2006MO	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	RCGX0803MO	RCGX1204MO	RCMT10T3MO	RCMT1606MO	RCMT2006MO
	h	16-20	20-32	20-25	32-40	40
	Vite	I60M3×7 (1,8 Nm)	I60M3,5×12 (2,7 Nm)	I60M3,5×10 (2,7 Nm)		I43M6×16 (9,1 Nm)
	Vite				I60M4×15X (3,4 Nm)	
	Vite (sottoplacchetta)		SM5×8.65XA		SM6×10XA	
	Sottoplacchetta		R12BS		R16BS	
	Chiave (vite)	WT10IP	WT15IP	WT15IP	WT15IP	
	Chiave (vite)					WT25IT
	Chiave (sotto-placchetta)		WH35L		WH40L	

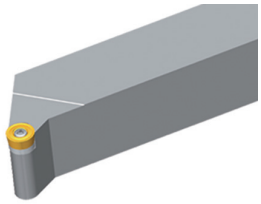
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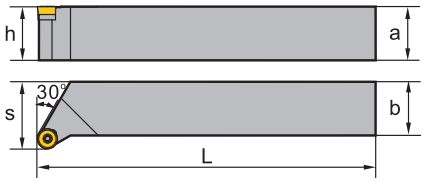
	
Lavorazione Al.	**Lavor.- ghisa grigia**
A132	A132

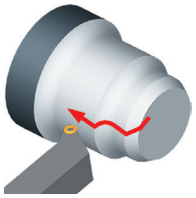
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

RC** Portautensile (esterno) S-Bloccaggio

SRGCR/L







Versione destra

Articolo	✻	Stock		Dimensioni [mm]					Inserto	
		R	L	a	b	L	h	s		
SRGCR/L1616H08		●	●	16	16	100	16	20	RCGX0803MO-LH	RCMT0803MO
SRGCR/L2020K12		●	○	20	20	125	20	27	RCGX1204MO	RCMT1204MO
SRGCR/L2525M12		●	○	25	25	150	25	32	RCGX1204MO	RCMT1204MO
SRGCR/L2525M10		●	○	25	25	100	25	32	RCMT10T3MO	
SRGCR/L2020K10		●	○	20	20	125	20	25	RCMT10T3MO	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	RCGX0803MO-LH	RCGX1204MO	RCMT10T3MO
	h	16	20-25	16-25
	Vite	I60M3,5×10 (2,7 Nm)	I60M3,5×12 (2,7 Nm)	I60M3,5×10 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA	
	Sottoplacchetta		R12BS	
	Chiave (vite)	WT15IP	WT15IP	WT15IP
	Chiave (sotto-placchetta)		WH35L	

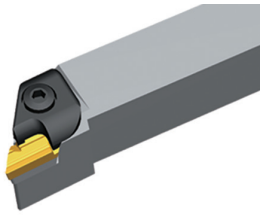
Inserto

	
Lavorazione Al.	**Lavor.- ghisa grigia**
A132	A132

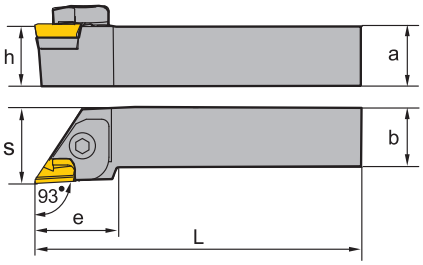
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

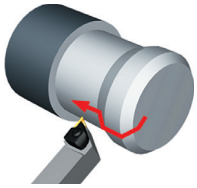
KNUX** Portautensile C-Bloccaggio

CKJNR/L Kr: 93°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
CKJNL2525M16			●	25	25	150	25	32	32	KNUX1604**L
CKJNL3232P16			●	32	32	170	32	40	32	KNUX1604**L
CKJNL4040R16			●	40	40	200	40	50	32	KNUX1604**L
CKJNR2525M16		●		25	25	150	25	32	32	KNUX1604**R
CKJNR3232P16		●		32	32	170	32	40	32	KNUX1604**R
CKJNR4040R16		○		40	40	200	40	50	32	KNUX1604**R

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	KNUX1604**L	KNUX1604**R
	h	25-40	25-40
	Staffa	C6L1T	C6R1T
	Perno passante	P0515	P0515
	Vite (staffa)	CM6×25A (7,0 Nm)	CM6×25A (7,0 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B
	Sottoplacchetta		K16CC
	Sottoplacchetta	K16CCL	
	Molla (staffa)	SPR1	SPR1
	Perno passante	SPR2	SPR2
	Chiave (staffa)	WH40L	WH40L
	Chiave (sottoplacchetta)	WH20L	WH20L

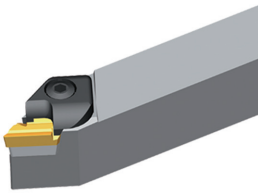
Inserto

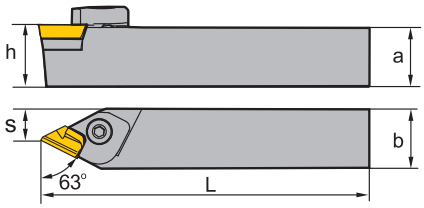
Finitura
A113

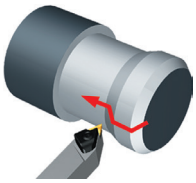
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

KNUX** Portautensile C-Bloccaggio

CKNNR/L Kr: 63°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	Inserto
CKNNL2525M16			●	25	25	150	25	14,3	KNUX1604**L
CKNNL3232P16			○	32	32	170	32	16,8	KNUX1604**L
CKNNR2525M16		●		25	25	150	25	14,3	KNUX1604**R

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	KNUX1604**L	KNUX1604**R
	h	**25-32**	**25-32**
	Staffa	C6L1T	C6R1T
	Perno passante	P0515	P0515
	Vite (staffa)	CM6×25A (7,0 Nm)	CM6×25A (7,0 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B
	Sottoplacchetta		K16CC
	Sottoplacchetta	K16CCL	
	Molla (staffa)	SPR1	SPR1
	Perno passante	SPR2	SPR2
	Chiave (staffa)	WH40L	WH40L
	Chiave (sotto-placchetta)	WH20L	WH20L

Inserto

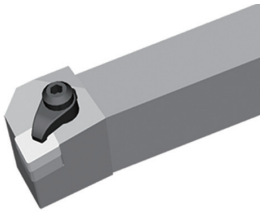


Finitura
A113

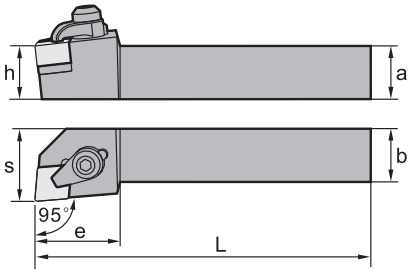
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

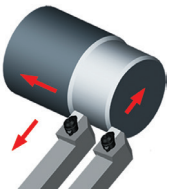
CN** Portautensile (esterno) C-Bloccaggio

CCLNR/L Kr: 95°



Versione destra





Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto	
CCLNR/L2020K12		○	○	20	20	125	20	27	32	CNGN1204**	CNGN1207**
CCLNR/L2525M12		○	●	25	20	100	25	27	36	CNGN1204**	CNGN1207**
CCLNR/L2525M16			○	25	25	150	25	32	36	CNGN1604**	CNGN1606**
CCLNR/L3225P16		○	○	32	25	170	32	32	36	CNGN1604**	CNGN1606**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CNGN1204**	CNGN1207**	CNGN1604**	CNGN1606**
	h	20-25	20-25	25-32	25-32
	Staffa	C1RC	C1RC	C2RC	C2RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)	CM8×30B (10,2 Nm)	CM8×30B (10,2 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B	SM4×12B	SM4×12B
	Sottoplacchetta	C12CC-04	C12CC-07	C16CC-04	C16CC-06
	Molla	SPR1	SPR1	SPR3	SPR3
	Chiave (staffa)	WH40L	WH40L	WH50L	WH50L
	Chiave (sottoplacchetta)	WH20L	WH20L	WH30L	WH30L

Inserto



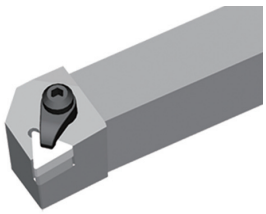
PCBN/PCD

A173

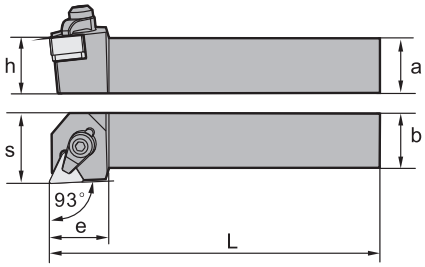
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

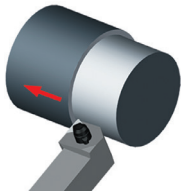
TN** Portautensile (esterno) C-Bloccaggio

CTJNR/L Kr: 93°



Versione destra





Articolo	✲	Stock		Dimensioni [mm]						Inserto	
		R	L	a	b	L	h	s	e		
CTJNR/L2020K16		○	○	20	20	125	20	25	30	TNGN1604**	TNGN1607**
CTJNR/L2525M16		○	○	25	25	150	25	32	30	TNGN1604**	TNGN1607**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	TNGN1604**	TNGN1607**
	h	20-25	20-25
	Staffa	C1RC	C1RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B
	Sottoplacchetta	T16CC-04	T16CC-07
	Molla	SPR1	SPR1
	Chiave (staffa)	WH40L	WH40L
	Chiave (sottoplacchetta)	WH20L	WH20L

Inserto



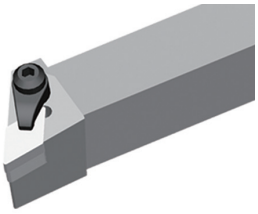
Media Lavor.

A215

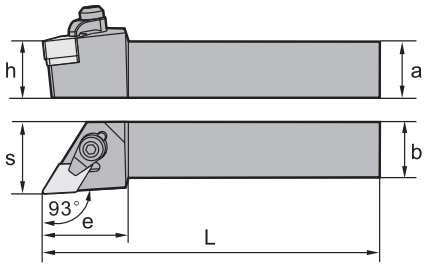
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

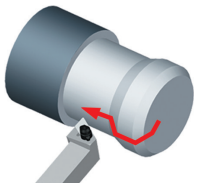
DN** Portautensile (esterno) C-Bloccaggio

CDJNR/L Kr: 93°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto	
		R	L	a	b	L	h	s	e		
CDJNR/L2525M15		●	●	25	25	150	25	32	32	DNGN1504**	DNGN1507**
CDJNR/L3225P15		○	○	32	25	170	32	32	32	DNGN1504**	DNGN1507**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DNGN1504**	DNGN1507**
	h	25-32	25-32
	Staffa	C1RC	C1RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)
	Vite (sottoplac-chetta)	SM3×10B	SM3×10B
	Sottoplacchetta	D15CC-04	D15CC-07
	Molla	SPR1	SPR1
	Chiave (staffa)	WH40L	WH40L
	Chiave (sotto-placchetta)	WH20L	WH20L

Inserto

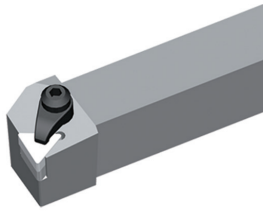


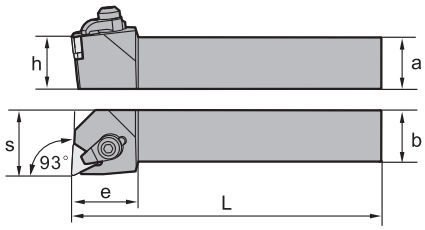
Media Lavor.
A205

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TN** Portautensile (esterno) C-Bloccaggio

CTUNR/L Kr: 93°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]						Inserto	
		R	L	a	b	L	h	s	e		
CTUNR/L2525M16		○	○	25	25	150	25	32	27	TNGN1604**	TNGN1607**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**TNGN1604****	**TNGN1607****
	h	**20-25**	**20-25**
	Staffa	C1RC	C1RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)
	Vite (sottoplac-chetta)	SM3×10B	SM3×10B
	Sottoplacchetta	T16CC-04	T16CC-07
	Molla	SPR1	SPR1
	Chiave (staffa)	WH40L	WH40L
	Chiave (sotto-placchetta)	WH20L	WH20L

Inserto



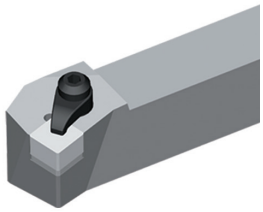
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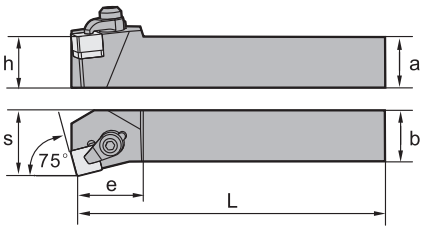
A215

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno) C-Bloccaggio

CSKNR/L Kr: 75°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] a	b	L	h	s	e	Inserto	
CSKNR/L2020K12		○	○	20	20	125	20	25	25	SNGN1204**	SNGN1207**
CSKNR/L2525M12		○	○	25	25	170	25	32	25	SNGN1204**	SNGN1207**
CSKNR/L3225P12		○	○	32	25	170	32	32	25	SNGN1204**	SNGN1207**
CSKNR/L3225P15		○	○	32	25	170	32	32	32	SNGN1507**	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SNGN1204**	SNGN1207**	SNGN1507**
	h	20-32	20-32	32
	Staffa	C1RC	C1RC	C2RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)	CM8×30B (10,2 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B	SM4×12B
	Sottoplacchetta	S12CC-04	S12CC-07	S15CC-07
	Molla	SPR1	SPR1	SPR3
	Chiave (staffa)	WH40L	WH40L	WH50L
	Chiave (sottoplacchetta)	WH20L	WH20L	WH30L

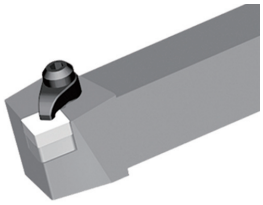
Inserto

Lavor.- ghisa grigia	PCBN/PCD
A86	A175

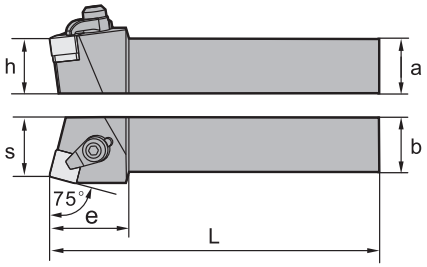
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

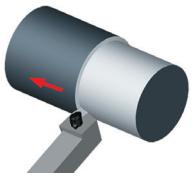
SN** Portautensile (esterno) C-Bloccaggio

CSRNR/L Kr: 75°



Versione destra





Articolo	✲	Stock		Dimensioni [mm]						Inserto	
		R	L	a	b	L	h	s	e		
CSRNR/L2020K12		○	○	20	20	125	20	22	32	SNGN1204**	SNGN1207**
CSRNR/L2525M12		○	○	25	20	100	25	27	32	SNGN1204**	SNGN1207**
CSRNR/L3225P12		○	○	32	25	170	32	27	32	SNGN1204**	SNGN1207**
CSRNR/L3225P15		○		32	25	170	32	32	40	SNGN1507**	
CSRNR/L4040R15		○	○	40	40	200	40	43	40	SNGN1507**	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	SNGN1204**	SNGN1207**	SNGN1507**
	h	20-32	20-32	32-40
	Staffa	C1RC	C1RC	C2RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)	CM8×30B (10,2 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B	SM4×12B
	Sottoplacchetta	S12CC-04	S12CC-07	S15CC-07
	Molla	SPR1	SPR1	SPR3
	Chiave (staffa)	WH40L	WH40L	WH50L
	Chiave (sottoplacchetta)	WH20L	WH20L	WH30L

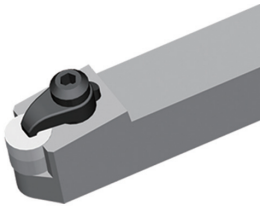
Inserto

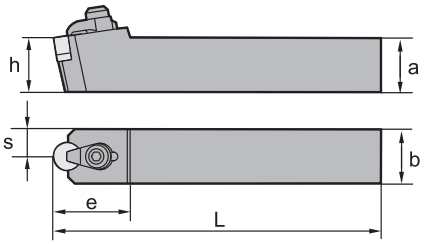
	
Lavor.- ghisa grigia	**PCBN/PCD**
A86	A175

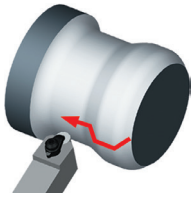
Codice sistema A228 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

RN** Portautensile (esterno) C-Bloccaggio

CRDNN







Articolo	✻	Stock	Dimensioni [mm]						Inserto	
			a	b	L	h	s	e		
CRDNN2020K12		○	20	20	125	20	10	32	RNGN1204**	RNGN1207**
CRDNN2525M12		○	25	25	150	25	12,5	32	RNGN1204**	RNGN1207**
CRDNN3225P12		○	32	25	170	32	12,5	32	RNGN1204**	RNGN1207**
CRDNN3232P15		○	32	32	170	32	17,5	40	RNGN1507**	
CRDNN4040R15		○	40	40	200	40	20	40	RNGN1507**	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	RNGN1204**	RNGN1207**	RNGN1507**
	h	**20-32**	**20-32**	**32-40**
	Staffa	C1RC	C1RC	C2RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)	CM8×30B (10,2 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B	SM4×12B
	Sottoplacchetta	R12CC-04	R12CC-07	R15CC-07
	Molla	SPR1	SPR1	SPR3
	Chiave (staffa)	WH40L	WH40L	WH50L
	Chiave (sotto-placchetta)	WH20L	WH20L	WH30L

Inserto



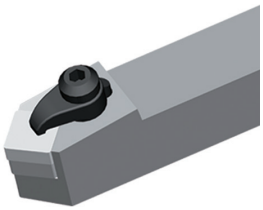
PCBN/PCD

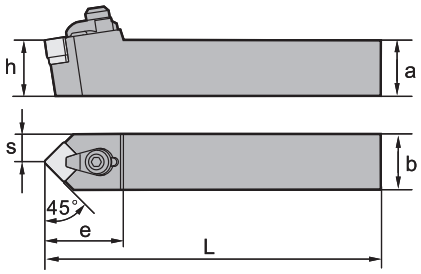
A174

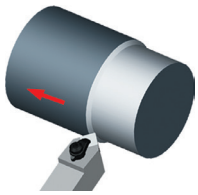
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno) C-Bloccaggio

CSDNN Kr: 45°







Articolo	✻	Stock	Dimensioni [mm]						Inserto	
			a	b	L	h	s	e		
CSDNN2020K12		○	20	20	125	20	10	35	SNGN1204**	SNGN1207**
CSDNN2525M12		●	25	25	150	25	12,5	30	SNGN1204**	SNGN1207**
CSDNN3225P12		○	32	25	170	32	12,5	35	SNGN1204**	SNGN1207**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SNGN1204**	SNGN1207**
	h	20-32	20-32
	Staffa	C1RC	C1RC
	Vite (staffa)	CM6×30B (7,0 Nm)	CM6×30B (7,0 Nm)
	Vite (sottoplacchetta)	SM3×10B	SM3×10B
	Sottoplacchetta	S12CC-04	S12CC-07
	Molla	SPR1	SPR1
	Chiave (staffa)	WH40L	WH40L
	Chiave (sottoplacchetta)	WH20L	WH20L

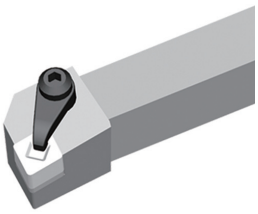
Inserto

Lavor.- ghisa grigia	PCBN/PCD
A86	A175

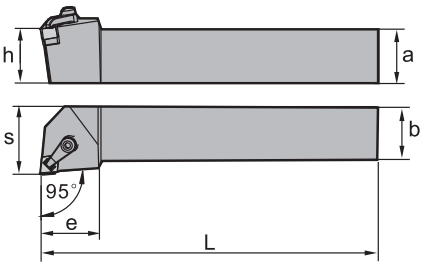
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

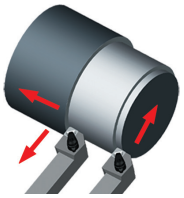
CN** Portautensile (esterno) J-Bloccaggio

JCLNR/L Kr: 95°



Versione destra





Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
JCLNR/L2020K12		○	○	20	20	125	20	29	32	CNGX1207**
JCLNR/L2525M12		○	○	25	25	150	25	32	32	CNGX1207**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**CNGX1207****
	h	**20-25**
	Staffa	C1RJ
	Vite (staffa)	CM6×30B (7,0 Nm)
	Vite (sottoplacchetta)	SM3×10B
	Sottoplacchetta	C12CC-07
	Molla	SPR1
	Chiave (staffa)	WH40L
	Chiave (sottoplacchetta)	WH20L

Inserto



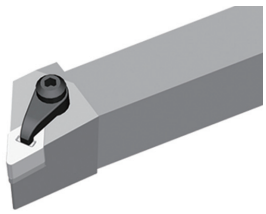
Media Lavor.

A203

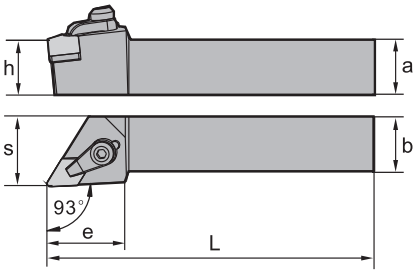
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

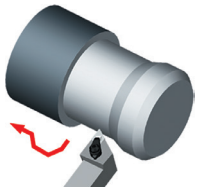
DN** Portautensile (esterno) J-Bloccaggio

JDJNR/L Kr: 93°



Versione destra





Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	a	b	L	h	s	e	
JDJNR/L2525M15		●	○	25	25	150	25	32	38	DNGX1507**
JDJNR/L3225P15		○	○	32	25	170	32	32	38	DNGX1507**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**DNGX1507****
	h	**25-32**
	Staffa	C1RJ
	Vite (staffa)	CM6×30B (7,0 Nm)
	Vite (sottoplac-chetta)	SM3×10B
	Sottoplacchetta	D15CC-07
	Molla	SPR1
	Chiave (staffa)	WH40L
	Chiave (sotto-placchetta)	WH20L

Inserto

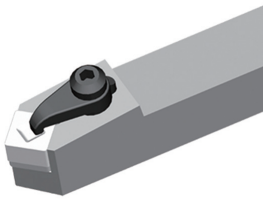


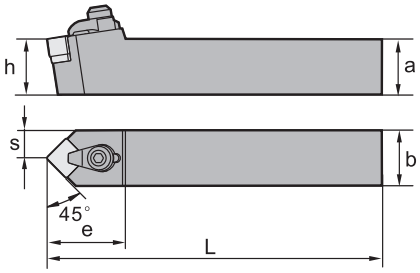
Media Lavor.
A206

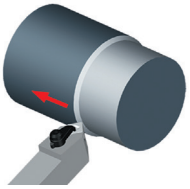
Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SN** Portautensile (esterno) J-Bloccaggio

JSDNN Kr: 45°







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			a	b	L	h	s	e	
JSDNN2525M12		○	25	25	150	25	12,5	40	SNGX1207**
JSDNN3225P12		○	32	25	170	32	12,5	40	SNGX1207**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SNGX1207****
	h	**20-32**
	Staffa	C1RJ
	Vite (staffa)	CM6×30B (7,0 Nm)
	Vite (sottoplacchetta)	SM3×10B
	Sottoplacchetta	S12CC-07
	Molla	SPR1
	Chiave (staffa)	WH40L
	Chiave (sottoplacchetta)	WH20L

Inserto



Media Lavor.

A213

Codice sistema A228 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

Note

Tornitura generale

Codice ISO – portautensili esterni – fantine mobili

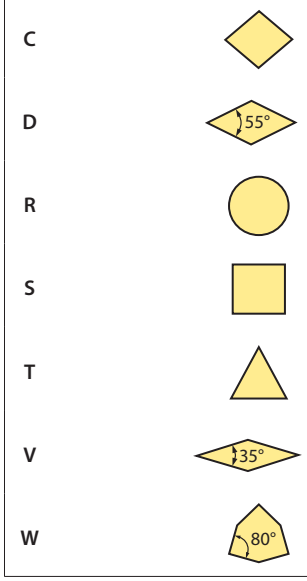
S	C	L	N	L	25	25	M	12	–	S	C
1	2	3	4	5	6	7	8	9		10	11

1 Sistema di bloccaggio

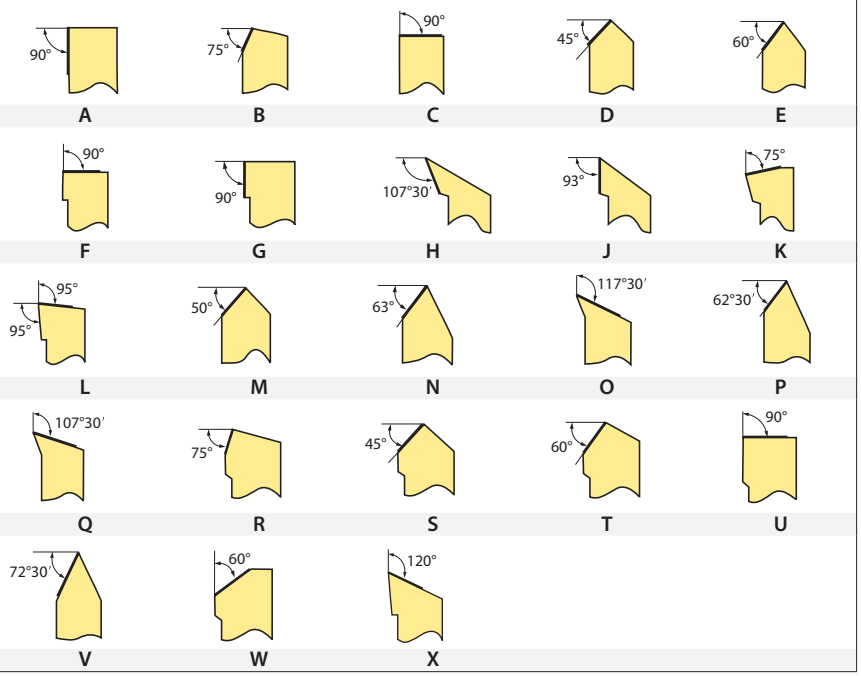
Code	Descrizione
S	Bloccaggio a vite



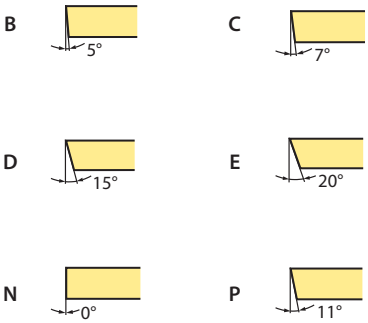
2 Forma dell'inserto



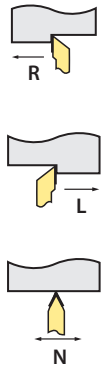
3 Forma portautensile e angolo di regolazione



4 Angolo di spoglia inferiore

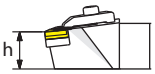


Direzione di taglio



5

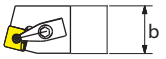
Altezza stelo h [mm]



Code	h
12	12
16	16
20	20
25	25
32	32
40	40
50	50

6

Larghezza stelo b [mm]



Code	b
12	12
16	16
20	20
25	25
32	32
40	40
50	50

7

Lungh. portautensile L [mm]



Code	L
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

8

Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto						
	C	D	R	S	T	V	W
5,56					**09**		
6,35	**06**	**07**			**11**		
9,525	**09**	**11**	**09**	**09**	**16**	**16**	**06**
12,7	**12**	**15**	**12**	**12**	**22**	**22**	**08**
15,875	**16**	**19**	**15**	**15**	**27**		
19,05	**19**		**19**	**19**	**33**		
25,4	**25**		**25**	**25**	**44**		
32			**32**				

9

Portautensile per tornitura di minuteria (Swissturning)

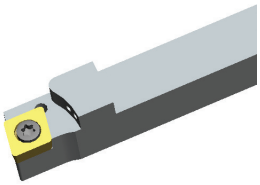
10

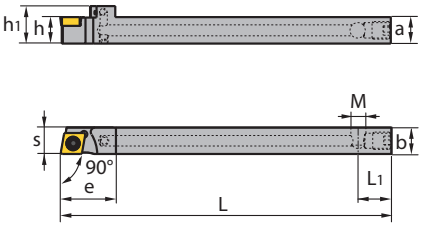
Con raffreddamento interno

11

CC** Portautensile S-Bloccaggio

SCACR/L-SC Kr: 90°





Articolo	✲	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserto
SCACR/L1212M09-SC	✲	●	●	12	12	150	12	17	12	15	25	M8X1	0,14	CC**09T3**
SCACR/L1616H09-SC	✲	●	●	16	16	100	16	21	16	15	28	M8X1	0,21	CC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**CC**09T3****
	h	**12-16**
	Vite	I60M3,5×8 (2,7 Nm)
	Chiave	WT15IP

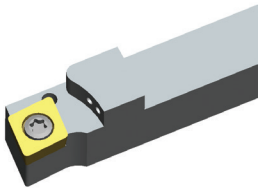
Inserto

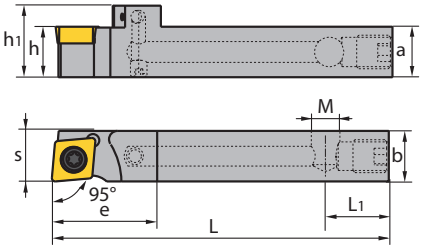
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A117	A119	A121	A122	A121	A180

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CC** Portautensile S-Bloccaggio

SCLCR/L-SC Kr: 95°





Articolo	✲	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserto
SCLCR/L1010F06-S		●	●	10	10	80	10	15	10	15	10		0,06	CC**0602**
SCLCR/L1212F09-SC	✲	●	●	12	12	80	12	17	12	15	25	M8X1	0,07	CC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	CC**0602**	CC**09T3**
	h	10	12
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave	WT07IP	WT15IP

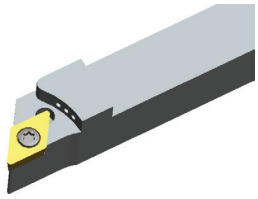
Inserto

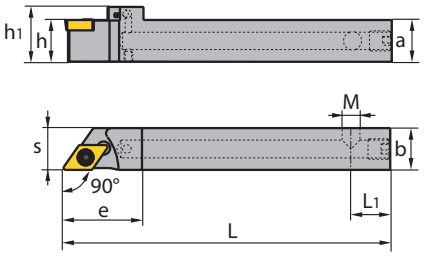
Finitura	Media Lavor.	Sgrossatura	Lavorazione Al.	Lavor.- ghisa grigia	PCBN/PCD
A116	A119	A121	A122	A121	A180

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile S-Bloccaggio

SDACR/L-SC Kr: 90°





Articolo	✲	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserto
SDACR/L1212M07-SC	✲	●	●	12	12	150	12	17	12	15	25	M8X1	0,15	DC**0702**
SDACR/L1212H11-SC	✲	○		12	12	100	12	17	12	15	30	M8X1	0,1	DC**11T3**
SDACR/L1616K11-SC	✲	●	●	16	16	125	16	21	16	15	30	M8X1	0,21	DC**11T3**
SDACR/L1212M11-SC	✲	●	●	12	12	150	12	17	12	15	30	M8X1	0,14	DC**11T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	DC**0702**	DC**11T3**	DC**11T3**
	h	12	12	12-16
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave	WT07IP	WT15IP	WT15IP

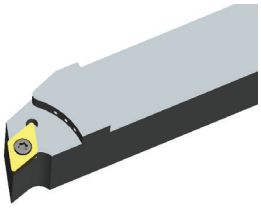
Inserto

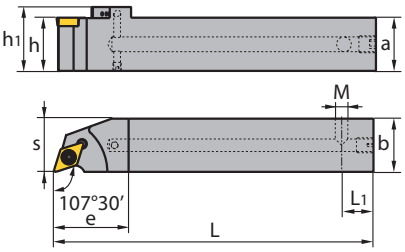
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A126	A127	A129	A129	A129	A184

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile S-Bloccaggio

SDHCR/L-SC Kr: 107°30'





Articolo	✲	Stock	Dimensioni [mm]									kg	Inserto
			a	b	L	h	h_1	s	L_1	e	M		
SDHCR/L2020K11-SC	✲	○	20	20	125	20	25	20	15	30	M8X1	0,35	DC**11T3**
SDHCR/L2525M11-SC	✲	●	25	25	150	25	30	25	15	35	M8X1	0,66	DC**11T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**DC**11T3****
	h	**20-25**
	Vite	I60M3,5×8 (2,7 Nm)
	Chiave	WT15IP

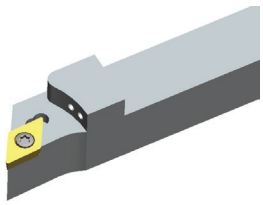
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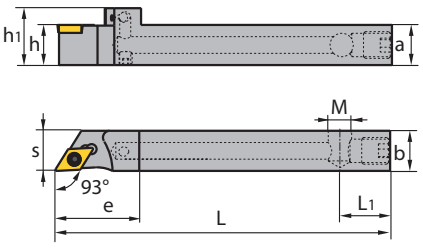
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile S-Bloccaggio

SDJCR/L-SC Kr: 93°





Articolo	✻	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserto
SDJCR/L1212H07-SC	✻	●	●	12	12	100	12	17	12	15	25	M8X1	0,1	DC**0702**
SDJCR/L1212H11-SC	✻	●	●	12	12	100	12	17	12	15	30	M8X1	0,1	DC**11T3**
SDJCR/L1616K11-SC	✻	●	●	16	16	125	16	21	16	15	30	M8X1	0,21	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DC**0702**	DC**11T3**
	h	12	12-16
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave	WT07IP	WT15IP

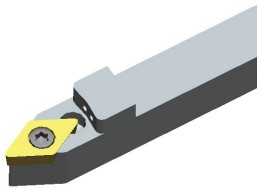
Inserto

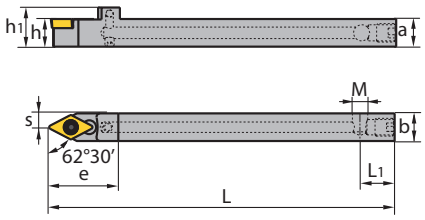
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A126	A127	A129	A129	A129	A184

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Portautensile S-Bloccaggio

SDNCN-SC Kr: 62°30'





Articolo	✲	Stock	Dimensioni [mm]									kg	Inserto
			a	b	L	h	h_1	s	L_1	e	M		
SDNCN1212H11-SC	✲	○	12	12	100	12	17	6	15	30	M8X1	0,09	DC**11T3**
SDNCN1212M11-SC	✲	●	12	12	150	12	17	6	15	30	M8X1	0,1	DC**11T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**DC**11T3****
	h	**12**
	Vite	I60M3,5×8 (2,7 Nm)
	Chiave	WT15IP

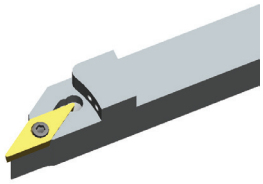
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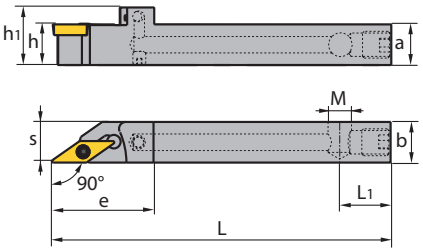
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VC** Portautensile S-Bloccaggio

SVACR/L-SC Kr: 90°





Articolo	✻	Stock R	Stock L	a	b	L	h	h_1	s	L_1	e	M	kg	Inserto
SVACR/L1212H11-SC	✻	●	●	12	12	100	12	17	12	15	30	M8X1	0,1	VC**1103**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VC**1103****
	h	**12**
	Vite	I60M2,5×6,5 (1,0 Nm)
	Chiave	WT07IP

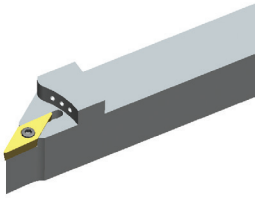
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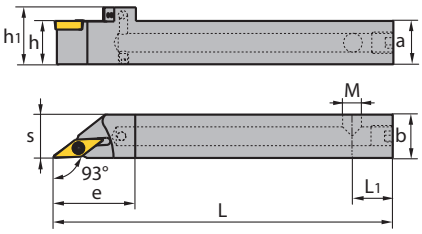
 **Finitura**	 **Lavorazione Al.**	 **PCBN/PCD**
A156	A154	A193

Codice sistema A304 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VC** Portautensile S-Bloccaggio

SVJCR/L-SC Kr: 93°





Articolo	✻	Stock		Dimensioni [mm]									kg	Inserto
		R	L	a	b	L	h	h_1	s	L_1	e	M		
SVJCR/L0808H11-S		●	●	8	8	100	8	13	8	15	22	M8X1	0,044	VC**1103**
SVJCR/L1212H11-SC	✻	●	●	12	12	100	12	17	12	15	30	M8X1	0,095	VC**1103**
SVJCR/L1616K11-SC	✻	●	●	16	16	125	16	21	16	15	30	M8X1	0,2	VC**1103**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VC**1103****
	h	**8-16**
	Vite	I60M2,5×6,5 (1,0 Nm)
	Chiave	WT07IP

Inserto

		
Finitura	**Lavorazione Al.**	**PCBN/PCD**
A156	A154	A193

Codice sistema A304 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

Tornitura generale

Codice sistema – portautensili – tecnologia ferroviaria

RW	P	L	F	N	L/R	19
1	2	3	4	5	6	7

1

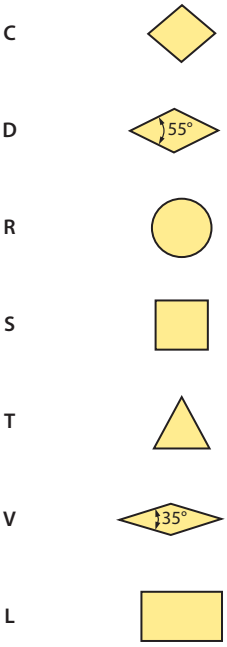
(RW = Rail Way)

Supporto per la tecnologia ferroviaria

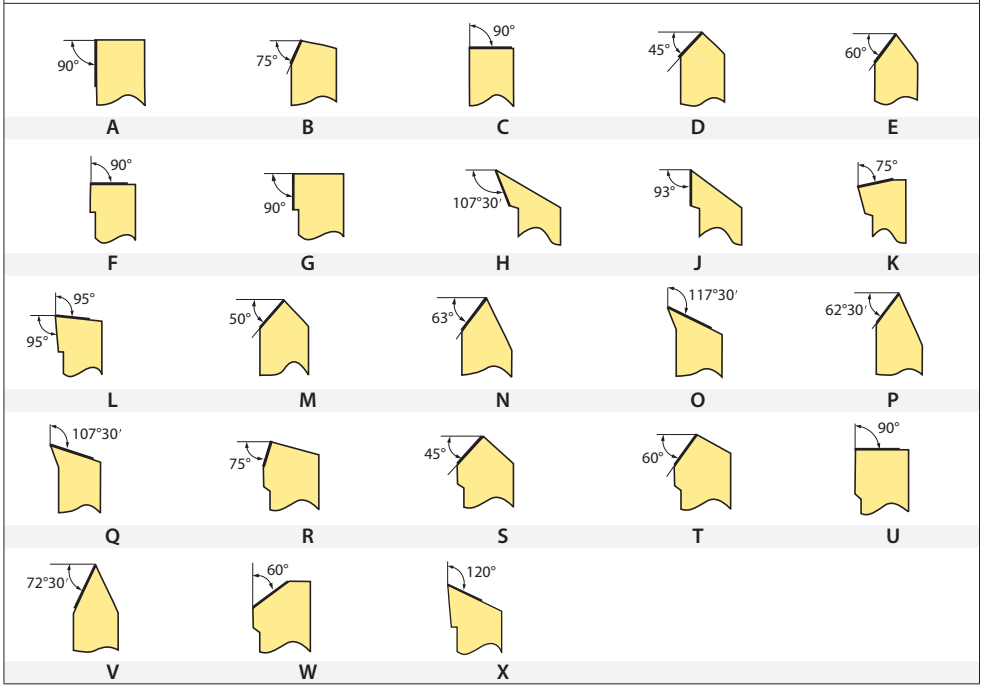
2 Sistema di bloccaggio

Code	Descrizione	
P	Bloccaggio a leva	
M	Sistema di bloccaggio a staffa / perno	
S	Bloccaggio a vite	
C/J	Bloccaggio a staffa	
D	Doppio bloccaggio	

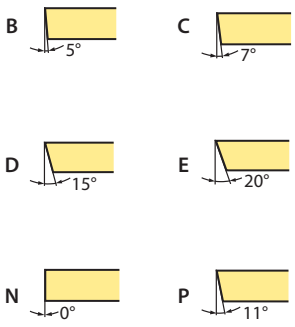
3 Forma dell'inserto



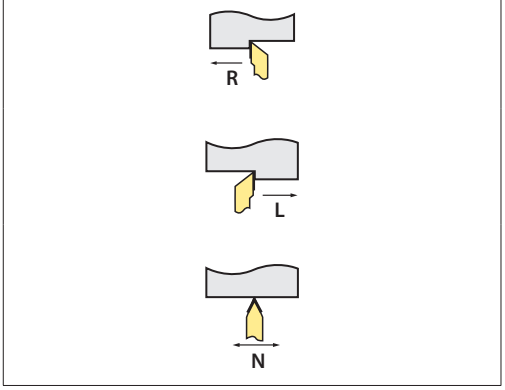
4 Forma portautensile e angolo di regolazione



5 Angolo di spoglia inferiore



Direzione di taglio



6

Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto						
	C	D	R	S	T	V	W
5,56					**09**		
6,35	**06**	**07**			**11**		
9,525	**09**	**11**	**09**	**09**	**16**	**16**	**06**
12,7	**12**	**15**	**12**	**12**	**22**	**22**	**08**
15,875	**16**	**19**	**15**	**15**	**27**		
19,05	**19**		**19**	**19**	**33**		
25,4	**25**		**25**	**25**	**44**		
32			**32**				

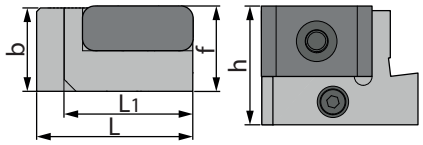
7

LN** Portautensile (esterno) P-Bloccaggio

RW-PLANR/L Kr: 90°



Versione destra



Articolo	✲	Stock R	Stock L	Dimensioni [mm] b	L	h	L_1	f	Inserto
RW-PLANR/L-19	✲	○	○	22,5	43	32	35	23	LNUX1919**
RW-PLANR/L-30	✲	○	○	22,5	43	32	35	23	LNUX3019**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**LNUX1919****	**LNUX3019****
	h	**25-32**	**25-32**
	Leva di fissaggio	L5 RWL	L5 RWL
	Vite	LEM8×25 RWL (10,2 Nm)	LEM8×25 RWL (10,2 Nm)
	Chiave	WH30L	WH30L

Inserto



Alta asp.

A115

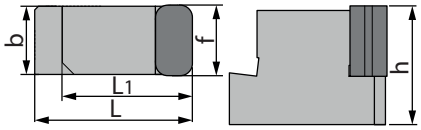
Codice sistema A314 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

LN** Portautensile (esterno) P-Bloccaggio

RW-PLFNR/L Kr: 90°



Versione destra



Articolo	✲	Stock		Dimensioni [mm]					Inserto
		R	L	b	L	h	L_1	f	
RW-PLFNR/L-19	✲	○	○	18,6	43	32	35	19,1	LNUX1919**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	LNUX1919**
	h	**25-32**
	Leva di fissaggio	L5 RWL
	Vite	LEM8×25 RWL (10,2 Nm)
	Chiave	WH30L

Inserto



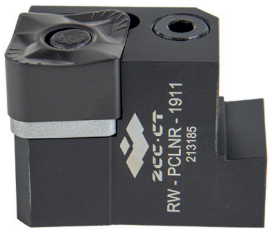
Alta asp.

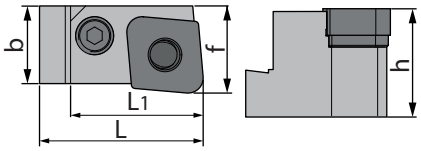
A115

Codice sistema A314 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CN** Portautensile (esterno) P-Bloccaggio

RW-PCLNR/L Kr: 95°





Versione destra

Articolo	✲	Stock R	Stock L	Dimensioni [mm] b	L	h	L_1	f	Inserto
RW-PCLNR/L-1907	✲	○	○	24,8	43	32	35	19,1	CNMM1907**
RW-PCLNR/L-1911	✲	○	○	24,8	43	32	35	19,1	CNMM1911**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	CNMM1907**	CNMM1911**
	h	25-32	25-32
	Leva di fissaggio	L5 RWC	L5 RWC
	Vite	LEM8×25 RWC (10,2 Nm)	LEM8×25 RWC (10,2 Nm)
	Perno dist (sottoplacchetta)	SP5 RWC	SP5 RWC
	Sottoplacchetta	C19 RWC	C19 RWC
	Chiave	WH30L	WH30L

Inserto

	
Finitura	**Sgrossatura**
A114	A114

Codice sistema A314 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

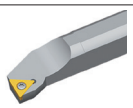
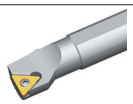
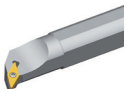
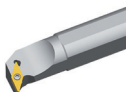
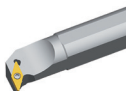
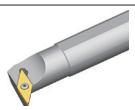
Note

Barre alesatrici

	Portautensile	Applicazione: Lavorazione longitudinale	Applicazione: Lavorazione planare	Applicazione: Lavorazione sottosquadra	Applicazione: Lavorazione di contorni	Applicazione: Lavorazione di profili	Pezzo: Stabile	Pezzo: Instabile	Pagina
P	PDSNR/L 62°30'	●		●	●	●	●		A326
	PCLNR/L 95°	●	●				●	●	A324
	PDUNR/L 93°	●			●	●	●	●	A327
	PSKNR/L 75°	●					●		A329
	PTFNR/L 91°	●					●		A330
	PWLNR/L 95°	●	●				●		A332
S	SCFCR/L 90°	●					●	●	A352
	SCLCR/L 95°	●	●				●		A352
	SCLPR/L 95°	●	●				●	●	A354
	SDQCR/L 107°30'	●			●	●	●	●	A357
	SDQPR/L 107°30'	●			●	●	●	●	A356
	SDUCR/L 93°	●			●	●	●	●	A359
	SDUPR/L 93°	●			●		●	●	A358
	SDZCR/L 95°			●			●		A338

● Raccomandato

Barre alesatrici

	Portautensile		Applicazione: Tornitura longitudinale	Applicazione: Lavorazione planare	Applicazione: Lavorazione sottosquadra	Applicazione: Lavorazione di contorni	Applicazione: Lavorazione di profili	Pezzo: Stabile	Pezzo: Instabile	Pagina
S	SSKCR/L 75°		●					●		A339
	STFCR/L 91°		●							A361
	STUPR/L 93°		●							A360
	SVQBR/L 107°30'		●			●	●			A345
	SVXBR/L 93°				●			●		A347
	SVQCR/L 107°30'		●							A363
	SVUBR/L 93°		●			●	●			A346
	SVUCR/L 93°		●			●	●			A364
	SZLNR/L 95°		●	●				●		A365
Antivibrazione	SCLPR/L 95°		●	●						A348
	SDQPR/L 107°30'		●			●	●			A349
	SDUPR/L 93°		●							A350
	STUPR/L 93°		●							A351
	SVQCR/L 107°30'		●			●	●			A343
	SVUCR/L 93°		●			●	●			A344

● Raccomandato

A

B

C

D

E

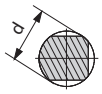
S	16	R	–	S	D	U	C	R	07	–	KR93
1	2	3		4	5	6	7	8	9		10

Versione del codolo

Code	Descrizione
A	Stelo di acciaio (foro per refrigerante)
C	Stelo in metallo duro integrale
E	Stelo in metallo duro integrale (foro per refrigerante)
S	Stelo in acciaio
X	Applicazione speciale

1

Diametro stelo d [mm]



Code	d
16	16
20	20
25	25
32	32
40	40
50	50

2

Lunghezza L [mm]



Code	L
H	100
K	125
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400

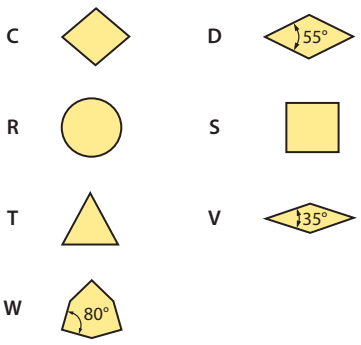
3

Sistema di bloccaggio

Code	Descrizione	
P	Bloccaggio a leva	
S	Bloccaggio a vite	

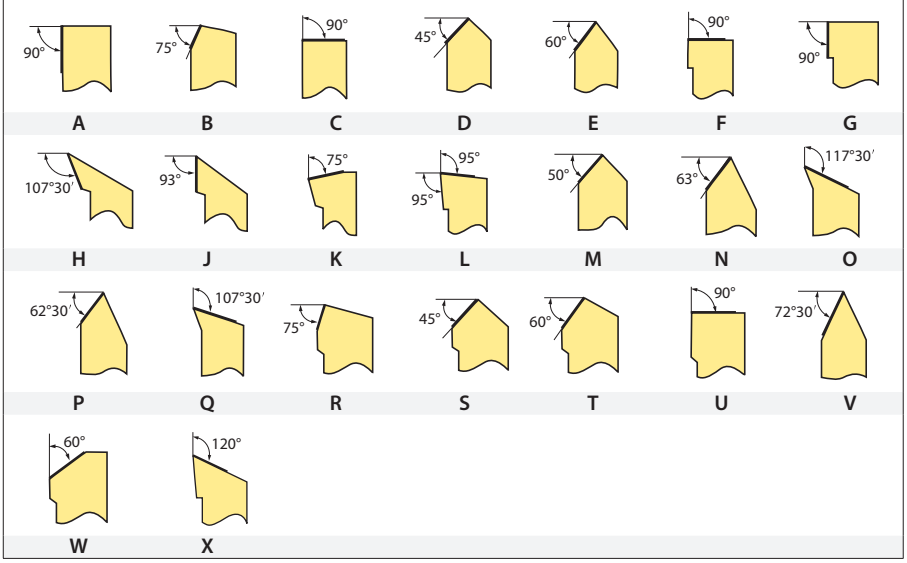
4

Forma dell'inserto



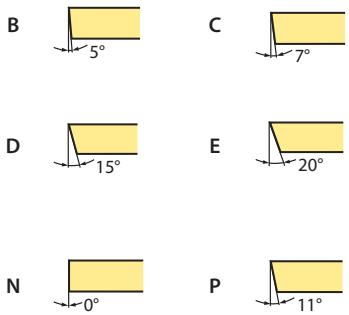
5

Forma portautensile e angolo di regolazione



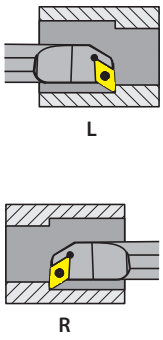
6

Angolo di spoglia inferiore



7

Direzione di taglio



8

Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto						
	C	D	R	S	T	V	W
5,56					09		
6,35	06	07			11		
9,525	09	11	09	09	16	16	06
12,7	12	15	12	12	22	22	08
15,875	16	19	15	15	27		
19,05	19		19	19	33		
25,4	25		25	25	44		
32			32				

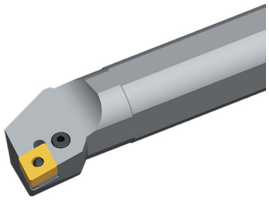
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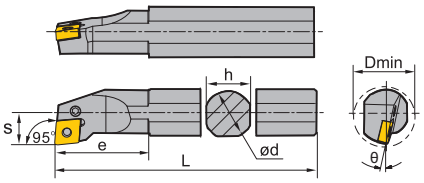
Angolo di regolazione

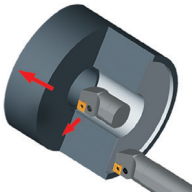
10

CN** Barre alesatrici in acciaio P-Bloccaggio

PCLNR/L Kr: 95°







Versione destra

Articolo	✲	Stock R	Stock L	Dimensioni [mm] ød	L	h	S	e	D_{min}	θ	Inserto
S16M-PCLNR/L09		●	●	16	150	15	11	28	20	-12	CN**0903**
S16R-PCLNR/L09		●	●	16	200	15	11	28	20	-12	CN**0903**
S20Q-PCLNR/L09		●	●	20	180	18	13	31	25	-11	CN**0903**
S20S-PCLNR/L09		●	●	20	250	18	13	31	25	-11	CN**0903**
S25Q-PCLNR/L09		○	○	25	180	23	17	35	32	-10	CN**0903**
S25T-PCLNR/L09		●	○	25	300	23	17	35	32	-10	CN**0903**
A16M-PCLNR/L09	✲	○		16	150	14	11		20	-12	CN**0903**
S25Q-PCLNR/L12		○	○	25	180	23	17	40	32	-12	CN**1204**
S25T-PCLNR/L12		●	●	25	300	23	17	40	32	-12	CN**1204**
S32R-PCLNR/L12		●	●	32	200	30	22	50	44	-10	CN**1204**
S32U-PCLNR/L12		●	●	32	350	30	22	50	44	-10	CN**1204**
S40S-PCLNR/L12		○	●	40	250	37	27	55	54	-10	CN**1204**
S40V-PCLNR/L12		●	●	40	400	37	27	55	54	-10	CN**1204**
S50S-PCLNR/L12		○	○	50	250	47	35	56	63	-10	CN**1204**
S50W-PCLNR/L12		●	●	50	450	47	35	56	63	-10	CN**1204**
A25R-PCLNR/L12	✲	●	●	25	200	24	17	40	32	-12	CN**1204**
A32S-PCLNR/L12	✲	●	●	32	250	31	22	50	44	-10	CN**1204**
S50S-PCLNR/L19		○	○	50	250	47	35	63	63	-10	CN**1906**
S50W-PCLNR/L19		●	○	50	450	47	35	63	63	-10	CN**1906**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CN** Barre alesatrici in acciaio

Parti di ricambio

	Inserto	CN**0903**	CN**1204**	CN**1204**	CN**1906**
	ød	16-25	25	32-50	50
	Leva di fissaggio	L3C	L4A	L4A	L6
	Vite	LEM5×9B (4,0 Nm)			
	Vite				LEM10×27 (16,6 Nm)
	Vite		LEM6×13,4A (7,0 Nm)	LEM6×13,4A (7,0 Nm)	
	Perno dist (sottoplacchetta)			SP4	SP6
	Sottoplacchetta				C19AP
	Sottoplacchetta			C12APB	
	Chiave		WH25L	WH25L	WH40L
	Chiave	WT09IP			

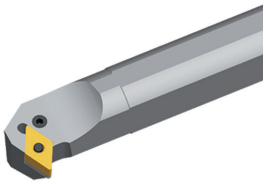
Inserto

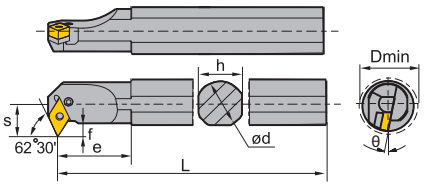
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A51	A52	A53	A57	A61	A177

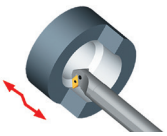
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DN** Barre alesatrici in acciaio P-Bloccaggio

PDSNR/L Kr: 62°30'







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	f	D_{min}	θ	Inserto
S32R-PDSNR/L15-3		○	○	32	200	30	22	45	8,5	40	-11	DN**1504**
S40V-PDSNR/L15-3		●		40	400	37	27	43	9,4	50	-11	DN**1504**
A32S-PDSNR/L15-3	✻	○	○	32	250	31	22	45	8,5	40	-11	DN**1504**
S32R-PDSNR/L15		●	●	32	200	30	22	45	8,5	40	-11	DN**1506**
S32U-PDSNR/L15		●	●	32	350	30	22	45	8,5	40	-11	DN**1506**
S40S-PDSNR/L15		○	○	40	250	37	27	43	9,4	50	-11	DN**1506**
S40V-PDSNR/L15		○	○	40	400	37	27	43	9,4	50	-11	DN**1506**
A32S-PDSNR/L15	✻	●	●	32	250	31	22	45	8,5	40	-11	DN**1506**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DN**1504**	DN**1506**
	ød	**32-40**	**32-40**
	Leva di fissaggio	L4	L4B
	Vite	LEM8×21 (10,2 Nm)	LEM8×21 (10,2 Nm)
	Perno dist (sottoplacchetta)	SP4	SP4
	Sottoplacchetta	D15AP	D15AP
	Chiave	WH30L	WH30L

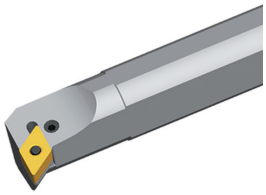
Inserto

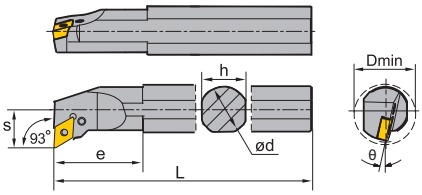
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A62	A63	A63	A68	A69	A178

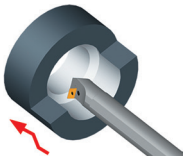
Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DN** Barre alesatrici in acciaio P-Bloccaggio

PDUNR/L Kr: 93°







Versione destra

Articolo	✲	Stock R	Stock L	ød	L	h	s	e	D_{min}	θ	Inserto
S20Q-PDUNR/L11		●	○	20	180	18	13	30	25	-16	DN**1104**
S20S-PDUNR/L11		●	●	20	250	18	13	30	25	-16	DN**1104**
S25Q-PDUNR/L11		●	●	25	180	23	17	35	32	-13	DN**1104**
S25T-PDUNR/L11		●	●	25	300	23	17	35	32	-13	DN**1104**
S32R-PDUNR/L11		○	○	32	200	30	22	40	40	-16	DN**1104**
S32U-PDUNR/L11		●	●	32	350	30	22	40	40	-16	DN**1104**
A25R-PDUNR/L11	✲	●		25	200	24	17	35	32	-13	DN**1104**
S32R-PDUNR/L15-3		○	○	32	200	30	22	50	40	-16	DN**1504**
S32U-PDUNR/L15-3		●	●	32	350	30	22	50	40	-16	DN**1504**
S40S-PDUNR/L15-3		○	○	40	250	37	27	50	50	-11	DN**1504**
S40V-PDUNR/L15-3		●	●	40	400	37	27	50	50	-11	DN**1504**
A32S-PDUNR/L15-3	✲	●	●	32	250	31	22	50	40	-16	DN**1504**
S32R-PDUNR/L15		○	○	32	200	30	22	50	40	-16	DN**1506**
S32U-PDUNR/L15		●	●	32	350	30	22	50	40	-16	DN**1506**
S40S-PDUNR/L15		○	○	40	250	37	27	50	50	-11	DN**1506**
S40V-PDUNR/L15		●	●	40	400	37	27	50	50	-11	DN**1506**
A32S-PDUNR/L15	✲	●	●	32	250	31	22	50	40	-16	DN**1506**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**DN**1104****	**DN**1104****	**DN**1504****	**DN**1506****
	ød	**20-25**	**32**	**32-40**	**32-40**
	Leva di fissaggio	L3D	L3	L4	L4B
	Vite	LEM5×12B (4,0 Nm)	LEM6×17 (7,0 Nm)		
	Vite			LEM8×21 (10,2 Nm)	LEM8×21 (10,2 Nm)
	Perno dist (sottoplacchetta)		SP3	SP4	SP4
	Sottoplacchetta		D11AP	D15AP	D15AP
	Chiave		WH25L	WH30L	WH30L
	Chiave	WT09IP			

Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DN** Barre alesatrici in acciaio

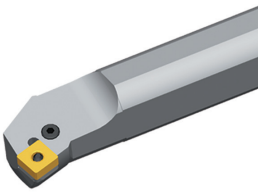
Inserto

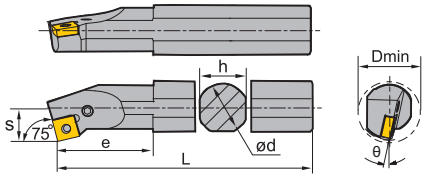
 Raschiante	 Finitura	 Media Lavor.	 Sgrossatura	 Lavor.- ghisa grigia	 PCBN/PCD
A62	A63	A63	A68	A69	A178

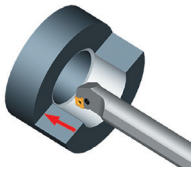
Codice sistema > A322 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

SN** Barre alesatrici in acciaio P-Bloccaggio

PSKNR/L Kr: 75°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	D_{min}	θ	Inserto
S25Q-PSKNR/L12		○	●	25	180	23	17	42	32	-12	SN**1204**
S25T-PSKNR/L12		●	○	25	300	23	17	42	32	-12	SN**1204**
S32R-PSKNR/L12		○	○	32	200	30	22	45	44	-10	SN**1204**
S32U-PSKNR/L12		●	●	32	350	30	22	45	44	-10	SN**1204**
S40S-PSKNR/L12		○	○	40	250	37	27	50	54	-10	SN**1204**
S40V-PSKNR/L12		●	○	40	400	37	27	50	54	-10	SN**1204**
A25R-PSKNR/L12	✻	●	●	25	200	24	17	42	32	-12	SN**1204**
A32S-PSKNR/L12	✻	●	●	32	250	31	22	50	44	-12	SN**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SN**1204**	SN**1204**
	ød	**25**	**32-40**
	Leva di fissaggio	L4A	L4
	Vite		LEM8×21 (10,2 Nm)
	Vite	LEM6×13,4A (7,0 Nm)	
	Perno dist (sottoplacchetta)		SP4
	Sottoplacchetta		S12APB
	Chiave	WH25L	WH30L

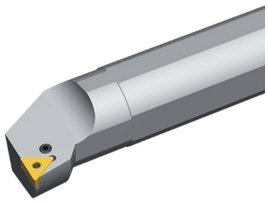
Inserto

				
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A73	A73	A78	A84	A162

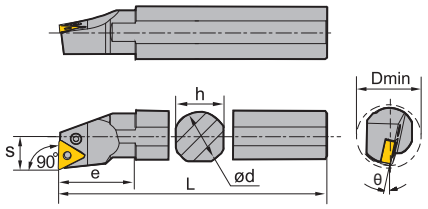
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

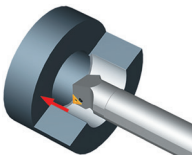
TN** Barre alesatrici in acciaio P-Bloccaggio

PTFNR/L Kr: 90°



Versione destra





Articolo	✲	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	D_{min}	θ	Inserto
S16M-PTFNR/L11		○	○	16	150	15	11	28	20	-14	TN**1103**
S16R-PTFNR/L11		●	●	16	200	15	11	28	20	-14	TN**1103**
S20Q-PTFNR/L11		●	●	20	180	18	13	31	25	-12	TN**1103**
S20S-PTFNR/L11		●	●	20	250	18	13	31	25	-12	TN**1103**
S25Q-PTFNR/L11		○	○	25	180	23	17	35	32	-10	TN**1103**
S25T-PTFNR/L11		○	○	25	300	23	17	35	32	-10	TN**1103**
S25Q-PTFNR/L16		○	○	25	180	23	17	42	32	-12	TN**1604**
S25T-PTFNR/L16		●	●	25	300	23	17	42	32	-12	TN**1604**
S32R-PTFNR/L16		○	○	32	200	30	22	50	44	-10	TN**1604**
S32U-PTFNR/L16		●	●	32	350	30	22	50	44	-10	TN**1604**
S40S-PTFNR/L16		○	○	40	250	37	27	55	54	-10	TN**1604**
S40V-PTFNR/L16		●	●	40	400	37	27	55	54	-10	TN**1604**
A25R-PTFNR/L16	✲	●	○	25	200	24	17	40	32	-12	TN**1604**
A32S-PTFNR/L16	✲	●	●	32	250	31	22	50	44	-10	TN**1604**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	TN**1103**	TN**1604**	TN**1604**
	ød	16-25	25	32-40
	Leva di fissaggio	L2	L3B	L3
	Vite	LEM5×9B (4,0 Nm)	LEM5×12B (4,0 Nm)	LEM6×17 (7,0 Nm)
	Perno dist (sottoplacchetta)			SP3
	Sottoplacchetta			T16APB
	Chiave		WH20L	WH25L
	Chiave	WT09IP		

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TN** Barre alesatrici in acciaio

Inserto

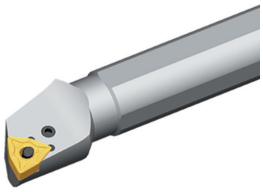
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A87	A88	A90	A92	A99	A163

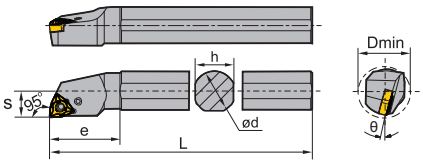
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

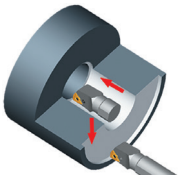
Codice sistema > A322 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

WN** Barre alesatrici in acciaio P-Bloccaggio

PWLNR/L Kr: 95°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	D_{min}	θ	Inserto
			●	16	150	15	11	25	20	-13	WN**0604**
S16M-PWLNR/L06		●		16	150	15	11	25	20	-13	WN**0604**
S16R-PWLNR/L06		○	○	16	200	15	11	25	20	-13	WN**0604**
S20Q-PWLNR/L06		●	●	20	180	18	13	35	25	-13	WN**0604**
S20S-PWLNR/L06		●	○	20	250	18	13	35	25	-13	WN**0604**
S25Q-PWLNR/L06		○	○	25	180	23	17	35	32	-13	WN**0604**
S25T-PWLNR/L06		○		25	300	23	17	35	32	-13	WN**0604**
S20Q-PWLNR/L08		●	●	20	180	18	13	32	25	-13	WN**0804**
S20S-PWLNR/L08		●		20	250	18	13	32	25	-13	WN**0804**
S25Q-PWLNR/L08		●	○	25	180	23	17	45	32	-13	WN**0804**
S25T-PWLNR/L08		●	●	25	300	23	17	45	32	-13	WN**0804**
S32R-PWLNR/L08		●	●	32	200	30	22	50	40	-15	WN**0804**
S32U-PWLNR/L08		●	●	32	350	30	22	50	40	-15	WN**0804**
S50W-PWLNR/L08		○	○	50	450	47	35	50	63	-15	WN**0804**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	WN**0604**	WN**0804**	WN**0804**	WN**0804**
	ød	16-25	20-25	32	50
	Leva di fissaggio	L3B	L4A	L4	L4
	Vite	LEM5×12B (4,0 Nm)			
	Vite			LEM8×21 (10,2 Nm)	LEM8×21 (10,2 Nm)
	Vite		LEM6×13,4A (7,0 Nm)		
	Perno dist (sottoplacchetta)			SP4	SP4
	Sottoplacchetta			W08AP	W08AP
	Chiave		WH25L	WH30L	WH30L
	Chiave	WT09IP			

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

WN** Barre alesatrici in acciaio

Inserto

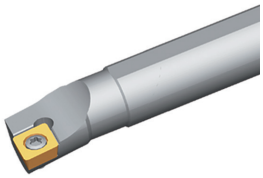
					
Raschiante	**Finitura**	**Media Lavor.**	**Sgrossatura**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A106	A107	A107	A109	A111	A165

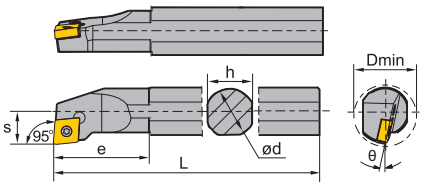
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

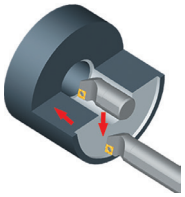
Codice sistema > A322 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

CC** Barre alesatrici in acciaio S-Bloccaggio

SCLCR/L Kr: 95°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]								Inserto
		R	L	ød	L	h	s	L_2	e	D_{min}	θ	
S08K-SCLCR/L06		●	●	8	125	7	5	14	14	10	-15	CC**0602**
S10K-SCLCR/L06		●	●	10	125	7	5	14	14	10	-15	CC**0602**
S10M-SCLCR/L06		●	●	10	150	9	6	14	14	12	-13	CC**0602**
S12M-SCLCR/L06		●	●	12	150	11	9	25	25	16	-10	CC**0602**
A08F-SCLCR/L06	✻	●	●	8	80	7,5	5	14	14	10	-15	CC**0602**
A10H-SCLCR/L06	✻	●	●	10	100	9,5	6	14	14	12	-13	CC**0602**
A12K-SCLCR/L06	✻	●	●	12	125	11,5	9	25	25	16	-10	CC**0602**
S12M-SCLCR/L09		●	●	12	150	11	9	25	25	16	-10	CC**09T3**
S16M-SCLCR/L09		●	○	16	150	15	11	32,5	32,5	20	-12	CC**09T3**
S16R-SCLCR/L09		●	●	16	200	15	11	32,5	32,5	20	-12	CC**09T3**
S20Q-SCLCR/L09		●	●	20	180	18	13	38	38	25	-8	CC**09T3**
S20S-SCLCR/L09		●	●	20	250	18	13	38	38	25	-8	CC**09T3**
S25Q-SCLCR/L09		●	○	25	180	23	17	45	45	32	-6	CC**09T3**
S25T-SCLCR/L09		●	●	25	300	23	17	45	45	32	-6	CC**09T3**
A12K-SCLCR/L09	✻	●	●	12	125	11,5	9	25	25	16	-10	CC**09T3**
A16M-SCLCR/L09	✻	●	●	16	150	15,5	11	32,5	32,5	20	-12	CC**09T3**
A20Q-SCLCR/L09	✻	●	●	20	180	19	13	38	38	25	-8	CC**09T3**
A25R-SCLCR/L09	✻	●	●	25	200	24	17	45	45	32	-6	CC**09T3**
S25Q-SCLCR/L12		●	○	25	180	23	17	45	45	32	-6	CC**1204**
S25T-SCLCR/L12		●	●	25	300	23	17	45	45	32	-6	CC**1204**
S32R-SCLCR/L12		●	●	32	200	30	22	50	50	40	-10	CC**1204**
S32U-SCLCR/L12		●	●	32	350	30	22	50	50	40	-10	CC**1204**
S40S-SCLCR/L12		○		40	250	37	27	60	60	50	-8	CC**1204**
S40V-SCLCR/L12		●	●	40	400	37	27	60	60	50	-8	CC**1204**
A25R-SCLCR/L12	✻	●	●	25	200	24	17	45	45	32	-6	CC**1204**
A32T-SCLCR/L12	✻	○		32	300	30	22			40	-10	CC**1204**
A32S-SCLCR/L12	✻	●	●	32	250	31	22	50	50	40	-10	CC**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

CC** Barre alesatrici in acciaio

Parti di ricambio

	Inserto	CC**0602**	CC**09T3**	CC**09T3**	CC**1204**	CC**1204**
	ød	8-12	12-20	25	25	32-40
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×10 (2,7 Nm)		
	Vite				I60M4×11X (3,4 Nm)	I60M4×11X (3,4 Nm)
	Vite (sottoplacchetta)					SM6×10XA
	Sottoplacchetta					C12BS
	Chiave (vite)	WT07IP	WT15IP	WT15IP	WT15IP	WT15IP
	Chiave (sotto-placchetta)					WH40L

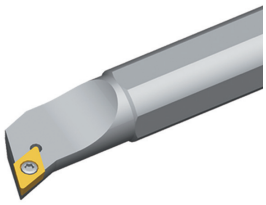
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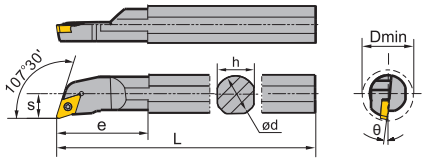
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

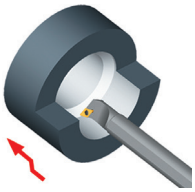
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DC** Barre alesatrici in acciaio S-Bloccaggio

SDQCR/L Kr: 107°30'







Versione destra

Articolo	✻	Stock R	Stock L	ød	L	h	s	L_2	e	D_{min}	θ	Inserto
S10M-SDQCR/L07		●	●	10	150	9	7	20	20	13	-8	DC**0702**
S12M-SDQCR/L07		●	●	12	150	11	9	22	22	16	-8	DC**0702**
S16M-SDQCR/L07		○	●	16	150	15	11	27	27	20	-6	DC**0702**
S16Q-SDQCR/L07		●	●	16	180	15	11	27	27	20	-6	DC**0702**
S16R-SDQCR/L07		●	●	16	200	15	11	27	27	20	-6	DC**0702**
A10H-SDQCR/L07	✻	●	●	10	100	9,5	7	20	20	13	-8	DC**0702**
A12K-SDQCR/L07	✻	●	●	12	125	11,5	9	22	22	16	-8	DC**0702**
S20Q-SDQCR/L11		●	○	20	180	18	13	32	32	25	-6	DC**11T3**
S20S-SDQCR/L11		●	●	20	250	18	13	32	32	25	-6	DC**11T3**
S25Q-SDQCR/L11		●	○	25	180	23	17	32	32	32	-6	DC**11T3**
S25T-SDQCR/L11		●	●	25	300	23	17	32	32	32	-6	DC**11T3**
A16M-SDQCR/L11	✻	●	●	16	150	15,5	11	27	27	20	-6	DC**11T3**
A20Q-SDQCR/L11	✻	●	●	20	180	19	13	32	32	25	-6	DC**11T3**
A25R-SDQCR/L11	✻	●	●	25	200	24	17	32	32	32	-6	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DC**0702**	DC**0702**	DC**11T3**	DC**11T3**	DC**11T3**
	ød	**10**	**12-16**	**16-20**	**20**	**25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT07IP	WT15IP	WT15IP	WT15IP

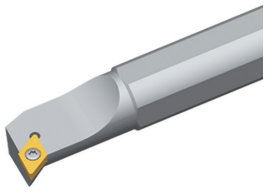
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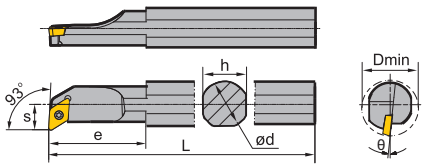
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

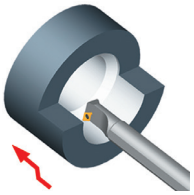
Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Barre alesatrici in acciaio S-Bloccaggio

SDUCR/L Kr: 93°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	L_2	e	D_{min}	θ	Inserto
S10M-SDUCR/L07		●	●	10	150	9	7	-	0	13	-8	DC**0702**
S12M-SDUCR/L07		●	●	12	150	11	9	22	22	16	-8	DC**0702**
S16M-SDUCR/L07		●	●	16	150	15	11	27	27	20	-6	DC**0702**
S16R-SDUCR/L07		●	●	16	200	15	11	27	27	20	-6	DC**0702**
A10H-SDUCR/L07	✻	●	●	10	100	9,5	7	-	0	13	-8	DC**0702**
A12K-SDUCR/L07	✻	●	●	12	125	11,5	9	22	22	16	-8	DC**0702**
A16M-SDUCR/L07	✻	●	●	16	150	15,5	11	27	27	20	-6	DC**0702**
S20Q-SDUCR/L11		●	●	20	180	18	13	40	40	25	-6	DC**11T3**
S20S-SDUCR/L11		●	●	20	250	18	13	40	40	25	-6	DC**11T3**
S25Q-SDUCR/L11		●	○	25	180	23	17	46	46	32	-6	DC**11T3**
S25T-SDUCR/L11		●	●	25	300	23	17	46	46	32	-6	DC**11T3**
A16R-SDUCR/L11	✻	○		16	200	15	14,5	27	27	23	-6	DC**11T3**
A20Q-SDUCR/L11	✻	●	●	20	180	19	13	40	40	25	-6	DC**11T3**
A25R-SDUCR/L11	✻	●	●	25	200	24	17	46	46	32	-6	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**DC**0702****	**DC**11T3****
	ød	**10-16**	**16-25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave	WT07IP	WT15IP

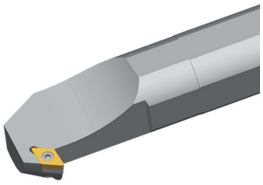
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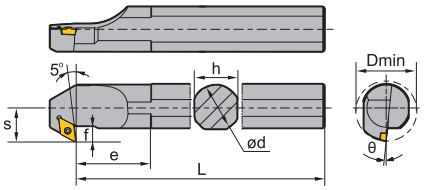
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A126	A127	A129	A129	A129	A184

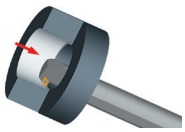
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DC** Barre alesatrici in acciaio S-Bloccaggio

SDZCR/L Kr: 85°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	f	D_{min}	θ	Inserto
S25Q-SDZCR/L11		●	●	25	180	23	17	30	6,9	32	-6	DC**11T3**
S25T-SDZCR/L11		●	●	25	300	23	17	30	6,9	32	-6	DC**11T3**
S32R-SDZCR/L11		○		32	200	30	22	39	8,4	40	-6	DC**11T3**
S32U-SDZCR/L11		●	●	32	350	30	22	39	8,4	40	-6	DC**11T3**
S40S-SDZCR/L11		○	●	40	250	37	27	47	9,4	50	-4	DC**11T3**
S40V-SDZCR/L11		●	●	40	400	37	27	47	9,4	50	-4	DC**11T3**
A25R-SDZCR/L11	✻	●	●	25	200	24	17	30	4,5	32	-6	DC**11T3**
A32S-SDZCR/L11	✻	●	●	32	250	31	22	39	6	40	-6	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DC**11T3**	DC**11T3**
	ød	**25**	**32-40**
	Vite	I60M3,5×10 (2,7 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8.65XA
	Sottoplacchetta		D11BS
	Chiave (vite)	WT15IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

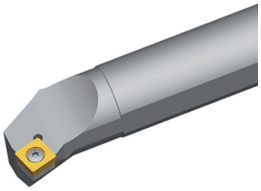
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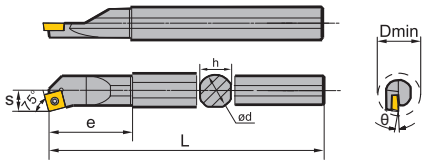
Finitura	Media Lavor.	Sgrossatura	Lavorazione Al.	Lavor.- ghisa grigia	PCBN/PCD
A126	A127	A129	A129	A129	A184

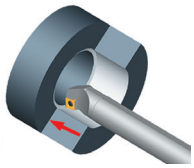
Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

SC** Barre alesatrici in acciaio S-Bloccaggio

SSKCR/L Kr: 75°







Versione destra

Articolo	✻	Stock		Dimensioni [mm]							Inserto
		R	L	ød	L	h	s	e	D_{min}	θ	
S12M-SSKCR/L09		●	●	12	150	11	9	26	16	-10	SC**09T3**
S16M-SSKCR/L09		○	○	16	150	15	11	32,5	20	-11	SC**09T3**
S16R-SSKCR/L09		○	○	16	200	15	11	32,5	20	-11	SC**09T3**
S20Q-SSKCR/L09		○	○	20	180	18	13	34,5	25	-6	SC**09T3**
S20S-SSKCR/L09		●	○	20	250	18	13	34,5	25	-6	SC**09T3**
A12K-SSKCR/L09	✻	●	○	12	125	11	9	26	16	-10	SC**09T3**
A16M-SSKCR/L09	✻	●	○	16	150	15	11	32,5	20	-11	SC**09T3**
A20Q-SSKCR/L09	✻	●	○	20	180	19	13	34,5	25	-6	SC**09T3**
S25Q-SSKCR/L12		○	○	25	180	23	17	36,3	32	-8	SC**1204**
S25T-SSKCR/L12		●	○	25	300	23	17	36,3	32	-8	SC**1204**
S32R-SSKCR/L12		○	○	32	200	30	22	43,5	40	-10	SC**1204**
S32U-SSKCR/L12		●		32	350	30	22	43,5	40	-10	SC**1204**
A25R-SSKCR/L12	✻	●	○	25	200	24	17	41,3	32	-8	SC**1204**
A32S-SSKCR/L12	✻	●		32	250	31	22	42,8	40	-10	SC**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SC**09T3**	SC**1204**	SC**1204**
	ød	12-20	25	32
	Vite	I60M3,5×8 (2,7 Nm)		
	Vite		I60M4×11X (3,4 Nm)	I60M4×11X (3,4 Nm)
	Vite (sottoplacchetta)			SM6×10XA
	Sottoplacchetta			S12BS
	Chiave (vite)	WT15IP	WT15IP	WT15IP
	Chiave (sottoplacchetta)			WH40L

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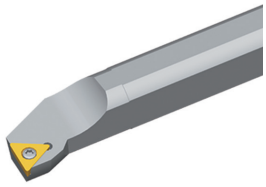
SC** Barre alesatrici in acciaio

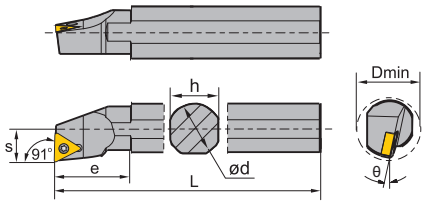
Inserto			
			
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**
A134	A135	A136	A136

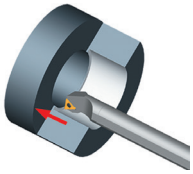
Codice sistema > A322 Scelta gradi > A42 Informazioni tecniche > A501 Dati di taglio > A366

TC** Barre alesatrici in acciaio S-Bloccaggio

STFCR/L Kr: 91°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ød	L	h	s	e	D_{min}	θ	
S12M-STFCR/L11		●	●	12	150	11	9	30	16	-10	TC**1102**
S16M-STFCR/L11		○	●	16	150	15	11	35	20	-6	TC**1102**
S16R-STFCR/L11		●	●	16	200	15	11	35	20	-6	TC**1102**
S20Q-STFCR/L11		○	○	20	180	18	13	36	25	-3	TC**1102**
S20S-STFCR/L11		●	●	20	250	18	13	36	25	-3	TC**1102**
A12K-STFCR/L11	✲	●	●	12	125	11,5	9	26	16	-10	TC**1102**
A16M-STFCR/L11	✲	●	●	16	150	15,5	11	30	20	-6	TC**1102**
A20Q-STFCR/L11	✲	●	●	20	180	19	13	36	25	-3	TC**1102**
S25Q-STFCR/L16		●	○	25	180	23	17	49	32	-6	TC**16T3**
S25T-STFCR/L16		●	●	25	300	23	17	49	32	-6	TC**16T3**
S32R-STFCR/L16		●	●	32	200	30	22	50	40	-10	TC**16T3**
S32U-STFCR/L16		●	●	32	350	30	22	50	40	-10	TC**16T3**
S40S-STFCR/L16		○	○	40	250	37	27	60	50	-8	TC**16T3**
S40V-STFCR/L16		●	●	40	400	37	27	60	50	-8	TC**16T3**
A25R-STFCR/L16	✲	●	●	25	200	24	17	45	32	-6	TC**16T3**
A32S-STFCR/L16	✲	●	○	32	250	31	22	49	40	-10	TC**16T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**TC**1102****	**TC**16T3****	**TC**16T3****
	ød	**12-20**	**25**	**32-40**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)			SM5×8.65XA
	Sottoplacchetta			T16BS
	Chiave (vite)	WT07IP	WT15IP	WT15IP
	Chiave (sottoplacchetta)			WH35L

Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

TC** Barre alesatrici in acciaio

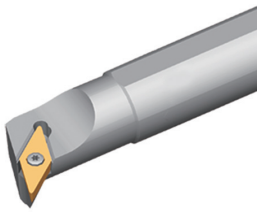
Inserto

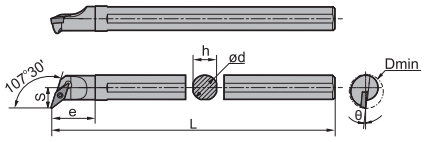
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A141	A142	A143	A145	A143	A187

Codice sistema > A322 | Scelta gradi > A42 | Informazioni tecniche > A501 | Dati di taglio > A366

VC** Barre alesatrici in acciaio S-Bloccaggio

SVQCR/L Kr: 107°30'







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ød	L	h	s	e	D_{min}	θ	
S16Q-SVQCR/L11		●	●	16	180	15	13	28	22	-6	VC**1103**
S20R-SVQCR/L11		●	○	20	200	18	15	32	26	-4	VC**1103**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**VC**1103****
	ød	**16-20**
	Vite	I60M2,5×6,5 (1,0 Nm)
	Chiave (vite)	WT07IP

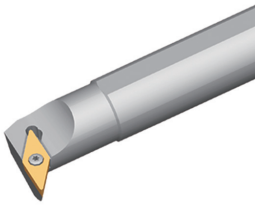
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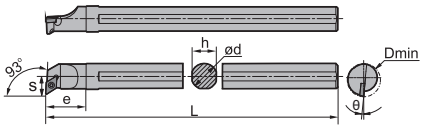
		
Finitura	**Lavorazione Al.**	**PCBN/PCD**
A156	A154	A193

Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

VC** Barre alesatrici in acciaio S-Bloccaggio

SVUCR/L Kr: 93°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	L_2	e	D_{min}	θ	Inserto
S16Q-SVUCR/L11		●	○	16	180	15	15	25	25	24	-6	VC**1103**
S20R-SVUCR/L11		●	●	20	200	18	17	30	30	28	-4	VC**1103**
S40U-SVUCR/L16			○	40	350	37	27	56	56	50	-8	VC**1604**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	VC**1103**	VC**1604**
	ød	**16-20**	**40**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)		SM5×8,65XA (4,0 Nm)
	Sottoplacchetta		V16BSC
	Chiave (vite)	WT07IP	WT15IP
	Chiave (sottoplacchetta)		WH35L

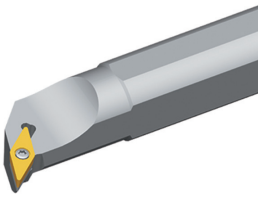
Inserto

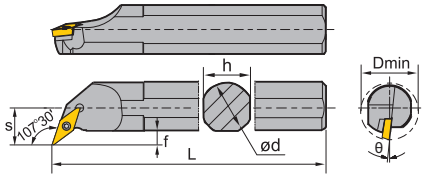
Finitura	Media Lavor.	Lavorazione Al.	PCBN/PCD
A156	A156	A154	A193

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

VB** Barre alesatrici in acciaio S-Bloccaggio

SVQBR/L Kr: 107°30'







Versione destra

Articolo	✻	Stock		Dimensioni [mm]								Inserto
		R	L	ød	L	h	s	e	f	D_{min}	θ	
S32R-SVQBR/L16		●	●	32	200	30	22	56	8,4	40	-8	VB**1604**
S32U-SVQBR/L16		●	●	32	350	30	22	56	8,4	40	-8	VB**1604**
S40V-SVQBR/L16		●	●	40	400	37	27	64	9,4	50	-8	VB**1604**
A32S-SVQBR/L16	✻	○	○	32	250	31	22	56	8,4	40	-8	VB**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**VB**1604****
	ød	**32-40**
	Vite	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA
	Sottoplacchetta	V16BS
	Chiave (vite)	WT15IP
	Chiave (sottoplacchetta)	WH35L

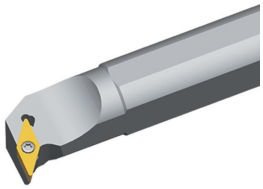
Inserto

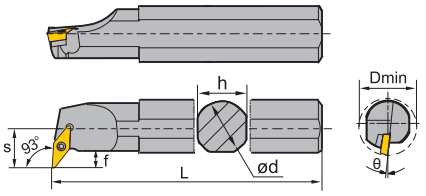
			
Finitura	**Media Lavor.**	**Sgrossatura**	**PCBN/PCD**
A148	A151	A152	A191

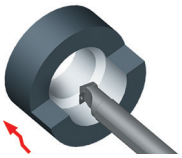
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

VB** Barre alesatrici in acciaio S-Bloccaggio

SVUBR/L Kr: 93°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	f	D_{min}	θ	Inserto
S32R-SVUBR/L16		●	○	32	200	30	22	49	8,4	40	-8	VB**1604**
S32U-SVUBR/L16		●	●	32	350	30	22	49	8,4	40	-8	VB**1604**
S40S-SVUBR/L16		●	○	40	250	37	27	56,5	9,4	50	-8	VB**1604**
S40V-SVUBR/L16		●	●	40	400	37	27	56,5	9,4	50	-8	VB**1604**
A32S-SVUBR/L16	*	●	●	32	250	31	22	49	8,4	40	-8	VB**1604**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	**VB**1604****
	ød	**32-40**
	Vite	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)	SM5×8.65XA
	Sottoplacchetta	V16BS
	Chiave (vite)	WT15IP
	Chiave (sotto-placchetta)	WH35L

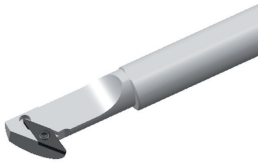
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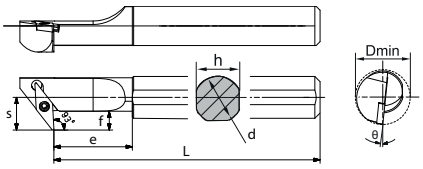
			
Finitura	**Media Lavor.**	**Sgrossatura**	**PCBN/PCD**
A148	A151	A152	A191

Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

VB** Barre alesatrici in acciaio S-Bloccaggio

SVXBR/L Kr: 93°





Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	f	D_{min}	θ	Inserto
S16P-SVXBR/L1102-KR93		○	○	16	170	15	12,5	30	72	21	-8	VB**1102**
S16P-SVXBR/L11-KR93		○	○	16	170	15	12,5	30	72	21	-8	VB**1103**
S20R-SVXBR/L11-KR93		○	○	20	187	20	13	22	5,7	25	-8	VB**1103**
S25S-SVXBR/L16-KR93		○	○	25	235	25	19	26	10,2	32	-8	VB**1604**
S32T-SVXBR/L16-KR93		○	○	32	280	32	22	80	11,7	40	-8	VB**1604**
S40M-SVXBR/L16-KR93		○	○	40	130	40	27	40	14,3	50	-8	VB**1604**
S40U-SVXBR/L16-KR93		○	○	40	330	40	27	90	14,3	50	-8	VB**1604**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	VB**1102**	VB**1103**	VB**1604**
	ød	**16-20**	**16-20**	**25-40**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M2,5×6,5 (1,0 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)			SM5×8,65XA (4,0 Nm)
	Sottoplacchetta			V16BS
	Chiave (vite)			WT15IP
	Chiave (sotto-placchetta)			WH35L
	Chiave	WT07IP	WT07IP	WT15IP

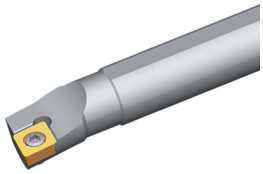
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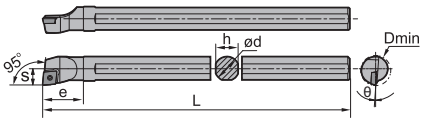
			
Finitura	**Media Lavor.**	**Sgrossatura**	**PCBN/PCD**
A148	A151	A152	A191

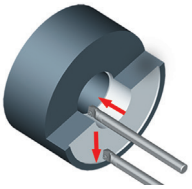
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CP** Barre alesatrici in acciaio S-Bloccaggio

SCLPR/L Kr: 95°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	D_{min}	θ	Inserto
S10K-SCLPR/L06		●	●	10	125	9	6	17	12	-7	CP**0602**
S12M-SCLPR/L06		●	●	12	150	11	8	20	16	-4	CP**0602**
S16Q-SCLPR/L09		●	●	16	180	15	10	29	20	-4	CP**09T3**
S20R-SCLPR/L09		○	○	20	200	18	13	35	25	-4	CP**09T3**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	CP**0602**	CP**09T3**
	ød	**10-12**	**20-25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP

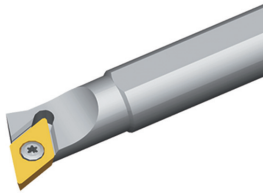
Inserto

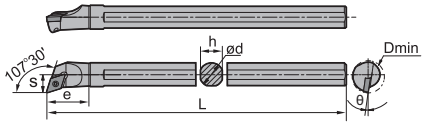
		
Finitura	**Media Lavor.**	**Lavor.- ghisa grigia**
A124	A124	A124

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DP** Barre alesatrici in acciaio S-Bloccaggio

SDQPR/L Kr: 107°30'







Versione destra

Articolo	✻	Stock		Dimensioni [mm]							Inserto
		R	L	ød	L	h	s	e	D_{min}	θ	
S10K-SDQPR/L07		●	●	10	125	9	7	20	13	-8	DP**0702**
S12M-SDQPR/L07		●	●	12	150	11	9	22	16	-8	DP**0702**
S16Q-SDQPR/L07		●	●	16	180	15	11	27	20	-6	DP**0702**
S16Q-SDQPR/L11		●	●	16	180	15	11	32	20	-6	DP**11T3**
S20R-SDQPR/L11		○	○	20	200	18	13	33	25	-6	DP**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**DP**0702****	**DP**0702****	**DP**11T3****
	ød	**10-12**	**16**	**16-20**
	Vite	l60M2,5×5,5 (1,0 Nm)	l60M2,5×6,5 (1,0 Nm)	l60M3,5×8 (2,7 Nm)
	Chiave (vite)	WT07IP	WT07IP	WT15IP

Inserto



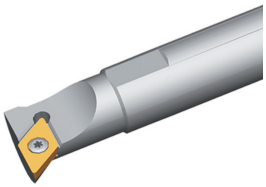
Finitura

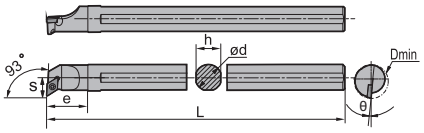
A131

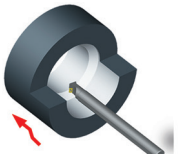
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DP** Barre alesatrici in acciaio S-Bloccaggio

SDUPR/L Kr: 93°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] ød	L	h	s	e	D_{min}	θ	Inserto
S10K-SDUPR/L07		●	●	10	125	9	9	18	15	-8	DP**0702**
S12M-SDUPR/L07		●	●	12	150	11	9	19	16	-8	DP**0702**
S16Q-SDUPR/L07		●	●	16	180	15	11	25	20	-6	DP**0702**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	**DP**0702****	**DP**0702****
	ød	**10-12**	**16**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M2,5×6,5 (1,0 Nm)
	Chiave (vite)	WT07IP	WT07IP

Inserto



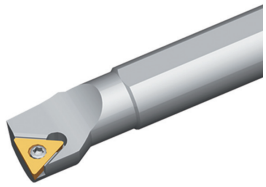
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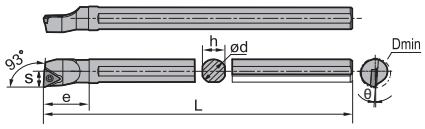
A131

Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TP** Barre alesatrici in acciaio S-Bloccaggio

STUPR/L Kr: 93°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ød	L	h	s	e	D_{min}	θ	
S10K-STUPR/L09		●	●	10	125	9	6	20	12	-6	TP**0902**
S12M-STUPR/L09		●	●	12	150	11	8	22	16	-4	TP**0902**
S12M-STUPR/L11		●	●	12	150	11	8	25	16	-4	TP**1103**
S16Q-STUPR/L11		●	●	16	180	15	10	27	20	-3	TP**1103**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**TP**0902****	**TP**1103****
	ød	**10-12**	**12-16**
	Vite	I60M2,2×5,5 (0,8 Nm)	I60M2,5×6,5 (1,0 Nm)
	Chiave	WT07IP	WT07IP

Inserto



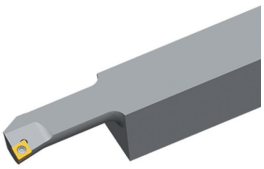
Finitura

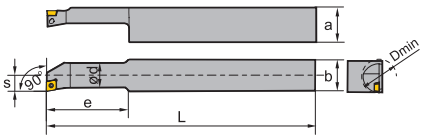
A147

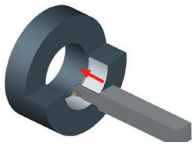
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CC** Barre alesatrici in acciaio S-Bloccaggio

SCFCR/L Kr: 90°







Articolo	✻	Stock R	Stock L	Dimensioni [mm] ød	a	b	L	s	e	D_{min}	Inserto
S10M-SCFCR/L06S25		●	○	10	27	25	150	7	30	13	CC**0602**
S12P-SCFCR/L06S25		●		12	27	25	170	9	35	16	CC**0602**
S16Q-SCFCR/L09S25		●	○	16	27	25	180	11	40	20	CC**09T3**
S20R-SCFCR/L09S25		●		20	27	25	200	13	45	25	CC**09T3**
S25R-SCFCR/L12S25		●	●	25	27	25	200	17	50	32	CC**1204**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CC**0602**	CC**09T3**	CC**1204**
	ød	**10-12**	**16-20**	**25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M4×12 (3,4 Nm)
	Chiave	WT07IP	WT15IP	WT20IP

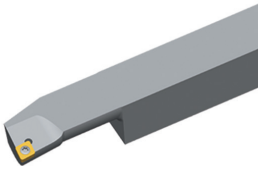
Inserto

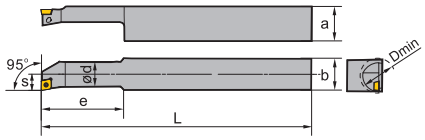
 Finitura	 Media Lavor.	 Sgrossatura	 Lavorazione Al.	 Lavor.- ghisa grigia	 PCBN/PCD
A116	A119	A121	A122	A121	A180

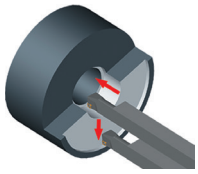
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CC** Barre alesatrici in acciaio S-Bloccaggio

SCLCR Kr: 95°







Articolo	✲	Stock	Dimensioni [mm]							Inserto
			ød	a	b	L	s	e	D_{min}	
S10M-SCLCR06S20		○	10	22	20	150	7	30	13	CC**0602**
S12P-SCLCR06S20		○	12	22	20	170	9	35	16	CC**0602**
S16Q-SCLCR09S20		●	16	22	20	180	11	40	20	CC**09T3**
S20R-SCLCR09S20		●	20	22	20	200	13	60	25	CC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**CC**0602****	**CC**09T3****
	ød	**10-12**	**16-20**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave	WT07IP	WT15IP

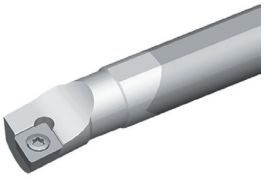
Inserto

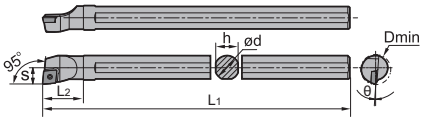
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

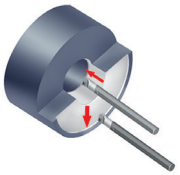
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CP** Barre alesatrici in metallo duro integrale S-Bloccaggio

SCLPR/L Kr: 95°







Versione destra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	ød	h	s	L_1	L_2	θ	Inserto
C10M-SCLPR/L06		●	●	12	10	9	6	150	17	7	CP**0602**
C12Q-SCLPR/L06		●	○	16	12	11	8	180	20	4	CP**0602**
C16R-SCLPR/L09		●	●	20	16	15	10	200	29	4	CP**09T3**
E16R-SCLPR/L09	✻	○	○	19	16	15,5	10	200	-	-2	CP**09T3**
C20S-SCLPR/L09		●	○	25	20	18	13	250	35	4	CP**09T3**
E20S-SCLPR/L09	✻	○		24	20	19,5	13	250	-	-2	CP**09T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	CP**0602**	CP**09T3**
	ød	**10-12**	**16-20**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP

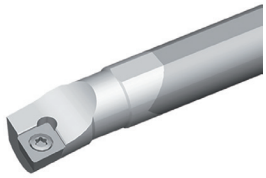
Inserto

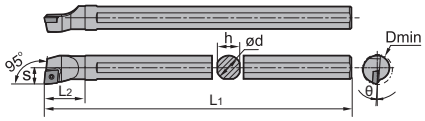
		
Finitura	**Media Lavor.**	**Lavor.- ghisa grigia**
A124	A124	A124

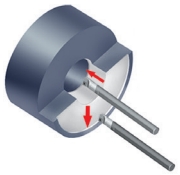
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

CC** Barre alesatrici in metallo duro integrale S-Bloccaggio

SCLCR/L Kr: 95°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E08K-SCLCR/L06-09	✲	●	●	9	8	7,5	5	125	-	-12	CC**0602**
E08K-SCLCR/L06-10	✲	●	●	10	8	7,5	6	125	-	-12	CC**0602**
E10M-SCLCR/L06	✲	●	●	12	10	9,5	7	150	-	-10	CC**0602**
E12Q-SCLCR/L06	✲	●	●	15	12	11,5	9	180	-	-10	CC**0602**
E16R-SCLCR/L06	✲	●	●	18	16	15,5	10	200	-	-8	CC**0602**
E12Q-SCLCR/L09	✲	●	●	15	12	11,5	9	180	-	-9	CC**09T3**
E16R-SCLCR/L09	✲	●	●	18	16	15,5	10	200	-	-10	CC**09T3**
E20S-SCLCR/L09	✲	●	●	24	20	19,5	13	250	-	-8	CC**09T3**
E25T-SCLCR/L09	✲	●	●	31	25	24	17	300	-	-6	CC**09T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**CC**0602****	**CC**09T3****	**CC**09T3****
	ød	**8-16**	**12**	**16-25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP	WT15IP

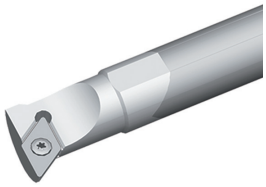
Inserto

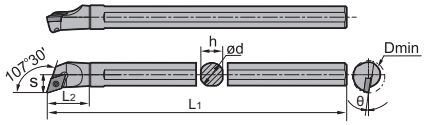
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A116	A119	A121	A122	A121	A180

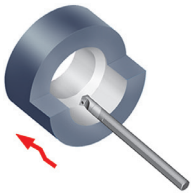
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DP** Barre alesatrici in metallo duro integrale S-Bloccaggio

SDQPR/L Kr: 107°30'







Versione destra

Articolo	✻	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C10M-SDQPR/L07		●	●	13	10	9	7	150	20	8	DP**0702
C12Q-SDQPR/L07		○	●	16	12	11	9	180	22	8	DP**0702
C16R-SDQPR/L07		○	○	20	16	15	11	200	27	6	DP**0702
C16R-SDQPR/L11		○	○	20	16	15	11	200	32	6	DP**11T3**
C20S-SDQPR/L11		●	○	25	20	18	13	250	33	6	DP**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	DP**0702	DP**0702	DP**11T3**
	ød	10-12	16	16-20
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)
	Chiave (vite)	WT07IP	WT07IP	WT15IP

Inserto

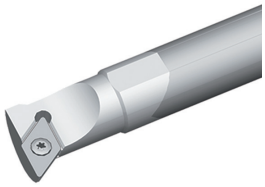


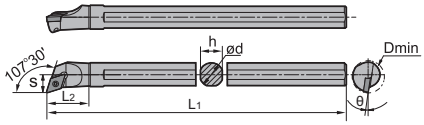
Finitura
A131

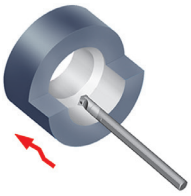
Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Barre alesatrici in metallo duro integrale S-Bloccaggio

SDQCR/L Kr: 107°30'







Versione destra

Articolo	✻	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E08K-SDQCR/L07	✻	●	●	11	8	7,5	6,5	125	-	-12	DC**0702**
E10M-SDQCR/L07	✻	●	●	12	10	9,5	7	150	-	-10	DC**0702**
E12Q-SDQCR/L07	✻	●	●	15	12	11,5	9	180	-	-10	DC**0702**
E16R-SDQCR/L07	✻	●	○	18	16	15,5	10	200	27-	-6	DC**0702**
E20S-SDQCR/L07	✻	●	○	24	20	19,5	13	250	33-	-4	DC**0702**
E16R-SDQCR/L11	✻	●	●	18	16	15,5	10	200	-	-8	DC**11T3**
E20S-SDQCR/L11	✻	●	○	24	20	19,5	13	250	-	-8	DC**11T3**
E25T-SDQCR/L11	✻	●	○	31	25	24	17	300	-	-6	DC**11T3**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**DC**0702****	**DC**11T3****
	ød	**8-20**	**16-25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP

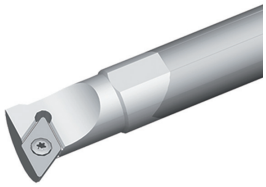
Inserto

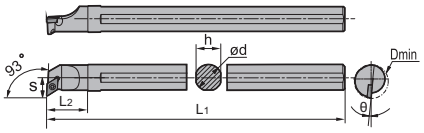
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

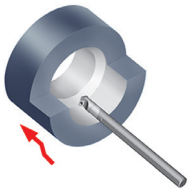
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

DP** Barre alesatrici in metallo duro integrale S-Bloccaggio

SDUPR/L Kr: 93°







Versione destra

Articolo	*	Stock R	Stock L	Dimensioni [mm] ØD	ød	h	s	L_1	L_2	θ	Inserto
C10M-SDUPR/L07		●	●	15	10	9	9	150	18	8	DP**0702**
C12Q-SDUPR/L07		●	○	16	12	11	9	180	19	8	DP**0702**
C16R-SDUPR/L07		○	○	20	16	15	11	200	25	6	DP**0702**

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	**DP**0702****
	ød	**15-20**
	Vite	I60M2,5×5,5 (1,0 Nm)
	Chiave	WT07IP

Inserto

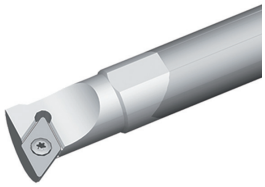


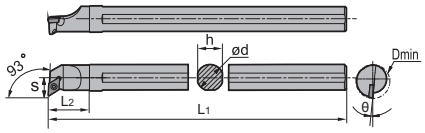
Finitura
A131

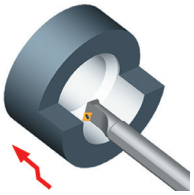
Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

DC** Barre alesatrici in metallo duro integrale S-Bloccaggio

SDUCR/L Kr: 93°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E10M-SDUCR/L07	✲	●	○	12	10	9,5	7	150	-	-10	DC**0702**
E12Q-SDUCR/L07	✲	●	●	15	12	11,5	9	180	-	-10	DC**0702**
E16R-SDUCR/L07	✲	●	○	18	16	15,5	10	200	-	-6	DC**0702**
E20S-SDUCR/L07	✲	○	○	24	20	19,5	13	250	-	-4	DC**0702**
E16R-SDUCR/L11	✲	●	○	18	16	15,5	10	200	-	-8	DC**11T3**
E20S-SDUCR/L11	✲	●	●	24	20	19,5	13	250	-	-8	DC**11T3**
E25T-SDUCR/L11	✲	○	○	31	25	24	17	300	-	-6	DC**11T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**DC**0702****	**DC**11T3****
	ød	**10-20**	**16-25**
	Vite	I60M2,5×5,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP

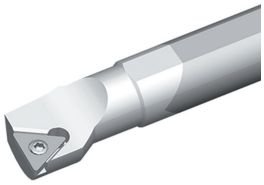
Inserto

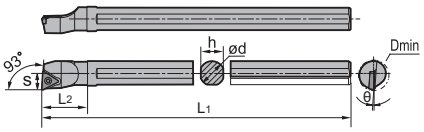
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A126	A127	A129	A129	A129	A184

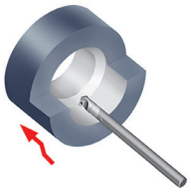
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

TP** Barre alesatrici in metallo duro integrale S-Bloccaggio

STUPR/L Kr: 93°







Versione destra

Articolo	*	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C10M-STUPR/L09		○	○	12	10	9	6	150	20	6	TP**0902**
C12Q-STUPR/L09		●		16	12	11	8	180	22	4	TP**0902**
C12Q-STUPR/L11		●		16	12	11	8	180	25	4	TP**1103
C16R-STUPR/L11		○	○	20	16	15	10	200	27	3	TP**1103

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

	Inserto	TP**0902**	TP**1103
	ød	**10-12**	**12-16**
	Vite	I60M2,2×5,5 (0,8 Nm)	I60M2,5×6,5 (1,0 Nm)
	Chiave (vite)	WT07IP	WT07IP

Inserto



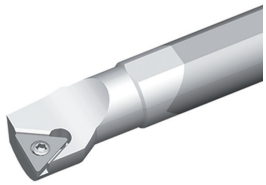
Finitura

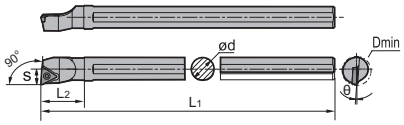
A147

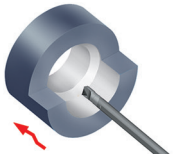
Codice sistema A322 Scelta gradi A42 Informazioni tecniche A501 Dati di taglio A366

TC** Barre alesatrici in metallo duro integrale S-Bloccaggio

STFCR/L Kr: 90°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E08K-STFCR/L09	✲	○	●	11	8	7,5	6	125	-	-12	TC**0902**
E10M-STFCR/L09	✲	○	○	12	10	9,5	7	150	-	-10	TC**0902**
E12Q-STFCR/L11	✲	○	○	15	12	11,5	9	180	-	-10	TC**1102**
E16R-STFCR/L11	✲	○	○	18	16	15,5	10	200	-	-8	TC**1102**
E20S-STFCR/L11	✲	○	○	24	20	19,5	13	250	-	-8	TC**1102**
E20S-STFCR/L16	✲	○	○	24	20	19,5	13	250	-	-8	TC**16T3**
E25T-STFCR/L16	✲	○	○	31	25	24	17	300	-	-6	TC**16T3**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**TC**0902****	**TC**1102****	**TC**16T3****
	ød	**8-10**	**12-20**	**20-25**
	Vite	I60M2,2×5,5 (0,8 Nm)	I60M2,5×5,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT07IP	WT15IP

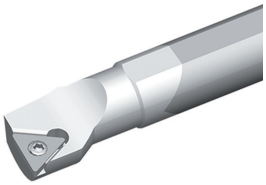
Inserto

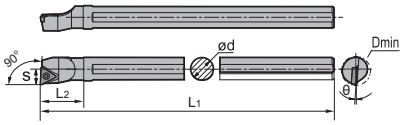
					
Finitura	**Media Lavor.**	**Sgrossatura**	**Lavorazione Al.**	**Lavor.- ghisa grigia**	**PCBN/PCD**
A141	A142	A143	A145	A143	A187

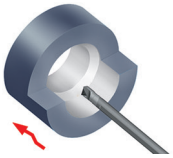
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

TC** Barre alesatrici in metallo duro integrale S-Bloccaggio

STFPR/L Kr: 90°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
E10M-STFPR/L11	✲	○	○	12	10	9,5	6	150	-	-5	TP**1103**
E12Q-STFPR/L11	✲	○	○	15	12	11,5	8	180	-	-4	TP**1103**
E16R-STFPR/L11	✲	○	○	19	16	15,5	10	200	-	-2	TP**1103**
E20S-STFPR/L11	✲	○	○	24	20	19	13	250	-	-2	TP**1103**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**TP**1103****
	ød	**10-20**
	Vite	I60M3,0×7,0 (1,8 Nm)
	Chiave (vite)	WT08IP

Inserto

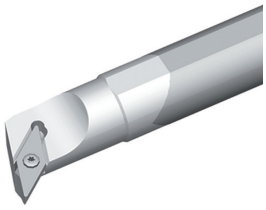


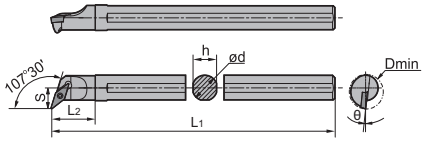
Finitura
A147

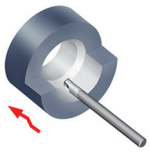
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

VC** Barre alesatrici in metallo duro integrale S-Bloccaggio

SVQCR/L Kr: 107°30'







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C16R-SVQCR/L11		○	○	22	16	15	13	200	28	-6	VC**1103**
C20S-SVQCR/L11		○	○	26	20	18	15	250	32	-4	VC**1103**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**VC**1103****
	ød	**16-20**
	Vite	I60M2,5×6,5 (1,0 Nm)
	Chiave (vite)	WT07IP

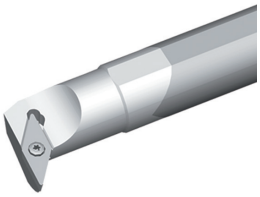
Inserto

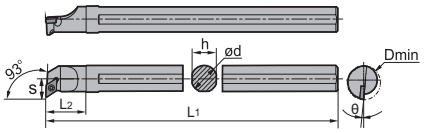
		
Finitura	**Lavorazione Al.**	**PCBN/PCD**
A156	A154	A193

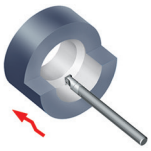
Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

VC** Barre alesatrici in metallo duro integrale S-Bloccaggio

SVUCR/L Kr: 93°







Versione destra

Articolo	✲	Stock		Dimensioni [mm]							Inserto
		R	L	ØD	ød	h	s	L_1	L_2	θ	
C16R-SVUCR/L11			○	24	16	15	15	200	25	6	VC**1103**
E16R-SVUCR/L11	✲	○	○	22	16	15	13	200	-	-6,5	VC**1103**
C20S-SVUCR/L11		●	●	28	20	18	17	250	30	4	VC**1103**
E20S-SVUCR/L11	✲	○	○	27	20	18	13	250	-	-6,5	VC**1103**
E25T-SVUCR/L16	✲	○	○	35	25	23	20,5	300	-	-6,5	VC**1604**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**VC**1103****	**VC**1604****
	ød	**16-20**	**25**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)
	Chiave (vite)	WT07IP	WT15IP

Inserto

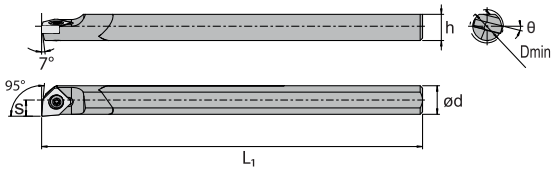
			
Finitura	**Media Lavor.**	**Lavorazione Al.**	**PCBN/PCD**
A156	A156	A154	A193

Codice sistema A322 | Scelta gradi A42 | Informazioni tecniche A501 | Dati di taglio A366

ZNEX Barre alesatrici in metallo duro integrale S-Bloccaggio

SZLNR Kr: 95°





Articolo	✻	Stock		Dimensioni [mm]							Inserto
		R	L	D_{min}	ød	h	s	L_1	L_2	θ	
C06X-SZLNR04		●		7	6	5,5	3,4	80	-	-14	ZNEX0401**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

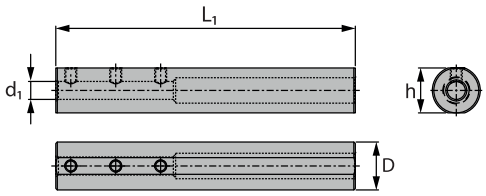
Parti di ricambio

	Inserto	**ZNEX0401****
	ød	**6**
	Vite	I60M2x3,7 (0,5 Nm)
	Chiave (Vite)	WT06IP

Portautensile C06X**

SZLNR Kr: 95°





Articolo	Stock	Dimensioni [mm]			
		D	d_1	L_1	h
SHSZ1600.06.100	●	16	6	100	15

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Vite	M4x5SH
	Chiave (Vite)	WH20L

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www.zccct-europe.com

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, negativi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (CVD) YBC103 Avanzamento [mm] 0,1	0,2	0,6	YB6315 Avanzamento [mm] 0,1	0,2	0,6	YBC152 Avanzamento [mm] 0,1	0,2	0,6
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	520	420	280	500	400	270	500	400	270
		ca. 0,45 % C	Temprato	190	2	440	360	250	420	340	230	420	340	230
		ca. 0,45 % C	pre-temprato	250	3	350	300	220	330	280	200	330	280	200
		ca. 0,75 % C	Temprato	270	4	340	290	210	320	270	190	320	270	190
		ca. 0,75 % C	pre-temprato	300	5	300	260	190	280	240	170	280	240	170
	Acciaio al carbonio		Temprato	180	6	420	320	200	400	300	180	400	300	180
			pre-temprato	275	7	300	250	170	280	230	150	280	230	150
			pre-temprato	300	8	280	240	170	260	220	150	260	220	150
			pre-temprato	350	9	250	210	140	230	190	120	230	190	120
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10	380	310	210	360	290	190	360	290	190
			temprato e rinvenuto	325	11	210	180	150	190	160	130	190	160	130
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12									
		martensitico	pre-temprato	240	13									
		austenitico	quencing	180	14									
		austenitico-ferritico		230	15									
K	Ghisa grigia	perlitico/ferritico		180	16									
		perlitico (martensitico)		260	17									
	Ghisa sferodale	ferritico		160	18									
		perlitico		250	19									
	Ghisa malleabile	ferritico		130	20									
		perlitico		230	21									
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22									
		invecchiabile	indurito	100	23									
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24									
		≤ 12 % Si, invecchiabile	indurito	90	25									
		> 12 % Si, non invecchiabile		130	26									
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, rame senza piombo e rame elettrolitico		100	29									
S	Leghe resistenti al calore	Base Fe	ricotto	200	30									
			indurito	280	31									
		Base Ni o Co	ricotto	250	32									
			indurito	350	33									
			fuso	320	34									
	Leghe di titanio	Titanio puro		R_m 400	35									
		Leghe Alpha + Beta	indurito	R_m 1050	36									
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37									
			temprato e rinvenuto	60 HRC	38									
	Ghisa dura		fuso	400	39									
	Ghise temprate		temprato e rinvenuto	55 HRC	40									
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Velocità di taglio v_c [m/min]																							
HC (CVD)																							
YBC203			YBC252			YBC352			YBM153			YBM253			YBD102			YB7315			YBD152		
Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
0,1	0,4	0,8	0,1	0,4	0,8	0,2	0,5	1,0	0,2	0,4	0,6	0,2	0,4	0,6	0,1	0,3	0,4	0,1	0,3	0,5	0,1	0,3	0,5
480	370	230	480	370	230	430	330	220															
400	310	190	400	310	190	350	270	180															
310	250	160	310	250	160	260	210	150															
300	240	150	300	240	150	250	200	140															
260	210	130	260	210	130	210	170	120															
380	290	170	380	290	170	320	240	150															
260	210	140	260	210	140	200	170	120															
240	200	140	240	200	140	180	160	120															
220	180	110	220	180	110	150	130	90															
310	250	170	310	250	170	220	180	130															
150	130	100	150	130	100	–	–	–															
									380	295	210	350	265	180									
									190	155	120	150	110	65									
									250	200	150	200	140	80									
									200	160	130	160	115	70									
															530	380	220	600	410	220	540	375	210
															240	200	150	330	240	150	280	210	140
															300	210	145	340	250	160	290	215	140
															220	150	105	260	190	120	210	155	100
															330	265	220	370	300	230	320	265	210
															230	155	100	280	200	120	230	165	100

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW metallo duro non rivestito, componente principale (WC)
BL nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN ceramica Si_3N_4
CM ceramica mista
HC_1 cermet rivestito
BC CBN rivestito
CC ceramica rivestito
CR ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP diamante policristallino

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, negativi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]								
						HC (CVD)			HC (PVD)					
						YBD152C			YBG101			YBG102		
						Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
						0,1	0,3	0,5	0,1	0,3	0,6	0,1	0,3	0,6
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1									
		ca. 0,45 % C	Temprato	190	2									
		ca. 0,45 % C	pre-temprato	250	3									
		ca. 0,75 % C	Temprato	270	4									
		ca. 0,75 % C	pre-temprato	300	5									
	Acciaio al carbonio		Temprato	180	6									
			pre-temprato	275	7									
			pre-temprato	300	8									
			pre-temprato	350	9									
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10									
			temprato e rinvenuto	325	11									
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12							360	290	200
		martensitico	pre-temprato	240	13							180	150	110
		austenitico	quencing	180	14							240	190	140
		austenitico-ferritico		230	15							190	150	110
K	Ghisa grigia	perlitico/ferritico		180	16	570	395	220						
		perlitico (martensitico)		260	17	310	230	150						
	Ghisa sferodale	ferritico		160	18	310	230	150						
		perlitico		250	19	230	170	110						
	Ghisa malleabile	ferritico		130	20	340	280	220						
		perlitico		230	21	250	180	110						
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22				2000	1200	–	2000	1200	–
		invecchiabile	indurito	100	23				610	420	–	610	420	–
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24				550	300	–	550	300	–
		≤ 12 % Si, invecchiabile	indurito	90	25				360	190	–	360	190	–
		> 12 % Si, non invecchiabile		130	26				320	170	–	320	170	–
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27				730	350	–	730	350	–
		CuZn, CuSnZn		90	28				370	330	–	370	330	–
		CuSn, rame senza piombo e rame elettrolitico		100	29				270	200	–	270	200	–
S	Leghe resistenti al calore	Base Fe	ricotto	200	30							65	45	–
			indurito	280	31							60	40	–
		Base Ni o Co	ricotto	250	32							60	40	–
			indurito	350	33							55	35	–
			fuso	320	34							55	35	–
	Leghe di titanio	Titanio puro		R_m 400	35							100	60	–
		Leghe Alpha + Beta	indurito	R_m 1050	36							80	40	–
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37									
			temprato e rinvenuto	60 HRC	38									
	Ghisa dura		fuso	400	39									
	Ghise temprate		temprato e rinvenuto	55 HRC	40									
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																							
	HC (PVD)															HC_1			HT					
	YBS103			YBG105			YB9320			YBG205			YPD201			YNG151C			YNG151			YNT251		
	Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,3	0,6	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
																510	350	–	510	350	–	510	350	–
																430	270	–	430	270	–	430	270	–
																330	220	–	330	220	–	330	220	–
																320	200	–	320	200	–	320	200	–
																280	170	–	280	170	–	280	170	–
																400	240	–	400	240	–	400	240	–
																290	180	–	290	180	–	290	180	–
																240	170	–	240	170	–	240	170	–
																220	150	–	220	150	–	220	150	–
																340	220	–	340	220	–	340	220	–
																180	110	–	180	110	–	180	110	–
	360	290	200	360	290	200	360	290	200	320	250	160	360	290	200									
	180	150	110	180	150	110	190	155	110	170	150	110	190	155	110									
	240	190	140	240	190	140	250	210	150	230	190	140	250	210	150									
	190	150	110	190	150	110	200	165	120	180	150	110	200	165	120									
																430	365	280	430	365	280	430	365	280
																390	340	270	390	340	270	390	340	270
																360	300	220	360	300	220	360	300	220
																340	295	230	340	295	230	340	295	230
																310	260	190	310	260	190	310	260	190
																250	210	150	250	210	150	250	210	150
	80	65	45	65	45	–	55	35	–	55	–	–	–	65	45									
	75	60	40	60	40	–	50	30	–	50	–	–	–	60	40									
	70	60	40	60	40	–	50	30	–	50	–	–	–	60	40									
	65	55	35	55	35	–	45	25	–	45	–	–	–	55	35									
	65	55	35	55	35	–	45	25	–	45	–	–	–	55	35									
	110	100	60	100	60	–	80	60	–	70	–	–	–	100	60									
	90	80	40	80	40	–	60	40	–	50	–	–	–	80	40									

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW metallo duro non rivestito, componente principale (WC)
BL nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN ceramica Si_3N_4
CM ceramica mista
HC_1 cermet rivestito
BC CBN rivestito
CC ceramica rivestito
CR ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP diamante policristallino

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, negativi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]								
						HW						BL		
						YD101			YD201			YCB112		
						Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
						0,05	0,2	0,35	0,1	0,2	0,3	0,1	0,2	0,3
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1									
		ca. 0,45 % C	Temprato	190	2									
		ca. 0,45 % C	pre-temprato	250	3									
		ca. 0,75 % C	Temprato	270	4									
		ca. 0,75 % C	pre-temprato	300	5									
	Acciaio al carbonio		Temprato	180	6									
			pre-temprato	275	7									
			pre-temprato	300	8									
			pre-temprato	350	9									
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10									
			temprato e rinvenuto	325	11									
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12									
		martensitico	pre-temprato	240	13									
		austenitico	quencing	180	14									
		austenitico-ferritico		230	15									
K	Ghisa grigia	perlitico/ferritico		180	16									
		perlitico (martensitico)		260	17									
	Ghisa sferodale	ferritico		160	18									
		perlitico		250	19									
	Ghisa malleabile	ferritico		130	20									
		perlitico		230	21									
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	1750	1200	800	1750	1200	800			
		invecchiabile	indurito	100	23	510	380	250	510	380	250			
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	460	320	175	460	320	175			
		≤ 12 % Si, invecchiabile	indurito	90	25	300	205	110	300	205	110			
		> 12 % Si, non invecchiabile		130	26	270	185	100	270	185	100			
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	610	410	205	610	410	205			
		CuZn, CuSnZn		90	28	310	250	195	310	250	195			
		CuSn, rame senza piombo e rame elettrolitico		100	29	225	170	115	225	170	115			
S	Leghe resistenti al calore	Base Fe	ricotto	200	30									
			indurito	280	31									
		Base Ni o Co	ricotto	250	32							180	160	140
			indurito	350	33							160	140	120
			fuso	320	34							120	100	80
	Leghe di titanio	Titanio puro		R_m 400	35									
		Leghe Alpha + Beta	indurito	R_m 1050	36									
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37							220	170	130
			temprato e rinvenuto	60 HRC	38							200	160	120
	Ghisa dura		fuso	400	39							200	150	100
	Ghise temprate		temprato e rinvenuto	55 HRC	40							200	150	100
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																							
	BL									BC									BH			BL		
	YCB113			YCB121			YCB131			YCB113C			YCB121C			YCB131C			YCB215			YZB630		
	Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,3	0,5	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,3	0,5	0,1	0,3	0,5	0,1	0,3	0,5
																			1500	980	400			
																			1250	800	320			
																			–	–	–			
																			300	200	100			
																			–	–	–			
																			300	200	100			
							160	140	120															
							140	120	100															
							120	100	80															
	240	180	140	220	170	130	160	120	100	240	180	140	220	170	130	160	120	100				220	170	130
	220	180	140	200	160	120	150	120	100	220	180	140	200	160	120	150	120	100				200	160	120
	250	150	100	200	150	100	180	120	100	250	150	100	200	150	100	180	120	100				200	150	100
	200	150	100	200	150	100	150	120	100	200	150	100	200	150	100	150	120	100				200	150	100

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW metallo duro non rivestito, componente principale (WC)
BL nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN ceramica Si_3N_4
CM ceramica mista
HC_1 cermet rivestito
BC CBN rivestito
CC ceramica rivestito
CR ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP diamante policristallino

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, negativi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]								
						BC			BH			CM		
						YZB630C			YZB233			CA1000		
						Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
						0,1	0,3	0,5	0,3	0,9	1,5	0,1	0,6	1,5
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1									
		ca. 0,45 % C	Temprato	190	2									
		ca. 0,45 % C	pre-temprato	250	3									
		ca. 0,75 % C	Temprato	270	4									
		ca. 0,75 % C	pre-temprato	300	5									
	Acciaio al carbonio		Temprato	180	6									
			pre-temprato	275	7									
			pre-temprato	300	8									
			pre-temprato	350	9									
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10									
			temprato e rinvenuto	325	11									
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12									
		martensitico	pre-temprato	240	13									
		austenitico	quencing	180	14									
		austenitico-ferritico		230	15									
K	Ghisa grigia	perlitico/ferritico		180	16				1500	950	400			
		perlitico (martensitico)		260	17				1250	780	320			
	Ghisa sferodale	ferritico		160	18				–	–	–			
		perlitico		250	19				500	300	100			
	Ghisa malleabile	ferritico		130	20				–	–	–			
		perlitico		230	21				500	300	100			
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22									
		invecchiabile	indurito	100	23									
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24									
		≤ 12 % Si, invecchiabile	indurito	90	25									
		> 12 % Si, non invecchiabile		130	26									
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, rame senza piombo e rame elettrolitico		100	29									
S	Leghe resistenti al calore	Base Fe	ricotto	200	30									
			indurito	280	31									
		Base Ni o Co	ricotto	250	32									
			indurito	350	33									
			fuso	320	34									
	Leghe di titanio	Titanio puro		R_m 400	35									
		Leghe Alpha + Beta	indurito	R_m 1050	36									
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	220	170	130				180	150	120
			temprato e rinvenuto	60 HRC	38	200	160	120				140	120	80
	Ghisa dura		fuso	400	39	200	150	100				80	60	40
	Ghise temprate		temprato e rinvenuto	55 HRC	40	200	150	100				–	–	–
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Velocità di taglio v_c [m/min]																
CC			CN						CR							
CM1000			CN1000			CS1000			CW1400			CW1800				
Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]				
0,1	0,6	1,5	0,1	0,6	1,5	0,1	0,6	1,5	0,1	0,6	1,5	0,1	0,6	1,5		
			800	700	600											
			750	625	500											
			600	530	450											
			500	420	350											
			800	700	600											
			700	600	500											
						450	400	350	400	350	300	400	350	300		
						300	250	200	300	250	200	300	250	200		
						250	180	150	180	160	140	180	160	140		
200	160	140														
150	130	100														
–	–	–														
–	–	–														

HC	metallo duro rivestito
HT	metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW	metallo duro non rivestito, componente principale (WC)
BL	nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH	nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN	ceramica Si_3N_4
CM	ceramica mista
HC_1	cermet rivestito
BC	CBN rivestito
CC	ceramica rivestito
CR	ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP	diamante policristallino

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, positivi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]								
						HC (CVD)								
						YBC103			YB6315			YBC152		
						Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
						0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	460	400	280	450	390	270	450	390	270
		ca. 0,45 % C	Temprato	190	2	390	340	240	380	330	230	380	330	230
		ca. 0,45 % C	pre-temprato	250	3	310	275	210	300	265	200	300	265	200
		ca. 0,75 % C	Temprato	270	4	300	265	200	290	255	190	290	255	190
		ca. 0,75 % C	pre-temprato	300	5	260	235	180	250	225	170	250	225	170
	Acciaio al carbonio		Temprato	180	6	370	310	190	360	300	180	360	300	180
			pre-temprato	275	7	260	220	160	250	210	150	250	210	150
			pre-temprato	300	8	240	210	160	230	200	150	230	200	150
			pre-temprato	350	9	210	180	130	200	170	120	200	170	120
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10	330	285	200	320	275	190	320	275	190
			temprato e rinvenuto	325	11	170	160	140	160	150	130	160	150	130
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12									
		martensitico	pre-temprato	240	13									
		austenitico	quencing	180	14									
		austenitico-ferritico		230	15									
K	Ghisa grigia	perlitico/ferritico		180	16									
		perlitico (martensitico)		260	17									
	Ghisa sferodale	ferritico		160	18									
		perlitico		250	19									
	Ghisa malleabile	ferritico		130	20									
		perlitico		230	21									
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22									
		invecchiabile	indurito	100	23									
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24									
		≤ 12 % Si, invecchiabile	indurito	90	25									
		> 12 % Si, non invecchiabile		130	26									
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, rame senza piombo e rame elettrolitico		100	29									
S	Leghe resistenti al calore	Base Fe	ricotto	200	30									
			indurito	280	31									
		Base Ni o Co	ricotto	250	32									
			indurito	350	33									
			fuso	320	34									
	Leghe di titanio	Titanio puro		R_m 400	35									
		Leghe Alpha + Beta	indurito	R_m 1050	36									
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37									
			temprato e rinvenuto	60 HRC	38									
	Ghisa dura		fuso	400	39									
	Ghise temprate		temprato e rinvenuto	55 HRC	40									
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Velocità di taglio v_c [m/min]																							
HC (CVD)																							
YBC203			YBC252			YBC352			YBM153			YBM253			YBD102			YB7315			YBD152		
Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
0,1	0,3	0,6	0,1	0,3	0,6	0,2	0,4	0,6	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
430	350	230	430	350	230	390	310	230															
360	295	190	360	295	190	315	250	190															
280	235	160	280	235	160	230	195	160															
270	225	150	270	225	150	220	185	150															
235	195	130	235	195	130	185	155	120															
340	270	170	340	270	170	290	225	150															
235	195	140	235	195	140	170	150	130															
220	180	140	220	180	140	150	140	130															
190	155	110	190	155	110	130	110	90															
280	230	170	280	230	170	180	160	140															
130	115	100	130	115	100	–	–	–															
									360	340	260	330	300	230									
									180	170	140	150	130	95									
									240	220	170	195	170	115									
									190	175	140	160	140	100									
															480	345	200	540	370	200	490	340	190
															220	180	135	300	220	135	250	190	130
															270	210	130	300	230	145	260	200	125
															200	150	95	230	180	110	190	140	90
															275	240	180	310	260	190	265	230	170
															190	145	85	230	170	100	190	140	90

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW metallo duro non rivestito, componente principale (WC)
BL nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN ceramica Si_3N_4
CM ceramica mista
HC_1 cermet rivestito
BC CBN rivestito
CC ceramica rivestito
CR ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP diamante policristallino

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, positivi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]								
						HC (CVD)			HC (PVD)					
						YBD152C			YBG101			YBG102		
						Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
						0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1									
		ca. 0,45 % C	Temprato	190	2									
		ca. 0,45 % C	pre-temprato	250	3									
		ca. 0,75 % C	Temprato	270	4									
		ca. 0,75 % C	pre-temprato	300	5									
	Acciaio al carbonio		Temprato	180	6									
			pre-temprato	275	7									
			pre-temprato	300	8									
			pre-temprato	350	9									
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10									
			temprato e rinvenuto	325	11									
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12							305	245	205
		martensitico	pre-temprato	240	13							150	125	100
		austenitico	quencing	180	14							200	165	145
		austenitico-ferritico		230	15							160	130	115
K	Ghisa grigia	perlitico/ferritico		180	16	520	360	200						
		perlitico (martensitico)		260	17	280	210	135						
	Ghisa sferodale	ferritico		160	18	280	220	135						
		perlitico		250	19	210	160	100						
	Ghisa malleabile	ferritico		130	20	280	245	180						
		perlitico		230	21	210	160	100						
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22				1800	880	–	1800	880	–
		invecchiabile	indurito	100	23				540	380	–	540	380	–
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24				500	270	–	500	270	–
		≤ 12 % Si, invecchiabile	indurito	90	25				320	170	–	320	170	–
		> 12 % Si, non invecchiabile		130	26				290	150	–	290	150	–
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27				660	320	–	660	320	–
		CuZn, CuSnZn		90	28				330	300	–	330	300	–
		CuSn, rame senza piombo e rame elettrolitico		100	29				220	175	–	220	175	–
S	Leghe resistenti al calore	Base Fe	ricotto	200	30							60	45	–
			indurito	280	31							55	40	–
		Base Ni o Co	ricotto	250	32							55	40	–
			indurito	350	33							50	35	–
			fuso	320	34							50	35	–
	Leghe di titanio	Titanio puro		R_m 400	35							95	60	–
		Leghe Alpha + Beta	indurito	R_m 1050	36							75	40	–
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37									
			temprato e rinvenuto	60 HRC	38									
	Ghisa dura		fuso	400	39									
	Ghise temprate		temprato e rinvenuto	55 HRC	40									
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																							
	HC (PVD)															HC_1			HT					
	YBS103			YBG105			YB9320			YBG205			YPD201			YNG151C			YNG151			YNT251		
	Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,3	0,6	0,1	0,2	0,4	0,1	0,2	0,4	0,1	0,2	0,4
																470	320	–	470	320	–	470	320	–
																400	250	–	400	250	–	400	250	–
																300	200	–	300	200	–	300	200	–
																290	180	–	290	180	–	290	180	–
																245	150	–	245	150	–	245	150	–
																370	220	–	370	220	–	370	220	–
																255	160	–	255	160	–	255	160	–
																200	140	–	200	140	–	200	140	–
																185	130	–	185	130	–	185	130	–
																285	180	–	285	180	–	285	180	–
																150	90	–	150	90	–	150	90	–
	305	245	205	305	245	205	305	245	206	270	205	165	360	290	200									
	150	125	100	150	125	100	160	130	110	145	125	100	190	155	110									
	200	165	145	200	165	145	210	180	155	195	165	145	250	210	150									
	160	130	115	160	130	115	170	140	120	155	130	115	200	165	120									
																390	330	255	390	330	255	390	330	255
																355	310	245	355	310	245	355	310	245
																330	270	200	330	270	200	330	270	200
																310	270	210	310	270	210	310	270	210
																260	220	160	260	220	160	260	220	160
																210	170	120	210	170	120	210	170	120
	70	50	–	60	45	–	50	35	–	50	–	–	–	50	35									
	60	45	–	55	40	–	45	30	–	45	–	–	–	45	30									
	60	45	–	55	40	–	45	30	–	45	–	–	–	45	30									
	66	40	–	50	35	–	40	–	–	40	–	–	–	40	–									
	66	40	–	50	35	–	40	–	–	40	–	–	–	40	–									
	100	65	–	95	60	–	75	60	–	70	–	–	–	75	60									
	75	50	–	75	40	–	55	40	–	45	–	–	–	55	40									

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW metallo duro non rivestito, componente principale (WC)
BL nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN ceramica Si_3N_4
CM ceramica mista
HC_1 cermet rivestito
BC CBN rivestito
CC ceramica rivestito
CR ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP diamante policristallino

Tornitura generale Dati di taglio consigliati

Inserti per tornitura, positivi

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]								
						HW						BL		
						YD101			YD201			YCB112		
						Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]		
						0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1									
		ca. 0,45 % C	Temprato	190	2									
		ca. 0,45 % C	pre-temprato	250	3									
		ca. 0,75 % C	Temprato	270	4									
		ca. 0,75 % C	pre-temprato	300	5									
	Acciaio al carbonio		Temprato	180	6									
			pre-temprato	275	7									
			pre-temprato	300	8									
			pre-temprato	350	9									
	Acciaio alto legato e acciaio alto legato per utensili		ricotto	200	10									
			temprato e rinvenuto	325	11									
M	Acciaio inossidabile	ferritico/martensitico	ricotto	200	12									
		martensitico	pre-temprato	240	13									
		austenitico	quencing	180	14									
		austenitico-ferritico		230	15									
K	Ghisa grigia	perlitico/ferritico		180	16									
		perlitico (martensitico)		260	17									
	Ghisa sferodale	ferritico		160	18									
		perlitico		250	19									
	Ghisa malleabile	ferritico		130	20									
		perlitico		230	21									
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	1550	1050	700	1550	1050	700			
		invecchiabile	indurito	100	23	450	320	200	450	320	200			
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	400	270	150	400	270	150			
		≤ 12 % Si, invecchiabile	indurito	90	25	250	170	95	250	170	95			
		> 12 % Si, non invecchiabile		130	26	230	150	85	230	150	85			
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	550	370	170	550	370	170			
		CuZn, CuSnZn		90	28	260	210	160	260	210	160			
		CuSn, rame senza piombo e rame elettrolitico		100	29	190	145	95	190	145	95			
S	Leghe resistenti al calore	Base Fe	ricotto	200	30	55	30	–	55	30	–	–	–	–
			indurito	280	31	55	25	–	55	25	–	–	–	–
		Base Ni o Co	ricotto	250	32	45	25	–	45	25	–	180	160	140
			indurito	350	33	35	20	–	35	20	–	160	140	120
			fuso	320	34	40	20	–	40	20	–	120	100	80
	Leghe di titanio	Titanio puro		R_m 400	35	60	40	–	60	40	–	–	–	–
		Leghe Alpha + Beta	indurito	R_m 1050	36	30	–	–	30	–	–	–	–	–
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37							220	170	130
			temprato e rinvenuto	60 HRC	38							200	160	120
	Ghisa dura		fuso	400	39							200	150	100
	Ghise temprate		temprato e rinvenuto	55 HRC	40							200	150	100
X	Materiali non metallici	Termoplastiche			41									
		Termoindurenti			42									
		Vetroresina VTR			43									
		Plastica rinforzata in fibra di carbonio			44									
		Grafite			45									
		Legno			46									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																							
	BL									BC									BH			DP		
	YCB113			YCB121			YCB131			YCB113C			YCB121C			YCB131C			YCB215			YCD421		
	Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]			Avanzamento [mm]					
	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,1	0,2	0,3	0,05	0,2	0,4
																			1500	980	400			
																			1250	800	320			
																			–	–	–			
																			300	200	100			
																			–	–	–			
																			300	200	100			
																						2500	2000	250
																						2500	2000	250
																						2500	2000	250
																						2500	2000	250
																						1000	800	100
																						650	530	70
																						650	530	70
																						400	330	40
							–	–	–															
							–	–	–															
							160	140	120															
							140	120	100															
							120	100	80															
							–	–	–															
							–	–	–															
	240	180	140	220	170	130	160	120	100	240	180	140	220	170	130	160	120	100						
	220	180	140	200	160	120	150	120	100	220	180	140	200	160	120	150	120	100						
	250	150	100	200	150	100	180	120	100	250	150	100	200	150	100	180	120	100						
	200	150	100	200	150	100	150	120	100	200	150	100	200	150	100	150	120	100						

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HW metallo duro non rivestito, componente principale (WC)
BL nitruro di boro cubico-cristallino con basso contenuto di nitruro di boro
BH nitruro di boro cubico-cristallino con alto contenuto di nitruro di boro
CN ceramica Si_3N_4
CM ceramica mista
HC_1 cermet rivestito
BC CBN rivestito
CC ceramica rivestito
CR ceramica, componente principale ossido di alluminio (Al_2O_3), rinforzata
DP diamante policristallino

SCANALATURE E GOLE



Scanalature e gole

Panoramica prodotti	**A382-A383**
Panoramica sistema	**A384-A385**
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Campo di applicazione dei gradi	**A394-A397**
Codice sistema – Inserti	**A398**
Inserti	**A399-A415**
Codice sistema – Inserti – Serie QC	**A416**
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Gli utensili speciali	**A513**

Scanalature e gole Panoramica prodotti

Inserti per scanalatura e troncatura

Bilaterale



ZT*D-MM	ZT*D-MG	ZT**-EG	ZP*D-MG	ZP*D-MG-R/L	
2-8	2,5-6	1-6,5	2,5-6	2,35-2,85	Larghezza
A399	A404	A407	A400	A401	Pagina



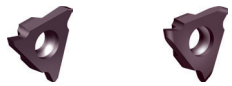
ZR*D-MG	ZR*D-EG	ZR*D-LH	ZILD-LC		
2,5-6	3-6	6-8	8		Larghezza
A410	A411	A414	A415		Pagina

Monolaterale



ZT*S-MM	ZT*S-MG	ZP*S-MG	ZP*S-MG-R/L	ZIMF-NM	ZIGQ-NM	
2,5-6	5-6	2,5-6	2,5-3	3-6	3-6	Larghezza
A406	A405	A402	A403	A412	A413	Pagina

A tre denti



QC**R/L	QC**R/L***R	
0,75-4,8	1-4	Larghezza
A417	A420	Pagina

Portautensili esterni



GQCR/L**

A453



QER/L**

A425



QE*SN**

A431



QE*SN-1**

A432



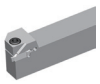
QE*SN30

A427



QE*SR/L

A430



QECDR/L

A428

Pagina



QFR/L**

A434



QFRR/LL**

A436



QF*DR/L

A439



QF*SRR/LL

A438



QFHSDR/L

A441



QX*DR/L

A429



QZS*

A433

Pagina



QER/L-DGC**

A446



QER/L-DGSC**

A448



QER/L-SC**

A449

Pagina

Barre alesatrici



Q*DR/L

A444



S*K-QCR/L**

A454

Pagina

Scanalature e gole Panoramica sistema

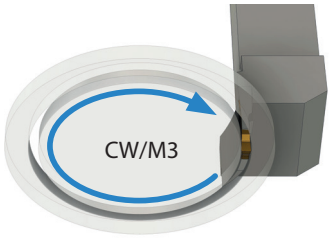
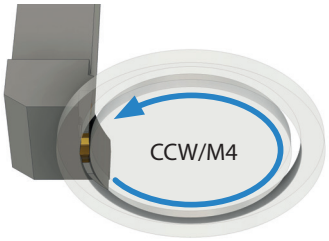
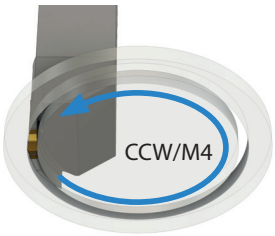
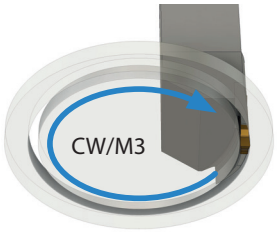
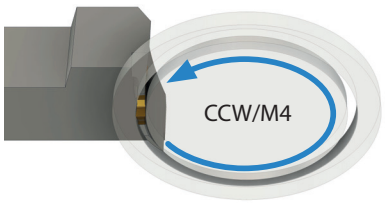
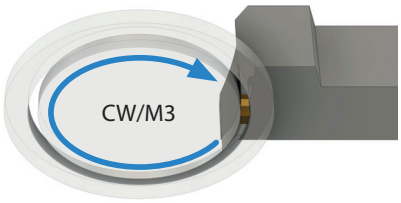
	Informazioni di sistema	Larghezza tagliente S	Profondità di scanalatura a_r max	Scanalatura	Gole	Scanalatura a tuffo	Pag.
Sistema QE	• Sistema per la **scanalatura e gole radiale** e la **scanalatura a tuffo** • Portautensile disponibile per la lavorazione interna ed esterna • Possibilità di refrigerazione mirata e trasmissione KSS diretta mediante il codolo • Inserti di taglio con uno e due taglienti • Inserti di taglio dedicati alla scanalatura di precisione	2,0–6,0 mm	fino a 30,0 mm	✔	✔	✔	■ A425 ● A444
Sistema QZ e QE	• Sistema per la **scanalatura e troncatura radiale** • Combinazione di portatagliente e portautensile • Sistema dotato di autobloccaggio • Inserti di taglio con un tagliente • Impiego flessibile	2,5–6,0 mm	fino a 60,0 mm	✔	✔	–	■ A431
Sistema QF	• Sistema per la **scanalatura assiale** e la **scanalatura a tuffo** • Area di prima scanalatura con Ø 48–400 mm • Bloccaggio tramite viti per la massima stabilità • Inserti di taglio con due taglienti • Portautensile disponibile in versione neutra e con angolazione di 90° • Sottostruttura destra per M3 • Sottostruttura sinistra per M4	2,0–6,0 mm	fino a 22,0 mm	✔	–	✔	■ A434
Sistema QX	• Sistema per la **retro-tornitura** • Portacodolo con angolo di inclinazione di 45° • Bloccaggio tramite viti per la massima stabilità • Per inserti di tornitura con due taglienti • Per lavorazioni di tornitura come ad esempio incavature e retro-torniture. Possibilità di impiego anche per operazioni di tornitura in copiatura	3,0–6,0 mm	fino a 4,0 mm	✔	–	✔	■ A429

■ Portautensili esterni
● Barre alesatrici

	Informazioni di sistema	Larghezza tagliente S	Profondità di scanalatura a_p max	Scanalatura	Gole	Scanalatura a tuffo	Pag.
Sistema C*X-Q	• Sistema speciale dedicato alla **lavorazione di ruote in alluminio** • Barra alesatrice con angolo di inclinazione di 15° • Bloccaggio tramite viti per la massima stabilità • Per inserti di scanalatura con due taglienti • Area di prima scanalatura da Ø 160 mm • Rompitrucioli speciali per la lavorazione dell'alluminio	6,0–8,0 mm	fino a 80,0 mm	–	–	✔	● A443
Sistema QE*S*N	• Sistema speciale dedicato a **materiali a difficile asportazione** • Rompitrucioli speciali per materiali a difficile asportazione • Bloccaggio tramite viti per la massima stabilità • Per inserti di scanalatura con un tagliente	3,0–6,0 mm	fino a 22,0 mm	✔	–	✔	■ A430
Sistema QC	• Sistema per la **scanalatura di precisione** • Portautensile disponibile per la lavorazione esterna e interna • Bloccaggio a vite tangenziale per un'elevata stabilità e rigidità • 3 taglienti per un'alta redditività • Inserti rettificati con precisione e con tolleranze elevate • Alta ripetibilità nella sostituzione del tagliente • Inserti con tagliente diritto o circolare • Particolarità della lavorazione interna: portautensile destro + inserto di taglio sinistro / portautensile sinistro + inserto di taglio destro	0,5–4,8 mm	fino a 5,0 mm	✔	–	–	■ A453 ● A454

■ Portautensili esterni
● Barre alesatrici

Versioni dei portautensili per la lavorazione assiale

Portautensile	Posizionamentoo dell'utensile
QFFD****L**-**H	
QFFD****R**-**H	
QFFD****LL**-**H	
QFFD****RR**-**H	
QFFD****L**-**L	
QFFD****R**-**L	

Note

Scanalature e gole Panoramica rompitrucioli

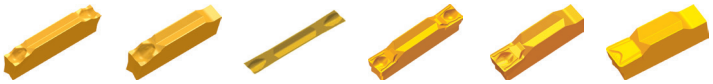
Scanalatura

MM P M K S




Rompitruciolo sinterizzato con tagliente diritto per la lavorazione generale di acciaio, acciaio inox, ghisa e materiali difficili da lavorare. Può essere utilizzato per scanalatura, tornitura e troncatura.

MG P M K S

Rompitruciolo sinterizzato per la lavorazione generale di acciaio, acciaio inox, ghisa e materiali difficili da lavorare. Può essere utilizzato per scanalatura, tornitura e troncatura.

MG P M K S




Rompitruciolo universale con profilo tondo per lavorazione generica di acciaio, acciaio inossidabile e ghise. Utilizzabile per gole e gole/tornitura.

EG M P S



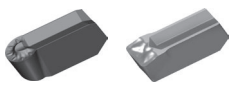

Rompitruciolo di precisione rettificato per lavorazioni di scanalatura e tornitura. Adatto per la lavorazione di acciaio inossidabile Classe E per una migliore ripetibilità.

EG M P S




Rompitruciolo di precisione rettificato con profilo tondo lavorazioni di scanalatura e tornitura. Adatto per la lavorazione di acciaio inossidabile Classe E per una migliore ripetibilità.

NM S

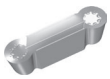



Rompitruciolo speciale per la lavorazione di materiali a difficile asportazione.

Scanalatura

LC **N**





Rompitruciolo rettificato per contornatura e tornitura di metalli non ferrosi.

LH **N**

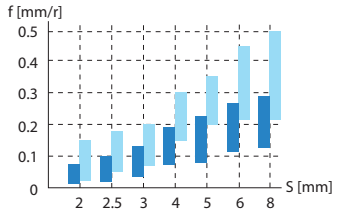
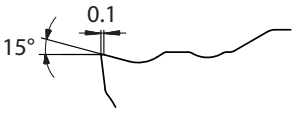
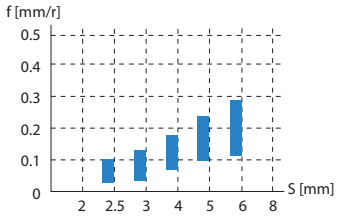
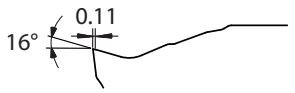
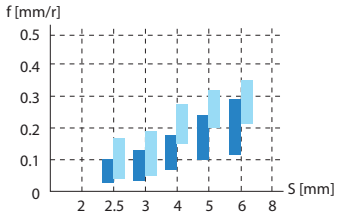
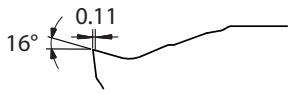
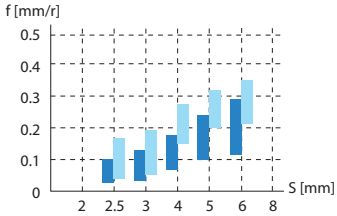
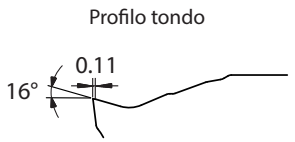
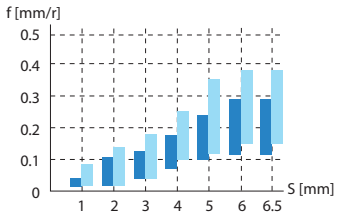
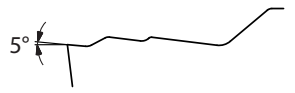
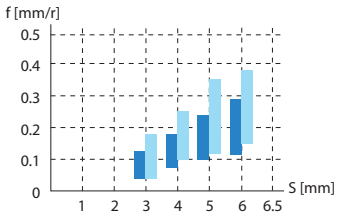
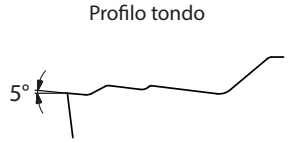
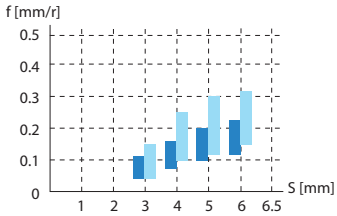
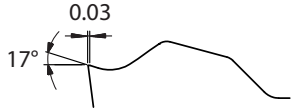




Rompitruciolo rettificato per contornatura e tornitura di metalli non ferrosi.

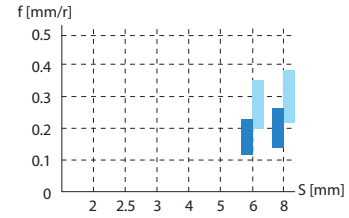
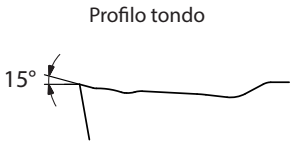
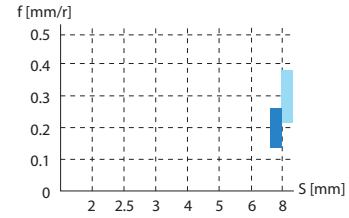
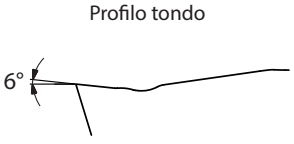
Scanalature e gole

Campo di applicazione dei rompitrucioli

Rompitruciolo	Applicazione	P	M	K	N	S	H	Avanzamento	Versione tagliente
ZT****-MM	Scanalature e gole ✔	✔	✔	✔		✔			
	Scanalatura a tuffo ✔								
ZP****-MG	Scanalature e gole ✔	✔	✔	✔		✔			
	Scanalatura a tuffo ▬								
ZT****-MG	Scanalature e gole ✔	✔	✔	✔		✔			
	Scanalatura a tuffo ✔								
ZR****-MG	Scanalature e gole ✔	✔	✔	✔		✔			
	Scanalatura a tuffo ✔								
ZT****-EG	Scanalature e gole ✔	✔	✔	✔		✔			
	Scanalatura a tuffo ✔								
ZR****-EG	Scanalature e gole ✔	✔	✔		✔	✔			
	Scanalatura a tuffo ✔								
ZI****-NM	Scanalature e gole ✔		✔		✔	✔			
	Scanalatura a tuffo ✔								

✔ Molto adatto ✔ Adatto

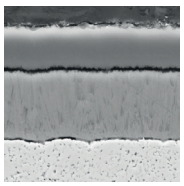
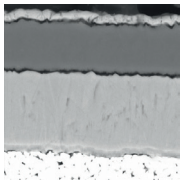
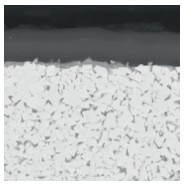
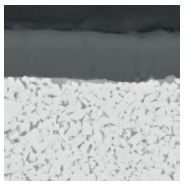
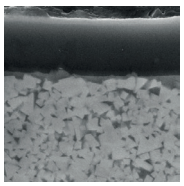
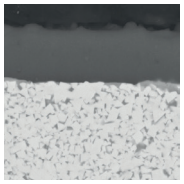
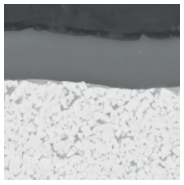
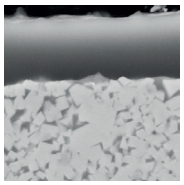
Scanalature e gole
Scanalatura a tuffo

Rompitruciolo	Applicazione	P	M	K	N	S	H	Avanzamento	Versione tagliente
ZR****-LH	Scanalature e gole ✔				✔	✔			
	Scanalatura a tuffo ✔								
ZI****-LC	Scanalature e gole ✔				✔	✔			
	Scanalatura a tuffo ✔								

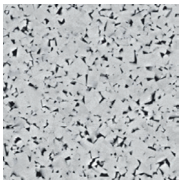
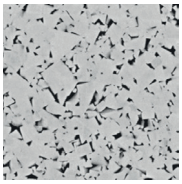
✔ Molto adatto ✔ Adatto

Scanalature e gole
Scanalatura a tuffo

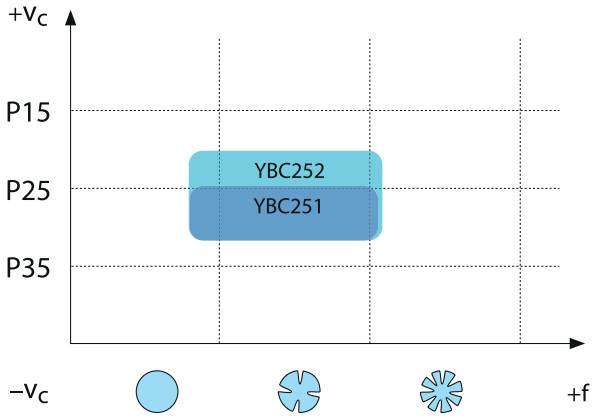
Scanalature e troncatura

Grado	ISO	Microstruttura	Descrizione gradi
YBC252	P20 - P35		Grado di metallo duro con rivestimento in CVD P20-P35 adatto per lavorazioni dall´asportazione media alla sgrossatura di acciaio e acciaio fuso. Resistenza all´usura e tenacità ottimizzata per un ampio campo di applicazioni.
YBC251	P20 - P35		Grado di metallo duro con rivestimento in CVD P20-P35 adatto per lavorazioni dall´asportazione media alla sgrossatura di acciaio e acciaio fuso per basse velocità di taglio.
YBG105	S05 - S20		Grado di metallo duro con rivestimento multistrato in PVD S05-S20 adatto per lavorazioni dalla finitura all´asportazione media di superleghe ma anche di acciai inossidabili. Ottima resistenza all´usura e alla temperatura in una vasta gamma di applicazioni
YBG102	S05 - S15		Grado di metallo duro con rivestimento in PVD S05-S15 per lavorazioni dalla finitura all´asportazione media di superleghe, acciaio inossidabile e alluminio. Ottima resistenza all´usura in una vasta gamma di applicazioni.
YB9320	P10 - P30 M10 - M25		Grado di metallo duro P10 - P30/M10 - M25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (scanalatura/fresatura). Resistenza all'usura ottimale grazie all'adesione migliore del rivestimento e alla maggiore resistenza termica in un ampio campo di applicazione.
YBG205	P10 - P30 M20 - M40 S15-S25		Grado di metallo duro P10 - P30/M20 - M40/S15 - S25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (fresatura). Resistenza all'usura e resistenza termica ottimali in un ampio campo di applicazione.
YBG202	P10 - P30 M10 - M25		Grado di metallo duro con rivestimento in PVD P10–P30/M10–M25 per lavorazioni dalla finitura all'asportazione media di acciai inossidabili e acciaio (fresatura). Ottima resistenza all´usura in una vasta gamma di applicazioni.
YBG302	P15 - P30 M25 - M40		Grado di metallo duro con rivestimento in PVD P15–P30/M25–M40 per lavorazioni dall'asportazione media fino alla sgrossatura di acciaio inossidabile e acciaio (fresatura). Ottima resistenza all´usura e tenacità.

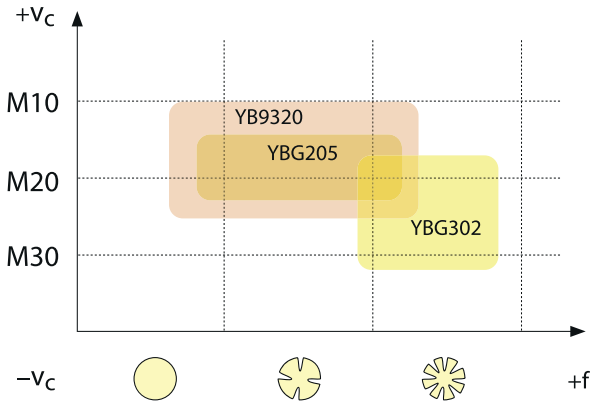
Scanalature e troncatura

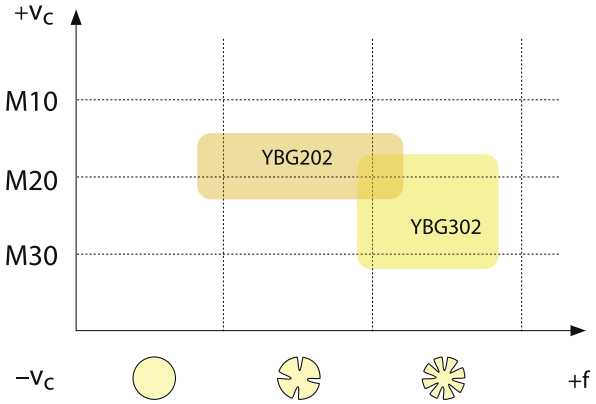
Grado	ISO	Microstruttura	Descrizione gradi
YD101	K05 - K20 N05 - N20		Substrato in metallo duro non rivestito K05–K20/N05–N20 per lavorazioni dalla finitura all´asportazione media di alluminio e altri materiali.
YD201	K10 - K30 N10 - N30		Substrato in metallo duro non rivestito K10–K30/N10–N30 per l´asportazione media di alluminio e altri materiali.

Gradi di metallo duro con rivestimento in CVD per acciaio

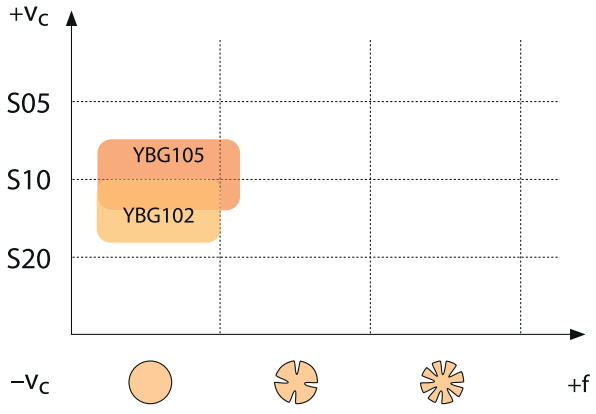


Gradi di metallo duro con rivestimento in PVD per acciaio inossidabile

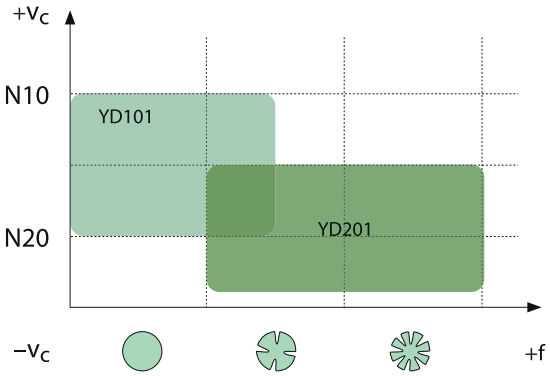




Gradi di metallo duro con rivestimento in PVD per superleghe



Gradi di metallo duro per metalli non ferrosi



Campi di applicazione dei gradi – scanalature e gole

	ISO	HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	Ceramic	HW	CBN	PCD
P	P01								
	P10	YBC251, YBC252							
	P20								
	P30								
	P40								
M	M01								
	M10		YBG202, YBG205, YB9320, YBG302						
	M20								
	M30								
	M40								
K	K01								
	K10								
	K20								
	K30								
N	N01								
	N10						YD101, YD102		
	N20								
	N30								
S	S01								
	S10		YBG102, YBG105						
	S20								
	S30								
H	H01								
	H10								
	H20								
	H30								

P	Acciaio	N	Metalli non ferrosi
M	Acciaio inossidabile	S	Materiali a difficile asportazione
K	Ghisa	H	Materiali ad elevata durezza

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Metallo duro non rivestito

Note

Scanalature e gole Codice sistema – inserti

ZP	G	D	04	04	–	M	G
1	2	3	4	5		6	7

Applicazione

Code	Descrizione
ZP	Troncatura
ZT	Scanalatura e tornitura
ZR	Inserti con raggio

1

Dim. sede inserto [mm]

Larghezza tagliente

Code	Descrizione
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

2

Numero taglienti

Code	Descrizione
S	Singolo
D	Doppio

3

Spessore dell'inserto S [mm]



Code	S
02	2,0
025	2,5
03	3,0
04	4,0
05	5,0
06	6,0
08	8,0

4

Raggio di punta r [mm]



Code	r
02	0,2
03	0,3
04	0,4
08	0,8

5

Classe di tolleranza [mm]

Code	Descrizione
M	±0,13
E	±0,025

6

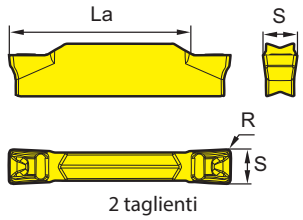
Rompitruciolo

Code	Descrizione
G	Rompitruciolo generico
F	Rompitruciolo speciale
M	Tagliente diritto

7

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

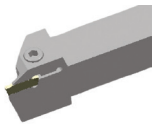
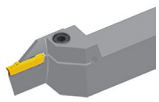
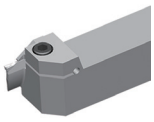
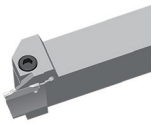
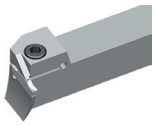
Inserti per scanalatura e troncatura

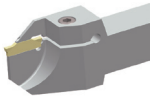
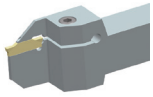
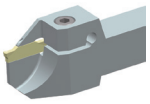
ZT** Inserti scanalatura (bilaterale)							HC[1] (CVD)				HC[1] (PVD)						HW	
 2 taglienti						P												
						M												
						K												
						N												
						S												
						H												
	ISO		R±0.1	La *max*	S	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTBD02002-MM**		0,2	13	2	0,02-0,07							●	●		○		
	ZTED02503-MM		0,3	17	2,5	0,03-0,1							●					
	ZTFD0303-MM		0,3	17	3	0,04-0,13							●					
	ZTGD0404-MM		0,4	22	4	0,06-0,18							●					
	ZTHD0504-MM		0,4	22	5	0,08-0,23							●					
	ZTKD0608-MM		0,8	22	6	0,12-0,27							●					
	ZTLD0808-MM		0,8	28	8	0,13-0,29	○						●	○				

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

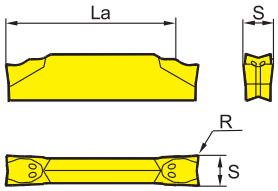
Utensile

QE*D*R/L	QF*D*R/L-H	QF*D*LL-H	QF*D*RR-H	QF*D*R/L-L	*-QBDR/L	C***-Q*DR/L
						
A425	A434	A436	A436	A439	A444	A444

QE*D*R/L-DGC	QE*D*R/L-DGSC	QE*D*R/L-SC
		
A446	A448	A449

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



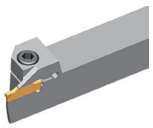
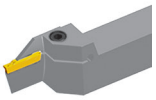
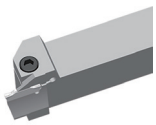
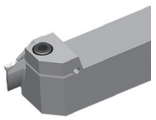
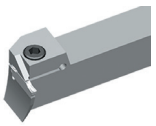
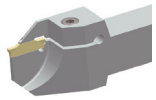
2 taglienti

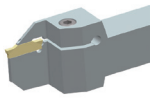
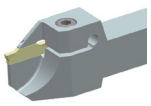
Inserti scanalatura (bilaterale)							HC[1] (CVD)				HC[1] (PVD)						HW	
						P												
						M												
						K												
						N												
						S												
						H												
	ISO	R±0.1	La *max*	S±0.10	f		YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZPED02502-MG**	0,2	17	2,5	0,03-0,1			●					●		○	●		
	ZPFD0302-MG	0,2	17	3	0,04-0,13		●	●					●		○	●		
	ZPGD0402-MG	0,2	22	4	0,07-0,18			●					●			●		○
	ZPHD0503-MG	0,3	22	5	0,1-0,24										○	●		
	ZPKD0604-MG	0,4	22	6	0,12-0,29		○								○	●		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile

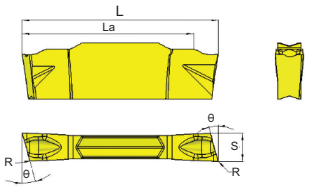
QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C***-Q*DR/L	QE*D*R/L-DGC
						
A425	A434	A436	A436	A439	A444	A446

QE*D*R/L-DGSC	QE*D*R/L-SC
	
A448	A449

Codice sistema A398 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

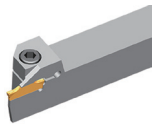
- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

ZT** Inserti scanalatura (bilaterale)									HC¹ (CVD)		HC¹ (PVD)						HW	
 Versione destra								P	◌	◌			◌	◌	◌	◌		
								M	◌	◌			◌	◌	◌	◌		
								K										
								N									●	◌
								S			●	●	◌	◌	◌			
								H										
	ISO		La *max*	L	S	θ	R	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZPED02502-MG-6L**		17	20	2,35	6°	0,2	0,03-0,08								●		
	ZPED02502-MG-6R		17	20	2,35	6°	0,2	0,03-0,08					●			●		
	ZPED02502-MG-15L		17	20	2,35	15°	0,2	0,03-0,05								○		
	ZPED02502-MG-15R		17	20	2,35	15°	0,2	0,03-0,05							○	○		
	ZPFD0302-MG-6L		17	20	2,85	6°	0,2	0,04-0,1					●		○	●		
	ZPFD0302-MG-6R		17	20	2,85	6°	0,2	0,04-0,1					●		○	○		
	ZPFD0302-MG-15L		17	20	2,85	15°	0,2	0,04-0,08							○	○		
	ZPFD0302-MG-15R		17	20	2,85	15°	0,3	0,04-0,08					●			○		

● In magazzino ○ Su richiesta

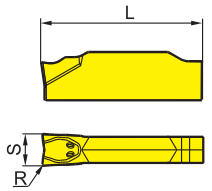
HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile
QE*D*R/L

A425

Codice sistema A398 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



1 tagliente

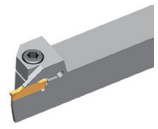
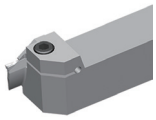
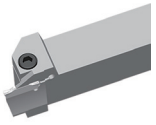
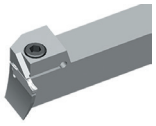
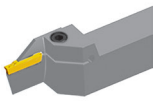
Inserti scanalatura (monolaterale)					HC¹ (CVD)						HC¹ (PVD)						HW	
					P													
					M													
					K													
					N													
					S													
					H													
ISO		R±0.1	S±0.10	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	ZPES02502-MG	0,2	2,5	0,03-0,1									○		○	●		
	ZPFS0302-MG	0,2	3	0,04-0,13		●							●			●		
	ZPGS0402-MG	0,2	4	0,07-0,18		○									○	●		○
	ZPGS0402-MG-25	0,2	4	0,07-0,18									●					
	ZPHS0503-MG	0,3	5	0,1-0,24											○	●		
	ZPHS0503-MG-25	0,3	5	0,1-0,24									●					
	ZPKS0604-MG	0,4	6	0,12-0,29											○	●		
	ZPKS0604-MG-25	0,4	6	0,12-0,29									●					

● In magazzino ○ Su richiesta

Inserti a tagliente unico esclusivamente per l´impiego su lame per gole

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile

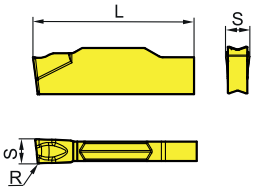
QE*S*R/L	QZ**+QE**	QF*S*LL-H	QF*S*RR-H	QF*S*R/L-L	QF*S*R/L-H
					
A427	A432	A438	A438	A441	A442

Codice sistema A398 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

Inserti scanalatura (monolaterale)



1 tagliente

	HC¹ (CVD)				HC¹ (PVD)						HW	
P	❁	❁					❁	❁	❁	❁		
M							❁	❁	❁	❁		
K												
N											○	❁
S					○	○	❁	❁	❁			
H												

	ISO	R±0.1	L	S±0.10	θ	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZPES02502-MG-6L**	0,2	19,9	2,5	6°	0,03-0,08					●					
	ZPES02502-MG-6R	0,2	19,9	2,5	6°	0,03-0,08					●					
	ZPFS0302-MG-6L	0,2	19,9	3	6°	0,04-0,1					●					
	ZPFS0302-MG-6R	0,2	19,9	3	6°	0,04-0,1					●					

● In magazzino ○ Su richiesta

Inserti a tagliente unico esclusivamente per l´impiego su lame per gole

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

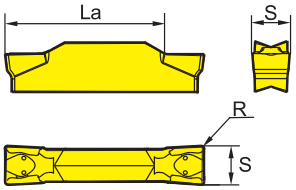
Utensile
QZ+QE****

A432

Codice sistema A398 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



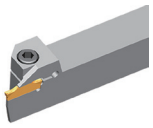
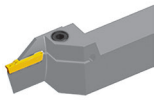
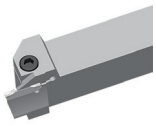
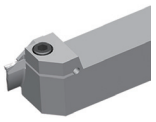
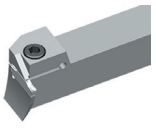
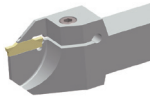
2 taglienti

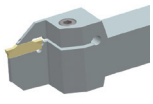
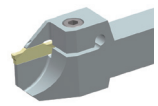
Inserti scanalatura (bilaterale)							HC¹ (CVD)						HC¹ (PVD)						HW	
						P														
						M														
						K														
						N														
						S														
						H														
	ISO	R±0.1	La *max*	S±0.10	f		YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTED02503-MG**		17	2,5	0,03-0,11												○	●		
	ZTFD0303-MG		17	3	0,04-0,14									○		●	●	●		
	ZTGD0402-MG		22	4	0,07-0,2															
	ZTGD0404-MG		22	4	0,07-0,2		●									●	○	●	●	
	ZTHD0504-MG		22	5	0,10-0,25											●	○	●		
	ZTKD0604-MG		22	6	0,13-0,30										○	●				
	ZTKD0608-MG		22	6	0,13-0,30									○	●		○	●		

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile

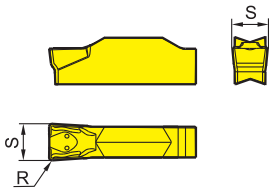
QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C***-Q*DR/L	QE*D*R/L-DGC
						
A425	A434	A436	A436	A439	A444	A446

QE*D*R/L-DGSC	QE*D*R/L-SC
	
A448	A449

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Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



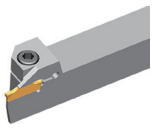
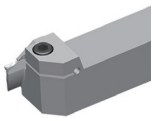
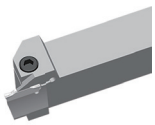
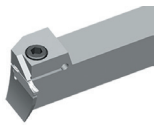
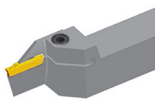
1 tagliente

Inserti scanalatura (monolaterale)						HC[1] (CVD)						HC[1] (PVD)						HW	
					P														
					M														
					K														
					N													●	●
					S							●	●	●	●	●			
					H														
	ISO	R±0.1	S±0.10	f		YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTHS0504-MG**	0,4	5	0,10-0,25										○		○	●		
	**ZTKS0608-MG**	0,8	6	0,13-0,30												○	●		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

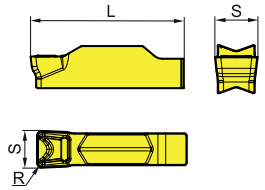
Utensile

QE*S*R/L	QZ**+QE**	QF*S*LL-H	QF*S*RR-H	QF*S*R/L-L	QF*S*R/L-H
					
A427	A431	A438	A438	A441	A442

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Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



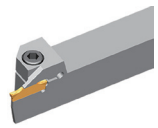
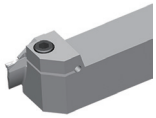
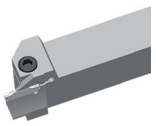
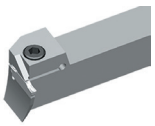
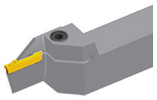
1 tagliente

Inserti scanalatura (monolaterale)							HC[1] (CVD)				HC[1] (PVD)						HW	
						P	❁	❁				❁	❁	❁	❁			
						M						❁	❁	❁	❁			
						K												
						N											●	❁
						S					●	●	❁	❁	❁			
						H												
	ISO		R±0.1	L	S±0.10	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTES02503-MM**		0,3	19,9	2,5	0,03-0,1							●					
	ZTFS0303-MM		0,3	19,9	3	0,04-0,13							●					
	ZTGS0404-MM-25		0,4	24,6	4	0,06-0,18							●					
	ZTHS0504-MM-25		0,4	24,6	5	0,08-0,23							●					
	ZTKS0608-MM-25		0,8	24,6	6	0,12-0,27							●					

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

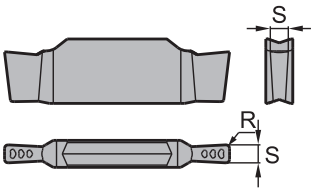
Utensile

QE*S*R/L	QZ**+QE**	QF*S*LL-H	QF*S*RR-H	QF*S*R/L-L	QF*S*R/L-H
					
A427	A432	A438	A438	A441	A442

Codice sistema A398 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

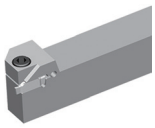
- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

Inserti scanalatura (bilaterale)						HC[1] (CVD)				HC[1] (PVD)						HW	
					P	⊛	⊛			⊛	⊛	⊛	⊛				
					M	⊛	⊛			⊛	⊛	⊛	⊛				
					K												
					N											●	⊛
					S					●	●	⊛	⊛	⊛			
					H												
	ISO	La *max*	S±0.025	R±0.05	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTCD01002-EG**	2,6	1	0,2	0,02-0,04										○		
	ZTCD011502-EG	2,6	1,15	0,2	0,02-0,04										○		
	ZTCD01202-EG	2,6	1,2	0,2	0,02-0,04										○		
	ZTCD013802-EG	2,6	1,38	0,2	0,02-0,04										○		
	ZTCD01402-EG	2,6	1,4	0,2	0,02-0,04										○		
	ZTCD01500-EG	2,6	1,5	0	0,02-0,04										○		
	ZTCD01502-EG	2,6	1,5	0,2	0,02-0,04										○		
	ZTCD01503-EG	2,6	1,5	0,3	0,02-0,04									○			
	ZTCD015503-EG	2,6	1,55	0,3	0,02-0,04										○		
	ZTCD01602-EG	2,6	1,6	0,2	0,02-0,04										○		
	ZTCD01702-EG	3,4	1,7	0,2	0,02-0,08										○		
	ZTCD017503-EG	3,4	1,75	0,3	0,02-0,08										○		
	ZTCD017602-EG	3,4	1,76	0,2	0,02-0,08									○			
	ZTCD01802-EG	3,4	1,8	0,2	0,02-0,08										○		
	ZTCD018502-EG	3,4	1,85	0,2	0,02-0,08										○		
	ZTCD02000-EG	3,4	2	0	0,02-0,08										○		
	ZTCD02002-EG	3,4	2	0,2	0,02-0,08										●		
	ZTCD020503-EG	3,4	2,05	0,3	0,02-0,08										○		
	ZTCD021502-EG	3,4	2,15	0,2	0,02-0,08										○		
	ZTCD02302-EG	3,4	2,3	0,2	0,03-0,11										○		
	ZTCD02303-EG	3,4	2,3	0,3	0,03-0,11										○		
	ZTCD02402-EG	3,4	2,4	0,2	0,03-0,11										○		

● In magazzino ○ Su richiesta

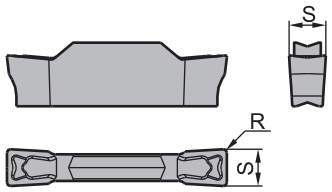
HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile
QECD

A428

Codice sistema A398 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



Inserti scanalatura (bilaterale)						HC[1] (CVD)							HC[1] (PVD)							HW		
					P																	
					M																	
					K																	
					N																	
					S																	
					H																	
ISO		La *max*	S±0.025	R±0.05	f	YBC252	YBC251						YBG105	YBG102	YB9320	YBG205	YBG202	YBG302		YD101	YD201	
	ZTED02502-EG	17	2,5	0,2	0,03-0,11													○				
	ZTED026502-EG	17	2,65	0,2	0,03-0,11													○				
	ZTED02702-EG	17	2,7	0,2	0,03-0,11													○				
	ZTED02703-EG	17	2,7	0,3	0,03-0,11													○				
	ZTED02802-EG	17	2,8	0,2	0,04-0,13													○				
	ZTED02803-EG	17	2,8	0,3	0,04-0,13													○				
	ZTED02804-EG	17	2,8	0,4	0,04-0,13													○				
	ZTED02903-EG	17	2,9	0,3	0,04-0,13													○				
	ZTFD03001-EG	17	3	0,1	0,04-0,13												○					
	ZTFD03002-EG	17	3	0,2	0,04-0,13													○				
	ZTFD03003-EG	17	3	0,3	0,04-0,13													○				
	ZTFD03203-EG	17	3,2	0,3	0,04-0,13													○				
	ZTFD0325024-EG	17	3,25	2,4	0,04-0,13													○				
	ZTFD03302-EG	17	3,3	0,2	0,04-0,13												○	○				
	ZTFD03303-EG	17	3,3	0,3	0,04-0,13													○				
	ZTFD03403-EG	17	3,4	0,3	0,04-0,13													○				
	**ZTFD035-EG**	17	3,5	0	0,04-0,13													○				
	ZTGD039602-EG	22	3,96	0,2	0,07-0,18													○				
	ZTGD04002-EG	22	4	0,2	0,07-0,18													○				
	ZTGD04003-EG	22	4	0,3	0,07-0,18													○				
	ZTGD04004-EG	22	4	0,4	0,07-0,18													○				
	ZTGD04008-EG	22	4	0,8	0,07-0,18												○					
	ZTGD04503-EG	22	4,5	0,3	0,07-0,18													○				
	ZTGD04505-EG	22	4,5	0,5	0,07-0,18													○				
	ZTGD04805-EG	22	4,8	0,5	0,1-0,24													○				
	ZTHD05003-EG	22	5	0,3	0,1-0,24													○				
	ZTHD05004-EG	22	5	0,4	0,1-0,24											○						
	ZTHD05008-EG	22	5	0,8	0,1-0,24												○					
	ZTHD05012-EG	22	5	0,12	0,1-0,24												○					
	ZTHD05202-EG	22	5,2	0,2	0,1-0,24													○				
	ZTHD052503-EG	22	5,25	0,3	0,1-0,24													○				
	ZTHD05508-EG	22	5,5	0,8	0,1-0,24													○				

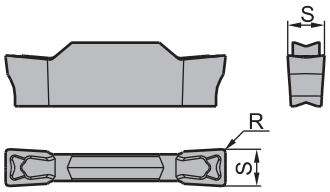
● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Codice sistema > A398 Scelta gradi > A394 Informazioni tecniche > A501 Dati di taglio > A456

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

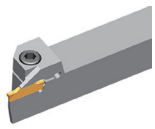
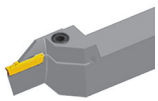
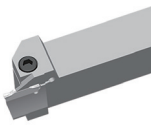
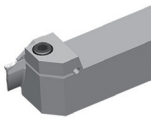
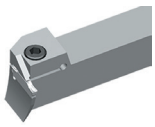
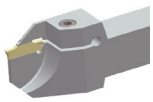


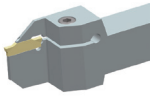
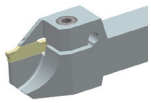
Inserti scanalatura (bilaterale)						HC[1] (CVD)		HC[1] (PVD)						HW	
					P										
					M										
					K										
					N									●	○
					S			●	●	○	○	○			
					H										
	ISO	La *max*	S±0.025	R±0.05	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZTKD06004-EG**	22	6	0,4	0,12-0,29								○		
	ZTKD06504-EG	22	6,5	0,4	0,12-0,29								○		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile

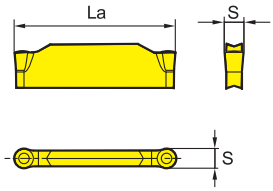
QE*D*R/L	QF*D*R/L-H	QF*D*RR-H	QF*D*LL-H	QF*D*R/L-L	C***-Q*DR/L	QE*D*R/L-DGC
						
A425	A434	A436	A436	A439	A444	A446

QE*D*R/L-DGSC	QE*D*R/L-SC
	
A448	A449

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Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

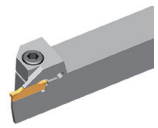
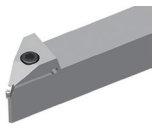
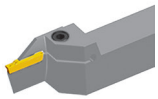
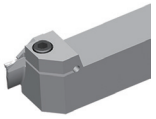
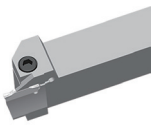
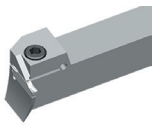
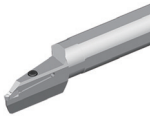


Inserti scanalatura (bilaterale)					HC[1] (CVD)						HC[1] (PVD)						HW	
				P														
				M														
				K														
				N													●	●
				S							●	●	●	●	●			
				H														
ISO		La *max*	S±0.10	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	ZRED025-MG	17,5	2,5	0,03-0,11											○	●		
	ZRFD03-MG	17	3	0,04-0,14									●			●		
	ZRGD04-MG	21	4	0,07-0,2		○								●	○	●		
	ZRHD05-MG	20	5	0,1-0,24											○	●	○	
	ZRKD06-MG	19	6	0,12-0,29											○	●		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile

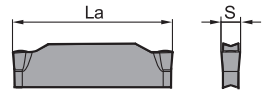
QE*D*R/L	QX*D*	QF*D*R/L-H	QF*D*LL-H	QF*D*RR-H	QF*D*R/L-L	C*X-Q*DR/L
						
A425	A429	A434	A436	A436	A439	A443

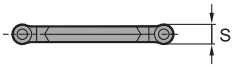
C***-Q*DR/L

A444

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura





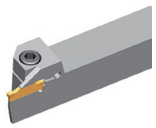
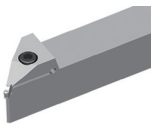
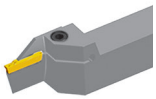
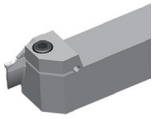
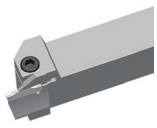
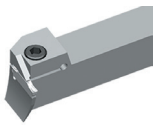
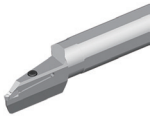
2 taglienti

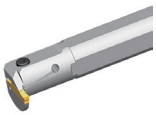
Inserti scanalatura (bilaterale)						HC[1] (CVD)							HC[1] (PVD)							HW		
					P																	
					M																	
					K																	
					N																	
					S																	
					H																	
ISO		La *max*	S±0.025	f		YBC252	YBC251						YBG105	YBG102	YB9320	YBG205	YBG202	YBG302		YD101	YD201	
	ZRFD03-EG	17	3	0,04-0,14											●			○				
	ZRGD04-EG	21	4	0,07-0,2											●							
	ZRHD05-EG	20	5	0,1-0,24											●			○				
	ZRKD06-EG	19	6	0,12-0,29											○							

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

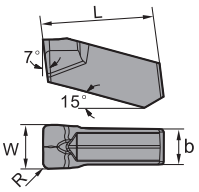
Utensile

QE*D*R/L	QX*D*	QF*D*R/L-H	QF*D*LL-H	QF*D*RR-H	QF*D*R/L-L	C*X-Q*DR/L
						
A425	A429	A434	A436	A436	A439	A443

C***-Q*DR/L

A444

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

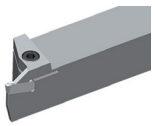
Inserti per scanalatura e troncatura



Inserti scanalatura (monolaterale)							HC[1] (CVD)						HC[1] (PVD)						HW	
						P	⊛	⊛						⊛	⊛	⊛	⊛				
						M								⊛	⊛	⊛	⊛				
						K															
						N													●	⊛
						S							●	●	⊛	⊛	⊛				
						H															
	ISO	R±0.1	W±0.05	b	L	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZIMF304N-NM**	0,4	3	2,4	15,3	0,04-0,11							●							
	ZIMF406N-NM	0,6	4	3,2	15,3	0,07-0,16							●	○						
	ZIMF506N-NM	0,6	5	4	15,3	0,1-0,2							●	○						
	ZIMF608N-NM	0,8	6	4	15,3	0,12-0,23							●	○						

● In magazzino ○ Su richiesta

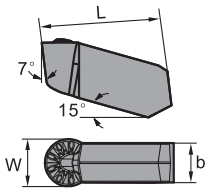
HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile
QE*S*R/L-N

A430

Codice sistema A398 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

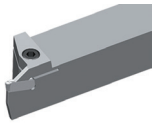
Inserti per scanalatura e troncatura



Inserti scanalatura (monolaterale)							HC[1] (CVD)				HC[1] (PVD)						HW	
						P												
						M												
						K												
						N												
						S												
						H												
	ISO	W±0.05	b	L	f		YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZIGQ3N-NM**	3	2,4	15,3	0,04-0,11						●	○						
	ZIGQ4N-NM	4	3,2	15,3	0,07-0,16						●	○						
	ZIGQ5N-NM	5	4	15,3	0,1-0,2						●	○						
	ZIGQ6N-NM	6	5	15,3	0,13-0,24						●							

● In magazzino ○ Su richiesta

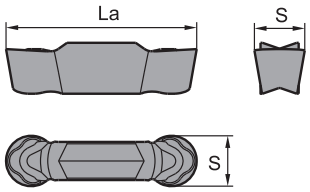
HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile
QE*S*R/L-N

A430

Codice sistema A398 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

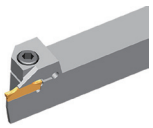
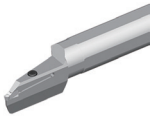
Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

Inserti scanalatura (bilaterale)					HC[1] (CVD)						HC[1] (PVD)						HW	
				P	⊛	⊛					⊛	⊛	⊛	⊛				
				M							⊛	⊛	⊛	⊛				
				K														
				N													●	⊛
				S							●	●	⊛	⊛	⊛			
				H														
ISO		La *max*	S±0.025	f	YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZRKD06-LH**	19	6	0,12-0,23													○	
	ZRLD08-LH	22	8	0,14-0,26													○	

● In magazzino ○ Su richiesta

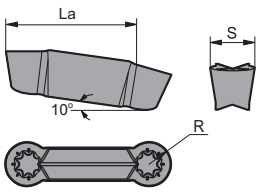
HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile		
QE*D*R/L	**C*X-Q*DR/L**	**C***-Q*DR/L**
		
A425	A443	A444

Codice sistema A398 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

● Buone condizioni di lavorazione
◈ Condizioni di lavorazione normali
✱ Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



Inserti scanalatura (bilaterale)					HC¹ (CVD)				HC¹ (PVD)						HW	
				P	◈	◈				◈	◈	◈	✱			
				M						◈	◈	◈	✱			
				K												
				N											●	◈
				S					●	●	◈	◈	◈			
				H												
ISO		La *max*	S±0.025	f	YBC252	YBC251			YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**ZILD08-LC**	22	8	0,14-0,26											○	○

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

Codice sistema > A398 | Scelta gradi > A394 | Informazioni tecniche > A501 | Dati di taglio > A456

Scanalature e gole

Codice sistema – inserti – serie QC

Inserti triangolari per scanalatura con tagliente diritto

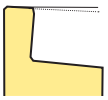
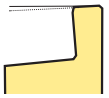
QC	22	R	300	–	R	03
1	2	3	4		5	6

Serie — 1

Lunghezza tagliente [mm] — 2

Code	I.C
11	6,35
16	9,525
22	12,70

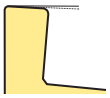
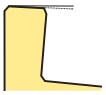
Direzione di taglio — 3

Code	Descrizione
R	 Destra
L	 Sinistra

Larghezza scanalatura [mm] — 4

Code	Descrizione
050	0,50
100	1,00
…	…
480	4,80

Forma tagliente — 5

Code	Descrizione
R	 Raggio
C	 Smusso

Raggio / Smusso [mm] — 6

Code	Descrizione
005	0,05
02	0,2
03	0,3
04	0,4

Inserti triangolari per scanalatura con tagliente tondo

QC	22	R	300	–	R
1	2	3	4		5

Serie — 1

Lunghezza tagliente [mm] — 2

Code	I.C
11	6,35
16	9,525
22	12,70

Direzione di taglio — 3

Code	Descrizione
R	 Destra
L	 Sinistra

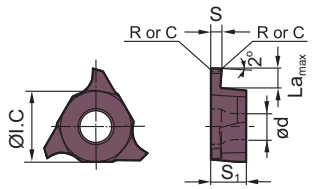
Larghezza scanalatura [mm] — 4

Code	Descrizione
050	0,50
100	1,00
…	…
480	4,80

Tondo — 5

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



Versione destra

QC ** Inserti - Tornitura/Fresatura									HC¹ (CVD)		HC¹ (PVD)						HW	
									YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
P									◉	◉			◉	◉	◉	◉		
M													◉	◉	◉	◉		
K																		
N																	●	◉
S											●	●	◉	◉	◉			
H																		
	ISO		La *max*	S±0.025	R/C	ØI.C	S1	ød	f									
	QC11R120-R02		1,5	1,2	0,2	6,35	3,18	2,8	0,02-0,03					●				
	QC11L120-R02		1,5	1,2	0,2	6,35	3,18	2,8	0,02-0,03					●				
	QC11R125-R02		1,5	1,25	0,2	6,35	3,18	2,8	0,02-0,03					●				
	QC11L125-R02		1,5	1,25	0,2	6,35	3,18	2,8	0,02-0,03					●				
	QC11R145-R02		1,5	1,45	0,2	6,35	3,18	2,8	0,02-0,05					●				
	QC11L145-R02		1,5	1,45	0,2	6,35	3,18	2,8	0,02-0,05					●				
	QC11R150-R02		1,5	1,5	0,2	6,35	3,18	2,8	0,02-0,05					●				
	QC11L150-R02		1,5	1,5	0,2	6,35	3,18	2,8	0,02-0,05					●				
	QC11R200-R02		2	2	0,2	6,35	3,18	2,8	0,02-0,06					●				
	QC11L200-R02		2	2	0,2	6,35	3,18	2,8	0,02-0,06					●				
	QC11R225-R02		2	2,25	0,2	6,35	3,18	2,8	0,02-0,06					○				
	QC11L225-R02		2	2,25	0,2	6,35	3,18	2,8	0,02-0,06					○				
	QC16R075-R01		2	0,75	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16L075-R01		2	0,75	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16R080-R01		2	0,8	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16R095-R01		2	0,95	0,1	9,525	3,18	4,4	0,02-0,03					○				
	**QC16L095-R01**		2	0,95	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16L100-R01		2	1	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16R110-R01		2	1,1	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16L110-R01		2	1,1	0,1	9,525	3,18	4,4	0,02-0,03					●	○			
	QC16R115-R04		2	1,15	0,4	9,525	3,18	4,4	0,02-0,03					○				
	QC16R120-R01		2	1,2	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16L120-R01		2	1,2	0,1	9,525	3,18	4,4	0,02-0,03					○				
	QC16R125-R02		2	1,25	0,2	9,525	3,18	4,4	0,02-0,03					○				
	QC16L125-R02		2	1,25	0,2	9,525	3,18	4,4	0,02-0,03					●				
	QC16R130-R02		2	1,3	0,2	9,525	3,18	4,4	0,02-0,06					○				
	QC16L130-R02		2	1,3	0,2	9,525	3,18	4,4	0,02-0,06					○				
	QC16R140-R02		2	1,4	0,2	9,525	3,18	4,4	0,02-0,06					○				
	QC16R145-R02		2	1,45	0,2	9,525	3,18	4,4	0,02-0,06					●				
	QC16L145-R02		2	1,45	0,2	9,525	3,18	4,4	0,02-0,06					●				
	QC16R150-R02		2	1,5	0,2	9,525	3,18	4,4	0,02-0,06					●				
	QC16L150-R02		2	1,5	0,2	9,525	3,18	4,4	0,02-0,06					○				
	QC16R160-R02		2	1,6	0,2	9,525	3,18	4,4	0,02-0,06					●				
	QC16L160-R02		2	1,6	0,2	9,525	3,18	4,4	0,02-0,06					●				

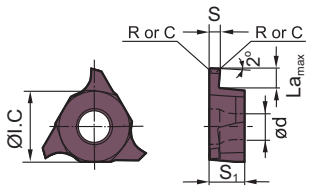
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

Codice sistema A416 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



Versione destra

QC ** Inserti - Tornitura/Fresatura									HC[1] (CVD)						HC[1] (PVD)						HW	
									YBC252	YBC251					YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
P									◉	◉							◉	◉	◉	◉		
M																	◉	◉	◉	◉		
K																						
N																					●	◉
S															●	●	◉	◉	◉			
H																						
	ISO		La *max*	S±0.025	R/C	ØI.C	S1	ød	f													
	QC16R165-R02		2	1,65	0,2	9,525	3,18	4,4	0,02-0,06									○				
	QC16L165-R02		2	1,65	0,2	9,525	3,18	4,4	0,02-0,06									○				
	QC16R170-R02		2	1,7	0,2	9,525	3,18	4,4	0,02-0,06									○				
	QC16L170-R02		2	1,7	0,2	9,525	3,18	4,4	0,02-0,06									○				
	QC16R175-R02		2	1,75	0,2	9,525	3,18	4,4	0,02-0,07									●				
	QC16L175-R02		2	1,75	0,2	9,525	3,18	4,4	0,02-0,06									○				
	QC16R180-R02		2	1,8	0,2	9,525	3,18	4,4	0,02-0,07									○				
	QC16R185-R02		2,5	1,85	0,2	9,525	3,18	4,4	0,02-0,07									●				
	QC16L185-R02		2,5	1,85	0,2	9,525	3,18	4,4	0,02-0,07									○				
	QC16R200-R02		2,5	2	0,2	9,525	3,18	4,4	0,02-0,07									●				
	QC16L200-R02		2,5	2	0,2	9,525	3,18	4,4	0,02-0,07									●				
	QC16L210-R02		2,5	2,1	0,2	9,525	3,18	4,4	0,02-0,07									○				
	QC16L210-R05		2,5	2,1	0,5	9,525	3,18	4,4	0,02-0,07									○				
	QC16R220-R02		2,5	2,2	0,2	9,525	3,18	4,4	0,02-0,07									○				
	QC16L220-R02		2,5	2,2	0,2	9,525	3,18	4,4	0,02-0,07									○				
	**QC16R250-R02**		2,5	2,5	0,2	9,525	3,18	4,4	0,02-0,08									●	○			
	QC16L250-R02		2,5	2,5	0,2	9,525	3,18	4,4	0,02-0,08									●				
	QC16R300-R02		3	3	0,2	9,525	3,18	4,4	0,03-0,11									●				
	QC16L300-R02		3	3	0,2	9,525	3,18	4,4	0,03-0,11									●				
	QC22L100-R02		2	1	0,2	12,7	4,76	5,5	0,02-0,03									○				
	QC22R125-R02		2	1,25	0,2	12,7	4,76	5,5	0,02-0,03									●				
	QC22L125-R02		2	1,25	0,2	12,7	4,76	5,5	0,02-0,03									○				
	QC22R145-R02		2	1,45	0,2	12,7	4,76	5,5	0,02-0,06									○				
	QC22L145-R02		2	1,45	0,2	12,7	4,76	5,5	0,02-0,06									○				
	QC22R150-R02		3,5	1,5	0,2	12,7	4,76	5,5	0,02-0,06									○				
	QC22L150-R02		3,5	1,5	0,2	12,7	4,76	5,5	0,02-0,06									○				
	QC22R175-R02		3,5	1,75	0,2	12,7	4,76	5,5	0,02-0,06									●				
	QC22L175-R02		3,5	1,75	0,2	12,7	4,76	5,5	0,02-0,06									○				
	QC22R185-R02		3,5	1,85	0,2	12,7	4,76	5,5	0,02-0,07									●				
	QC22L185-R02		3,5	1,85	0,2	12,7	4,76	5,5	0,02-0,07									○				
	QC22R195-R02		3,5	1,95	0,2	12,7	4,76	5,5	0,02-0,07									○				
	QC22R200-R02		3,5	2	0,2	12,7	4,76	5,5	0,02-0,07									○				
	QC22L200-R02		3,5	2	0,2	12,7	4,76	5,5	0,02-0,07									○				
	QC22R225-R02		3,5	2,25	0,2	12,7	4,76	5,5	0,02-0,07									○				

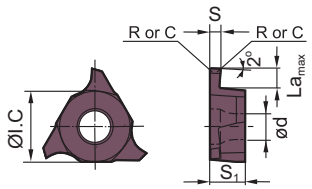
● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Codice sistema > A416 Scelta gradi > A394 Informazioni tecniche > A501 Dati di taglio > A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura



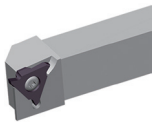
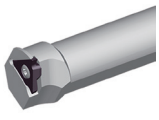
Versione destra

QC ** Inserti - Tornitura/Fresatura									HC¹ (CVD)		HC¹ (PVD)						HW	
	ISO	La *max*	S±0.025	R/C	ØI.C	S1	ød	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
P									◉	◉			◉	◉	◉	◉		
M													◉	◉	◉	◉		
K																		
N																	◉	◉
S											◉	◉	◉	◉	◉			
H																		
	QC22R230-R02	3,5	2,3	0,2	12,7	4,76	5,5	0,02-0,07					●					
	QC22L230-R02	3,5	2,3	0,2	12,7	4,76	5,5	0,02-0,07					○					
	QC22R250-R03	4	2,5	0,3	12,7	4,76	5,5	0,02-0,08					●					
	QC22L250-R03	4	2,5	0,3	12,7	4,76	5,5	0,02-0,08					○					
	QC22R265-R03	4	2,65	0,3	12,7	4,76	5,5	0,02-0,08					●					
	QC22L265-R03	4	2,65	0,3	12,7	4,76	5,5	0,02-0,08					●					
	QC22R280-R03	4	2,8	0,3	12,7	4,76	5,5	0,02-0,08					●					
	QC22L280-R03	4	2,8	0,3	12,7	4,76	5,5	0,02-0,08					○					
	QC22R300-R03	4	3	0,3	12,7	4,76	5,5	0,03-0,11					○					
	QC22L300-R03	4	3	0,3	12,7	4,76	5,5	0,03-0,11					○					
	QC22R320-R03	4	3,2	0,3	12,7	4,76	5,5	0,03-0,11					○					
	QC22L320-R03	4	3,2	0,3	12,7	4,76	5,5	0,03-0,11					○					
	QC22R330-R03	4	3,3	0,3	12,7	4,76	5,5	0,03-0,11					○					
	QC22L330-R03	4	3,3	0,3	12,7	4,76	5,5	0,03-0,11					○					
	QC22R350-R03	5	3,5	0,3	12,7	4,76	5,5	0,05-0,13					○					
	QC22L350-R03	5	3,5	0,3	12,7	4,76	5,5	0,05-0,13					○					
	QC22R400-R04	5	4	0,4	12,7	4,76	5,5	0,05-0,14					○					
	QC22L400-R04	5	4	0,4	12,7	4,76	5,5	0,05-0,14					●					
	QC22R430-R04	5	4,3	0,4	12,7	4,76	5,5	0,05-0,14					○					
	QC22L430-R04	5	4,3	0,4	12,7	4,76	5,5	0,05-0,14					○	○				
	QC22R450-R04	5	4,5	0,4	12,7	4,76	5,5	0,06-0,18					○					
	QC22L450-R04	5	4,5	0,4	12,7	4,76	5,5	0,06-0,18					○				○	
	QC22R480-R04	5	4,8	0,4	12,7	5,06	5,5	0,06-0,18					○					
	QC22L480-R04	5	4,8	0,4	12,7	5,06	5,5	0,08-0,2					○					



● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

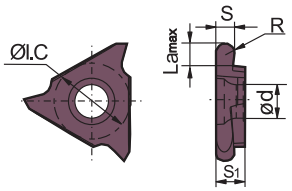
Utensile	
GQCR/L	**S***-QC**R/L**
	
A453	A454

Codice sistema A416 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti per scanalatura e troncatura

QC ** Inserti - Tornitura/Fresatura



Versione destra

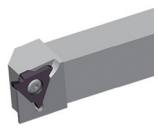
	HC¹ (CVD)						HC¹ (PVD)						HW	
P	◉	◉						◉	◉	◉	◉			
M								◉	◉	◉	◉			
K														
N													●	◉
S							●	●	◉	◉	◉			
H														

	ISO	La *max*	S±0.025	R/C	ØI.C	S1	ød	f	YBC252	YBC251	YBG105	YBG102	YB9320	YBG205	YBG202	YBG302	YD101	YD201
	**QC16R100R**	2	1	0,5	12,7	3,18	4,4	0,02-0,03						○				
	QC16R120R	2	1,2	0,6	12,7	3,18	4,4	0,02-0,03						○				
	QC16R150R	2	1,5	0,75	12,7	3,18	4,4	0,02-0,06						○				
	QC16R200R	2,5	2	1	12,7	3,18	4,4	0,02-0,07						●				
	QC16L200R	2,5	2	1	12,7	3,18	4,4	0,02-0,07						○				
	QC16R250R	2,5	2,5	1,25	12,7	3,18	4,4	0,02-0,08						○				
	QC16L280R	2,5	2,8	1,4	12,7	3,18	4,4	0,02-0,08						○				
	QC16R300R	2,5	3	1,5	12,7	3,18	4,4	0,03-0,11						●				
	QC16L300R	2,5	3	1,5	12,7	3,18	4,4	0,03-0,11						●				
	QC22R100R	2	1	0,5	12,7	4,76	5,5	0,02-0,03						●				
	QC22L100R	2	1	0,5	12,7	4,76	5,5	0,02-0,03						○	○			
	QC22R150R	3,5	1,5	0,75	12,7	4,76	5,5	0,02-0,06						●				
	QC22L150R	3,5	1,5	0,75	12,7	4,76	5,5	0,02-0,06						●	○			
	QC22R170R	3,5	1,7	0,85	12,7	4,76	5,5	0,02-0,06						○				
	QC22R200R	3,5	2	1	12,7	4,76	5,5	0,02-0,07						○				
	QC22L200R	3,5	2	1	12,7	4,76	5,5	0,02-0,07						○				
	QC22R250R	4	2,5	1,25	12,7	4,76	5,5	0,02-0,08						●				
	QC22L250R	4	2,5	1,25	12,7	4,76	5,5	0,02-0,08						●				
	QC22R300R	4	3	1,5	12,7	4,76	5,5	0,03-0,11						●				
	QC22L300R	4	3	1,5	12,7	4,76	5,5	0,03-0,11						●				
	QC22R320R	4	3,2	1,6	12,7	4,76	5,5	0,03-0,11						○				
	QC22R400R	5	4	2	12,7	4,76	5,5	0,05-0,14						●				
	QC22L400R	5	4	2	12,7	4,76	5,5	0,05-0,14						●				

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HW Carburo cementato non rivestito

Utensile

GQCR/L	S***-QC**R/L
	
A453	A454

Codice sistema A416 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Note

Portautensili esterni

Q	F	G	D	2525	R	22	(S)	C	–	(130)	(H)
1	2	3	4	5	6	7	8	9		10	11

Portautensili per scanalatura e troncatura

1

Applicazione	
Code	Descrizione
E	Lavorazione esterna
F	Lavorazione assiale

2

Dim. sede inserto [mm]	
Larghezza portautensile/tagliente	
Code	Descrizione
A	1,5
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

3

Numero taglienti	
Code	Descrizione
S	Singolo
D	Doppio

4

Sezione portautensile [mm] x [mm]

5

Versione	
Code	Descrizione
R	Destra
L	Sinistra
N	Destro e sinistro

6

Max. profondità di taglio [mm]

7

Extra	
Code	Descrizione
S	Portautensile rinforzato per tagli profondi
DG	Portautensile con rinforzo per maggiore profondità di scanalatura
DGS	Portautensile senza rinforzo per maggiore profondità di scanalatura

8

Con raffreddamento interno

9

Diametro min. del pezzo per scanalatura assiale [mm]

10

Testa tagliente	
Code	Descrizione
H	0°
L	90°

11

Barre alesatrici

C	32	S	–	Q	G	D	R	11	–	44
1	2	3		4	5	6	7	8		9

Sistema di bloccaggio

1

Diametro [mm]

2

Lunghezza [mm]

Code	Descrizione
Q	180
R	200
S	250
X	320

3

Portautensile per scanalatura

4

Dim. sede inserto [mm]

Larghezza portautensile/tagliente

Code	Descrizione
B	2.0
E	2.5
F	3.0
G	4.0
H	5.0
K	6.0
L	8.0

5

Numero taglienti

Code	Descrizione
S	Singolo
D	Doppio

6

Versione

Code	Descrizione
R	Destra
L	Sinistra
N	Destro e sinistro

7

Profondità di taglio max. [mm]

8

Diametro interno min. del pezzo [mm]

9

Scanalature e gole Codice sistema – portautensile

Lama

Q	E	G	D	32	N	(–1)
1	2	3	4	5	6	7

1 Lama per scanalatura e troncatura

2 Applicazione

Code	Descrizione
E	Lavorazione esterna

3 Dim. sede inserto [mm]

Larghezza portautensile/tagliente

Code	Descrizione
B	2,0
E	2,5
F	3,0
G	4,0
H	5,0
K	6,0
L	8,0

4 Numero taglienti

Code	Descrizione
S	Singolo
D	Doppio

5 Altezza lama [mm]

6 Versione

Code	Descrizione
R	Destra
L	Sinistra
N	Destro e sinistro

7 Altezza lama –1 mm

Portautensile

QZ	S	32	32
1	2	3	4

1 Utensile per scanalatura

2 Numero taglienti

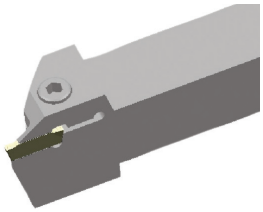
Code	Descrizione
S	Singolo
D	Doppio

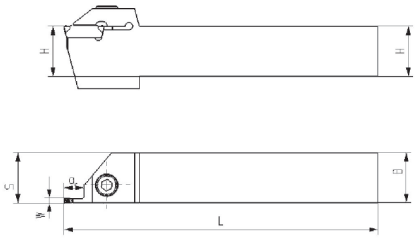
3 Altezza attacchi [mm]

4 Altezza lama [mm]

Portautensile per scanalatura (esterna)

QE**R/L





Articolo	✲	Stock		Dimensioni [mm]					Inserto
		R	L	HxB	L	S	W	ar_{max}	
QEBD1616R/L04		○	○	16x16	150	16,17	2	4	Z*BD**
QEBD2020R/L07		○	○	20x20	150	20,17	2	7	Z*BD**
QEED1616R/L10		●	●	16x16	125	15	2,5	10	Z*ED**
QEED1616R/L17		●	●	16x16	125	15	2,5	17	Z*ED**
QEED2020R/L17		●	●	20x20	125	19	2,5	17	Z*ED**
QEED2020R/L10		●	●	20x20	150	10	2,5	10	Z*ED**
QEED2525R/L10		●	●	25x25	150	19	2,5	10	Z*ED**
QEED2525R/L17		●	●	25x25	150	19	2,5	17	Z*ED**
QEFD1616R/L10		●	●	16x16	125	14,8	3	10	Z*FD**
QEFD1616R/L17		●	●	16x16	125	14,8	3	17	Z*FD**
QEFD2020R/L10		●	●	20x20	125	18,8	3	10	Z*FD**
QEFD2020R/L17		●	●	20x20	125	18,8	3	17	Z*FD**
QEFD2525R/L10		●	●	25x25	150	23,8	3	10	Z*FD**
QEFD2525R/L17		●	●	25x25	150	23,8	3	17	Z*FD**
QEGD2020R/L13		●	●	20x20	140	18,5	4	13	Z*GD**
QEGD2020R/L22		●	●	20x20	140	18,5	4	22	Z*GD**
QEGD2525R/L13		●	●	25x25	150	23,5	4	13	Z*GD**
QEGD2525R/L22		●	●	25x25	150	23,5	4	22	Z*GD**
QEGD3232R/L13		●	●	32x32	170	30,5	4	13	Z*GD**
QEGD3232R/L22		●	●	32x32	170	30,5	4	22	Z*GD**
QEHD2525R/L13		●	●	25x25	150	23	5	13	Z*HD**
QEHD2525R/L22		●	●	25x25	150	23	5	22	Z*HD**
QEHD3232R/L13		●	●	32x32	170	30	5	13	Z*HD**
QEHD3232R/L22		●	●	32x32	170	30	5	22	Z*HD**
QEKD2525R/L13		●	●	25x25	150	22,6	6	13	Z*KD**
QEKD2525R/L22		●	●	25x25	150	22,6	6	22	Z*KD**
QEKD3232R/L13		●	●	32x32	170	29,6	6	13	Z*KD**
QEKD3232R/L22		●	●	32x32	170	29,6	6	22	Z*KD**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema > A422 | Scelta gradi > A394 | Informazioni tecniche > A501 | Dati di taglio > A456

Portautensile per scanalatura (esterna)

Parti di ricambio

	Inserto	Z*BD**	Z*ED**	Z*ED**	Z*FD**	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	16-20	16	20-32	16	20-32	20-32	20-32	20-32
	Vite	GB70-85-M5×16 (4,0 Nm)	GB70-85-M5×20 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M5×20 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH40L	WH40L	WH50L	WH40L	WH50L	WH50L	WH50L	WH50L

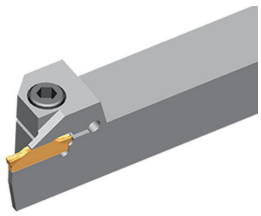
Inserto

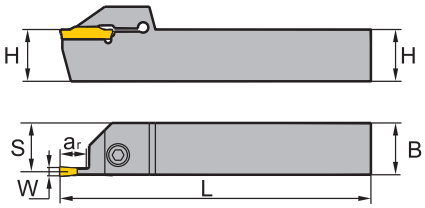
						
A399	A400	A401	A404	A407	A410	A411
						
A414						

Codice sistema > A422 Scelta gradi > A394 Informazioni tecniche > A501 Dati di taglio > A456

Portautensile per scanalatura (esterna)

QE*SN30







Articolo	✲	Stock	Dimensioni [mm]					Inserto
			HxB	L	S	W	ar_{max}	
QEHS2525N30		●	25x25	150	12,5	5	30	Z*HS**
QEHS3232N30		●	32x32	170	16	5	30	Z*HS**
QEKS2525N30		○	25x25	150	12,5	6	30	Z*KS**
QEKS3232N30		○	32x32	170	16	6	30	Z*KS**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*HS****	**Z*KS****
	H	**25-32**	**25-32**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH50L	WH50L

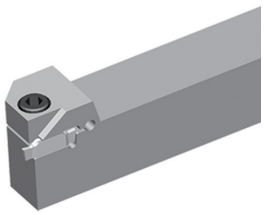
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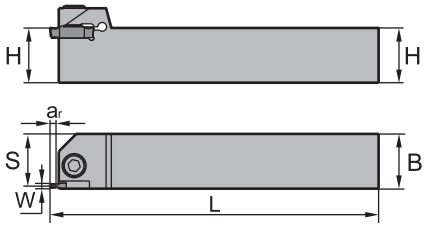
A402	A405	A406

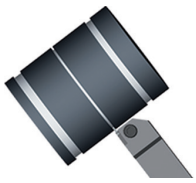
Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Portautensile per scanalatura (esterna)

QECDR/L







Versione destra

Articolo	✻	Stock		Dimensioni [mm]					Inserto
		R	L	HxB	L	S	W	ar_{max}	
QECD1616R/L025		○	○	16x16	125	14,75		2,5	Z*CD**
QECD2020R/L025		○	○	20x20	125	18,75		2,5	Z*CD**
QECD2525R/L025		○	○	25x25	150	23,75		2,5	Z*CD**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	Z*CD**	Z*CD**
	H	16	20-32
	Vite	GB70-85-M5×20 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH40L	WH50L

Inserto

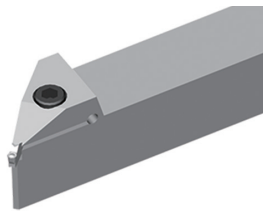


A407

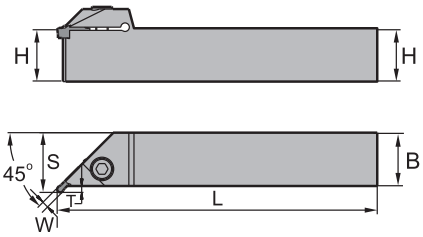
Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

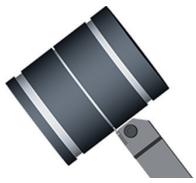
Portautensile per scanalatura (esterna)

QX*DR/L



Versione destra





Articolo	✻	Stock		Dimensioni [mm]					Inserto
		R	L	HxB	L	S	W	ar_{max}	
QXFD2020R/L03-45		○	○	20x20	125	23	3	3	Z*FD**
QXFD2525R/L03-45		●	●	25x25	150	28	3	3	Z*FD**
QXFD3232R/L03-45		○	○	32x32	170	35	3	3	Z*FD**
QXGD2020R/L03-45		○	○	20x20	125	23	4	3	Z*GD**
QXGD2525R/L03-45		○	○	25x25	150	28	4	3	Z*GD**
QXGD3232R/L03-45		○	○	32x32	170	35	4	3	Z*GD**
QXHD2020R/L04-45		○	○	20x20	125	24	5	4	Z*HD**
QXHD2525R/L04-45		○	○	25x25	150	29	5	4	Z*HD**
QXHD3232R/L04-45		○	○	32x32	170	36	5	4	Z*HD**
QXKD2020R/L04-45		○	○	20x20	125	24	6	4	Z*KD**
QXKD2525R/L04-45		○	○	25x25	150	29	6	4	Z*KD**
QXKD3232R/L04-45		○	○	32x32	170	36	6	4	Z*KD**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*FD****	**Z*GD****	**Z*HD****	**Z*KD****
	H	**20-32**	**20-32**	**20-32**	**20-32**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH50L	WH50L	WH50L	WH50L

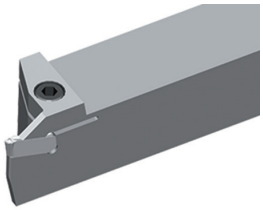
Inserto

	
A410	A411

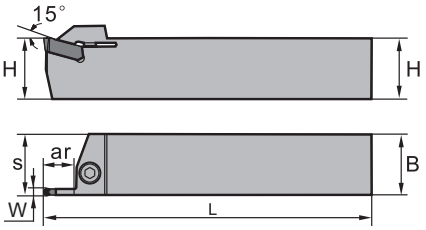
Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

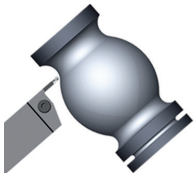
Portautensile per scanalatura (esterna)

QE*SR/L



Versione destra





Articolo	✻	Stock		Dimensioni [mm]					Inserto
		R	L	HxB	L	S	W	ar_{max}	
QEFS2525R/L12-3N		○	○	25x25	150	25,3	3	12	ZI**
QEGS2525R/L12-4N		○	○	25x25	150	25,3	4	12	ZI**
QEHS2525R/L12-5N		○	○	25x25	150	25,4	5	12	ZI**
QEKS2525R/L12-6N		○	○	25x25	150	25,4	6	12	ZI**
QEFS3232R/L22-3N		○	○	32x32	170	32,3	3	22	ZI**
QEGS3232R/L22-4N		○	○	32x32	170	32,3	4	22	ZI**
QEHS3232R/L22-5N		○	○	32x32	170	32,4	5	22	ZI**
QEKS3232R/L22-6N		○		32x32	170	32,4	6	22	ZI**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**ZI****
	H	**25-32**
	Vite	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH50L

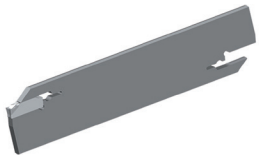
Inserto

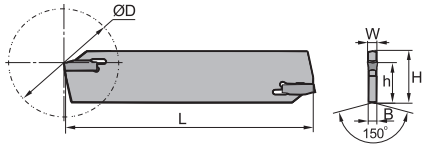
	
A412	A413

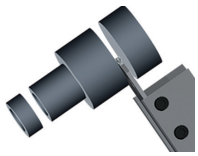
Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Lame per gole per lavorazione esterna

QE*S**N







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			H	L	h	B	W	ØDmax	
QEES26N		●	26	110	19	2	2,5	60	ZPES**
QEES32N		●	32	150	24,6	2	2,5	100	ZPES**
QEFS26N		●	26	110	19	2,4	3	60	ZPFS**
QEFS32N		●	32	150	24,6	2,4	3	100	ZPFS**
QEGS26N		●	26	110	19	3,2	4	70	ZPGS**
QEGS32N		●	32	150	24,6	3,2	4	120	ZPGS**
QEHS26N		●	26	110	19	4	5	70	ZPHS**
QEHS32N		●	32	150	24,6	4	5	120	ZPHS**
QEKS26N		●	26	110	19	5	6	70	ZPKS**
QEKS32N		●	32	150	24,6	5	6	120	ZPKS**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**ZPES****	**ZPFS****	**ZPGS****	**ZPHS****	**ZPKS****
	H	**26-32**	**26-32**	**26-32**	**26-32**	**26-32**
	Chiave	W50RL	W50RL	W50RL	W50RL	W50RL

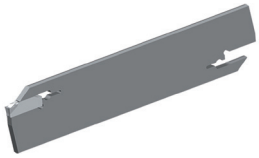
Inserto

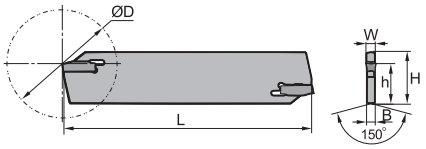
			
A402	A403	A405	A406

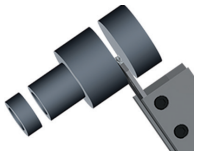
Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Lame per gole per lavorazione esterna

QE*S**N-1







Articolo	✻	Stock	Dimensioni [mm]						Inserto
			H	L	h	B	W	ØDmax	
QEES26N-1		●	26	110	19	2	2,5	60	ZPES**
QEES32N-1		●	32	150	24,6	2	2,5	100	ZPES**
QEFS26N-1		●	26	110	19	2,4	3	60	ZPFS**
QEFS32N-1		●	32	150	24,6	2,4	3	100	ZPFS**
QEGS26N-1		●	26	110	19	3,2	4	70	ZPGS**
QEGS32N-1		●	32	150	24,6	3,2	4	120	ZPGS**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Compatibile solo con i blocchi di serraggio dei sistemi disponibili in commercio di altri produttori.

Parti di ricambio

	Inserto	**ZPES****	**ZPFS****	**ZPGS****
	H	**26-32**	**26-32**	**26-32**
	Chiave	W50X	W50X	W50X

La chiave W50X deve essere ordinata come opzione.

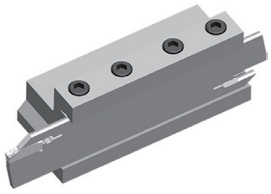
Inserto

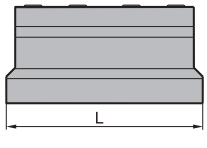
		
A402	A403	A406

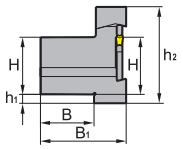
Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

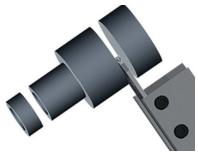
Portautensile (esterna)

QZS*









Articolo	✲	Stock	Dimensioni [mm]						Inserto
			H	L	h_1	h_2	B	B1	
QZS2026		●	20	86	10	46,6	19	38	QE**26
QZS2526		●	25	86	5	46,6	23	42	QE**26
QZS3226		○	32	86	3	51,6	30	48	QE**26
QZS2032		●	20	110	13	50	19	38	QE**32
QZS2532		●	25	110	8	50	23	42	QE**32
QZS3232		●	32	110	5	54	30	48	QE**32

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

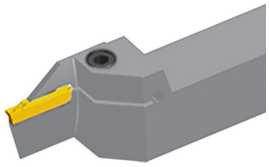
Parti di ricambio

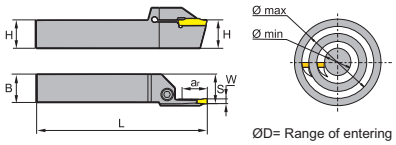
	Inserto	**QE**26**	**QE**32**
	H	**20-32**	**20-32**
	Staffa	QZC26	QZC32
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL	W50RL

Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (assiale)

QF**R/L







Versione sinistra

Articolo	*	Stock R	Stock L	Dimensioni [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserto
QFFD2020R/L7-48H		○	○	20x20	150	21	3	7	48-66	Z*FD**
QFFD2020R/L7-60H		○	○	20x20	150	21	3	7	60-80	Z*FD**
QFFD2020R/L7-74H		○	○	20x20	150	21	3	7	74-110	Z*FD**
QFFD2020R/L7-100H		○	○	20x20	150	21	3	7	100-150	Z*FD**
QFFD2020R/L10-48H		○	○	20x20	150	21	3	10	48-66	Z*FD**
QFFD2020R/L10-60H		○	○	20x20	150	21	3	10	60-80	Z*FD**
QFFD2020R/L10-74H		○	○	20x20	150	21	3	10	74-110	Z*FD**
QFFD2020R/L10-100H		○	○	20x20	150	21	3	10	100-150	Z*FD**
QFFD2525R/L10-48H		●	●	25x25	150	26	3	10	48-66	Z*FD**
QFFD2525R/L10-60H		●	●	25x25	150	26	3	10	60-80	Z*FD**
QFFD2525R/L10-74H		●	●	25x25	150	26	3	10	74-110	Z*FD**
QFFD2525R/L10-100H		●	●	25x25	150	26	3	10	100-150	Z*FD**
QFFD2525R/L17-48H		●	●	25x25	150	26	3	17	48-66	Z*FD**
QFFD2525R/L17-60H		●	●	25x25	150	26	3	17	60-80	Z*FD**
QFFD2525R/L17-74H		●	●	25x25	150	26	3	17	74-110	Z*FD**
QFFD2525R/L17-100H		●	●	25x25	150	26	3	17	100-150	Z*FD**
QFGD2020R/L10-52H		○	○	20x20	150	21	4	10	52-72	Z*GD**
QFGD2020R/L10-64H		○	○	20x20	150	21	4	10	64-100	Z*GD**
QFGD2020R/L10-90H		○	○	20x20	150	21	4	10	90-140	Z*GD**
QFGD2020R/L10-130H		○	○	20x20	150	21	4	10	130-230	Z*GD**
QFGD2020R/L15-52H		○	○	20x20	150	21	4	15	52-72	Z*GD**
QFGD2020R/L15-64H		○	○	20x20	150	21	4	15	64-100	Z*GD**
QFGD2020R/L15-90H		○	○	20x20	150	21	4	15	90-140	Z*GD**
QFGD2020R/L15-130H		○	○	20x20	150	21	4	15	130-230	Z*GD**
QFGD2525R/L13-52H		●	●	25x25	150	26	4	13	52-72	Z*GD**
QFGD2525R/L13-64H		●	●	25x25	150	26	4	13	64-100	Z*GD**
QFGD2525R/L13-90H		●	●	25x25	150	26	4	13	90-140	Z*GD**
QFGD2525R/L13-130H		●	●	25x25	150	26	4	13	130-230	Z*GD**
QFGD2525R/L22-52H		●	●	25x25	150	26	4	22	52-72	Z*GD**
QFGD2525R/L22-64H		●	●	25x25	150	26	4	22	64-100	Z*GD**
QFGD2525R/L22-90H		●	●	25x25	150	26	4	22	90-140	Z*GD**
QFGD2525R/L22-130H		●	●	25x25	150	26	4	22	130-230	Z*GD**
QFHD2525R/L13-58H		●	●	25x25	150	26	5	13	58-96	Z*HD**
QFHD2525R/L13-86H		●	●	25x25	150	26	5	13	86-140	Z*HD**
QFHD2525R/L13-130H		●	●	25x25	150	26	5	13	130-200	Z*HD**
QFHD2525R/L13-185H		●	●	25x25	150	26	5	13	185-400	Z*HD**

Codice sistema > A422 | Scelta gradi > A394 | Informazioni tecniche > A501 | Dati di taglio > A456

Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHD2523R/L16-44H		○		25x23	150		5	16	44-52	Z*HD**
QFHD2525R/L22-58H		●	●	25x25	150	26	5	22	58-96	Z*HD**
QFHD2525R/L22-86H		●	●	25x25	150	26	5	22	86-140	Z*HD**
QFHD2525R/L22-130H		●	●	25x25	150	26	5	22	130-200	Z*HD**
QFHD2525R/L22-185H		●	●	25x25	150	26	5	22	185-400	Z*HD**
QFKD2525R/L13-60H		●	●	25x25	150	26	6	13	60-100	Z*KD**
QFKD2525R/L13-88H		○	●	25x25	150	26	6	13	88-180	Z*KD**
QFKD2525R/L13-160H		●	●	25x25	150	26	6	13	160-400	Z*KD**
QFKD2525R/L20-45H			○	25x25	150		6	20	45-90	Z*KD**
QFKD2525R/L22-60H		●	●	25x25	150	26	6	22	60-100	Z*KD**
QFKD2525R/L22-88H		●	●	25x25	150	26	6	22	88-180	Z*KD**
QFKD2525R/L22-160H		●	●	25x25	150	26	6	22	160-400	Z*KD**
QFKD2525R/L30-88H		●		25x25	150		6	30	88-180	Z*KD**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*FD****	**Z*GD****	**Z*HD****	**Z*KD****
	H	**20-25**	**20-25**	**20-25**	**20-25**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL	W50RL	W50RL	W50RL

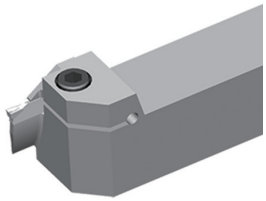
Inserto

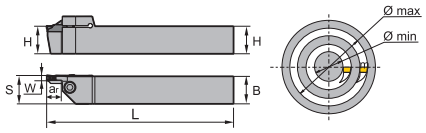
					
A399	A400	A404	A407	A410	A411

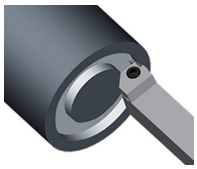
Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (assiale)

QF**RR/LL







Versione LL

Articolo	*	Stock		Dimensioni [mm]						Inserto
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFFD2020LL10-48H			○	20x20	150	21	3	10	48-66	Z*FD**
QFFD2020RR10-48H		○		20x20	150	21	3	10	48-66	Z*FD**
QFFD2020RR10-60H		○		20x20	150	21	3	10	60-80	Z*FD**
QFFD2020RR10-74H		○		20x20	150	21	3	10	74-110	Z*FD**
QFFD2525LL10-48H			●	25x25	150	26	3	10	48-66	Z*FD**
QFFD2525RR10-48H		○		25x25	150	26	3	10	48-66	Z*FD**
QFFD2525LL10-60H			○	25x25	150	26	3	10	60-80	Z*FD**
QFFD2525RR10-60H		○		25x25	150	26	3	10	60-80	Z*FD**
QFFD2525LL10-74H			○	25x25	150	26	3	10	74-110	Z*FD**
QFFD2525RR10-74H		○		25x25	150	26	3	10	74-110	Z*FD**
QFFD2525LL10-100H			○	25x25	150	26	3	10	100-150	Z*FD**
QFFD2525RR10-100H		○		25x25	150	26	3	10	100-150	Z*FD**
QFFD2525LL17-48H			●	25x25	150	26	3	17	48-66	Z*FD**
QFFD2525RR17-48H		○		25x25	150	26	3	17	48-66	Z*FD**
QFFD2525LL17-60H			○	25x25	150	26	3	17	60-80	Z*FD**
QFFD2525RR17-60H		○		25x25	150	26	3	17	60-80	Z*FD**
QFFD2525LL17-74H			○	25x25	150	26	3	17	74-110	Z*FD**
QFFD2525RR17-74H		○		25x25	150	26	3	17	74-110	Z*FD**
QFFD2525LL17-100H			○	25x25	150	26	3	17	100-150	Z*FD**
QFFD2525RR17-100H		○		25x25	150	26	3	17	100-150	Z*FD**
QFGD2020LL10-52H			○	20x20	150	21	4	10	52-72	Z*GD**
QFGD2020RR10-52H		○		20x20	150	21	4	10	52-72	Z*GD**
QFGD2020LL15-52H			○	20x20	150	26	4	15	52-72	Z*GD**
QFGD2020RR15-52H		○		20x20	150	26	4	15	52-72	Z*GD**
QFGD2020LL15-90H			○	20x20	150	26	4	15	90-140	Z*GD**
QFGD2020RR15-90H		○		20x20	150	26	4	15	90-140	Z*GD**
QFGD2020RR15-130H		○		20x20	150	26	4	15	130-230	Z*GD**
QFGD2525RR13-52H		●		25x25	150	21	4	13	52-72	Z*GD**
QFGD2525LL13-64H			●	25x25	150	21	4	13	64-100	Z*GD**
QFGD2525RR13-64H		○		25x25	150	21	4	13	64-100	Z*GD**
QFGD2525LL13-130H			●	25x25	150	26	4	13	130-230	Z*GD**
QFGD2525RR13-130H		○		25x25	150	21	4	13	130-230	Z*GD**
QFGD2525LL22-52H			○	25x25	150	26	4	22	52-72	Z*GD**
QFGD2525RR22-52H		○		25x25	150	26	4	22	52-72	Z*GD**
QFGD2525LL22-64H			○	25x25	150	26	4	22	64-100	Z*GD**

Codice sistema > A422 | Scelta gradi > A394 | Informazioni tecniche > A501 | Dati di taglio > A456

Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFGD2525RR22-64H		○		25x25	150	26	4	22	64-100	Z*GD**
QFGD2525LL22-90H			○	25x25	150	26	4	22	90-140	Z*GD**
QFGD2525RR22-90H		○		25x25	150	26	4	22	90-140	Z*GD**
QFGD2525LL22-130H			○	25x25	150	26	4	22	130-230	Z*GD**
QFGD2525RR22-130H		●		25x25	150	26	4	22	130-230	Z*GD**
QFHD2525LL13-130H			○	25x25	150	26	5	13	130-200	Z*HD**
QFHD2525RR13-130H		○		25x25	150	26	5	13	130-200	Z*HD**
QFHD2525RR13-185H		○		25x25	150	26	5	13	185-400	Z*HD**
QFHD2525LL22-58H			●	25x25	150	26	5	22	58-96	Z*HD**
QFHD2525RR22-58H		●		25x25	150	26	5	22	58-96	Z*HD**
QFHD2525RR22-86H		○		25x25	150	26	5	22	86-140	Z*HD**
QFHD2525LL22-130H			○	25x25	150	26	5	22	130-200	Z*HD**
QFHD2525RR22-130H		●		25x25	150	26	5	22	130-200	Z*HD**
QFHD2525LL22-185H			○	25x25	150	26	5	22	185-400	Z*HD**
QFHD2525RR22-185H		○		25x25	150	26	5	22	185-400	Z*HD**
QFKD2525RR13-60H		○		25x25	150	26	6	13	60-100	Z*KD**
QFKD2525RR13-88H		○		25x25	150	26	6	13	88-180	Z*KD**
QFKD2525RR15-50H		○		25x25	150		6	15	50-100	Z*KD**
QFKD2525RR22-60H		○		25x25	150	26	6	22	60-100	Z*KD**
QFKD2525LL22-88H			○	25x25	150	26	6	22	88-180	Z*KD**
QFKD2525RR22-88H		○		25x25	150	26	6	22	88-180	Z*KD**
QFKD2525LL22-160H			●	25x25	150	26	6	22	160-400	Z*KD**
QFKD2525RR22-160H		○		25x25	150	26	6	22	160-400	Z*KD**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*FD****	**Z*GD****	**Z*HD****	**Z*KD****
	H	**20-25**	**20-25**	**20-25**	**20-25**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL	W50RL	W50RL	W50RL

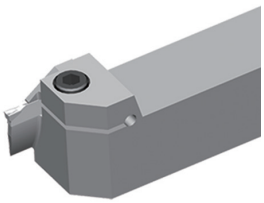
Inserto

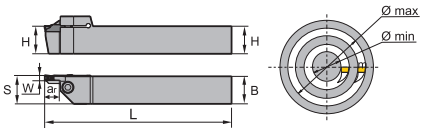
					
A399	A400	A404	A407	A410	A411

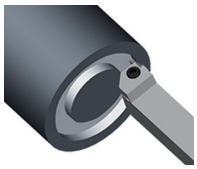
Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Portautensile per scanalatura (assiale)

QF*SRR/LL







Versione LL

Articolo	✻	Stock R	Stock L	Dimensioni [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserto
QFHS2525LL30-185H			●	25x25	150	26	5	30	185-400	Z*HS**
QFHS2525RR30-185H		○		25x25	150	26	5	30	185-400	Z*HS**
QFKS2525RR30-160H		○		25x25	150	26	6	30	160-400	Z*KS**
QFKS2525LL30-160H			○	25x25	150	26	6	30	160-400	ZT*S**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*HS****	**Z*KS****	**ZT*S****
	H	**25**	**25**	**25**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL	W50RL	W50RL

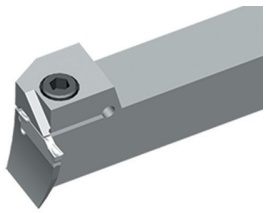
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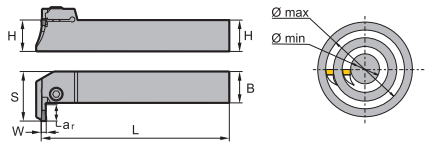
		
A402	A405	A406

Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (assiale)

QF*DR/L







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFFD2020R/L10-48L		○	○	20x20	150	31,5	3	10	48-66	Z*FD**
QFGD2020R/L10-52L		○	○	20x20	150	31,5	4	10	52-72	Z*GD**
QFFD2020R/L10-74L		●	○	20x20	150	31,5	3	10	74-110	Z*FD**
QFGD2020R/L10-90L		●	○	20x20	150	31,5	4	10	90-140	Z*GD**
QFFD2020R/L10-100L		○	○	20x20	150	31,5	3	10	100-150	Z*FD**
QFGD2020R/L15-52L		○	○	20x20	150	36,5	4	15	52-72	Z*GD**
QFFD2525R/L10-48L		●	●	25x25	150	36,5	3	10	48-66	Z*FD**
QFFD2525R/L10-60L		●	○	25x25	150	36,5	3	10	60-80	Z*FD**
QFFD2525R/L10-74L		○	○	25x25	150	36,5	3	10	74-110	Z*FD**
QFFD2525R/L10-100L		○	○	25x25	150	36,5	3	10	100-150	Z*FD**
QFGD2525R/L13-52L		○	○	25x25	150	39,5	4	13	52-72	Z*GD**
QFKD2525R/L13-60L		○	○	25x25	150	39,5	6	13	60-100	Z*KD**
QFGD2525R/L13-64L		○	●	25x25	150	39,5	4	13	64-100	Z*GD**
QFGD2525R/L13-90L		○	○	25x25	150	39,5	4	13	90-140	Z*GD**
QFGD2525R/L13-130L		○	○	25x25	150	39,5	4	13	130-230	Z*GD**
QFFD2525R/L17-48L		○	○	25x25	150	43,5	3	17	48-66	Z*FD**
QFFD2525R/L17-60L		○	○	25x25	150	43,5	3	17	60-80	Z*FD**
QFFD2525R/L17-74L		○	○	25x25	150	43,5	3	17	74-110	Z*FD**
QFFD2525R/L17-100L		●	○	25x25	150	43,5	3	17	100-150	Z*FD**
QFGD2525R/L22-52L		○	○	25x25	150	48,5	4	22	52-72	Z*GD**
QFKD2525R/L22-60L		○	●	25x25	150	48,5	6	22	60-100	Z*KD**
QFGD2525R/L22-64L		○	○	25x25	150	48,5	4	22	64-100	Z*GD**
QFKD2525R/L22-88L		○	●	25x25	150	48,5	6	22	88-180	Z*KD**
QFGD2525R/L22-90L		○	○	25x25	150	48,5	4	22	90-140	Z*GD**
QFGD2525R/L22-130L		●	○	25x25	150	48,5	4	22	130-230	Z*GD**
QFFD2020R/L7-74L		○		20x20	150	28,5	3	7	74-110	Z*FD**
QFFD2020R/L10-60L		●		20x20	150	31,5	3	10	60-80	Z*FD**
QFGD2020R/L10-130L		●		20x20	150	31,5	4	10	130-230	Z*GD**
QFGD2020R/L15-64L		○		20x20	150	36,5	4	15	64-100	Z*GD**
QFGD2020R/L15-90L		○		20x20	150	36,5	4	15	90-140	Z*GD**
QFGD2020R/L15-130L		○		20x20	150	36,5	4	15	130-230	Z*GD**
QFHD2525R/L13-58L		○		25x25	150	39,5	5	13	58-96	Z*HD**
QFHD2525R/L13-86L		●		25x25	150	39,5	5	13	86-140	Z*HD**
QFHD2525R/L13-130L		○	○	25x25	150	39,5	5	13	130-200	Z*HD**
QFHD2525R/L13-185L		○		25x25	150	39,5	5	13	185-400	Z*HD**
QFHD2525R/L22-58L		○	○	25x25	150	48,5	5	22	58-96	Z*HD**

Codice sistema > A422 | Scelta gradi > A394 | Informazioni tecniche > A501 | Dati di taglio > A456

Scanalature e gole Portautensile

Articolo	✻	Stock R	Stock L	Dimensioni [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserto
QFHD2525R/L22-86L		○	○	25x25	150	48,5	5	22	86-140	Z*HD**
QFHD2525R/L22-130L		○	○	25x25	150	48,5	5	22	130-200	Z*HD**
QFHD2525R/L22-185L		○	○	25x25	150	48,5	5	22	185-400	Z*HD**
QFKD2525R/L13-88L			○	25x25	150	39,5	6	13	88-180	Z*KD**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	**20-25**	**20-25**	**20-25**	**20-25**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL	W50RL	W50RL	W50RL

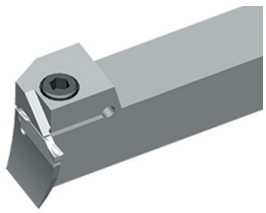
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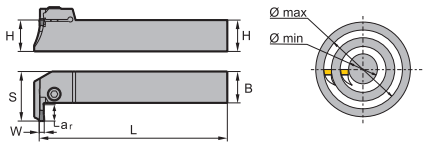
					
A399	A400	A404	A407	A410	A411

Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (assiale)

QFHSDR/L







Versione destra

Articolo	✲	Stock		Dimensioni [mm]						Inserto
		R	L	HxB	L	S	W	ar_{max}	ØD (min-max)	
QFHS2525R/L30-185L		○	○	25x25	150	56,5	5	30	185-400	Z*HS**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*HS****
	H	**25**
	Vite	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL

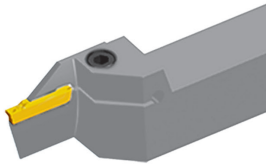
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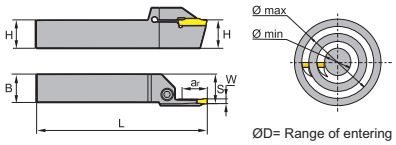
		
A402	A405	A406

Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (assiale)

QF**R/L







Versione sinistra

Articolo	✻	Stock R	Stock L	Dimensioni [mm] HxB	L	S	W	ar_{max}	ØD (min-max)	Inserto
QFHS2525R/L30-185H		●	●	25x25	150	26	5	30	185-400	Z*HS**
QFKS2525R/L30-160H		●	●	25x25	150	26	6	30	160-400	Z*KS**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*HS****	**Z*KS****
	H	**25**	**25**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	W50RL	W50RL

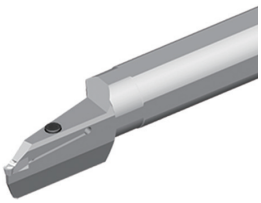
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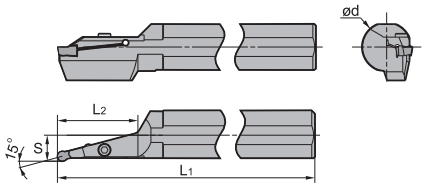
		
A402	A405	A406

Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura

Q*DR/L







Versione destra

Articolo	✻	Stock		Dimensioni [mm]					Inserto
		R	L	ØD	ød	S	L_1	L_2	
C40X-QKDR/L60-15A		○	○	160	40	20	320	60	Z*KD**
C40X-QKDR/L75-15A		●	○	160	40	20	320	75	Z*KD**
C40X-QLDR/L65-15A		○	○	160	40	21	320	65	Z*LD**
C40X-QLDR/L80-15A		○	○	160	40	21	320	80	Z*LD**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*KD****	**Z*LD****
	Ød	**32-40**	**32-40**
	Vite	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH50L	WH50L

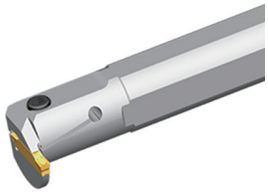
Inserto

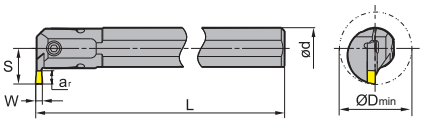
A410	A411	A414

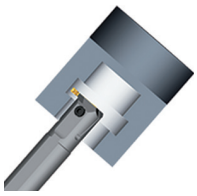
Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (interna)

Q*DR/L







Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØDmin	ød	L	S	W	ar_{max}	Inserto
C16M-QBDR/L04-20		●	○	20	16	150		2	4	Z*BD**
C20Q-QEDR/L05-27		●	●	27	20	180		2,5	5	Z*ED**
C25R-QEDR/L07-33		●	●	33	25	200		2,5	7	Z*ED**
C32S-QEDR/L09-42		●	●	42	32	250		2,5	9	Z*ED**
C20Q-QFDR/L05-27		●	●	27	20	0		3	5	Z*FD**
C25R-QFDR/L07-33		●	●	33	25	200		3	7	Z*FD**
C32S-QFDR/L09-42		●	●	42	32	250		3	9	Z*FD**
C25R-QGDR/L08-35		●	●	35	25	200		4	8	Z*GD**
C32S-QGDR/L11-44		●	●	44	32	250		4	11	Z*GD**
C40T-QGDR/L13-54		●	●	5	40	300		4	13	Z*GD**
C25R-QHDR/L08-35		●	●	35	25	200		5	8	Z*HD**
C32S-QHDR/L11-44		●	●	44	32	250		5	11	Z*HD**
C40T-QHDR/L13-54		●	●	54	40	300		5	13	Z*HD**
C25R-QKDR/L08-35		○	●	35	25	200		6	8	Z*KD**
C32S-QKDR/L11-44		●	●	44	32	250		6	11	Z*KD**
C40T-QKDR/L13-54		●	●	54	40	300		6	13	Z*KD**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	Z*BD**	Z*ED**	Z*ED**	Z*ED**	Z*FD**	Z*FD**	Z*FD**	Z*GD**	Z*GD**	Z*HD**	Z*HD**	Z*KD**	Z*KD**
	Ød	16	20	25	32-40	20	25	32-40	25	32-40	25	32-40	25	32-40
	Vite	GB70-85-M5×10 (4,0 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M5×16 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M5×16 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M5×16 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M5×16 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M5×16 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH40L	WH30L	WH40L	WH50L	WH30L	WH40L	WH50L	WH40L	WH50L	WH40L	WH50L	WH40L	WH50L

Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Portautensile per scanalatura (interna)

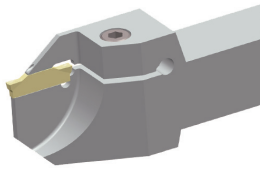
Inserto						
						
A399	A400	A404	A407	A410	A411	A414

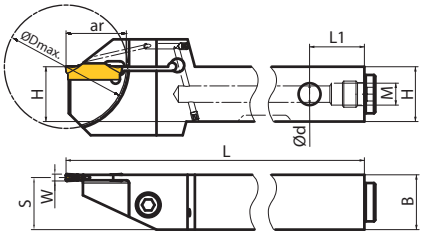
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

Codice sistema > A422 Scelta gradi > A394 Informazioni tecniche > A501 Dati di taglio > A456

Portautensile per scanalatura (esterna)

QE**R/L-DGC





Articolo	✻	Stock R	Stock L	Dimensioni [mm] HxB	ød	L	S	L_1	W	ar_{max}	ØDmax	M	Inserto
QEBD1616R/L20-DGC	✻	○	○	16x16	G1/8	96	15	20	2	20	40	G1/8	Z*BD**
QEBD1616R/L30-DGC	✻	●	●	16x16	G1/8	105	15	20	2	30	60	G1/8	Z*BD**
QEBD2020R/L20-DGC	✻	○	○	20x20	G1/8	111	19	20	2	20	40	G1/8	Z*BD**
QEBD2020R/L30-DGC	✻	●	●	20x20	G1/8	120	19	20	2	30	60	G1/8	Z*BD**
QEBD2525R/L20-DGC	✻	○	○	25x25	G1/8	126	24	20	2	20	40	G1/8	Z*BD**
QEBD2525R/L30-DGC	✻	●	●	25x25	G1/8	135	24	20	2	30	60	G1/8	Z*BD**
QEED1616R/L20-DGC	✻	○	○	16x16	G1/8	96	14,75	20	2,5	20	40	G1/8	Z*ED**
QEED1616R/L30-DGC	✻	●	●	16x16	G1/8	105	14,75	20	2,5	30	60	G1/8	Z*ED**
QEED2020R/L20-DGC	✻	○	○	20x20	G1/8	111	18,75	20	2,5	20	40	G1/8	Z*ED**
QEED2020R/L30-DGC	✻	●	○	20x20	G1/8	120	18,75	20	2,5	30	60	G1/8	Z*ED**
QEED2525R/L20-DGC	✻	○	○	25x25	G1/8	126	23,75	20	2,5	20	40	G1/8	Z*ED**
QEED2525R/L30-DGC	✻	○	○	25x25	G1/8	135	23,75	20	2,5	30	60	G1/8	Z*ED**
QEFD1616R/L20-DGC	✻	○	○	16x16	G1/8	96	14,5	20	3	20	40	G1/8	Z*FD**
QEFD1616R/L30-DGC	✻	●	●	16x16	G1/8	105	14,5	20	3	30	60	G1/8	Z*FD**
QEFD2020R/L20-DGC	✻	○	○	20x20	G1/8	111	18,5	20	3	20	40	G1/8	Z*FD**
QEFD2020R/L30-DGC	✻	●	●	20x20	G1/8	120	18,5	20	3	30	60	G1/8	Z*FD**
QEFD2525R/L20-DGC	✻	○	○	25x25	G1/8	126	23,5	20	3	20	40	G1/8	Z*FD**
QEFD2525R/L30-DGC	✻	○	○	25x25	G1/8	135	23,5	20	3	30	60	G1/8	Z*FD**
QEGD1616R/L20-DGC	✻	○	○	16x16	G1/8	96	14	20	4	20	40	G1/8	Z*GD**
QEGD1616R/L30-DGC	✻	●	●	16x16	G1/8	105	14	20	4	30	60	G1/8	Z*GD**
QEGD2020R/L20-DGC	✻	○	○	20x20	G1/8	111	18	20	4	20	40	G1/8	Z*GD**
QEGD2020R/L30-DGC	✻	○	○	20x20	G1/8	120	18	20	4	30	60	G1/8	Z*GD**
QEGD2525R/L20-DGC	✻	○	○	25x25	G1/8	126	23	20	4	20	40	G1/8	Z*GD**
QEGD2525R/L30-DGC	✻	○	○	25x25	G1/8	135	23	20	4	30	60	G1/8	Z*GD**

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	Z*BD**	Z*ED**	Z*FD**	Z*GD**
	H	16-25	16-25	16-25	20-25
	Vita senza testa	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4
	Vite	GB70-85-M5×20 (4,0 Nm)	GB70-85-M5×20 (4,0 Nm)	GB70-85-M5×20 (4,0 Nm)	GB70-85-M5×20 (4,0 Nm)
	Chiave	WH40L	WH40L	WH40L	WH40L
	Chiave	WH50L	WH50L	WH50L	WH50L

Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

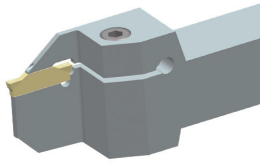
Portautensile per scanalatura (esterna)

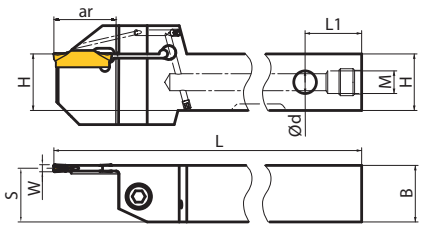
Inserto			
			
A399	A400	A404	A407

Codice sistema > A422 Scelta gradi > A394 Informazioni tecniche > A501 Dati di taglio > A456

Portautensile per scanalatura (esterna)

QE**R/L-DGSC





Articolo	✲	Stock		Dimensioni [mm]								Inserto
		R	L	HxB	ød	L	S	L_1	W	ar_{max}	M	
QEED1616R/L30-DGSC	✲	●	●	16x16	G1/8	105	14,75	20	2,5	30	G1/8	Z*ED**
QEED2020R/L30-DGSC	✲	●	○	20x20	G1/8	120	18,75	20	2,5	30	G1/8	Z*ED**
QEED2525R/L30-DGSC	✲	○	○	25x25	G1/8	135	23,75	20	2,5	30	G1/8	Z*ED**
QEFD1616R/L30-DGSC	✲	●	●	16x16	G1/8	105	14,5	20	3	30	G1/8	Z*FD**
QEFD2020R/L30-DGSC	✲	○	○	20x20	G1/8	120	18,5	20	3	30	G1/8	Z*FD**
QEFD2525R/L30-DGSC	✲	○	○	25x25	G1/8	135	23,5	20	3	30	G1/8	Z*FD**
QEGD1616R/L30-DGSC	✲	○	○	16x16	G1/8	105	14	20	4	30	G1/8	Z*GD**
QEGD2020R/L30-DGSC	✲	○	○	20x20	G1/8	120	18	20	4	30	G1/8	Z*GD**
QEGD2525R/L30-DGSC	✲	○	○	25x25	G1/8	135	23	20	4	30	G1/8	Z*GD**
QEHD2525R/L30-DGSC	✲	○	○	25x25	G1/8	135	22,5	20	5	30	G1/8	Z*HD**
QEKD2525R/L30-DGSC	✲	○	○	25x25	G1/8	135	22	20	6	30	G1/8	Z*KD**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	Z*ED**	Z*FD**	Z*GD**	Z*HD**	Z*KD**
	H	16-25	16-25	20-25	20-25	20-25
	Vita senza testa	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4
	Vite	GB70-85-M5×20 (4,0 Nm)	GB70-85-M5×20 (4,0 Nm)	GB70-85-M5×20 (4,0 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M6×20 (7,0 Nm)
	Chiave	WH40L	WH40L	WH40L	WH50L	WH50L
	Chiave	WH50L	WH50L	WH50L	WH50L	WH50L

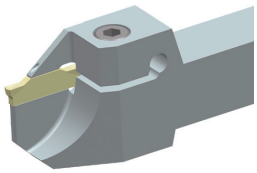
Inserto

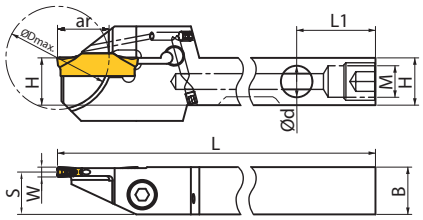
			
A399	A400	A404	A407

Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Portautensile per scanalatura (esterna)

QE**R/L-SC





Articolo	✲	Stock R	Stock L	Dimensioni [mm] HxB	ød	L	S	L_1	W	ar_{max}	ØDmax	M	Inserto
QEAD1010R/L10-SC	✲	○	○	10x10	G1/16	125	9	20	1,5	10	20	G1/16	Z*AD**
QEAD1212R/L13-SC	✲	○	○	12x12	G1/8	125	12	20	1,5	13	26	G1/8	Z*AD**
QEAD1616R/L13-SC	✲	○	○	16x16	G1/8	125	15	20	1,5	13	26	G1/8	Z*AD**
QEAD2020R/L13-SC	✲	○	○	20x20	G1/8	125	19	20	1,5	13	26	G1/8	Z*AD**
QEBD1010R/L10-SC	✲	○	○	10x10	G1/16	110	9	20	2	10	20	G1/16	Z*BD**
QEBD1212R/L13-SC	✲	●	●	12x12	G1/8	110	11	20	2	13	26	G1/8	Z*BD**
QEBD1616R/L13-SC	✲	●	●	16x16	G1/8	110	15	20	2	13	26	G1/8	Z*BD**
QEBD2020R/L13-SC	✲	○	○	20x20	G1/8	110	19	20	2	13	26	G1/8	Z*BD**
QEED1010R/L10-SC	✲	○	○	10x10	G1/16	110	8,75	20	2,5	10	20	G1/16	Z*ED**
QEED1212R/L13-SC	✲	●	●	12x12	G1/8	110	10,75	20	2,5	13	26	G1/8	Z*ED**
QEED1616R/L17-SC	✲	●	●	16x16	G1/8	110	14,75	20	2,5	17	34	G1/8	Z*ED**
QEED2020R/L17-SC	✲	●	●	20x20	G1/8	110	18,75	20	2,5	17	34	G1/8	Z*ED**
QEFD1212R/L13-SC	✲	●	●	12x12	G1/8	110	10,5	20	3	13	26	G1/8	Z*FD**
QEFD1616R/L17-SC	✲	●	●	16x16	G1/8	110	14,5	20	3	17	34	G1/8	Z*FD**
QEFD2020R/L22-SC	✲	●	●	20x20	G1/8	110	18,5	20	3	22	44	G1/8	Z*FD**

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**Z*AD****	**Z*AD****	**Z*AD****	**Z*AD****	**Z*BD****	**Z*BD****	**Z*BD****	**Z*ED****	**Z*ED****	**Z*ED****	**Z*FD****	**Z*FD****
	H	**10**	**12**	**16**	**20**	**10**	**12**	**16-20**	**10**	**12**	**16-20**	**12**	**16-20**
	Vita senza testa	PT1/16x6	PT1/8x4	PT1/8x4	PT1/8x4	PT1/16x6	PT1/8x4	PT1/8x4	PT1/16x6	PT1/8x4	PT1/8x4	PT1/8x4	PT1/8x4
	Vite	GB70-85-M4×12 (2,6 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M4×14	GB70-85-M4×18	GB70-85-M4×12 (2,6 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M6×20 (7,0 Nm)	GB70-85-M4×12 (2,6 Nm)	GB70-85-M5×20 (4,0 Nm)
	Chiave	WH30L	WH30L	WH30L	WH30L	WH30L	WH30L	WH40L	WH30L	WH30L	WH40L	WH30L	WH40L
	Chiave	WH40L	WH50L	WH50L	WH50L	WH40L	WH50L	WH50L	WH40L	WH50L	WH50L	WH50L	WH50L

Codice sistema A422 | Scelta gradi A394 | Informazioni tecniche A501 | Dati di taglio A456

Portautensile per scanalatura (esterna)

Inserto			
			
A399	A400	A404	A407

Codice sistema A422 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Accessori

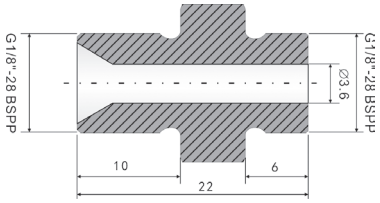
Tubo del refrigerante



Articolo	Dimensions [mm]			Stock
	L	Th1	Th2	
HOSE G1/8-7/16/200BS	200	G1/8"-28 BSPP	G1/8"-28 BSPP	○
HOSE G1/8-7/16/300BS	300	G1/8"-28 BSPP	G1/8"-28 BSPP	○
HOSE G1/8-7/16/200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	○
HOSE G1/8-7/16/300BB	300	G1/8"-28 BSPP	G1/8"-28 BSPP	○

● In magazzino ○ Su richiesta

Raccordo del refrigerante



Articolo	Stock
NIPPLE G1/8- G1/8	○

● In magazzino ○ Su richiesta

Portautensili esterni – Serie QC

GQC R 20 20 K 22 – 15

1	2	3	4	5	6	7

Serie — 1

Versione	
Code	Descrizione
R	Destra
L	Sinistra

2

Altezza [mm]	
Code	Descrizione
16	16
20	20
25	25

3

Larghezza [mm]	
Code	Descrizione
16	16
20	20
25	25

4

Lunghezza [mm]	
Code	Descrizione
K	125
M	150

5

Lunghezza tagliente [mm]	
Code	I.C
11	6,35
16	9,252
22	12,70

6

Area larghezza scanalatura [mm]		
Code	Dimensioni inserti	
15	0,5≤S<1,8 (QC16***)	1,0≤S<2,3 (QC22***)
25	1,8≤S<3,0 (QC16***)	2,3≤S<3,3 (QC22***)
35	–	3,3≤S≤4,8 (QC22***)

7

Barre alesatrici – Serie QC

S 20 K – QC 16 15 R 25

1	2	3	4	5	6	7	8

Versione del codolo	
Code	Pezzo da lavorare
S	Stelo in acciaio
C	Stelo in metallo duro
A	Stello in metallo duro (IK)

1

Diametro [mm]	
Code	Descrizione
16	16
20	20
25	25

2

Lunghezza [mm]	
Code	Descrizione
H	100
K	125
M	150

3

Serie — 4

Lunghezza tagliente [mm]	
Code	I.C
11	6,35
16	9,252
22	12,70

5

Area larghezza scanalatura			
Code	Dimensioni dell'inserto		
15	0,5≤S<1,8 (QC11***)	0,5≤S<1,8 (QC16***)	1,0≤S<2,3 (QC22***)
25	1,8≤S<3,0 (QC11***)	1,8≤S<3,0 (QC16***)	2,3≤S<3,3 (QC22***)
35	–	–	3,3≤S≤4,8 (QC22***)

6

Direzione di taglio	
Code	Descrizione
R	Destra
L	Sinistra

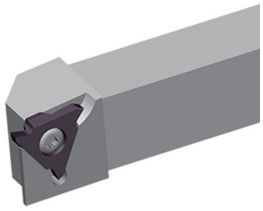
7

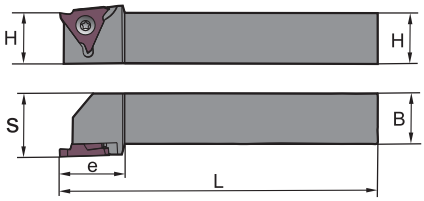
Diametro di partenza [mm]			
Code	Ø	Code	Ø
16	16	25	25
20	20	35	35

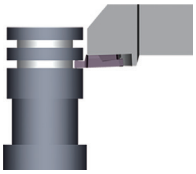
8

Scanalatura (esterna)

GQC**R/L







Versione destra

Articolo	✻	Stock		Dimensioni [mm]						Inserto
		R	L	H	L	S	e	B	Larghezza	
GQCR/L1616K16-15		●	●	16	125	21	25,5	16	0.5-1.80	QC16R/L 050-180
GQCR/L2020K16-15		○	●	20	125	25	25,5	20	0.5-1.80	QC16R/L 050-180
GQCR/L2525M16-15		○	●	25	150	30	25,5	25	0.5-1.80	QC16R/L 050-180
GQCR/L1616K16-25		●	●	16	125	21	25,5	16	1.8-3.0	QC16R/L 180-300
GQCR/L2020K16-25		○	●	20	125	25	25,5	20	1.8-3.0	QC16R/L 180-300
GQCR/L2525M16-25		○	●	25	150	30	25,5	25	1.8-3.0	QC16R/L 180-300
GQCR/L2020K22-15		○	●	20	125	25	25,5	20	1.0-2.3	QC22R/L 100-230
GQCR/L2525M22-15		○	●	25	150	30	25,5	25	1.0-2.3	QC22R/L 100-230
GQCR/L2020K22-25		○	●	20	125	25	25,5	20	2.3-3.3	QC22R/L 230-330
GQCR/L2525M22-25		○	●	25	150	30	25,5	25	2.3-3.3	QC22R/L 230-330
GQCR/L2020K22-35		●	●	20	125	25	25,5	20	3.3-4.8	QC22R/L 330-480
GQCR/L2525M22-35		●	●	25	150	30	25,5	25	3.3-4.8	QC22R/L 330-480

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**QC16R/L 050-180**	**QC16R/L 180-300**	**QC22R/L 100-230**	**QC22R/L 230-330**	**QC22R/L 330-480**
	H	**16-32**	**16-32**	**16-32**	**16-32**	**16-32**
	Vite	I60M3,5×10 (2,7 Nm)	I60M3,5×10 (2,7 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)
	Chiave (sotto-placchetta)	WT15IP	WT15IP	WT20IP	WT20IP	WT20IP

Inserto



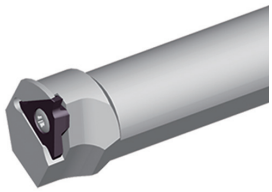
Media Lavor.

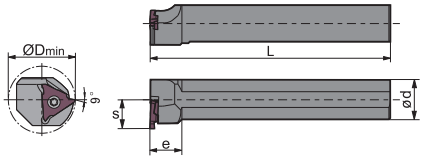
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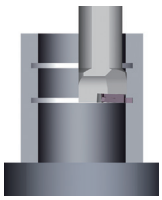
Codice sistema A452 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

S_QCR/L

S*K-QC**R/L







Versione destra

Articolo	✲	Stock R	Stock L	Dimensioni [mm] ØDmin	ød	L	S	e	Larghezza	Inserto
S16H-QC1115R/L20		●	●	21	16	100	11,5	12	0.5-1.80	QC11R/L 050-180
S20K-QC1115R/L16		●	●	16	20	125	11,1	40	0.5-1.80	QC11R/L 050-180
S16H-QC1125R/L20		●	●	21	16	100	11,5	12	1.8-3.0	QC11R/L 180-300
S20K-QC1125R/L16		○	○	16	20	125	11,1	40	1.8-3.0	QC11R/L 180-300
S20M-QC1615R/L25		○	●	26	20	150	12,5	15	0.5-1.80	QC16R/L 050-180
S20M-QC1625R/L25		●	●	26	20	150	12,5	15	1.8-3.0	QC16R/L 180-300
S25M-QC2215R/L35		●	●	35	25	150	18,2	15	1.0-2.3	QC22R/L 100-230
S25M-QC2225R/L35		●	●	35	25	150	18,2	20	2.3-3.3	QC22R/L 230-330
S25M-QC2235R/L35		○	●	35	25	150	18,2	20	3.3-4.8	QC22R/L 330-480

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Versione destra portautensile per versione sinistra inserto di taglio
Versione sinistra portautensile per versione destra inserto di taglio

Parti di ricambio

	Inserto	QC11R/L 050-180	QC11R/L 180-300	QC16R/L 050-180	QC16R/L 180-300	QC22R/L 100-230	QC22R/L 230-330	QC22R/L 330-480
	ød	**16-20**	**16-20**	**20**	**20**	**25**	**25**	**25**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M2,5×6,5 (1,0 Nm)	I60M3,5×10 (2,7 Nm)	I60M3,5×10 (2,7 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)
	Chiave (sotto-placchetta)	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP	WT20IP	WT20IP

Inserto



Media Lavor.

A417

Codice sistema A452 Scelta gradi A394 Informazioni tecniche A501 Dati di taglio A456

Note

Scanalature e gole Dati di taglio consigliati

Inserti per tornitura

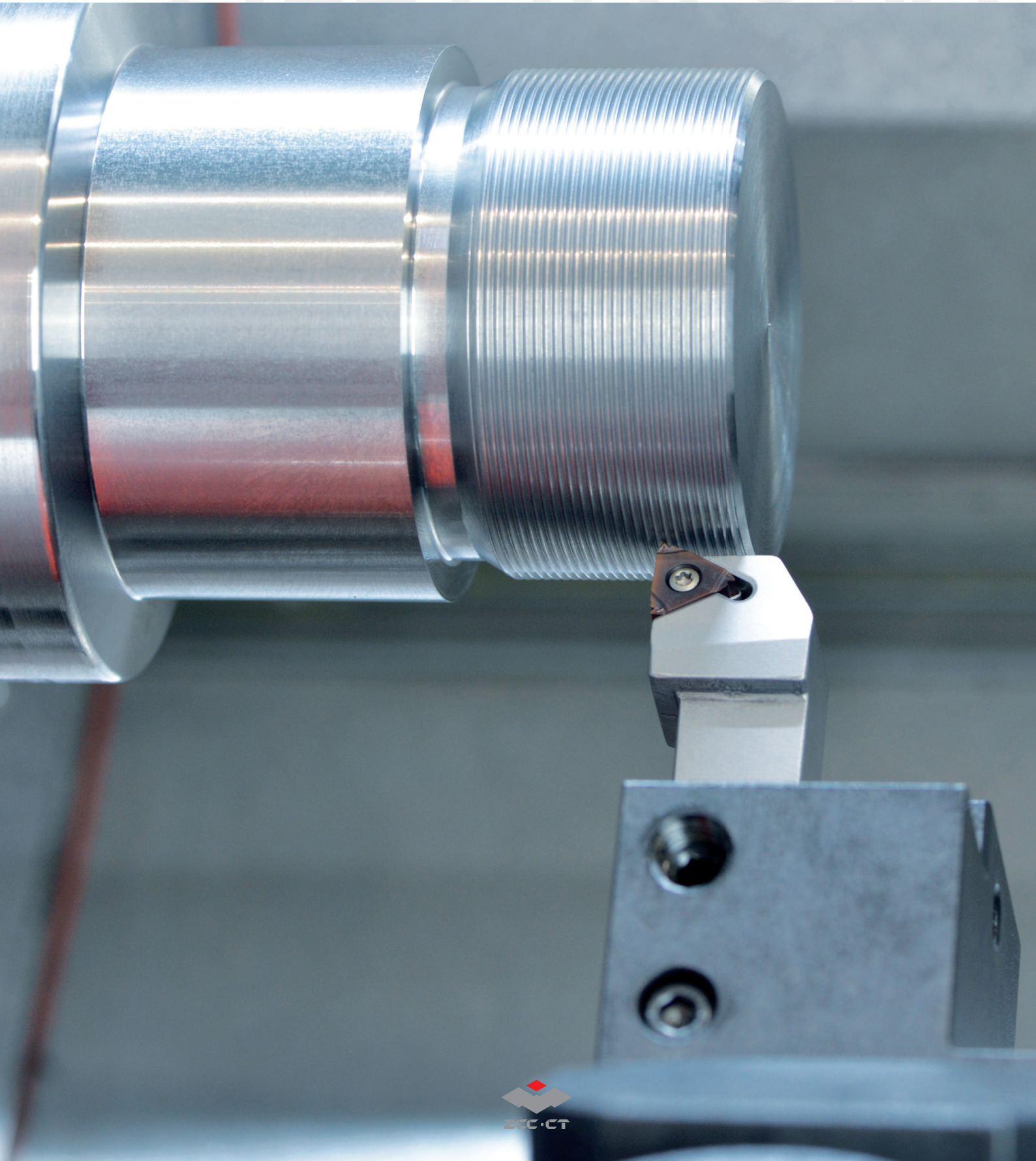
Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]			
						HC (CVD)	HC (PVD)		
						YBC252	YBG102	YBG105	
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	190			
		ca. 0,45 % C	Temprato	190	2	175			
		ca. 0,45 % C	pre-temprato	250	3	145			
		ca. 0,75 % C	Temprato	270	4	140			
		ca. 0,75 % C	pre-temprato	300	5	135			
	Acciaio al carbonio		Temprato	180	6	170			
			pre-temprato	275	7	125			
			pre-temprato	300	8	115			
			pre-temprato	350	9	105			
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	125			
			temprato e rinvenuto	325	11	95			
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	165	165	170	
		martensitico	pre-temprato	240	13	135	135	140	
		austenitico	quencing	180	14	155	155	160	
		austenitico-ferritico		230	15	135	135	140	
K	Ghisa grigia	perlitico/ferritico		180	16	240			
		perlitico (martensitico)		260	17	185			
	Ghisa sferodale	ferritico		160	18	220			
		perlitico		250	19	165			
	Ghisa malleabile	ferritico		130	20	175			
		perlitico		230	21	165			
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22				
		invecchiabile	indurito	100	23				
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24				
		≤ 12 % Si, invecchiabile	indurito	90	25				
		> 12 % Si, non invecchiabile		130	26				
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27				
		CuZn, CuSnZn		90	28				
		CuSn, rame senza piombo e rame elettrolitico		100	29				
S	Leghe resistenti al calore	Base Fe	Temprato	200	30		95	100	
			indurito	280	31		50	50	
		Base Ni o Co	Temprato	250	32		80	80	
			indurito	350	33		70	70	
			fuso	320	34		70	70	
	Leghe di titanio	Titanio puro		R_m 400	35		145	150	
		Leghe Alpha + Beta	indurito	R_m 1050	36		50	50	
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37				
			temprato e rinvenuto	60 HRC	38				
	Ghisa dura		fuso	400	39				
	Ghise temprate		temprato e rinvenuto	55 HRC	40				
X	Materiali non metallici	Termoplastiche			41				
		Termoindurenti			42				
		Vetroresina VTR			43				
		Plastica rinforzata in fibra di carbonio			44				
		Grafite			45				
		Legno			46				

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]						
	HC (PVD)				HW		
	YB9320	YBG202	YBG205	YBG302	YD101	YD201	
	190	190	190	185			
	175	175	175	170			
	145	145	145	140			
	140	140	140	135			
	135	135	135	130			
	170	170	170	165			
	125	125	125	125			
	115	115	115	115			
	105	105	105	105			
	125	125	125	125			
	95	95	95	95			
	165	165	165	160			
	135	135	135	130			
	155	155	155	150			
	135	135	135	130			
	240	240	240	235			
	185	185	185	180			
	220	220	220	215			
	165	165	165	160			
	175	175	175	170			
	165	165	165	160			
					800	760	
					600	570	
					320	305	
					240	230	
					160	155	
					160	155	
					600	570	
					200	190	
	95	95	95	95	70	65	
	50	50	50	50	35	35	
	80	80	80	75	60	60	
	70	70	70	65	50	50	
	70	70	70	65	50	50	
	145	145	145	140	105	100	
	50	50	50	50	35	35	

HC metallo duro rivestito
HW metallo duro non rivestito, componente principale (WC)

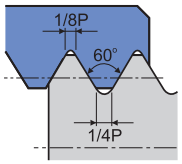
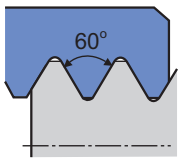
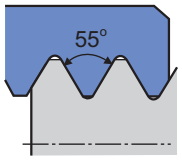
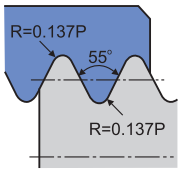
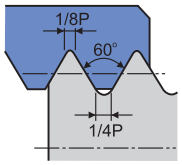
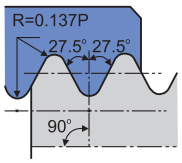
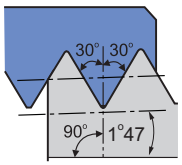
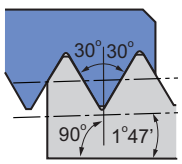
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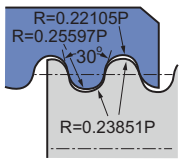
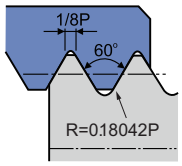
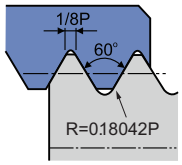
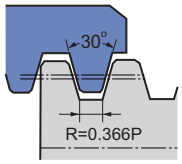
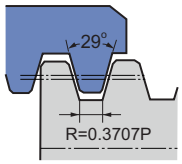
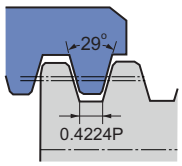
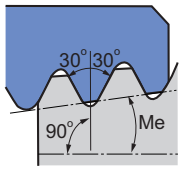
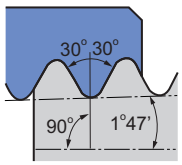


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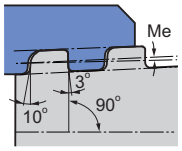
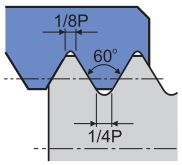
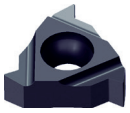
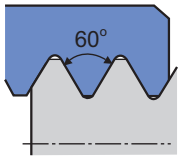
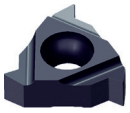
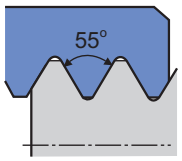
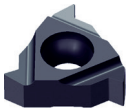
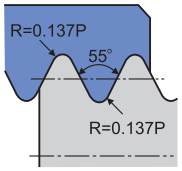
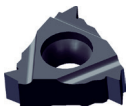
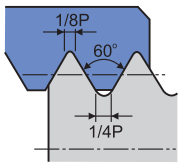
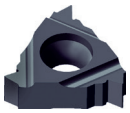
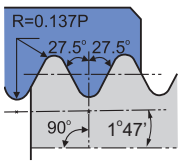
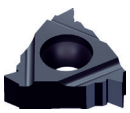
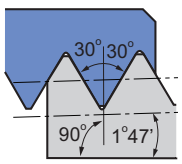
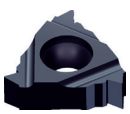
Panoramica sistema	**A460-A463**
Panoramica gradi	**A464**
Campo di applicazione dei gradi	**A465**
Codice sistema – Inserti	**A466**
Inserti	**A467-A491**
Codice sistema – Portautensile	**A492**
Portautensile	**A493-A499**
Dati di taglio consigliati	**A500**
Misure per la risoluzione dei problemi	**A504**
Informazioni tecniche	**A511-A512**
Gli utensili speciali	**A513**

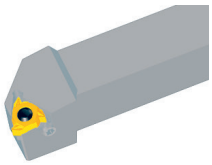
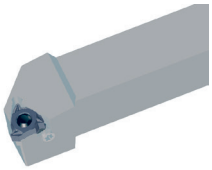
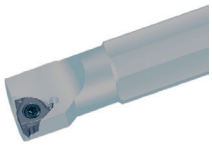
Filettatura Panoramica sistema

Tipi di filettature	Profilo	Disegno in sezione	Inserto	Filettatura interna Passo mm (TPI)	Filettatura esterna Passo mm (TPI)	Pagina
Filettatura ISO-Metrica standard 60° Profilo completo	**GM**			0,5-6,0	0,5-6,0	A467
60° Profilo parziale	**60°**			0,5-5,0 (5-48)	0,5-5,0 (5-48)	A469
55° Profilo parziale	**55°**			0,5-5,0 (5-48)	0,5-5,0 (5-48)	A470
Whitworth	**W**			(8-16)	(8-16)	A471
Profilo completo UN Americano Filettatura 60°	**UN**			(8-20)	(8-20)	A472
Filettatura BSPT conica per tubi	**BSPT**			(11-28)	(11-28)	A473
Filettatura per tubi NPT	**NPT**			(8-27)	(8-27)	A474
Filettatura per tubi NTPF autosigillante 60°	**NPTF**			(8-27)	(8-27)	A475

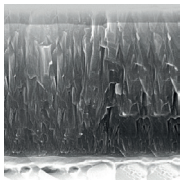
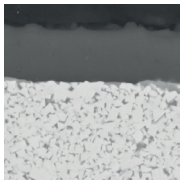
Tipi di filettature	Profilo	Disegno in sezione	Inserto	Filettatura interna Passo mm (TPI)	Filettatura esterna Passo mm (TPI)	Pagina
Filettatura tonda R 30°	**R**			(6-10)	(6-10)	A476
Filettatura MJ per industria aerospaziale	**MJ**			---	1,5-2,0	A477
Filettatura a vite unificato UNJ	**UNJ**			---	(8-32)	A478
Filettatura metrica ISO trapezoidale TR 30°	**Tr**			1,5-3,0	1,5-3,0	A479
Filettatura americana 29° trapezoidale ACME	**AC**			(8-16)	(8-16)	A480
Filettatura americana trapezoidale piatta STUB-ACME	**STAC**			(8-16)	(8-16)	A481
Filettatura API 60°	**AP**			(4-5)	(4-5)	A482
Filettatura tonda API	**RD**			(8-10)	(8-10)	A483

Filettatura Panoramica sistema

Tipi di filettature	Profilo	Disegno in sezione	Inserto	Filettatura interna Passo mm (TPI)	Filettatura esterna Passo mm (TPI)	Pagina
Filettatura americana a dente di sega API	**BUT**			(5)	(5)	A484
Filettatura ISO-Metrica standard 60° Profilo completo (spessore ISO)	**GM**			0,5-3,0	0,5-3,0	A485
60° Profilo parziale (spessore ISO)	**60°**			0,5-3,0 (8-48)	0,5-3,0 (8-48)	A486
55° Profilo parziale (spessore ISO)	**55°**			0,5-3,0 (8-48)	0,5-3,0 (8-48)	A487
Whitworth (spessore ISO)	**W**			(8-16)	(8-16)	A488
Profilo completo UN Americano Filettatura 60° (spessore ISO)	**UN**			(8-24)	(8-20)	A489
Filettatura BSPT conica per tubi (spessore ISO)	**BSPT**			(11-28)	(11-28)	A490
Filettatura NPT per tubi (spessore ISO)	**NPT**			(8-27)	(8-27)	A491

Versione	Portautensile	Dimensioni [mm]	Pagina
Portautensili per filettatura esterna		16×16×100 20×20×125 25×25×150 32×25×170 32×32×170 40×40×250	A493
Portautensili per filettatura interna		16×125×12 16×150×16 16×150×20 20×150×25 20×180×25 25×150×32 32×200×40 32×250×40 40×300×50 50×350×63	A495
Portautensili per filettatura esterna (spessore ISO)		16×16×100 32×25×170 20×20×125 32×32×170 25×25×150	A497
Portautensili per filettatura interna (spessore ISO)		16×150×20 32×200×40 20×180×25 32×250×40 25×150×32	A498

Filettatura

Grado	ISO	Microstruttura	Descrizione gradi
YBG201	P10 - P30 M10 - M30		Grado di metallo duro con rivestimento in PVD P10–P30/M10–M30 per lavorazioni dalla finitura all´asportazione media di acciai inossidabili e acciaio (fresatura). Ottima resistenza all´usura in una vasta gamma di applicazioni.
YBG205	P10 - P30 M20 - M40 S15-S25		Grado di metallo duro P10 - P30/M20 - M40/S15 - S25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (fresatura). Resistenza all'usura e resistenza termica ottimali in un ampio campo di applicazione.

Campi di applicazione dei gradi – filettatura

	ISO	HC[1] (CVD)	HC[1] (PVD)	HT	HC[2]	Ceramic	HW	CBN	PCD
P	P01								
	P10		YBG205 YBG201						
	P20								
	P30								
	P40								
M	M01								
	M10		YBG205 YBG201						
	M20								
	M30								
	M40								
K	K01								
	K10								
	K20								
	K30								
N	N01								
	N10								
	N20								
	N30								
S	S01								
	S10		YBG205 YBG201						
	S20								
	S30								
H	H01								
	H10								
	H20								
	H30								

P	Acciaio	N	Metalli non ferrosi
M	Acciaio inossidabile	S	Materiali a difficile asportazione
K	Ghisa	H	Materiali ad elevata durezza

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Metallo duro non rivestito

Filettatura Codice sistema – inserti

R	T	22.	01	W	–	3.50	GM	(P)	(B)
1	2	3	4	5		6	7	8	9

Versione	
Code	Descrizione
R	Destra
L	Sinistra

1

Forma dell'inserto	
T	Z Speciale

2

Dimensioni inserto [mm]	
Code	I.C
11	6,35
16	9,252
22	12,70

3

Denti per tagliente	
Code	Descrizione
01	1
02	2

4

Tipo lavorazione	
Code	Descrizione
W	Filettatura esterna
N	Filettatura interna

5

Passo		
Code	Intervallo del passo (profilo parziale)	
A	0,5 – 1,5 mm	48 – 16 (TPI)
AG	0,5 – 3,0 mm	48 – 8 (TPI)
G	1,75 – 3,0 mm	14 – 8 (TPI)
N	3,5 – 5,0 mm	7 – 5 (TPI)

Intervallo del passo [mm] (profilo completo)
0,50 0,75 1,00 1,25 1,50
1,75 2,00 2,50 3,00 3,50
4,00 4,50 5,00 5,50 6,00

Intervallo del passo (TPI) (profilo completo)
4 5 6 8
10 11 11,5 12
14 16 18 19
20 24 27 28

6

Profilo del filetto	
Code	Descrizione
GM	Filettatura ISO-Metrica standard 60°
60	Profilo parziale 60°
55	Profilo parziale 55°
W	Whitworth
UN	Filettatura UN Americano 60°
BSPT	Filettatura conica per tubi
NPT	Filettatura per tubi
NPTF	Filettatura per tubi autosigillante
R	Filettatura tondo 30°
MJ	Filettatura per industria aerospaziale
UNJ	Filettatura a vite unificato UNJ
TR	Filettatura metrica ISO trapezoidale
AC	Filettatura americana trapezoidale
STAC	Filettatura americana trapezoidale piatta
AP	Filettatura API 60°
RD	Filettatura tonda API
BUT	Filettatura americana a dente di sega

7

Rompitruciolo

8

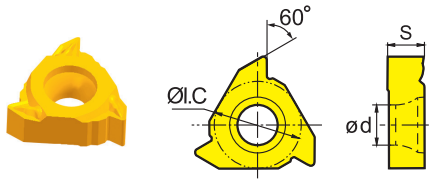
Spessore dell'inserto [mm]	
Code	Descrizione
B	Spessore ISO

9

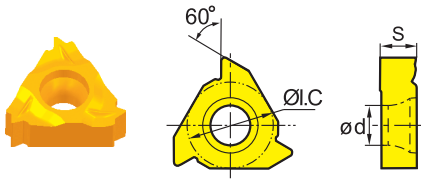
R/LT**N/W	I.C	S	d
11	6,35	3,18	2,8
16	9,525	3,97	4,4
22	12,7	5,56	5,5

Inserti per filettatura

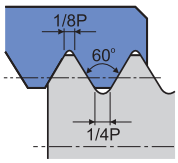
Filettatura ISO-Metrica standard 60° Profilo completo



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



ISO 965-1980 DIN 13
GB·T 197-2003 Tolleranza: 6g·6H

ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
11	0,50	-			RT11.01N-0.50GM	○	
11		-			LT11.01N-0.50GM	○	
11	0,75	-			RT11.01N-0.75GM	●	
11		-			LT11.01N-0.75GM	○	
11	1,00	-			RT11.01N-1.00GM	○	●
11		-			LT11.01N-1.00GM	●	
11	1,25	-			RT11.01N-1.25GM	●	
11		-			LT11.01N-1.25GM	●	
11	1,50	-			RT11.01N-1.50GM	○	●
11		-			LT11.01N-1.50GM	●	
11	1,75	-			RT11.01N-1.75GM	○	
11		-			LT11.01N-1.75GM	●	
11	2,00	-			RT11.01N-2.00GM	○	●
11		-			LT11.01N-2.00GM	●	
16	0,50	-			RT16.01N-0.50GM	○	
16		-			LT16.01N-0.50GM	○	
16	0,75	-			RT16.01N-0.75GM	○	
16		-			LT16.01N-0.75GM	○	
16	1,00	RT16.01W-1.00GM	○	●	RT16.01N-1.00GM	○	
16		LT16.01W-1.00GM	●		LT16.01N-1.00GM	●	
16	1,25	RT16.01W-1.25GM	○	●	RT16.01N-1.25GM	○	
16		LT16.01W-1.25GM	●		LT16.01N-1.25GM	●	
16	1,50	RT16.01W-1.50GM	○	●	RT16.01N-1.50GM	●	
16		LT16.01W-1.50GM	●		LT16.01N-1.50GM	●	
16	1,75	RT16.01W-1.75GM	●		RT16.01N-1.75GM	○	
16		LT16.01W-1.75GM	●		LT16.01N-1.75GM	●	
16	2,00	RT16.01W-2.00GM	○	●	RT16.01N-2.00GM	○	●

● In magazzino ○ Su richiesta

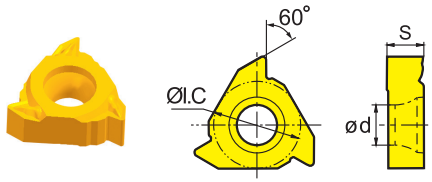
HC[1] Carburo cementato rivestito

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

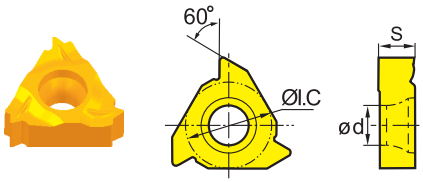
R/LT**N/W	I.C	S	d
11	6,35	3,18	2,8
16	9,525	3,97	4,4
22	12,7	5,56	5,5

Inserti per filettatura

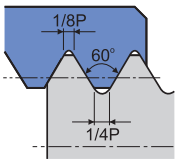
Filettatura ISO-Metrica standard 60° Profilo completo



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



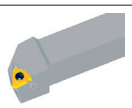
ISO 965-1980 DIN 13
GB·T 197-2003 Tolleranza: 6g·6H

ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	2,00	**LT16.01W-2.00GM**	●		**LT16.01N-2.00GM**	●	
16	2,50	**RT16.01W-2.50GM**	○	●	**RT16.01N-2.50GM**	○	●
16		**LT16.01W-2.50GM**	●		**LT16.01N-2.50GM**	●	
16	3,00	**RT16.01W-3.00GM**	○	●	**RT16.01N-3.00GM**	○	●
16		**LT16.01W-3.00GM**	●		**LT16.01N-3.00GM**	●	
22	3,50	**RT22.01W-3.50GM**	○		**RT22.01N-3.50GM**	○	●
22		**LT22.01W-3.50GM**	●		**LT22.01N-3.50GM**	●	
22	4,00	**RT22.01W-4.00GM**	○	●	**RT22.01N-4.00GM**	●	
22		**LT22.01W-4.00GM**	●		**LT22.01N-4.00GM**	●	
22	4,50	**RT22.01W-4.50GM**	○		**RT22.01N-4.50GM**	○	●
22		**LT22.01W-4.50GM**	○		**LT22.01N-4.50GM**	●	
22	5,00	**RT22.01W-5.00GM**	○		**RT22.01N-5.00GM**	○	
22		**LT22.01W-5.00GM**	●		**LT22.01N-5.00GM**	●	
22	5,50	**RT22.01W-5.50GM**	○		**RT22.01N-5.50GM**	○	
22		**LT22.01W-5.50GM**	○		**LT22.01N-5.50GM**	●	
22	6,00	**RT22.01W-6.00GM**	○	●	**RT22.01N-6.00GM**	○	●
22		**LT22.01W-6.00GM**	●		**LT22.01N-6.00GM**	●	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

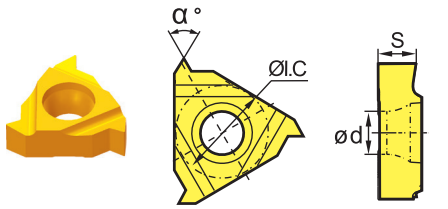
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 Scelta gradi A465 Informazioni tecniche A501 Dati di taglio A500

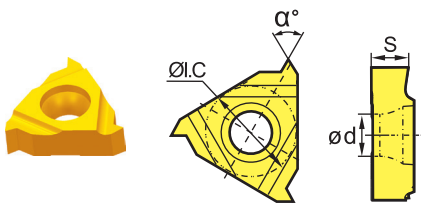
R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4
22	12,7	5,56	5,5

Inserti per filettatura

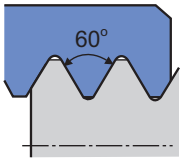
60° Profilo parziale



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna

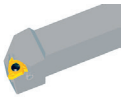


ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	0,50 - 1,50	**RT16.01W-A60**	○	●	**RT16.01N-A60**	○	
16		**LT16.01W-A60**	●		**LT16.01N-A60**	●	
16	0,50 - 3,00	**RT16.01W-AG60**	○	●	**RT16.01N-AG60**	○	
16		**LT16.01W-AG60**	●		**LT16.01N-AG60**	●	●
16	1,75 - 3,00	**RT16.01W-G60**	○		**RT16.01N-G60**	○	
16		**LT16.01W-G60**	●		**LT16.01N-G60**	○	
16		**LT16.01W-G60P**	●		**LT16.01N-G60P**	○	
16		**RT16.01W-G60P***	○	○	**RT16.01N-G60P***	○	
22	3,50 - 5,00	**LT22.01W-N60P**	○		-		
22		**RT22.01W-N60P***	●		**RT22.01N-N60P***	●	
22		**LT22.01W-N60P***			**LT22.01N-N60P***	○	

● In magazzino ○ Su richiesta
P*: Inserti con rompitrucioli

HC[1] Carburo cementato rivestito

Utensile

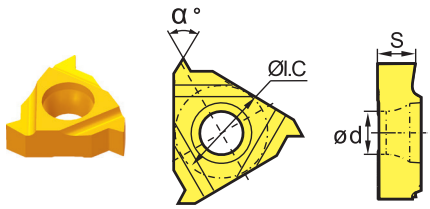
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

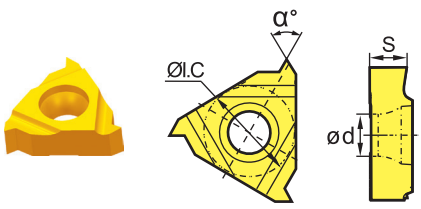
R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4
22	12,7	5,56	5,5

Inserti per filettatura

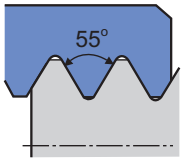
55° Profilo parziale



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna

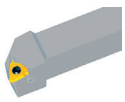


ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	48 - 16	**RT16.01W-A55**	○		**RT16.01N-A55**	○	
16		**LT16.01W-A55**	●		**LT16.01N-A55**	○	
16	48 - 8	**RT16.01W-AG55**	●		**RT16.01N-AG55**	○	●
16		**LT16.01W-AG55**	○		**LT16.01N-AG55**	●	
16	14 - 8	**RT16.01W-G55**	○		**RT16.01N-G55**	○	
16		**LT16.01W-G55**	●		**LT16.01N-G55**	○	
16		**LT16.01W-G55P**	●		**LT16.01N-G55P**	●	
16		**RT16.01W-G55P***	○		**RT16.01N-G55P***	○	
22	7 - 5	**RT22.01W-N55P**	○		**RT22.01N-N55P**	○	
22		-			**LT22.01N-N55**	○	

● In magazzino ○ Su richiesta
P*: Inserti con rompitrucioli

HC[1] Carburo cementato rivestito

Utensile

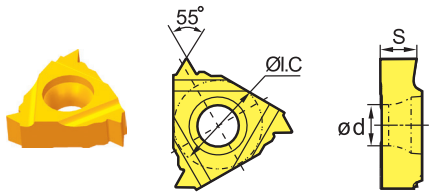
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

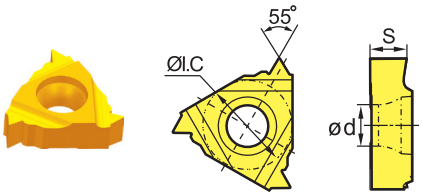
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

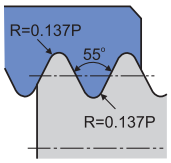
Whitworth



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



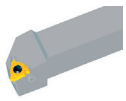
ISO 228·1:1982 DIN 259
B.S.84: 1956 Tolleranza: Classe 1 media

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8,00	**RT16.01W-8W**	○		**RT16.01N-8W**	○	
16		**LT16.01W-8W**	●		**LT16.01N-8W**	●	
16	9,00	-			**RT16.01N-9W**	○	
16		**LT16.01W-9W**	○		**LT16.01N-9W**	○	
16	10,00	**RT16.01W-10W**	○		**RT16.01N-10W**	○	
16		**LT16.01W-10W**	○		**LT16.01N-10W**	○	
16	11,00	**RT16.01W-11W**	○	●	**RT16.01N-11W**	○	●
16		**LT16.01W-11W**	●		**LT16.01N-11W**	○	
16	12,00	**RT16.01W-12W**	○		**RT16.01N-12W**	○	
16		**LT16.01W-12W**	○		**LT16.01N-12W**	○	
16	14,00	**RT16.01W-14W**	●		**RT16.01N-14W**	○	●
16		**LT16.01W-14W**	○		**LT16.01N-14W**	○	
16	16,00	**RT16.01W-16W**	○	●	**RT16.01N-16W**	○	●
16		**LT16.01W-16W**	○		**LT16.01N-16W**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

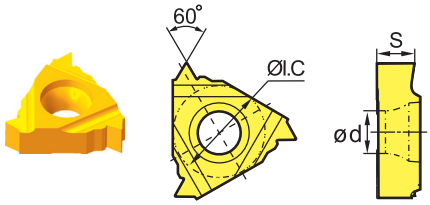
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 Scelta gradi A465 Informazioni tecniche A501 Dati di taglio A500

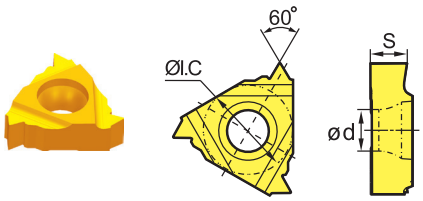
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

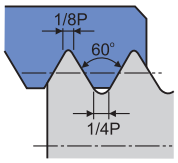
Profilo completo UN Americano Filettatura 60°



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



AS;E B1.1-1989
Tolleranza: 2A·2B

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	8,00	**RT16.01W-8UN**	○		**RT16.01N-8UN**	○	
16		**LT16.01W-8UN**	○		**LT16.01N-8UN**	○	
16	10,00	**RT16.01W-10UN**	○		**RT16.01N-10UN**	○	
16		**LT16.01W-10UN**	○		**LT16.01N-10UN**	○	
16	12,00	**RT16.01W-12UN**	○		**RT16.01N-12UN**	○	
16		**LT16.01W-12UN**	○		**LT16.01N-12UN**	○	
16	14,00	**RT16.01W-14UN**	○		**RT16.01N-14UN**	○	
16		**LT16.01W-14UN**	○		**LT16.01N-14UN**	○	
16	16,00	**RT16.01W-16UN**	○		**RT16.01N-16UN**	○	
16		**LT16.01W-16UN**	○		**LT16.01N-16UN**	○	
16	18,00	**RT16.01W-18UN**	○		**RT16.01N-18UN**	○	
16		**LT16.01W-18UN**	○		**LT16.01N-18UN**	○	
16	20,00	**RT16.01W-20UN**	○		**RT16.01N-20UN**	○	
16		**LT16.01W-20UN**	○		**LT16.01N-20UN**	○	
16	24,00	-			**RT16.01N-24UN**	○	
16		-			**LT16.01N-24UN**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

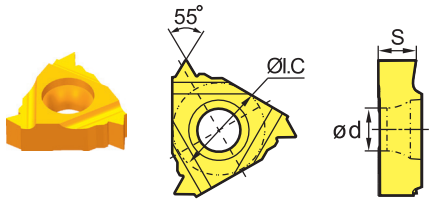
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

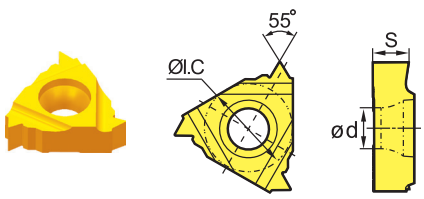
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

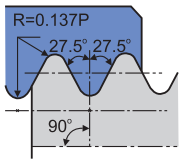
Filettatura BSPT conica per tubi



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



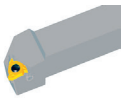
ISO 7-1: 1984 B.S.21:1985
BSPT standard

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
16	11,00	**RT16.01W-11BSPT**	○		**RT16.01N-11BSPT**	○	
16		**LT16.01W-11BSPT**	●		**LT16.01N-11BSPT**	○	
16	14,00	**RT16.01W-14BSPT**	○		**RT16.01N-14BSPT**	○	
16		**LT16.01W-14BSPT**	○		**LT16.01N-14BSPT**	○	
16	19,00	**RT16.01W-19BSPT**	○		**RT16.01N-19BSPT**	○	
16		**LT16.01W-19BSPT**	○		**LT16.01N-19BSPT**	○	
16	28,00	**RT16.01W-28BSPT**	○		**RT16.01N-28BSPT**		
16		**LT16.01W-28BSPT**	○		**LT16.01N-28BSPT**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

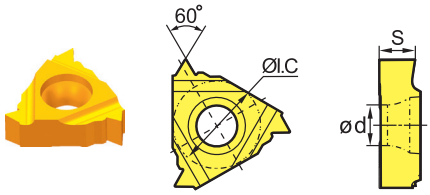
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 Scelta gradi A465 Informazioni tecniche A501 Dati di taglio A500

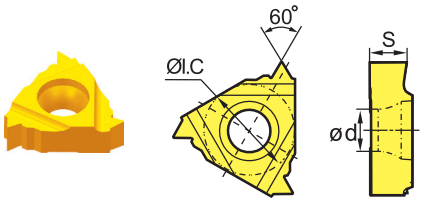
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

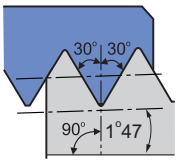
Filettatura per tubi NPT



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



ASME B1.20.1-1983
NPT standard

ISO	Passo (tpi)	Lavorazione esterna	HC¹ (PVD)		Lavorazione interna	HC¹ (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8,00	**RT16.01W-8NPT**	○		**RT16.01N-8NPT**	○	
16		**LT16.01W-8NPT**	○		**LT16.01N-8NPT**	○	
16	11,50	**RT16.01W-11.5NPT**	○		**RT16.01N-11.5NPT**	○	
16		**LT16.01W-11.5NPT**	○		**LT16.01N-11.5NPT**	○	
16	14,00	**RT16.01W-14NPT**	○	○	**RT16.01N-14NPT**	○	
16		**LT16.01W-14NPT**	○		**LT16.01N-14NPT**	○	
16	18,00	**RT16.01W-18NPT**	○		**RT16.01N-18NPT**	○	
16		**LT16.01W-18NPT**	○		**LT16.01N-18NPT**	○	
16	27,00	**RT16.01W-27NPT**	○		**RT16.01N-27NPT**	○	
16		**LT16.01W-27NPT**	○		**LT16.01N-27NPT**	○	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito

Utensile

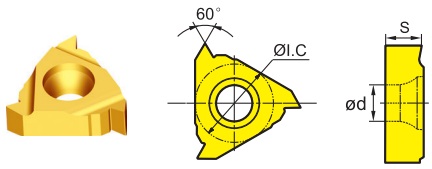
SWR/L	SNR/L
	
A493-A494	A495-A496

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

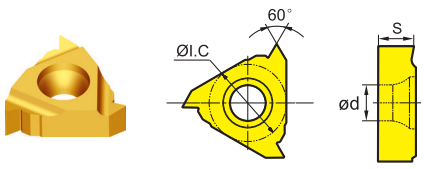
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

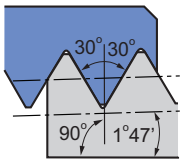
Filettatura per tubi NTPF autosigillante 60°



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



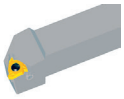
ASME B1.20.1-1983
Tolleranza: 2

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8,00	-			**RT16.01N-8NPTF**	○	
16	11,50	**RT16.01W-11.5NPTF**	○		**RT16.01N-11.5NPTF**	○	
16	14,00	**RT16.01W-14NPTF**	○		**RT16.01N-14NPTF**	○	
16	18,00	**RT16.01W-18NPTF**	○		**RT16.01N-18NPTF**	○	
16	27,00	-			**RT16.01N-27NPTF**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

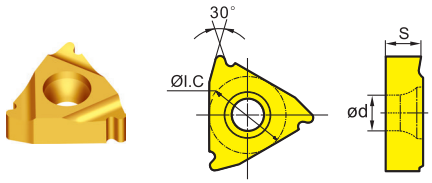
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

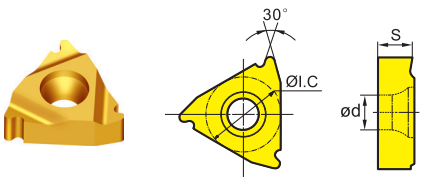
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

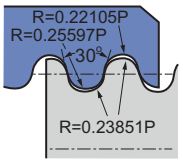
Filettatura tonda R 30°



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



DIN 405
Tolleranza: 7

ISO	Passo (tpi)	Lavorazione esterna	HC¹ (PVD)		Lavorazione interna	HC¹ (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	6,00	**RT16.01W-6R**	○		**RT16.01N-6R**	○	○
16	8,00	**RT16.01W-8R**	○		**RT16.01N-8R**	○	○
16	10,00	**RT16.01W-10R**	○		**RT16.01N-10R**	○	○

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito

Utensile

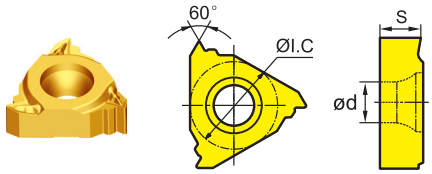
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

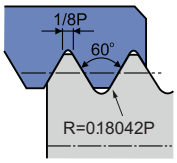
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

Filettatura MJ per industria aerospaziale



Versione destra esterna
Versione sinistra interna



ISO 5855-1999
Tolleranza: 4

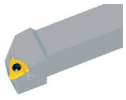
ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	1,50	**RT16.01W-1.50MJ**	○		-		
16	2,00	**RT16.01W-2.00MJ**	○		-		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

SWR/L



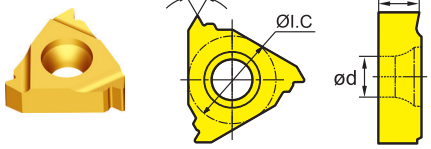
A493

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

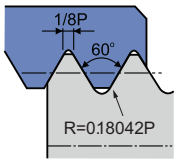
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

Filettatura a vite unificato UNJ



Versione destra esterna
Versione sinistra interna

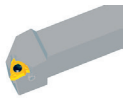


ISO 3161-1999
Tolleranza: 3A

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	10,00	**RT16.01W-10UNJ**	○		-		
16	12,00	**RT16.01W-12UNJ**	○		-		
16	14,00	**RT16.01W-14UNJ**	○		-		
16	18,00	**RT16.01W-18UNJ**	○		-		
16	20,00	**RT16.01W-20UNJ**	○		-		
16	24,00	**RT16.01W-24UNJ**	○		-		
16	28,00	**RT16.01W-28UNJ**	○		-		
16	32,00	**RT16.01W-32UNJ**	○		-		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

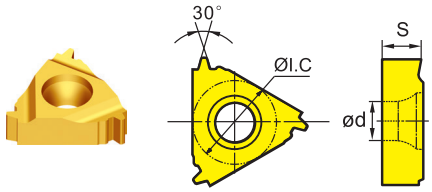
Utensile
SWR/L

A493

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

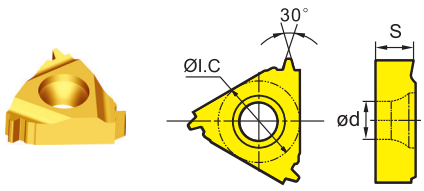
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

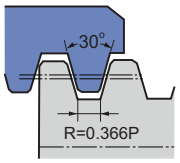
Filettatura metrica ISO trapezoidale TR 30°



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



ISO 2901-2904
Tolleranza: 7

ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	1,50	**RT16.01W-1.50TR**	○		**RT16.01N-1.50TR**	●	
16	2,00	**RT16.01W-2.00TR**	○	○	**RT16.01N-2.00TR**	○	○
16	3,00	**RT16.01W-3.00TR**	○	○	**RT16.01N-3.00TR**	○	●

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

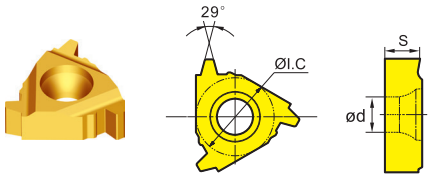
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

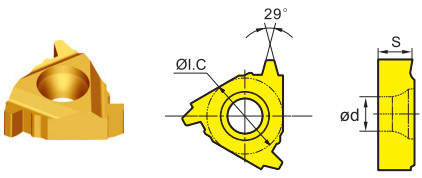
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

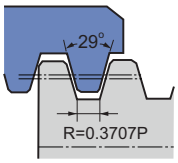
Filettatura americana 29° trapezoidale ACME



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



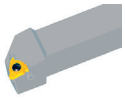
ANSI B1.5-1988
Tolleranza: 2G

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8,00	**RT16.01W-8AC**	○		**RT16.01N-8AC**	○	
16	10,00	**RT16.01W-10AC**	○		**RT16.01N-10AC**	○	
16	12,00	**RT16.01W-12AC**	○		**RT16.01N-12AC**	○	
16	14,00	**RT16.01W-14AC**	○		**RT16.01N-14AC**	○	
16	16,00	**RT16.01W-16AC**	○		**RT16.01N-16AC**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

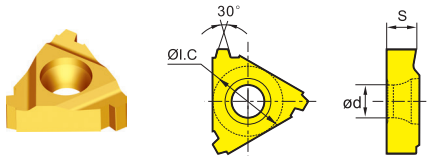
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

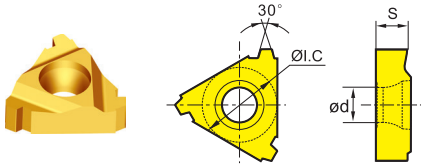
Inserti per filettatura

R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4

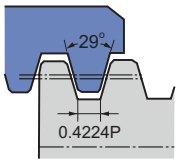
Filettatura americana trapezoidale piatta STUB-ACME



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



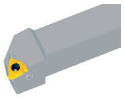
ANSI B1.8-1988
Tolleranza: Standard API

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8,00	**RT16.01W-8STAC**	○		**RT16.01N-8STAC**	○	
16	10,00	**RT16.01W-10STAC**	○		**RT16.01N-10STAC**	○	
16	12,00	**RT16.01W-12STAC**	○		**RT16.01N-12STAC**	○	
16	14,00	**RT16.01W-14STAC**	○		**RT16.01N-14STAC**	○	
16	16,00	**RT16.01W-16STAC**	○		**RT16.01N-16STAC**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

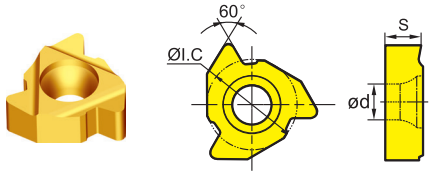
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

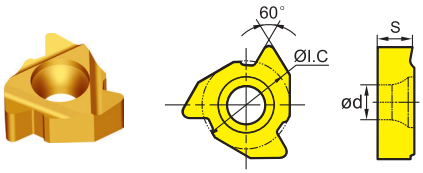
Inserti per filettatura

R/LT**N/W	I.C	S	d
22	12,7	5,56	5,5

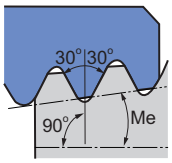
Filettatura API 60°



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



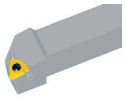
Me = conico, 2i.p.f-4°46', 3i.p.f-7°01'
API SPEC7:1990 Tolleranza: Standard API

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG201	HC[1] (PVD) YBG205
22	4,00	**RT22.01W-4AP382**	○		**RT22.01N-4AP382**	○	
22		**RT22.01W-4AP383**	○		**RT22.01N-4AP383**	○	
22		**RT22.01W-4AP502**	○		**RT22.01N-4AP502**	○	
22		**RT22.01W-4AP503**	○		**RT22.01N-4AP503**	○	
22	5,00	**RT22.01W-5AP403**	○		**RT22.01N-5AP403**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

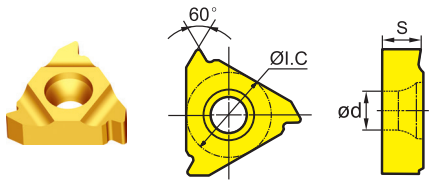
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

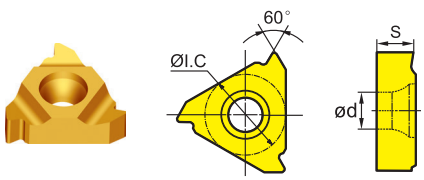
R/LT**N/W	I.C	S	d
16	9,525	3,97	4,4
22	12,7	5,56	5,5

Inserti per filettatura

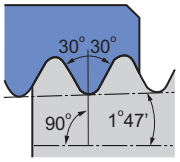
Filettatura tonda API



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



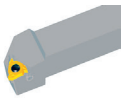
API spec.5B
Tolleranza: API RD

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
16	8,00	**RT16.01W-8RD**	○		**RT16.01N-8RD**	○	
16	10,00	**RT16.01W-10RD**	○		**RT16.01N-10RD**	○	
22	8,00	**RT22.01W-8RD**	○		**RT22.01N-8RD**	○	
22	10,00	**RT22.01W-10RD**	○		**RT22.01N-10RD**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

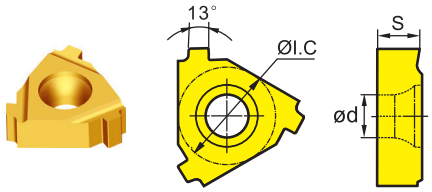
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

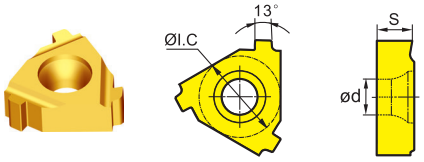
Inserti per filettatura

R/LT**N/W	I.C	S	d
22	12,7	5,56	5,5

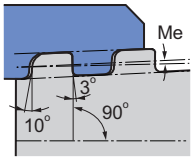
Filettatura americana a dente di sega API



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



Me=conico 3/4i.p.f-1°47′-1°47′ per Ø 4 1/2-13 3/8
1 i.p.f--2°23′ per Ø16 SEPC.5B.1979 Tol.: Std. API

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG201	YBG205		YBG201	YBG205
22	5,00	**RT22.01W-5BUT**	○		**RT22.01N-5BUT**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

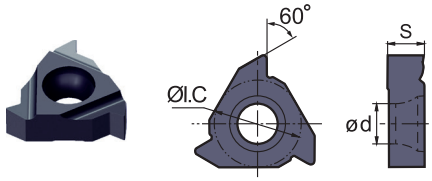
SWR/L	SNR/L
	
A493	A495

Codice sistema A466 Scelta gradi A465 Informazioni tecniche A501 Dati di taglio A500

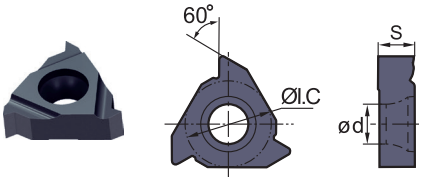
Inserti per filettatura (spessore ISO)

R/LT**N/W	I.C	S	d
16	9,525	3,52	4

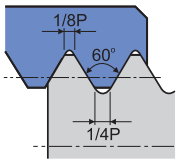
Filettatura ISO-Metrica standard 60° Profilo completo (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



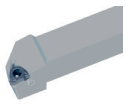
ISO 965-1980 DIN 13
GB·T 197-2003 Tolleranza: 6g/6H

ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG202	YBG205		YBG202	YBG205
16	0,50	**RT16.01W-0.50GMB**	○	○	**RT16.01N-0.50GMB**	○	○
16	0,75	**RT16.01W-0.75GMB**	○	○	**RT16.01N-0.75GMB**	○	○
16	1,00	**RT16.01W-1.00GMB**	○	○	**RT16.01N-1.00GMB**	○	○
16		-			**RT16.01N-1.00GMPB**	○	
16	1,25	**RT16.01W-1.25GMB**	○	○	**RT16.01N-1.25GMB**	○	○
16	1,50	**RT16.01W-1.50GMB**	○	○	**RT16.01N-1.50GMB**	○	
16		**RT16.01W-1.50GMPB***	○	○	-		
16	1,75	**RT16.01W-1.75GMB**	○	○	**RT16.01N-1.75GMB**	○	○
16	2,00	**RT16.01W-2.00GMB**	○	○	**RT16.01N-2.00GMB**	○	○
16		-			**RT16.01N-2.00GMPB***	○	○
16	2,50	**RT16.01W-2.50GMB**	○	○	**RT16.01N-2.50GMB**	○	○
16	3,00	**RT16.01W-3.00GMB**	○	○	**RT16.01N-3.00GMB**	○	○
16		-			**RT16.01N-3.00GMPB***	○	

● In magazzino ○ Su richiesta
PB*: Inserti con rompitrucioli

HC[1] Carburo cementato rivestito

Utensile

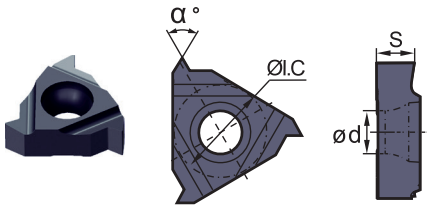
SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

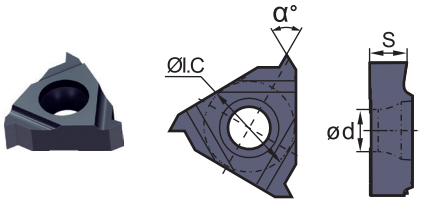
Inserti per filettatura (spessore ISO)

R/LT**N/W	I.C	S	d
16	9,525	3,52	4

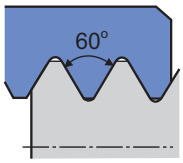
60° Profilo parziale (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna

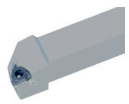


ISO	Passo (mm)	Lavorazione esterna	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	0,50 - 1,50	**RT16.01W-A60B**	○		**RT16.01N-A60B**	○	
16	0,50 - 3,00	**RT16.01W-AG60B**	○		**RT16.01N-AG60B**	○	
16		**RT16.01W-AG60PB***	○		-		
16	1,75 - 3,00	**RT16.01W-G60B**	○		**RT16.01N-G60B**	○	

● In magazzino ○ Su richiesta
PB*: Inserti con rompitrucioli

HC[1] Carburo cementato rivestito

Utensile

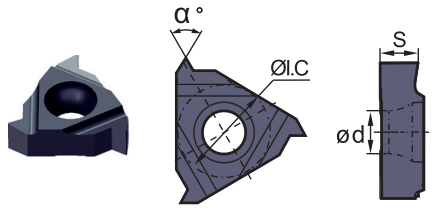
SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

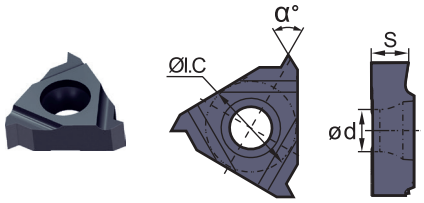
Inserti per filettatura (spessore ISO)

R/LT**N/W	I.C	S	d
16	9,525	3,52	4

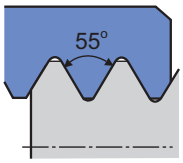
55° Profilo parziale (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna

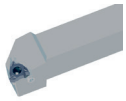


ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	48 - 16	**RT16.01W-A55B**	○		**RT16.01N-A55B**	○	
16	48 - 8	**RT16.01W-AG55B**	○		**RT16.01N-AG55B**	○	
16		**RT16.01W-AG55PB**	○	○	-		
16	14 - 8	**RT16.01W-G55B**	○		**RT16.01N-G55B**	○	

● In magazzino ○ Su richiesta
PB*: Inserti con rompitrucioli

HC[1] Carburo cementato rivestito

Utensile

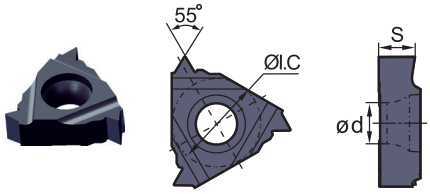
SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

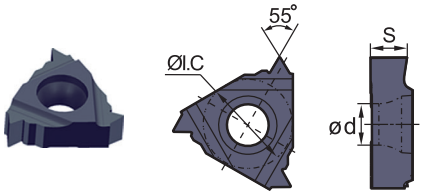
Inserti per filettatura (spessore ISO)

R/LT**N/W	I.C	S	d
16	9,525	3,52	4

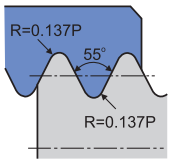
Whitworth (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna

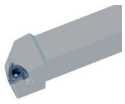


ISO 965-1980 DIN 13
GB·T 197-2003 Tolleranza: Classe A media

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG202	YBG205		YBG202	YBG205
16	8,00	**RT16.01W-8WB**	○		**RT16.01N-8WB**	○	
16	9,00	**RT16.01W-9WB**	○		**RT16.01N-9WB**	○	
16	10,00	**RT16.01W-10WB**	○		**RT16.01N-10WB**	○	
16	11,00	**RT16.01W-11WB**	○	○	**RT16.01N-11WB**	○	
16		-			**RT16.01N-11WPB**	○	
16		-			**RT16.01N-11WPB***	○	
16	12,00	**RT16.01W-12WB**	○		**RT16.01N-12WB**	○	
16	14,00	**RT16.01W-14WB**	○		**RT16.01N-14WB**	○	
16		-			**RT16.01N-14WPB***	○	
16	16,00	**RT16.01W-16WB**	○		**RT16.01N-16WB**	○	○

● In magazzino ○ Su richiesta
HC[1] Carburo cementato rivestito
PB*: Inserti con rompitrucioli

Utensile

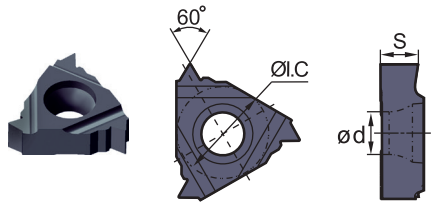
SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

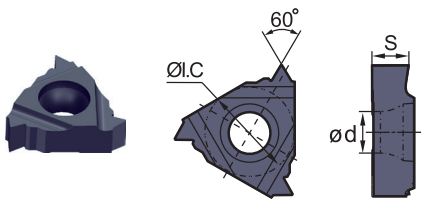
R/LT**N/W	I.C	S	d
16	9,525	3,52	4

Inserti per filettatura (spessore ISO)

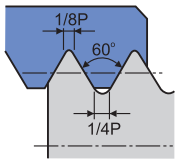
Profilo completo UN Americano Filettatura 60° (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



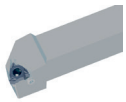
ASME B1.1-1989
Tolleranza: 2A/2B

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG202	YBG205		YBG202	YBG205
16	8,00	**RT16.01W-8UNB**	○		**RT16.01N-8UNB**	○	
16	10,00	**RT16.01W-10UNB**	○		**RT16.01N-10UNB**	○	
16	12,00	**RT16.01W-12UNB**	○		**RT16.01N-12UNB**	○	
16	14,00	**RT16.01W-14UNB**	○		**RT16.01N-14UNB**	○	
16	16,00	**RT16.01W-16UNB**	○		**RT16.01N-16UNB**	○	
16	18,00	**RT16.01W-18UNB**	○		**RT16.01N-18UNB**	○	
16	20,00	**RT16.01W-20UNB**	○		**RT16.01N-20UNB**	○	
16	24,00	-			**RT16.01N-24UNB**	○	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito

Utensile

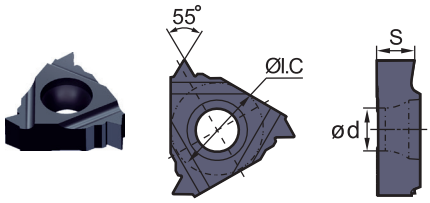
SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

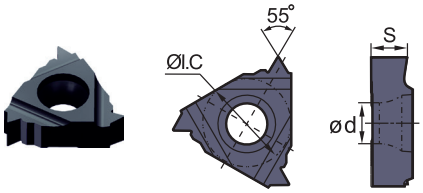
Inserti per filettatura (spessore ISO)

R/LT**N/W	I.C	S	d
16	9,525	3,52	4

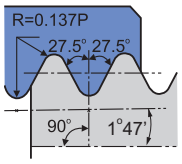
Filettatura BSPT conica per tubi (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna



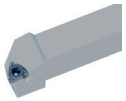
ASME B1.1-1989
BSPT standard

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205	Lavorazione interna	HC[1] (PVD) YBG202	HC[1] (PVD) YBG205
16	11,00	**RT16.01W-11BSPTB**	○	○	**RT16.01N-11BSPTB**	○	○
16	14,00	**RT16.01W-14BSPTB**	○		**RT16.01N-14BSPTB**	○	
16		**RT16.01W-14BSPTPB***	○		**RT16.01N-14BSPTPB***	○	○
16	19,00	**RT16.01W-19BSPTB**	○		**RT16.01N-19BSPTB**	○	
16	28,00	**RT16.01W-28BSPTB**	○		**RT16.01N-28BSPTB**	○	

● In magazzino ○ Su richiesta
PB*: Inserti con rompitrucioli

HC[1] Carburo cementato rivestito

Utensile

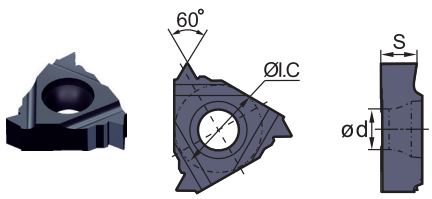
SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

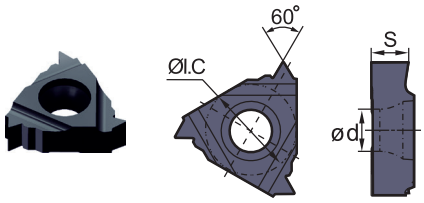
Inserti per filettatura (spessore ISO)

R/LT**N/W	I.C	S	d
16	9,525	3,52	4

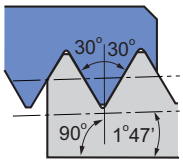
Filettatura NPT per tubi (spessore ISO)



Versione destra esterna
Versione sinistra interna



Versione destra interna
Versione sinistra esterna

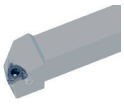


ASME B1.20.1-1983
NPT standard

ISO	Passo (tpi)	Lavorazione esterna	HC[1] (PVD)		Lavorazione interna	HC[1] (PVD)	
			YBG202	YBG205		YBG202	YBG205
16	8,00	**RT16.01W-8NPTB**	○		**RT16.01N-8NPTB**	○	
16	11,50	**RT16.01W-11.5NPTB**	○		**RT16.01N-11.5NPTB**	○	
16		-			**RT16.01N-11.5NPTPB***	○	
16	14,00	**RT16.01W-14NPTB**	○	○	**RT16.01N-14NPTB**	○	
16		-			**RT16.01N-14NPTPB***	○	○
16	18,00	**RT16.01W-18NPTB**	○		**RT16.01N-18NPTB**	○	
16	27,00	**RT16.01W-27NPTB**	○		**RT16.01N-27NPTB**	○	

● In magazzino ○ Su richiesta
HC[1] Carburo cementato rivestito
PB*: Inserti con rompitrucioli

Utensile

SWR	SNR
	
A497	A498

Codice sistema A466 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

Filettatura Codice sistema – portautensile

S	W	R	20	20	K	16	(B)
1	2	3	4	5	6	7	8

Sistema di bloccaggio

Code	Descrizione	
S	Bloccaggio a vite	
C	Bloccaggio a staffa	

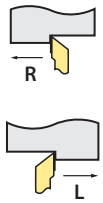
1

Tipo lavorazione

Code	Descrizione
W	Portautensile filettatura esterna
N	Portautensile filettatura interna

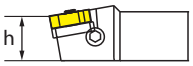
2

Direzione di taglio



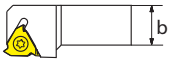
3

Altezza stelo h [mm]



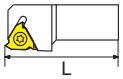
4

Larghezza stelo b [mm]



5

Lunghezza stelo L [mm]



Code	L
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

6

Dimensioni inserto [mm]

Code	Altezza
11	6,35
16	9,525
22	12,7

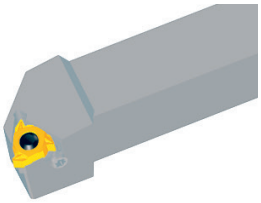
7

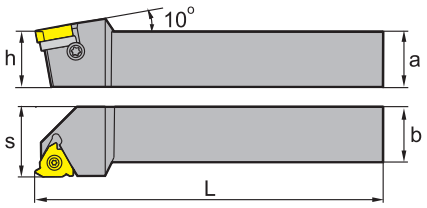
Portautensile per inserti per filettatura sottili (versione B)

8

Portautensile per filettatura (esterna)

SWR/L





Articolo	✲	Stock	Dimensioni [mm]					Inserto
			a	b	L	h	s	
SWR1616H16		●	16	16	100	16	20	RT16.01W-****
SWR2020K16		●	20	20	125	20	25	RT16.01W-****
SWR2525M16		●	25	25	150	25	32	RT16.01W-****
SWR3225P16		●	32	25	170	32	32	RT16.01W-****
SWR3232P16		●	32	32	170	32	40	RT16.01W-****
SWR2525M22		●	25	25	150	25	32	RT22.01W-****
SWR3225P22		●	32	25	170	32	32	RT22.01W-****
SWR3232P22		●	32	32	170	32	40	RT22.01W-****
SWR4040S22		○	40	40	250	40	50	RT22.01W-****

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**RT16.01W-******	**RT22.01W-******
	h	**16-32**	**25-40**
	Vite	I60M3,5×12 (2,7 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)	SM4×8C	SM5×8.5C
	Sottoplacchetta	MT16-__M	MT22-__M
	Chiave (vite)	WT15IP	WT20IP

Inserto



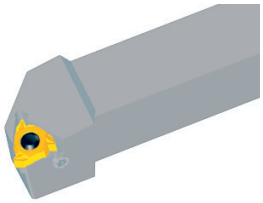
Media Lavor.

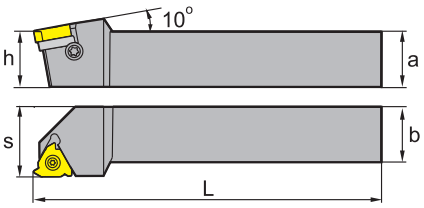
A467

Codice sistema A492 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

Portautensile per filettatura (esterna)

SWR/L





Articolo	✲	Stock	Dimensioni [mm]					Inserto
			a	b	L	h	s	
SWL1616H16		●	16	16	100	16	20	LT16.01W-****
SWL2020K16		●	20	20	125	20	25	LT16.01W-****
SWL2525M16		●	25	25	150	25	32	LT16.01W-****
SWL3225P16		●	32	25	170	32	32	LT16.01W-****
SWL3232P16		○	32	32	170	32	40	LT16.01W-****
SWL2525M22		●	25	25	150	25	32	LT22.01W-****
SWL3225P22		○	32	25	170	32	32	LT22.01W-****
SWL3232P22		●	32	32	170	32	40	LT22.01W-****
SWL4040S22		○	40	40	250	40	50	LT22.01W-****

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	LT16.01W-****	LT22.01W-****
	h	**16-32**	**25-40**
	Vite	I60M3,5×12 (2,7 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)	SM4×8C	SM5×8.5C
	Sottoplacchetta	MT16-__M	MT22-__M
	Chiave (vite)	WT15IP	WT20IP

Inserto



Media Lavor.

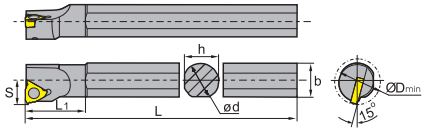
A467

Codice sistema A492 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

Portautensile per filettatura (interna)

SNR/L





Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ød	b	L	h	s	L_1	D_{min}	
SNR0016K11		●	16	16	125	15	10	20,9	12	RT11.01N-****
SNR0016M11		●	16	15,5	150	15	10,5	25,9	16	RT11.01N-****
SNR0016M16		●	16	15,5	150	15	12	27	20	RT16.01N-****
SNR0020M16		●	20	19	150	18	14	28,7	25	RT16.01N-****
SNR0020Q16		●	20	19	180	18	14	34	25	RT16.01N-****
SNR0025M16		●	25	24	150	23	17	28,8	32	RT16.01N-****
SNR0032R16		●	32	31	200	30	22	30,9	40	RT16.01N-****
SNR0032S16		●	32	31	250	30	22	30,9	40	RT16.01N-****
SNR0040T16		●	40	38,5	300	37	27	31,5	50	RT16.01N-****
SNR0050U16		○	50	49,5	350	49	35	40,2	63	RT16.01N-****
SNR0020Q22		●	20	21,5	180	18	15	35	25	RT22.01N-****
SNR0025R22		●	25	24	200	23	19	39	32	RT22.01N-****
SNR0032S22		●	32	31	250	30	22	36,4	40	RT22.01N-****
SNR0040T22		●	40	38,5	300	37	27	37,2	50	RT22.01N-****
SNR0050U22		●	50	48,5	350	47	35	42,6	63	RT22.01N-****

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**RT11.01N-******	**RT16.01N-******	**RT16.01N-******	**RT22.01N-******	**RT22.01N-******
	ød	**16**	**16**	**20-50**	**20**	**25-50**
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×12 (2,7 Nm)	I60M5×10 (6,7 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)			SM4×8C		SM5×8.5C
	Sottoplacchetta			MT16-__M		MT22-__M
	Chiave (vite)	WT07IP	WT15IP	WT15IP	WT20IP	WT20IP

Inserto



Media Lavor.

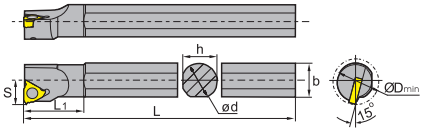
A467

Codice sistema > A492 Scelta gradi > A465 Informazioni tecniche > A501 Dati di taglio > A500

Portautensile per filettatura (interna)

SNR/L





Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ød	b	L	h	s	L_1	D_{min}	
SNL0016K11		●	16	16	125	15	10	20,9	12	LT11.01N-****
SNL0016M11		●	16	15,5	150	15	10,5	25,9	16	LT11.01N-****
SNL0016M16		●	16	15,5	150	15	12	27	20	LT16.01N-****
SNL0020M16		○	20	19	150	18	14	28,7	25	LT16.01N-****
SNL0020Q16		●	20	19	180	18	14	34	25	LT16.01N-****
SNL0025M16		●	25	24	150	23	17	28,8	32	LT16.01N-****
SNL0032R16		●	32	31	200	30	22	30,9	40	LT16.01N-****
SNL0032S16		○	32	31	250	30	22	30,9	40	LT16.01N-****
SNL0040T16		●	40	38,5	300	37	27	31,5	50	LT16.01N-****
SNL0050U16		○	50	49,5	350	49	35	40,2	63	LT16.01N-****
SNL0020Q22		●	20	21,5	180	18	15	35	25	LT22.01N-****
SNL0025R22		○	25	24	200	23	19	39	32	LT22.01N-****
SNL0032S22		●	32	31	250	30	22	36,4	40	LT22.01N-****
SNL0040T22		●	40	38,5	300	37	27	37,2	50	LT22.01N-****
SNL0050U22		●	50	48,5	350	47	35	42,6	63	LT22.01N-****

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	LT11.01N-****	LT16.01N-****	LT16.01N-****	LT22.01N-****	LT22.01N-****
	ød	16	16	20-50	20	25-50
	Vite	I60M2,5×6,5 (1,0 Nm)	I60M3,5×8 (2,7 Nm)	I60M3,5×12 (2,7 Nm)	I60M5×10 (6,7 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)			SM4×8C		SM5×8.5C
	Sottoplacchetta			MT16-__M		MT16-__M
	Chiave (vite)	WT07IP	WT15IP	WT15IP	WT20IP	WT20IP

Inserto



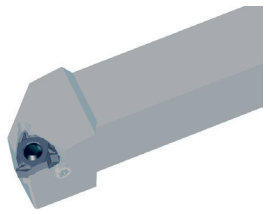
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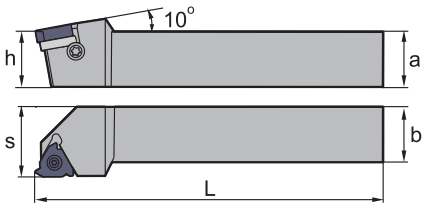
A467

Codice sistema A492 Scelta gradi A465 Informazioni tecniche A501 Dati di taglio A500

Portautensile per filettatura (esterna)

SWR-B Thin Type





Articolo	✲	Stock	Dimensioni [mm]					Inserto
			a	b	L	h	s	
SWR1616H16B		●	16	16	100	16	20	RT16.01W-****B
SWR2020K16B		●	20	20	125	20	25	RT16.01W-****B
SWR2525M16B		●	25	25	150	25	32	RT16.01W-****B
SWR3225P16B		●	32	25	170	32	32	RT16.01W-****B
SWR3232P16B		●	32	32	170	32	40	RT16.01W-****B

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**RT16.01W-****B**
	h	**16-32**
	Vite	I60M3,5×12TT (2,7 Nm)
	Vite (sottoplacchetta)	SM4×8C
	Sottoplacchetta	MT16-__M
	Chiave (vite)	WT15IP

Inserto



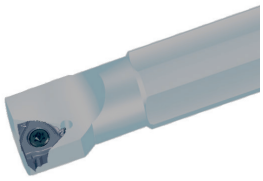
Media Lavor.

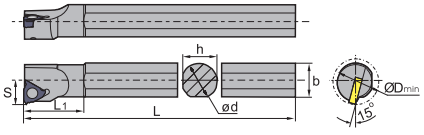
A486

Codice sistema A492 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

Portautensile per filettatura (interna)

SNR-B Thin Type





Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ød	b	L	h	s	L_1	D_{min}	
SNR0016M16B		●	16	15,5	150	15	12	27	20	RT16.01N-****B
SNR0020Q16B		●	20	19	180	18	14	34	25	RT16.01N-****B
SNR0025M16B		●	25	24	150	23	17	28,8	32	RT16.01N-****B
SNR0032R16B		●	32	31	200	30	22	30,9	40	RT16.01N-****B
SNR0032S16B		●	32	31	250	30	22	30,9	40	RT16.01N-****B

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**RT16.01N-****B**	**RT16.01N-****B**
	ød	**16**	**20-32**
	Vite	I60M3,5×08TT (2,7 Nm)	
	Vite		I60M3,5×12TT (2,7 Nm)
	Vite (sottoplac-chetta)		SM4×8C
	Sottoplacchetta		MT16-__M
	Chiave (vite)	WT15IP	WT15IP

Codice sistema A492 | Scelta gradi A465 | Informazioni tecniche A501 | Dati di taglio A500

Note

Filettatura Dati di taglio consigliati

Inserti per filettatura

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (PVD) YBG201	YBG205	
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	190	190	
		ca. 0,45 % C	Temprato	190	2	175	175	
		ca. 0,45 % C	pre-temprato	250	3	145	145	
		ca. 0,75 % C	Temprato	270	4	140	140	
		ca. 0,75 % C	pre-temprato	300	5	135	135	
	Acciaio al carbonio		Temprato	180	6	170	170	
			pre-temprato	275	7	125	125	
			pre-temprato	300	8	115	115	
			pre-temprato	350	9	105	105	
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	125	125	
			temprato e rinvenuto	325	11	95	95	
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	165	165	
		martensitico	pre-temprato	240	13	135	135	
		austenitico	quencing	180	14	155	155	
		austenitico-ferritico		230	15	135	135	
K	Ghisa grigia	perlitico/ferritico		180	16	240	240	
		perlitico (martensitico)		260	17	185	185	
	Ghisa sferodale	ferritico		160	18	220	220	
		perlitico		250	19	165	165	
	Ghisa malleabile	ferritico		130	20	175	175	
		perlitico		230	21	165	165	
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	800	800	
		invecchiabile	indurito	100	23	600	600	
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	320	320	
		≤ 12 % Si, invecchiabile	indurito	90	25	240	240	
		> 12 % Si, non invecchiabile		130	26	160	160	
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	160	160	
		CuZn, CuSnZn		90	28	600	600	
		CuSn, rame senza piombo e rame elettrolitico		100	29	200	200	
S	Leghe resistenti al calore	Base Fe	Temprato	200	30	95	95	
			indurito	280	31	50	50	
		Base Ni o Co	Temprato	250	32	80	80	
			indurito	350	33	70	70	
			fuso	320	34	70	70	
	Leghe di titanio	Titanio puro		R_m 400	35	145	145	
		Leghe Alpha + Beta	indurito	R_m 1050	36	50	50	
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37			
			temprato e rinvenuto	60 HRC	38			
	Ghisa dura		fuso	400	39			
	Ghise temprate		temprato e rinvenuto	55 HRC	40			
X	Materiali non metallici	Termoplastiche			41			
		Termoindurenti			42			
		Vetroresina VTR			43			
		Plastica rinforzata in fibra di carbonio			44			
		Grafite			45			
		Legno			46			

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

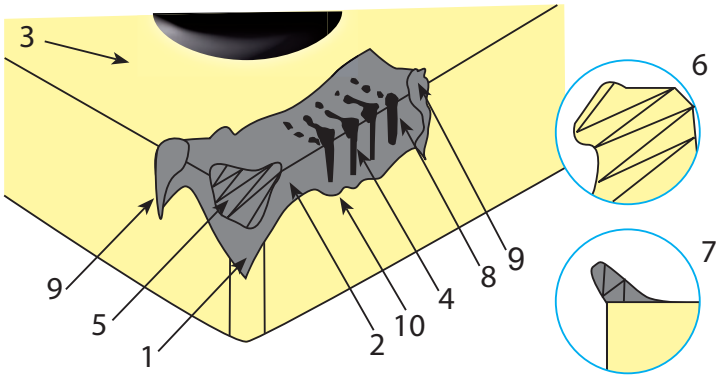
HC metallo duro rivestito

Informazioni tecniche

Misure per la risoluzione dei problemi – Tornitura	**A502-A504**
Informazioni tecniche – Tornitura	**A505-A512**
Gli utensili speciali – tornitura	**A513**

Misure per la risoluzione dei problemi – generali tornitura

vedi fig.	Tipo di usura	Effetti	Causa	Contromisura
1+2	Usura sul fianco	– Scarsa qualità superficiale e dimensioni inconsistenti – Aumento della forza di taglio	– Grado con resistenza all'usura insufficiente – Velocità di taglio troppo elevata – Angolo di spoglia inferiore troppo piccolo – Velocità di avanzamento troppo bassa	– Grado con maggiore resistenza all'usura – Ridurre la velocità di taglio – Aumentare l'angolo di spoglia – Ridurre la velocità di avanzamento
3	Craterizzazione	– Qualità superficiale e controllo del truciolo scarsi	– Grado con resistenza all'usura insufficiente – Velocità di taglio troppo elevata – Velocità di avanzamento troppo alta	– Grado con maggiore resistenza all'usura – Ridurre la velocità di taglio – Ridurre la velocità di avanzamento
4	Scheggiatura	– Durata utensile non stabile – Rottura improvvisa del tagliente	– Grado troppo duro – Velocità di avanzamento troppo alta – Stabilità tagliente Stabilità del portautensile o bloccaggio insufficienti	– Grado con maggiore tenacità – Ridurre la velocità di avanzamento – Cambiare l'arrotondamento del tagliente – Utilizzare un portautensile con maggiore stabilità
5	Rottura	– Aumento della forza di taglio – Scarsa qualità superficiale e dimensioni inconsistenti	– Grado troppo duro – Velocità di avanzamento troppo alta – Stabilità del tagliente insufficiente – Stabilità del portautensile o bloccaggio insufficienti	– Grado con maggiore tenacità – Ridurre la velocità di avanzamento – Cambiare l'arrotondamento del tagliente – Utilizzare un portautensile con maggiore stabilità
6	Deformazione plastica	– Dimensioni inconsistenti – Danneggiamento del tagliente	– Grado con resistenza all'usura insufficiente – Velocità di taglio troppo elevata – Profondità e/o velocità di taglio troppo alta – Temperatura sul tagliente troppo alta	– Grado con maggiore resistenza all'usura – Ridurre la velocità di taglio – Ridurre la profondità di taglio e la velocità di avanzamento – Grado con maggiore resistenza al calore
7	Tagliente di riporto	– Aumento della forza di taglio – Pessima finitura superficiale	– Velocità di taglio troppo bassa – Tagliente non sufficientemente affilato – Grado non adatto	– Aumentare la velocità di taglio – Aumentare l'angolo di spoglia – Selezionare un grado adatto
8	Termica usura	– Rottura per interazione termica, soprattutto in caso di taglio interrotto (fresatura)	– Variazioni di temperatura della lavorazione – Grado troppo duro	– Taglio a secco – Grado con maggiore tenacità
9	Intagliatura	– Bave – Aumento della forza di taglio	– Danneggiamento dovuto ai trucioli (rompitruciolo sfilacciato) – Avanzamento e velocità di taglio troppo alte	– Grado con maggiore resistenza all'usura – Aumentare l'angolo di spoglia per ottenere un tagliente più affilato – Ridurre la velocità di taglio
10	Sfaldamento (rivestimento)	– Soprattutto durante la lavorazione di materiali più duri o quando si verificano vibrazioni	– Adesioni sul tagliente e scheggiature – Scarso deflusso del truciolo	– Aumentare l'angolo di spoglia per ottenere un tagliente più affilato – Rompitruciolo con gola più grande



Misure per la risoluzione dei problemi – PCBN& PCD

Tipo di usura	Contromisura	
	Geometria	Condizioni di taglio
Usura sul fianco	– Tagliente più affilato per una forza di taglio minore – Fase negativa più piccola – Utilizzare inserti positivi	– Ridurre la velocità di taglio – Aumentare la velocità di avanzamento per ridurre la durata del taglio
Intagliatura	– Raggio maggiore	– Utilizzare il metodo della velocità di avanzamento variabile
Craterizzazione/Rottura dovuta a craterizzazione	– Tagliente più affilato per una forza di taglio minore	– Ridurre la velocità di taglio – Aumentare la velocità di avanzamento per ridurre la durata del contatto ed aumentare la distanza tra tagliente e cratere
Scheggiature dovute a impatti o vibrazioni	– Angolo di fase negativa maggiore/o onatura	– Aumentare la velocità di avanzamento per diminuire il numero degli impatti
Sfaldamento	– Tagliente più affilato per una forza di taglio minore – Fase negativa più piccola – Utilizzare inserti positivi	– Aumentare la velocità di avanzamento per ridurre la durata del taglio
Incrinatura/Rottura	– Tagliente più affilato per una forza di taglio minore – Fase negativa più piccola – Utilizzare inserti positivi	– Diminuire velocità di taglio, velocità di avanzamento e profondità di taglio – Taglio a secco
Scheggiature	– Fase negativa maggiore	– Aumentare la velocità di taglio per ridurre la forza di taglio

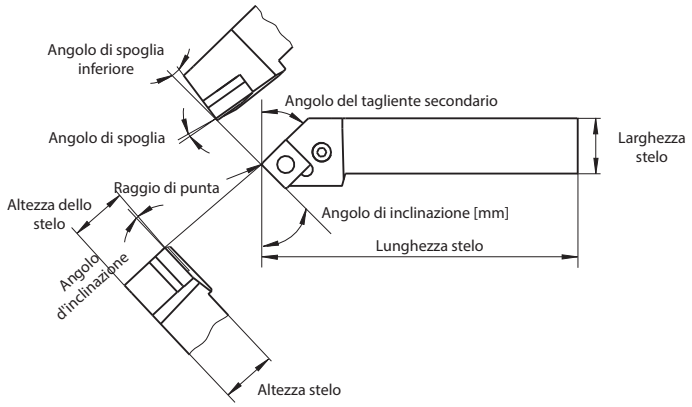
Per un'analisi dettagliata, vi preghiamo di inviarci gli inserti usati. Se il problema è la rottura, si prega di utilizzare inserti solo per l'80-90 % della durata dell'utensile prevista, poiché gli inserti rotti non contengono più alcuna informazione.

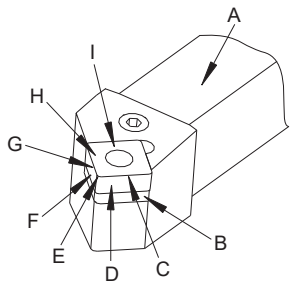
Misure per la risoluzione dei problemi – filettatura

Problema	Causa	Soluzione
Ampia usura sul fianco	– Velocità di taglio troppo elevata	– Ridurre la velocità di taglio
	– Incremento troppo basso	– Diminuire il numero degli incrementi
	– Inserto sopra/sotto centro di rotazione	– Correggere l'altezza dell'inserto
Segni di usura sul lato destro e sinistro differenti	– Incremento laterale non ottimale	– Correggere il metodo d'incremento laterale
	– L'angolo d'inclinazione e quello principale non corrispondono	– Cambiare lo spessore per ottenere un angolo corretto
Rottura	– Velocità di taglio troppo bassa	– Aumentare la velocità di taglio
	– Forza di taglio troppo elevata	– Aumentare il numero degli incrementi – Diminuire la dimensione dell'incremento
	– Condizioni instabili	– Migliorare il bloccaggio del pezzo e la sporgenza, per evitare vibrazioni
	– Scarso controllo del truciolo	– Aumentare la pressione del refrigerante per migliorare l'asportazione del truciolo
Deformazione plastica	– Velocità di taglio e temperatura troppo elevate	– Ridurre la velocità di taglio – Aumentare il numero degli incrementi – Diminuire la profondità dell'incremento
	– Scarsa alimentazione di refrigerante	– Migliorare l'alimentazione del refrigerante
Qualità superficiale della filettatura insufficiente	– Velocità di taglio troppo bassa	– Aumentare la velocità di taglio
	– L'inserto si trova oltre il centro	– Correggere l'altezza dell'inserto
	– Scarso controllo del truciolo	– Cambiare velocità di avanzamento e/o incremento
Profilo della filettatura errato	– Altezza dell'inserto errata	– Modificare l'altezza dell'inserto
	– Il portautensile non si trova ad un angolo di 90°	– Allineare di nuovo il portautensile
	– Passo errato nella macchina	– Allineare di nuovo la macchina
Profilo del filetto non sufficientemente profondo	– Altezza dell'inserto errata	– Modificare l'altezza dell'inserto
	– Rottura del tagliente	– Sostituzione dell'inserto
	– Usura troppo elevata	– Sostituzione dell'inserto
Formazione tagliente di riporto	– Temperatura sul tagliente troppo bassa	– Aumentare la velocità di taglio
	– Soprattutto durante la lavorazione di acciaio al carbonio o acciaio inossidabile	– Utilizzare un grado con sufficiente tenacità (rivestito PVD)
Vibrazioni	– Parametri di taglio errati	– Aumentare o ridurre fortemente la velocità di taglio
	– Altezza dell'inserto errata	– Modificare l'altezza dell'inserto
	– Bloccaggio del pezzo insufficiente	– Migliorare il sistema di bloccaggio e minimizzare la sporgenza dell'utensile

Tornitura generale

Geometria del tagliente





A Portautensile
B Spessore
C Tagliente principale
D Lato del fianco
E Raggio di punta
G Tagliente secondario
H Superficie di spoglia
I Inserto

Angolo di spoglia

Un aumento dell'angolo di spoglia riduce le forze di taglio, in quanto il truciolo viene leggermente deviato dalla sua direzione di flusso. Questo sistema di taglio è nel complesso più affilato e produce così un carico inferiore del bordo, minori sollecitazioni termiche. In generale l'usura del fianco è inferiore e quindi la prestazione di taglio superiore. Questo significa anche un indebolimento del cuneo di taglio, un aumento del carico sul tagliente e quindi un incremento del rischio di scheggiatura del tagliente.

Angolo di spoglia	Applicazioni
Piccolo	Lavorazione di materiali duri e fragili, sgrossatura, taglio interrotto
Dimensione	Lavorazione di materiali morbidi e resistenti, lavorazione di precisione

Angolo di spoglia inferiore

Un aumento dell'angolo di spoglia inferiore produce una riduzione dell'attrito tra pezzo ed utensile. Le forze di taglio sono complessivamente inferiori ed è possibile ottenere finiture superficiali migliori. Tuttavia, un angolo di spoglia inferiore troppo grande indebolisce la stabilità del tagliente. A seconda dell'applicazione, l'angolo di spoglia inferiore è compreso tra 3° e 12°.

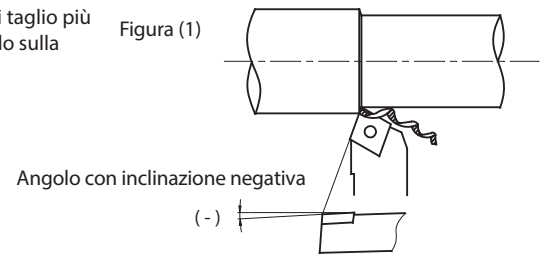
Spoglia superiore	Applicazioni
Piccolo	Lavorazione di materiali duri e fragili, sgrossatura con tagliente stabile
Dimensione	Lavorazione di materiali che tendono a rapidamente a cambiamenti nella microstruttura, lavorazioni di precisione con basse forze di taglio

Angolo d'inclinazione

Un angolo d'inclinazione positivo o negativo del tagliente ha una notevole influenza sulla direzione del flusso dei trucioli e sulla stabilità del tagliante e del punto di taglio. Questo viene incrementato per un angolo negativo e protegge in questo modo l'utensile dallo stress da impatto es. nella sgrossatura o nella lavorazione a taglio interrotto. In questo modo viene pero aumentata anche la forza di reazione, che può causare vibrazioni. Un angolo positivo del tagliente è vantaggioso nella finitura, in quanto i trucioli vengono portati via dalla superficie già lavorata.

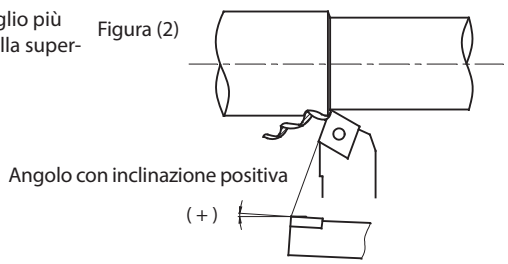
Come illustrato nella figura (1), un angolo negativo del tagliente, grazie al punto di taglio più basso rispetto alla superficie del portautensili, provoca uno scorrimento del truciolo sulla superficie già lavorata del pezzo.

Figura (1)



Come illustrato nella figura (2), un angolo positivo del tagliente, grazie al punto di taglio più alto rispetto alla superficie del portautensili, provoca uno scorrimento del truciolo sulla superficie non lavorata del pezzo.

Figura (2)

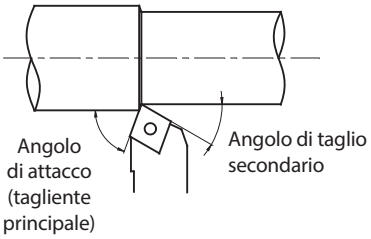


Tornitura generale

Angolo di attacco (tagliente principale)

Una riduzione dell'angolo di attacco aumenta la stabilità del tagliente. La percentuale del tagliente per la formazione del truciolo viene allargata, migliorano la distribuzione del carico per il tagliente e la dissipazione del calore. Un angolo piccolo di attacco ha un effetto positivo sulla durata. Un angolo grande di attacco di 90° viene usato nella lavorazione di alberi lunghi e sottili per evitare flessioni del pezzo.

Inclinazione [mm]	Applicazioni
Piccolo	Per materiali con elevata resistenza alla trazione, elevata durezza e superficie indurita
Dimensione	Per macchine con bassa stabilità



Angolo del tagliente secondario

La grandezza dell'angolo del tagliente secondario influisce sulla qualità della superficie del pezzo e sulla stabilità tagliente. Se l'angolo è troppo piccolo possono verificarsi vibrazioni.
Per la sgrossatura dovrebbe essere utilizzato un angolo piccolo, poiché il tagliente ha una maggiore stabilità. L'angolo più grande dovrebbe essere scelto per la lavorazione di precisione, al fine di ottenere finiture superficiali di elevata qualità.

Raggio di punta

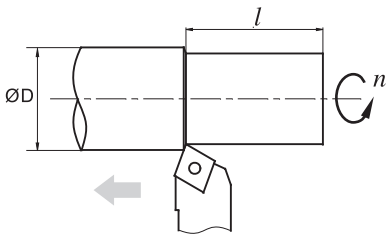
Il raggio di punta influenza la stabilità del tagliente e la finitura superficiale e i dati di taglio.
Con un grande raggio di punta migliora la superficie e aumenta la stabilità del tagliente. I lati del fianco e l'usura della superficie di spoglia si riducono.
Un incremento del raggio aumenta anche la pressione di taglio. Se è troppo grande, possono verificarsi vibrazioni che hanno un effetto negativo sul controllo del truciolo.

Raggio	Applicazioni
Piccolo	Finitura con piccole profondità di taglio Lavorazione di alberi lunghi e sottili Bassa stabilità della macchina o bloccaggio
Dimensione	Sgrossatura con elevata stabilità del tagliente Lavorazioni a taglio interrotto o materiali duri Elevata stabilità della macchina

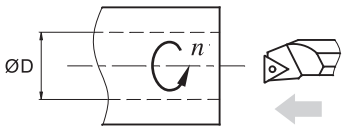
Tornitura generale

Velocità di taglio V_c

$$V_C = \frac{\pi \times D \times n}{1000} \text{ [m/min]}$$



Tornitura esterna



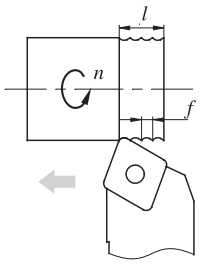
Tornitura interna

V_C: Velocità di taglio [m/min]
n: Numero di giri [1/min]
f: Avanzamento per rotazione [mm]

Esempio: n = 250 1/min, f = 0,2 mm,
l = 150 mm
Risultato: [Inserisci valori nella formula V_C]

Velocità di avanzamento F

$$f = \frac{l}{n} \text{ [mm/rev]}$$



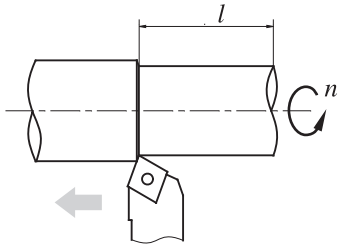
f: Avanzamento per rotazione [mm]
l: Lunghezza del taglio per minuto [mm]
n: Numero di giri [1/min]

Esempio: n = 500 1/min, l = 100 mm/min
Risultato: [Inserisci valori nella formula f]

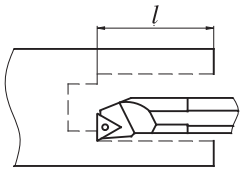
$$f = \frac{l}{n} = \frac{100}{500} = 0{,}2 \text{ mm}$$

Durata di taglio

$$T_C = \frac{l}{f \times n} \text{ [min]}$$



Tornitura esterna



Tornitura interna

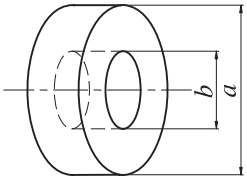
Tc: Durata di taglio [min]
l: Lunghezza del taglio per minuto [mm]
f: Avanzamento per rotazione [mm]
n: Numero di giri [1/min]

Esempio: n = 250 1/min, f = 0,2 mm,
l = 150 mm
Risultato: [Inserisci i valori nella formula T_C]

Tornitura generale

Durata di taglio per la spianatura

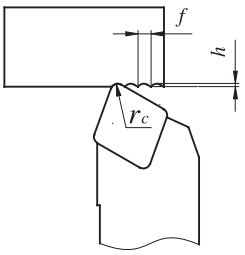
$$T_C = \frac{\pi \times (a^2 - b^2)}{4000 \times V_C \times f} \text{ [min]}$$



T_C: Durata di taglio [min]
V_C: Velocità di taglio [m/min]
f: Avanzamento per rotazione [mm]

Rugosità superficiale teorica R

$$R = \frac{f^2}{8r_c} \times 1000 \text{ [µm]}$$



R: Rugosità superficiale [µm]
f: Avanzamento per rotazione [mm]
r_C: Raggio dell'inserto [mm]

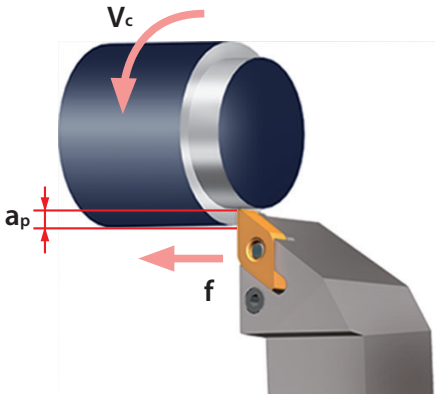
Esempio: f = 0,2 mm, r_C = 0,4 mm

Tornitura generale

Effetto dei tre parametri di taglio sulla tornitura

I requisiti attuali per gli strumenti di taglio moderni sono in prima istanza: cicli di lavorazione brevi, lunga durata dell'utensile ed elevata precisione di lavorazione.

In funzione della potenza della macchina, del materiale, della forma e della durezza del pezzo, la scelta degli strumenti e soprattutto dei parametri di taglio corretti sono il prerequisito per una lavorazione economica. Ciò che chiamiamo "Effetto dei tre parametri di taglio nella tornitura".



1. Velocità di taglio [V_C]

Un aumento dell'angolo di spoglia riduce le forze di taglio, in quanto il truciolo viene leggermente deviato dalla sua direzione di flusso. Questo sistema di taglio è nel complesso più affilato e produce così un carico inferiore del bordo, minori sollecitazioni termiche. In generale l'usura del fianco è inferiore e quindi la prestazione di taglio superiore. Questo significa anche un indebolimento del cuneo di taglio, un aumento del carico sul tagliente e quindi un incremento del rischio di scheggiatura del tagliente.

Effetto della velocità di taglio: La velocità di taglio è uno dei parametri più importanti nella lavorazione, poiché influenza in maniera decisiva il tempo di produzione. La scelta della velocità di taglio dipende principalmente dalla composizione e resistenza del materiale da lavorare, dalla tenacità e durezza del materiale di taglio utilizzato come anche dalla precisione dimensionale e dalla finitura superficiale desiderata. Influenza significativamente l'usura e la vita dell'utensile, a causa dell'aumento parabolico della temperatura del tagliente con la velocità di taglio. La velocità di taglio deve quindi essere scelta in modo da ottenere un rapporto tra il tempo di produzione e durata del taglio e il tempo necessario per la rimessa in servizio (sostituzione dell'inserto) dell'utensile e della macchina.
Un aumento della velocità di taglio del 20% dimezza la durata dell'utensile. Un aumento del 50% della velocità di taglio riduce la durata a circa 1/5 della durata dell'utensile originale. Un avanzamento minore causa vibrazioni e riduce la vita dell'utensile.

2. Avanzamento [f]

Nella tornitura l'avanzamento rappresenta la distanza percorsa dal portautensile per ogni giro del pezzo. L'unità di misura dell'avanzamento è millimetri per giro [mm/giro].

Effetto dell'avanzamento: Una riduzione dell'avanzamento incrementa allo stesso tempo l'usura del fianco e riduce la vita utile dell'utensile. Un aumento dell'avanzamento aumenta da un lato l'economicità della lavorazione, ma dall'altro lato anche la temperatura di taglio e l'usura.

3. Profondità di taglio [ap]

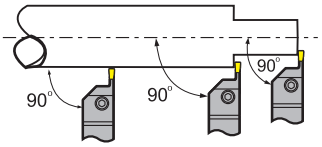
La profondità di taglio è la metà della differenza tra il diametro del pezzo grezzo e il diametro del pezzo finito. L'unità di misura della profondità di taglio è il millimetro [mm].

Effetto della profondità di taglio: La modifica della profondità di taglio non un grande effetto sulla durata dell'utensile. Quando si lavorano materiali con una superficie dura, una profondità di taglio troppo bassa comporta una minore durata dell'utensile. Quando si lavora su superfici non lavorate o materiali colati, è necessario selezionare la profondità massima di taglio in base alle prestazioni della macchina in modo che il tagliente e il raggio dell'angolo siano più profondi rispetto allo strato rigido. Questo aiuta a prevenire un usura eccessiva.

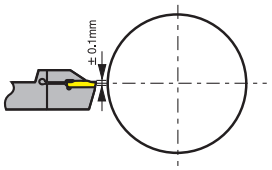
Scanalature e gole

Impostazione dell'altezza del tagliente per scanalature e gole

- Il portautensile in maniera tale che si trovi a 90° rispetto all'asse centrale del pezzo. In questo modo si ottiene una migliore qualità della superficie e si riduce il rischio di oscillazioni.



- Si prega di montare il portautensile in modo tale che durante la realizzazione di scanalature e gole l'area di tolleranza sia nell'intervallo di ± 0,1 mm rispetto all'asse centrale, in particolare per pezzi con diametri piccoli. In questo modo si ottiene una maggiore durata, si riducono le forze di taglio e la formazione di bave.

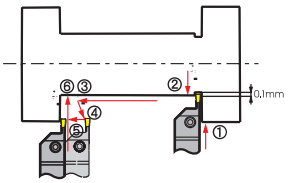


Troncatura

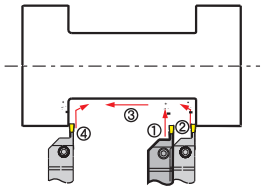
- Una riduzione della velocità di avanzamento del 30 % in avvicinamento alla lama all'asse centrale del pezzo prolunga la durata dell'inserto.
- Selezionare il portautensile con la sporgenza più piccola possibile per evitare vibrazioni e la deformazione dell'utensile.

Tornitura longitudinale e contornatura

- Sequenza di lavorazione 0,5 mm:
  1. Avanzamento radiale alla profondità richiesta di taglio (circa max. 0,75 x larghezza inserto)
  2. Tornare indietro radialmente di 0,1 mm
  3. Tornitura longitudinale sulla spalla opposta
  4. Tornare indietro diagonalmente di 0,5mm verso l'esterno fino al punto di partenza
  5. Avanzamento radiale alla profondità richiesta di taglio.

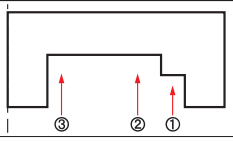


- Durante la tornitura del fondo della scanalatura o dello smusso, seguire i passaggi adiacenti. Questo riduce la flessione dell'utensile ed impedisce la scheggiatura del tagliente.

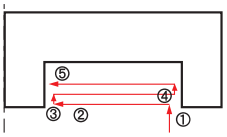


Scanalatura assiale

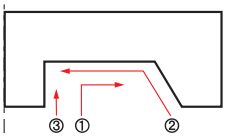
- Sgrossatura:
  Lavorazione dal diametro più grande verso l'asse. Durante il ritorno dell'utensile si raccomanda di piegarlo leggermente.



- Scanalature interne:
  Profondità di taglio per avanzamento assiale inferiore a 0,75 x S (larghezza dell'inserto). Quando la larghezza della camera è maggiore della profondità, seguire i passaggi indicati. Quando la profondità della camera è maggiore della larghezza, si consiglia in ogni passaggio l'asportazione del diametro richiesto.

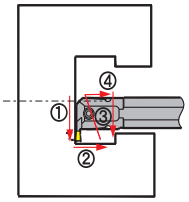


- Finitura:
  Per la finitura, realizzare prima il diametro esterno e il fondo. Infine realizzare il diametro interno fino alla dimensione richiesta.



Lavorazione interna

- Sequenza di lavorazione come da figura. Per la lavorazione di fori ciechi, è consigliato lavorare dall'interno verso l'esterno per una migliore rimozione del truciolo.



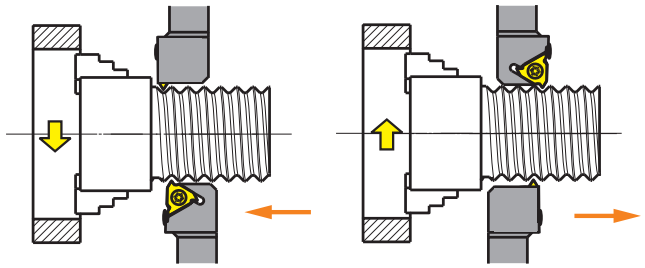
Filettatura

Sequenza di lavorazione per i migliori risultati di filettatura

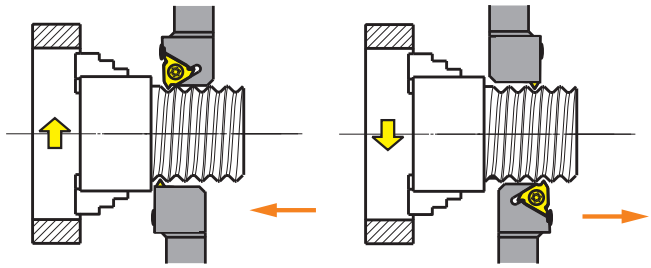
1. Selezione del metodo di filettatura
2. Scelta dell'angolo e dello spessore
3. Scelta del portautensile e degli inserti
4. Scelta dei parametri di taglio
5. Scelta della direzione di taglio

Metodo di filettatura

Lavorazione esterna

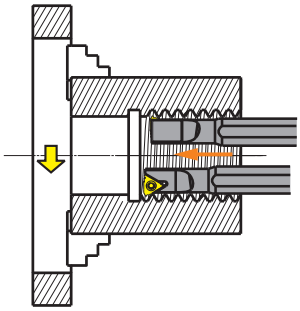


Versione destra

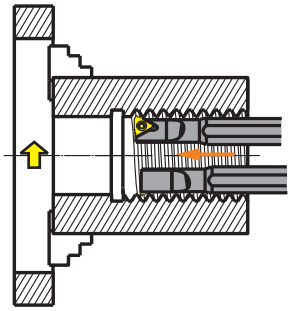


Versione sinistra

Lavorazione interna



Versione destra



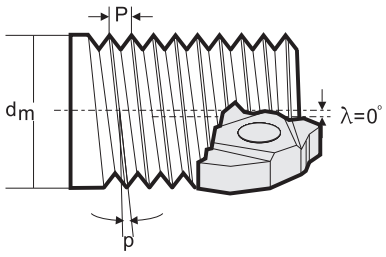
Versione sinistra

Scelta dell'angolo e dello spessore

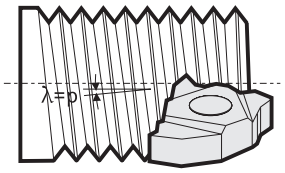
Selezione dell'inclinazione

Gli angoli di spoglia del fianco del profilo della filettatura dipendono dall'angolo di passo della filettatura. L'angolo di passo della filettatura deve essere per quanto possibile coincidere con l'angolo di inclinazione dell'inserto, al fine di ottenere un profilo accurato, per evitare l'usura irregolare sul fianco dell'inserto e per garantire una maggiore durata.

$$\lambda = \arctan \frac{p}{d_2 \times \pi}$$



Angolo di passo (p)



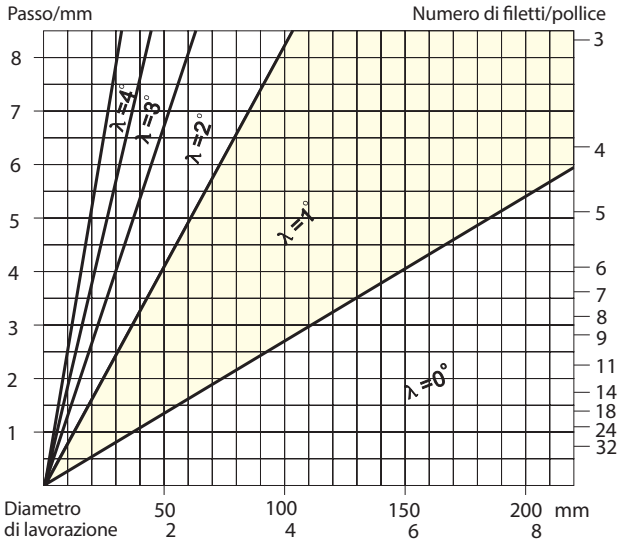
Angolo d'inclinazione (λ)

p Passo
d_2 Diametro del fianco
λ Angolo d'inclinazione

Selezione dello spessore corretto

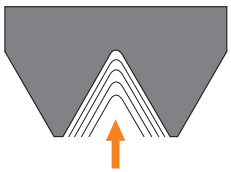
Passo	Dimensioni	Inclinazione	Sottoplacchetta
0,5–0,3	16	0	MT16-00M
		1	MT16-01M
		2	MT16-02M
		3	MT16-03M
3,5–6,0	22	0	MT22-00M
		1	MT22-01M
		2	MT22-02M
		3	MT22-03M

Lo spessore per λ =1° viene consegnato insieme al portautensili.



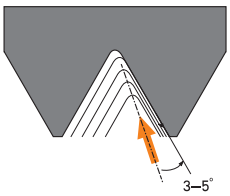
Modalità d'incremento nella filettatura

Il numero di passaggi e di incremento sono i punti chiave della filettatura. I dati consigliati sono da considerarsi come valori di partenza. Nel caso di una maggiore usura, consultare pagina A447 (risoluzione dei problemi).



Incremento radiale

L'incremento radiale richiede una profondità di taglio bassa, un tagliente affilato e un grado duro.



Incremento sul fianco modificato

Incremento al di sotto di un angolo di 3-5° rispetto al fianco della filettatura. Adatto per materiali a truciolo lungo e filettatura interna. Buona asportazione del truciolo.

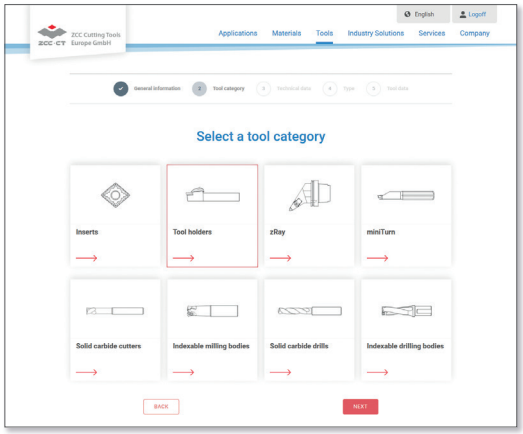


Incremento alternato

Incremento alternato lungo entrambi i fianchi. Applicazione per ampi passi e materiali a truciolo lungo. Usura uniforme del fianco su entrambi i bordi di taglio.

Andate direttamente all'utensile speciale personalizzato per operazioni di tornitura

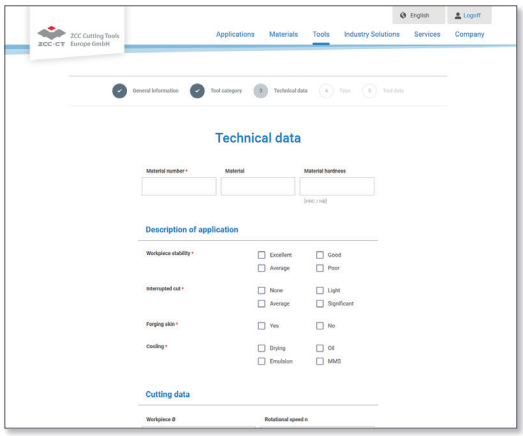
Lavorate con cicli di tornitura per cui è possibile ottenere vantaggi in termini commerciali, tecnici, logistici o di processo impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (https://www.zccct-europe.com/it/gli-utensili/gli-utensili-speciali).



Home page "Strumento online per utensili speciali" con Selezione della categoria dell'utensile

Selezione della categoria dell'utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell'utensile

Definizione dei parametri dell'utensile

Successivamente potrete seguire comodamente la procedura. Potrete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

Con noi, il vostro utensile speciale è a portata di mano.
ZCC Cutting Tools Europe GmbH.

Effettuate subito l'accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.

INSERTI PER FRESATURA

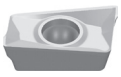


Inserti per fresatura

Panoramica prodotti	**B2-B3**
Panoramica sistema	**B4-B19**
Panoramica rompitrucioli	**B20**
Panoramica gradi	**B21-B23**
Campo di applicazione dei gradi	**B24-B25**
Codice sistema – Corpi fresa	**B26-B27**
Codice ISO – Inserti	**B28-B29**
Codice sistema – Frese a disco	**B30**
Codice sistema – Serie QCH	**B31-B32**
Fresa a spianare	**B33-B102**
Fresa per spallamento	**B103-B132**
Fresa profilata	**B133-B150**
Frese a disco	**B151-B162**
Frese ad alto avanzamento	**B163-B172**
Frese a forare	**B173-B174**
Frese per scanalature a T	**B175-B176**
Frese elicoidali	**B177-B182**
Frese a smusso	**B183-B194**
Serie QCH	**B195-B217**
Indicazioni generali Inserti per fresatura	**B218-B229**
Dati di taglio consigliati	**B230-B263**
Misure per la risoluzione dei problemi	**B528**
Informazioni tecniche	**B529-B536**
Gli utensili speciali	**B541**

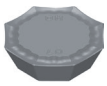
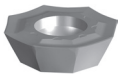
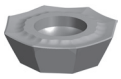
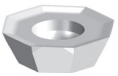
B

Inserti per fresatura

	ANGX-GM	ANGX-LH	APKT-ALH	APKT-APF	APKT-APM	APKT-LH	APKT-NM	APKT-PF	
									
Lunghezza tagl.	11 15	11 15	11 16	11 16	07 11 16	11 16	11	11 16	
Pagina	B124, B126, B128, B130, B132	B124, B126, B128, B130, B132	B104, B107, B111, B114, B116, B202, B213	B104, B107, B111, B114, B116, B202, B213	B104, B107, B111, B114, B116, B202, B213	B104, B107, B111, B114, B116, B202, B213	B104, B107, B111, B114, B116, B202, B213	B104, B107, B111, B114, B116, B202, B213	

	APKT-PM/PR	APKT-XR	APMT	CNE-A/B	HNEX-DR	HNGX-HDR	HNGX-MR	LNCX	
									
Lunghezza tagl.	11 15 16	11	11 16	12	09	09	09	18	
Pagina	B104, B107, B111, B114, B116, B202, B213	B104, B107, B111, B114, B116, B202, B213	B118	B174	B64	B218	B218	B220	

	LNE32.534	LNKT-GL	LNKT-GM	LNKT-ZR	MPHT-DM	ODHT-GH	ODHT-GL	ODHT-GM	
									
Lunghezza tagl.		08 12 16	08 12 16	12 15 20 25	06 08 12	06	06	06	
Pagina	B219	B120, B122	B120, B122	B66, B73, B80	B156, B158, B176	B47	B47	B47	

	ODHT-LH	ODMT-GM	OFKR-DF	OFKR-DM	OFKR-LH	OFKT-DF	OFKT-DM	OFKT-LH	
									
Lunghezza tagl.	06	06	07	07	07	05	05	05	
Pagina	B47	B47	B45	B45	B45	B43	B43	B43	

	ONHU-CM	ONHU-GH	ONHU-GL	ONHU-GM	ONHU-PF	ONHU-PM	PNEG-CF	PNEG-CM	
									
Lunghezza tagl.	06 08	06	06	06 08	06 08	06 08	11	11	
Pagina	B49, B51	B56	B56	B56	B49, B51	B49, B51	B59, B61	B59, B61	

	PNEG-CR	PNEG-PF	PNEG-PM	PNEG-PR	RCKT-DM	RCKT-DR	RCKT-ER	RCKT-NM	
Lunghezza tagl.	11	11	11	11	10 12 16 20	12 16 20	12 16 20	12 16 20	
Pagina	B59, B61	B58, B61	B58, B61	B58, B61	B89, B92	B89, B92	B89, B92	B89, B92	

	RDKT-MM	RDKW	ROHX	SDMT	SDMT-DM	SDMT-NM	SDMT-PM	SEEN	
Lunghezza tagl.	10 12	07 08 10 12 16 20	12 16 20	09	06 09 12 15	09 12	06 09 12 15	12	
Pagina	B95, B99, B205	B95, B99, B205	B137	B135	B164, B167, B198, B211	B164	B164, B167, B198, B211	B41	

Inserti per fresatura

								
SEET-APF	**SEET-APM**	**SEET-APR**	**SEET-CF**	**SEET-CM**	**SEET-CR**	**SEET-DF**	**SEET-DM**	
09 12	09 12	09 12	12	12	12	12	12 18	Lunghezza tagl.
B77	B77	B77	B35, B37	B35, B37	B35, B37	B35, B37	B35, B37	Pagina

								
SEET-DR	**SEET-EF**	**SEET-EM**	**SEET-LH**	**SEET-PF**	**SEET-PM**	**SEET-PR**	**SEET-W**	
12	12	12	12	09 12	09 12	09 12	12	Lunghezza tagl.
B35, B37	B35, B37	B35, B37	B35, B37	B77	B77	B77	B34, B37	Pagina

								
SEKN	**SEKR**	**SNEG-E**	**SNEG-GM**	**SNEG-GR**	**SNEG-HGR**	**SNEG-W**	**SNKN**	
12 15	12	15	12 15	12 15 19	15	12	12 15	Lunghezza tagl.
B40	B41	B53	B53	B53	B53	B54	B221	Pagina

								
SPCN	**SPGN**	**SPKN**	**SPKR**	**SPKR-GM**	**SPKT**	**SPKW**	**SPMR**	
12 15	12	12 15	12	12 15	12	12	09 12	Lunghezza tagl.
B222	B225	B70	B71	B71	B68	B68	B223	Pagina

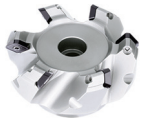
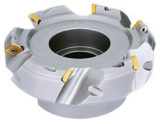
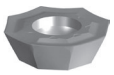
								
SPMT	**SPMT-HT**	**SPMT-KT**	**SPMT-PM**	**SPUN**	**TPKN**	**TPMR**	**TPUN**	
06 09 12	09 12	06	12	12 15	16 22	11 16 22	11 16 22	Lunghezza tagl.
B135, B184, B186, B188, B190, B192, B194	B224	B135, B224	B178, B180, B182	B225	B75, B226	B227	B227	Pagina

WPGT	**WPGT-PM**	**XEEC**	**XPHT-GM**	**XSEQ**	**ZDET**	**ZDET-PM**	**ZOHX-GF**	
05 06 08 09	05 06 08 09	12	16 20 25 30 32 40 50	12	08 11	13	12 16 20 25 30 32	Lunghezza tagl.
B169, B171, B200	B169, B171, B200	B87	B139, B141, B143, B145, B196	B152, B154	B134	B134	B147, B149, B209	Pagina

ZOHX-GM	**ZPNT**		
12 16 20 25 30 32	22		Lunghezza tagl.
B147, B149, B209	B134		Pagina

Inserti per fresatura Panoramica sistema

Frese a spianare

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
FMA01		 SEET12T3 SEET18T6	45°	✓	✓	✓	✓	✓		• Intervallo diametro Ø50 – 315 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Fresa a taglio morbido con geometria del tagliente grande e positiva • Inserti raschianti per una migliore f	B33
FMA02		 SEET12T3	45°	✓	✓	✓	✓	✓		• Intervallo diametro Ø50 – 125 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Fresa a taglio morbido con geometria del tagliente grande e positiva • Passo lungo	B36
FMA03		 SEEN1203 SEKN1203 SEKR1203 SEKN1504 SEKR1504	45°	✓	✓	✓	✓			• Intervallo diametro Ø80 – 315 mm • Per acciaio, acciaio inossidabile e ghise • Fresa a taglio morbido con geometria del tagliente grande e positiva • Bloccaggio a cuneo	B39
FMA04		 OFKT05T3	45°	✓	✓	✓	✓			• Intervallo diametro Ø50 – 160 mm • Per acciaio, acciaio inossidabile, ghise e metalli non ferrosi • Inserti con otto taglienti • Bloccaggio a vite	B42
FMA04		 OFKR0704	45°	✓	✓	✓	✓			• Intervallo diametro Ø125 – 315 mm • Per acciaio, acciaio inossidabile, ghise e metalli non ferrosi • Inserti con otto taglienti • Bloccaggio a cuneo	B44
FMA04		 OD*T0605**	45°							• Intervallo diametro Ø50 – 160 mm • Per acciaio, acciaio inossidabile, ghise e metalli non ferrosi • Inserti con otto taglienti • Bloccaggio a vite	B46

✓ Molto adatto ✓ Adatto

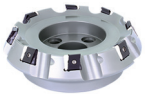
Frese a spianare

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
FMA07		 ONHU0604 ONHU08T5	45°	✔		✔			✔	• Intervallo diametro Ø25 – 50 mm • Per acciaio e ghise • Inserti con 16 taglienti	B48
FMA07		 ONHU0604 ONHU08T5	45°	✔		✔			✔	• Intervallo diametro Ø40 – 315 mm • Per acciaio e ghise • Inserti con 16 taglienti	B50
FMA11		 SNEG1205 SNEG1506 SNEG1907	45°	✔	✔	✔		✔		• Intervallo diametro Ø63 – 315 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con otto taglienti • Inserto bilaterale extra spesso per un´elevata resistenza alla frattura e grande profondità di taglio • Inserti Wiper, per una miglio	B52
FMA12		 ON*U0604** ONHU08T6	45°	✔	✔	✔		✔		• Intervallo diametro Ø63 – 315 mm • Per acciaio, acciaio, acciaio inossidabile e ghise • Inserti con 16 taglienti< BR>	B55
FMD02		 PNEG1105	67°	✔	✔	✔				• Intervallo diametro Ø50 – 315 mm • Per acciaio, acciaio, acciaio inossidabile e ghise • Inserti con dieci taglienti • Bloccaggio a cuneo o a vite • Passo normale e stretto	B57
FMD02		 PNEG1105	67°			✔				• Intervallo diametro Ø50 – 315 mm • Per acciaio, acciaio, acciaio inossidabile e ghise • Inserti con dieci taglienti • Bloccaggio a cuneo o a vite • Passo normale e stretto	B60

✔ Molto adatto ✔ Adatto

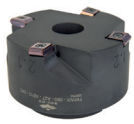
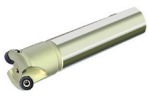
Inserti per fresatura Panoramica sistema

Frese a spianare

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
FMD02		 HNEX0905	55°			✔				• Intervallo diametro Ø80 – 315 mm • Per ghise • Bloccaggio a cuneo • Inserti con dodici taglienti	B63
FMD03		 LNKT2007-ZR LNKT2510-ZR	60°	✔		✔				• Intervallo diametro Ø100 – 400 mm • Per acciaio e ghise • Inserto tangenziale con quattro taglienti • Asportazione pesante con profondità di taglio elevate • Bloccaggio a vite	B65
FME02		 SPKT1204 SPKW1204	75°	✔	✔	✔				• Intervallo diametro Ø50 – 125 mm • Per acciaio, ghise e acciaio inossidabile • Bloccaggio a vite	B67
FME03		 SPKN1203 SPKR1203 SPEX1203 SPKN1504 SPKR1504 SPEX1504	75°	✔	✔	✔				• Intervallo diametro Ø80 – 400 mm • Per acciaio, ghise e acciaio inossidabile • Bloccaggio a cuneo	B69
FME04		 LNKT1506-ZR	75°	✔		✔				• Intervallo diametro Ø125 – 315 mm • Per acciaio e ghise • Inserto tangenziale con quattro taglienti • Asportazione pesante con profondità di taglio elevate • Bloccaggio a vite	B72
FMP01		 TPKN2204	90°	✔	✔	✔		✔		• Intervallo diametro Ø80 – 315 mm • Per acciaio, acciaio inossidabile e ghise • Fresa a taglio morbido con geometria del tagliente grande e positiva • Bloccaggio a cuneo	B74

✔ Molto adatto ✔ Adatto

Frese a spianare

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
FMP02		 SEET09T3 SEET1203	90°	✔	✔	✔	✔	✔		• Intervallo diametro Ø50 – 315 mm • Per acciaio, acciaio inossidabile, ghise e metalli non ferrosi • Bloccaggio a vite	B76
FMP03		 LNKT120608-ZR LNKT1506EN-ZR LNKT2007DN-ZR LNKT2510-ZR	89°	✔		✔				• Intervallo diametro Ø50 – 315 mm • Per acciaio e ghise • Inserto tangenziale con quattro taglienti • Bloccaggio a vite	B79
FMP12		 WNHU0604 WNHU0806	90°	✔		✔				• Intervallo diametro Ø50 – 315 mm • Per acciaio e ghise • Inserto tangenziale con quattro taglienti • Bloccaggio a vite	B81
FMP12		 WNHU0604	90°	✔		✔				• Intervallo diametro Ø50 – 315 mm • Per acciaio e ghise • Inserto tangenziale con quattro taglienti • Bloccaggio a vite	B83
FMWX		 XEEC1209								• Intervallo diametro Ø50–125 mm • Fresa di finitura larga ad alto avanzamento per materiali in acciaio e ghisa • Inserti con quattro taglienti • Sedi degli inserti di riserva per una maggiore durata del corpo fresa • Corpo fresa dotato esclusivamente di due inserti contrapposti	B86
FMR01		 RCKT10T3 RCKT1204 RCGX1204		✔	✔	✔	✔	✔		• Intervallo diametro Ø25 – 63 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Bloccaggio a vite	B88

✔ Molto adatto ✔ Adatto

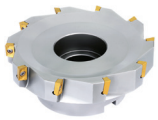
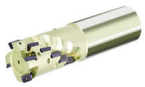
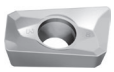
Inserti per fresatura Panoramica sistema

Frese a spianare

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
FMR02		 RCGX1204 RCKT1204 RCMW1204 RCKT1606 RCKT2006		✔	✔	✔	✔	✔		• Intervallo diametro Ø50 – 250 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Bloccaggio a vite	B90
FMR03		 RD**0803 RD**10T3 RD**1204		✔	✔	✔			✔	• Intervallo diametro Ø15 – 50 mm • Per acciaio, acciaio inossidabile e ghise • Bloccaggio a vite • Forme e stampe	B94
FMR03		 RDKW0702 RDKW1003		✔	✔	✔			✔	• Intervallo diametro Ø15 – 50 mm • Per acciaio, acciaio inossidabile e ghise • Bloccaggio a vite • Forme e stampe	B96
FMR04		 RD**1204 RD**1605 RD**2006		✔	✔	✔			✔	• Intervallo diametro Ø50 – 200 mm • Per acciaio, acciaio inossidabile e ghise • Bloccaggio a vite • Forme e stampe	B98
FMR04		 RDKW1003 RDKW12T3 RDKW1604		✔	✔	✔			✔	• Intervallo diametro Ø42 – 200 mm • Per acciaio, acciaio inossidabile e ghise • Bloccaggio a vite • Forme e stampe	B100

✔ Molto adatto ✔ Adatto

Frese a spallamento retto

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
EMP01		 APKT0702 APKT11T3 APKT1604	90°	✔	✔	✔	✔	✔		• Intervallo diametro Ø12 – 63 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Codolo cilindrico • Per fresatura ad angolo, a scanalatura, a tuffo • Fresa a taglio morbido con geometria	B103
EMP01		 APKT11T3 APKT0702 APKT1604	90°	✔	✔	✔	✔	✔		• Intervallo diametro Ø12 – 63 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Codolo cilindrico • Per fresatura ad angolo, a scanalatura, a tuffo • Fresa a taglio morbido con geometria	B106
EMP02		 APKT0702 APKT11T3 APKT1604	90°	✔	✔	✔	✔	✔		• Intervallo diametro Ø40 - 250 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Per fresatura a 90°, a scanalatura e a tuffo • Fresa a taglio morbido con geometria del tagliente grande e positiva • INSERTi con due taglienti	B109
EMP03		 APKT11T3	90°	✔	✔	✔	✔			• Intervallo diametro Ø50 - 100 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Per fresatura a 90°, a scanalatura e a tuffo • Fresa a taglio morbido con geometria del tagliente grande e positiva • INSERTi con due taglienti	B113
EMP04		 APKT11T3	90°	✔	✔	✔	✔			• Intervallo diametro Ø20 - 40 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Per fresatura a 90°, a scanalatura e a tuffo • Fresa a taglio morbido con geometria del tagliente grande e positiva • INSERTi con due taglienti	B115
EMP05		 APMT1135	90°	✔	✔	✔				• Intervallo diametro Ø25 - 40 mm • Per acciaio, acciaio inossidabile e ghisa • Codolo cilindrico • Per fresatura a 90°, a scanalatura e a tuffo • Fresa a taglio morbido con geometria del tagliente grande e positiva • INSERTi con due taglienti • Possibilità di lavorazione in direzione Z	B117

✔ Molto adatto ✔ Adatto

Frese a spallamento retto

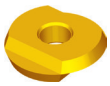
Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
EMP09		 LNKT0804PNR LNKT1206PNR LNKT1607PNR	90°	✔	✔	✔				• Intervallo diametro Ø40 – 125 mm • Geometria del tagliente affilata combinata con robusti inserti tangenziali • Prima scelta per grandi profondità di taglio ad alte velocità di avanzamento • Taglienti appositamente progettati con elevato contro	B119
EMP09		 LNKT1206PNR	90°	✔	✔	✔				• Intervallo diametro Ø40 – 80 mm • Geometria del tagliente affilata combinata con robusti inserti tangenziali • Prima scelta per grandi profondità di taglio ad alte velocità di avanzamento • Taglienti appositamente progettati con elevato contro	B121
EMP13		 ANGX1105 ANGX1506	90°	✔	✔	✔	✔			• Intervallo diametro Ø40 – 250 mm • Per acciaio, acciaio inossidabile, ghise e materiali a difficile • Inserto bilaterale extra spesso per un´elevata resistenza alla frattura e grande profondità di taglio • Inserti con quattro taglienti	B123
EMP13		 ANGX1105 ANGX1506	90°	✔	✔	✔	✔			• Intervallo diametro Ø25 – 40 mm • Per acciaio, acciaio inossidabile e metalli non ferrosi • Inserto bilaterale extra spesso per un´elevata resistenza alla frattura e grande profondità di taglio • Inserti con quattro taglienti	B125
EMP13		 ANGX1105 ANGX1506	90°	✔	✔	✔	✔			• Intervallo diametro Ø25 – 40 mm • Per acciaio, acciaio inossidabile e metalli non ferrosi • Inserto bilaterale extra spesso per un´elevata resistenza alla frattura e grande profondità di taglio • Inserti con quattro taglienti	B127

✔ Molto adatto ✔ Adatto

Frese a spallamento retto

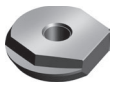
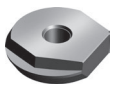
Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
EMP13		 ANGX1105 ANGX1506	90°	✔	✔	✔	✔			• Intervallo diametro Ø50 – 80 mm • Per acciaio, acciaio inossidabile e metalli non ferrosi • Inserto bilaterale extra spesso per un´elevata resistenza alla frattura e grande profondità di taglio • Inserti con quattro taglienti	B129
EMP13		 ANGX1105 ANGX1506	90°	✔	✔	✔	✔			• Intervallo diametro Ø25 – 40 mm • Per acciaio, acciaio inossidabile e metalli non ferrosi • Inserto bilaterale extra spesso per un´elevata resistenza alla frattura e grande profondità di taglio • Inserti con quattro taglienti	B131

Frese profilate

BMR01		 ZDET08T2 & SPMT0603 ZDET1103 & SPMT0603 ZDET13T2 & SDMT0903 ZPNT2204 & SPMT1204		✔	✔	✔				• Intervallo diametro Ø20 – 63 mm • Per acciaio, acciaio inossidabile e ghise • Particolarmente adatta per la sgrossatura di forme grandi • Inserti con tre taglienti	B133
BMR02		 ROHX1203 ROHX1604 ROHX2005		✔	✔	✔				• Intervallo diametro Ø12 – 20 mm • Per acciaio, acciaio inossidabile e ghise • Particolarmente adatta per la finitura di forme e stampe • Inserto con due taglienti	B136
BMR03		 XPHT16 XPHT20 XPHT25 XPHT30 XPHT32 XPHT40		✔	✔	✔				• Intervallo diametro Ø16 – 40 mm • Per acciaio e ghise • Particolarmente adatta per la sgrossatura di forme e stampe • Corpo dell´utensile con alta stabilità	B138

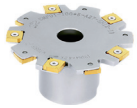
✔ Molto adatto ✔ Adatto

Frese profilate

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
BMR03		 XPHT16 XPHT20 XPHT25 XPHT30 XPHT32 XPHT40 XPHT50		✔	✔	✔				• Intervallo diametro Ø16 – 40 mm • Per acciaio e ghise • Particolarmente adatta per la sgrossatura di forme e stampe • Corpo dell´utensile con alta stabilità	B140
BMR03		 XPHT20 XPHT25 XPHT30 XPHT32 XPHT40 XPHT50		✔	✔	✔				• Intervallo diametro Ø16 – 40 mm • Per acciaio e ghise • Particolarmente adatta per la sgrossatura di forme e stampe • Corpo dell´utensile con alta stabilità	B142
BMR03		 XPHT40 XPHT50		✔	✔	✔				• Intervallo diametro Ø16 – 40 mm • Per acciaio e ghise • Particolarmente adatta per la sgrossatura di forme e stampe • Corpo dell´utensile con alta stabilità	B144
BMR04		 ZOHX12 ZOHX16 ZOHX20 ZOHX25 ZOHX30 ZOHX32		✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Particolarmente adatta per la finitura di forme e stampe • Inserto con due taglienti	B146
BMR04		 ZOHX12 ZOHX16 ZOHX20 ZOHX25 ZOHX30 ZOHX32		✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Particolarmente adatta per la finitura di forme e stampe • Inserto con due taglienti	B148

✔ Molto adatto ✔ Adatto

Frese a disco

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
SMP01		 XSEQ1202 XSEQ1203 XSEQ12T3 XSEQ1204 XSEQ12T4	90°	✔	✔	✔				• Intervallo diametro Ø100 – 250 mm • Per acciaio, acciaio inossidabile e ghise • Foro per taglio con attacco • Larghezza scanalature 4, 5 , 6, 7, 8 mm	B151
SMP01		 XSEQ1202 XSEQ1203 XSEQ12T3 XSEQ1204 XSEQ12T4	90°	✔	✔	✔				• Intervallo diametro Ø63 – 160 mm • Per acciaio, acciaio inossidabile e ghise • Larghezza scanalature 4, 5 , 6, 7, 8 mm	B153
SMP03		 MPHT0603 MPHT0803 MPHT1204	90°	✔	✔	✔				• Intervallo diametro Ø80 – 200 mm • Per acciaio, acciaio inossidabile e ghise • Foro per taglio con attacco • Larghezza scanalature 8, 10, 12, 16, 18, 20 mm	B155
SMP03		 MPHT0603 MPHT0803 MPHT1204	90°	✔	✔	✔				• Intervallo diametro Ø80 – 200 mm • Per acciaio, acciaio inossidabile e ghise • Larghezza scanalature 8, 10, 12, 16, 18, 20 mm	B157
SMP05		 QC16L QC22L	90°	✔	✔	✔				• Intervallo diametro Ø25 – 44 mm • Per acciaio, acciaio inossidabile e ghise • Intervallo larghezza scanalature 1,1 – 4,8 mm	B159

✔ Molto adatto ✔ Adatto

Inserti per fresatura Panoramica sistema

Frese ad alto avanzamento

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
XMR01		 SDMT06T2 SDMT09T3 SDMT1204 SDMT1505	15°	✔	✔	✔				• Intervallo diametro Ø20 – 40 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con quattro taglienti • Fresatura a tuffo possibile• Doppio sistema di bloccaggio per inserti	B163
XMR01		 SDMT06T2 SDMT09T3 SDMT1204 SDMT1505	15°	✔	✔	✔				• Intervallo diametro Ø40 – 125 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con quattro taglienti • Fresatura a tuffo possibile • Doppio sistema di bloccaggio per inserti	B165
XMR01		 WPGT0503 WPGT0604	11°- 22°	✔	✔	✔				• Intervallo diametro Ø20 – 40 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con quattro taglienti • Fresatura a tuffo possibile• Doppio sistema di bloccaggio per inserti	B168
XMR01		 WPGT0604 WPGT0806 WPGT0907	11°- 22°	✔	✔	✔				• Intervallo diametro Ø42 – 160 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con tre taglienti • Fresatura a tuffo possibile • Doppio sistema di bloccaggio per inserti	B170

Frese a forare

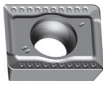
XMP01		 CNE12	90°	✔	✔	✔				• Intervallo diametro Ø80 – 400 mm • Per acciaio, acciaio inossidabile e ghise • Adatto anche per fresatura a spianare e ad angolo	B173

✔ Molto adatto ✔ Adatto

Frese per scanalature a T

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
TMP01		 MPHT0603 MPHT0803 MPHT1204	90°	✔	✔	✔				• Intervallo diametro Ø21 – 60 mm • Per ghise • Larghezza scanalature 9, 11, 14, 18, 22, 28 mm	B175

Frese elicoidali

HMP01		 APKT1504 & SPMT1204	90°	✔	✔	✔				• Intervallo diametro Ø40 – 50 mm • Per acciaio e ghise • Con codolo Weldon	B177
HMP01		 APKT1504 & SPMT1204	90°	✔	✔	✔				• Intervallo diametro Ø50 – 80 mm • Per acciaio e ghise • Con attacco JT	B179
HMP01-EC		 APKT1504 & SPMT1204	90°	✔	✔	✔				• Intervallo diametro Ø50 – 80 mm • Per acciaio e ghise • Con attacco JT • Testa intercambiabile	B181

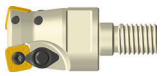
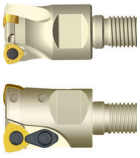
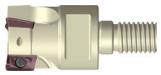
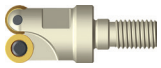
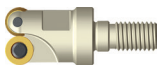
✔ Molto adatto ✔ Adatto

Frese a smusso

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
CMZ01		 SPMT1204	30°	✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Frese a smusso 30°	B185
CMZ01		 SPMT1204	30°	✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Frese a smusso 30°	B183
CMA01		 SPMT1204	45°	✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Frese a smusso 45°	B187
CMA01		 SPMT1204	45°	✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Frese a smusso 45°	B189
CMD01		 SPMT1204	60°	✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Frese a smusso 60° • Stelo Weldon	B191
CMD01		 SPMT1204	60°	✔	✔	✔				• Intervallo diametro Ø12 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Frese a smusso 60° • Stelo Weldon	B193

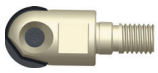
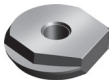
✔ Molto adatto ✔ Adatto

Frese con testa intercambiabile - Serie QCH

Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
QCH-XPHT		 XPHT16 XPHT20 XPHT25 XPHT30 XPHT32		✔	✔	✔				• Intervallo diametro Ø16 – 32 mm • Per acciaio e ghise • Particolarmente adatta per la sgrossatura di forme e stampe	B195
QCH-SDMT		 SDMT06T2 SDMT09T3 SDMT1204	15°	✔	✔	✔				• Intervallo diametro Ø20 – 40 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con quattro taglienti • Fresatura a tuffo possibile• Doppio sistema di bloccaggio per inserti	B197
QCH-WPGT		 WPGT0503 WPGT0604 WPGT0806	11°-22°	✔	✔	✔				• Intervallo diametro Ø16 – 42 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con tre taglienti • Fresatura a tuffo possibile• Doppio sistema di bloccaggio per inserti	B199
QCH-APKT		 APKT11T3 APKT1604	90°	✔	✔	✔	✔	✔		• Intervallo diametro Ø16 - 40 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Per fresatura a 90°, a scanalatura e a tuffo • Fresa a taglio morbido con geometria del tagliente grande e positiva • INSERTi con due taglienti • Solo per filettature M conformi alla norma DIN	B201
QCH-RD		 RDKW0702 RDKW10T3 RDKW1605		✔	✔	✔			✔	• Intervallo diametro Ø15 – 42 mm • Per acciaio, acciaio inossidabile e ghise • Bloccaggio a vite • Forme e stampe • Per inserti con due differenti spessori	B204
QCH-RD		 RDKW0702 RDKW1003 RDKW12T3 RDKW1604		✔	✔	✔			✔	• Intervallo diametro Ø15 – 42 mm • Per acciaio, acciaio inossidabile e ghise • Bloccaggio a vite • Forme e stampe • Per inserti con due differenti spessori	B206

✔ Molto adatto ✔ Adatto

Frese con testa intercambiabile - Serie QCH

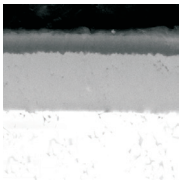
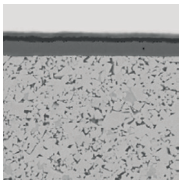
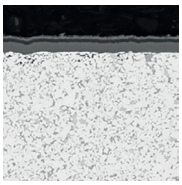
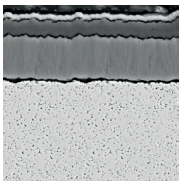
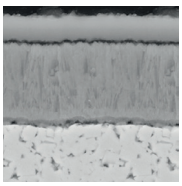
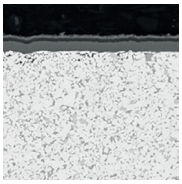
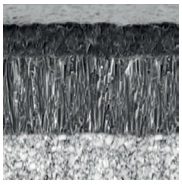
Serie	Corpi fresa	Inserto	Kr	Applicazione						Caratteristiche	Pagina
				P	M	K	N	S	H		
QCH-ZOHX		 ZOHX16 ZOHX20 ZOHX25 ZOHX30 ZOHX32		✓	✓	✓				• Intervallo diametro Ø16 – 32 mm • Per acciaio, acciaio inossidabile e ghise • Particolarmente adatta per la finitura di forme e stampe • Inserto con due taglienti	B208
QCH-SDMT-Q		 SDMT09T3		✓	✓	✓				• Intervallo diametro Ø20 – 40 mm • Per acciaio, acciaio inossidabile e ghise • Inserti con quattro taglienti • Fresatura a tuffo possibile • Doppio sistema di bloccaggio per inserti • Solo per filetto tipo Q come da standard ZCC-CT	B210
QCH-APKT-Q		 APKT11T3	90°	✓	✓	✓				• Intervallo diametro Ø16 - 40 mm • Per acciaio, acciaio inossidabile, ghise, metalli non ferrosi e materiali a difficile asportazione • Per fresatura a 90°, a scanalatura e a tuffo • Fresa a taglio morbido con geometria del tagliente grande e positiva • Inserti con due taglienti • Solo per filetto tipo Q come da standard ZCC-CT	B212
QCH-SPGT-Q		 SPGT0502		✓	✓	✓				• Intervallo diametro Ø16 – 20 mm • Per acciaio, acciaio inossidabile e ghise • Per rimuovere bave e svasare • Fresa a taglio dolce, con ampio tagliente positivo • Inserti con due taglienti • Solo per filetto tipo Q come da standard ZCC-CT	B214

Note

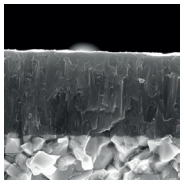
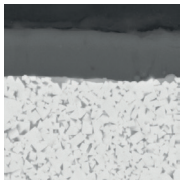
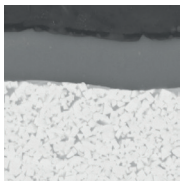
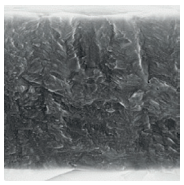
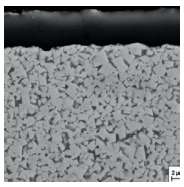
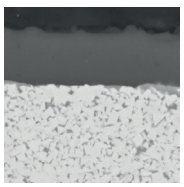
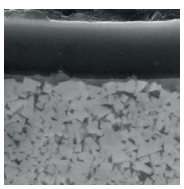
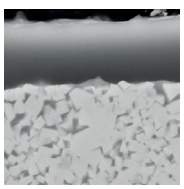
Panoramica rompitrucioli

	Finitura	Asportazione media	Sgrossatura
P	DF	DM	DR
	APF	APM	–
	PF	PM	PR
	GF	GM	GR
	GL	GM	GH
	–	HGR	–
	–	–	ZR
	–	XR	–
	–	MM	–
	MO-2	MO-1	MO-3
M	EF	EM	–
	APF	APM	–
	DF	DM	–
	PF	PM	PR
	GF	GM	GR
	GL	GM	GH
	–	HGR	–
	E	E	–
	–	–	ZR
	–	XR	–
	–	MM	–
K	CF	CM	CR
	DF	DM	DR
	EDFR	DER	DER
	PF	PM	PR
	GF	GM	GR
	GL	GM	GH
	–	–	ZR
	–	XR	–
	MO-2	MO-1	MO-3
S	EF	EM	–
	NM	NM	–
N	LH	LH	LH
	ALH	ALH	ALH

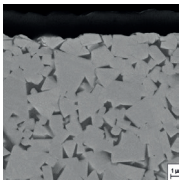
Metallo duro rivestito CVD

Grado	ISO	Microstruttura	Descrizione gradi
YBC302	P20 - P35		Grado di metallo duro con rivestimento in CVD P20-P35 adatto per lavorazioni dall´asportazione media alla sgrossatura di acciaio per alte velocità di taglio. Resistenza all´usura e tenacità ottimizzate per un ampio campo di applicazioni.
YBC301	P20 - P35		Grado di metallo duro con rivestimento in CVD P20-P35 adatto per lavorazioni dall´asportazione media alla sgrossatura di acciaio per basse velocità di taglio.
YBC401	P30 - P50 M30 - M40		Grado di metallo duro con rivestimento in CVD P30–P50/M30–M40 adatto per la sgrossatura di acciaio per basse velocità di taglio e condizioni sfavorevoli.
YBM251	P20 - P30 M15 - M35		Grado di metallo duro con rivestimento in CVD P20–P30/M15–M35 per lavorazioni da media fino alla sgrossatura di acciai inossidabili e acciaio in un ampio campo di applicazioni. Buona resistenza all´usura e alla deformazione per normali velocità di taglio.
YBM253	M15 - M35		Grado di metallo duro con rivestimento in CVD M15-M35 adatto per lavorazioni da media fino alla sgrossatura di acciai inossidabili in un ampio campo di applicazioni. Elevata resistenza all´usura e alla deformazione per alte velocità di taglio. Metallo dur
YBM351	P25 - P40 M20 - M40		Grado di metallo duro con rivestimento in CVD P25–P40/M20–M40 per la sgrossatura di acciai inossidabili e acciaio. Buona resistenza all´usura e stabilità del tagliente per normali velocità di taglio.
YBD152	K10 - K25		Grado di metallo duro con rivestimento in CVD K10-K25 per lavorazioni da media fino alla sgrossatura di materiali in ghisa. Elevata resistenza all´usura e alla rottura ad alte velocità di taglio.
YBD252	K20 - K35		Grado di metallo duro con rivestimento in CVD K20-K35 per lavorazioni da media fino alla sgrossatura di materiali in ghisa e acciaio. Elevata resistenza all´usura e alla rottura ad alte velocità di taglio.

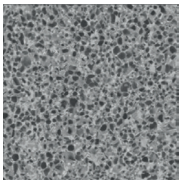
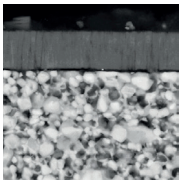
Metallo duro rivestito PVD

Grado	ISO	Microstruttura	Descrizione gradi
YBG101			Grado di metallo duro N05 - N20 con rivestimento in PVD per lavorazioni che spaziano dalla finitura all'asportazione media di materiali in alluminio. Il rivestimento applicato unicamente sulla superficie del vano truciolo riduce, in combinazione con il rompitruciolo in alluminio, la formazione de tagliente di riporto e assicura un taglio morbido.
YBG102	S05 - S15		Grado di metallo duro con rivestimento in PVD S05-S15 per lavorazioni dalla finitura all´asportazione media di superleghe, acciaio inossidabile e alluminio. Ottima resistenza all´usura in una vasta gamma di applicazioni.
YBG202	P10 - P30 M10-M25		Grado di metallo duro con rivestimento in PVD P10–P30/M10–M25 per lavorazioni dalla finitura all'asportazione media di acciai inossidabili e acciaio (fresatura). Ottima resistenza all´usura in una vasta gamma di applicazioni.
YBG212	P25 - P35 M25-M40		Grado di metallo duro con rivestimento in PVD P25–P35/M25–M40 per la lavorazione di acciaio e acciaio inossidabile. Particolarmente adatto come inserto di centraggio per la foratura.
YBS203	S15 – S25		Grado di tornitura e fresatura per la lavorazione di materiali resistenti al calore. Uno speciale substrato in metallo duro e la più recente tecnologia di rivestimento PVD consentono un'ottima resistenza all'usura, un'elevata resistenza alla rottura e un'alta stabilità termica.
YBG205	P10 - P30 M20 - M40 S15-S25		Grado di metallo duro P10 - P30/M20 - M40/S15 - S25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (fresatura). Resistenza all'usura e resistenza termica ottimali in un ampio campo di applicazione.
YB9320	P10 - P30 M10-M25		Grado di metallo duro P10 - P30/M10 - M25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (scanalatura/fresatura). Resistenza all'usura ottimale grazie all'adesione migliore del rivestimento e alla maggiore resistenza termica in un ampio campo di applicazione.
YBG302	P15 - P30 M25 - M40		Grado di metallo duro con rivestimento in PVD P15–P30/M25–M40 per lavorazioni dall'asportazione media fino alla sgrossatura di acciaio inossidabile e acciaio (fresatura). Ottima resistenza all´usura e tenacità.

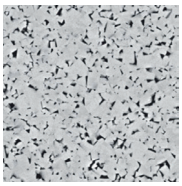
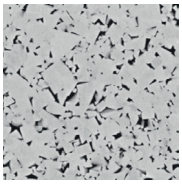
Metallo duro rivestito PVD

Grado	ISO	Microstruttura	Descrizione gradi
YBS303	S25 - S35		Grado di fresatura per la lavorazione di leghe di titanio. Un substrato in metallo duro e la più recente tecnologia di rivestimento PVD con una maggiore resistenza agli urti e un'elevata stabilità termica.

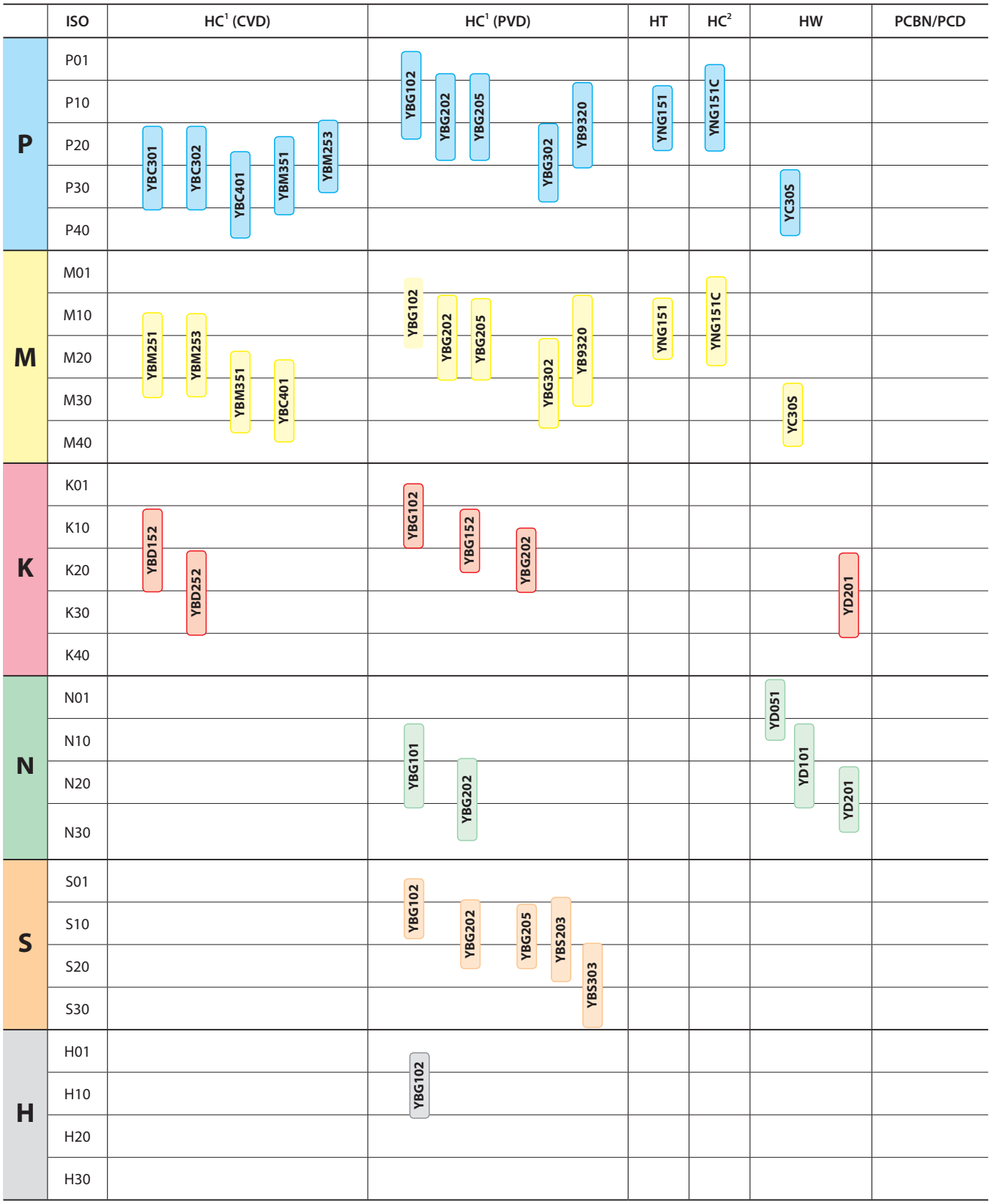
Cermet

Grado	ISO	Microstruttura	Descrizione gradi
YNG151	P05 - P15		Grado non rivestito in Cermet P05–P15 per la finitura di acciaio e acciaio inossidabile. Buona resistenza alla deformazione plastica. Consente un'ottima finitura superficiale.
YNG151C	P05 - P15		Grado Cermet non rivestito in PVD P05–P15 per la finitura di acciaio e acciaio inossidabile. Buona resistenza all'usura e alla deformazione plastica. Consente un'ottima finitura superficiale.

Metallo duro non rivestito

Grado	ISO	Microstruttura	Descrizione gradi
YD101	N05 - N25 K05 - K20		Substrato in metallo duro non rivestito K05–K20/N05–N20 per lavorazioni dalla finitura all´asportazione media di alluminio e altri materiali.
YD201	K10 - K30 N10 - N30		Substrato in metallo duro non rivestito K10–K30/N10–N30 per l´asportazione media di alluminio e altri materiali.

Campi di applicazione dei gradi – inserti per fresatura



P	Acciaio	
M	Acciaio inossidabile	
K	Ghisa	
N	Metalli non ferrosi	
S	Materiali a difficile asportazione	
H	Materiali ad elevata durezza	

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Metallo duro non rivestito

Note

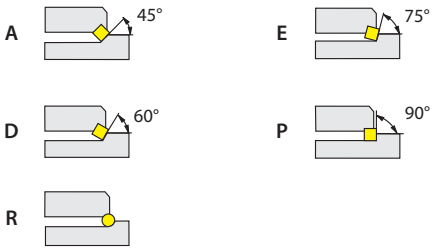
Inserti per fresatura Codice sistema – corpi fresa

FM	A	12	050	–	A22	O	–	N	06	–	04	(L)	(C)
1	2	3	4		5	6		7	8		9	10	11

Tipo fresa	
Code	Descrizione
BM	Fresa profilata
CM	Frese a smusso
EM	Fresa per spallamento
FM	Fresa a spianare
HM	Frese elicoidali
SM	Frese a disco
TM	Frese per scanalature a T
XM	Speciale

1

Angolo di inclinazione [mm]



2

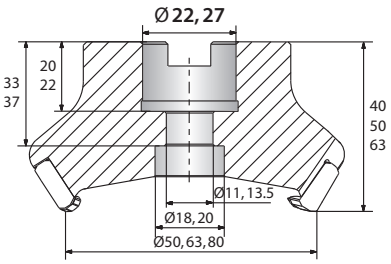
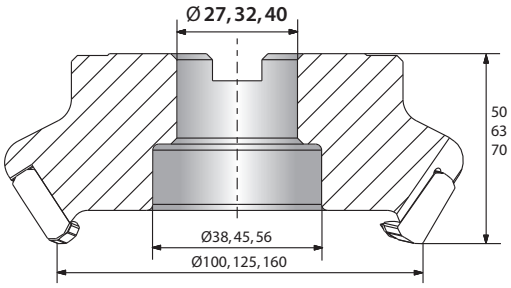
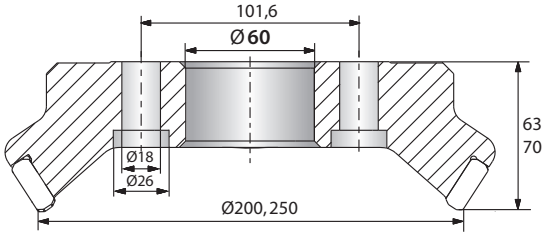
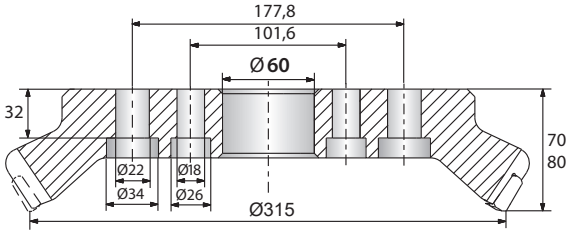
Codice seriale

3

Diametro nominale [mm]	
Code	Descrizione
025	25
050	50
160	160
315	315
...	

4

Versione e dimensioni dei portautensili

Code	Versione	Code	Versione
A	Diametro nominale Ø50 – 80 mm 	**B**	Diametro nominale Ø100 – 160 mm 
C	Diametro nominale Ø200 – 250 mm 	**D**	Diametro nominale Ø315 mm 
G	Codolo cilindrico	**XP**	Stelo Weldon
K	Foro con taglio con attacco		

5

Per quanto riguarda il fissaggio, si prega di osservare le informazioni fornite dal produttore del portautensile.

Forma dell'inserto			
A		C	
H		L	
M		O	
P		R	
S		T	
W		X	Speciale
Z	Speciale		

6

Angolo di spoglia inferiore			
B	5°	C	7°
D	15°	E	20°
F	25°	N	0°
P	11°		

7

Lunghezza tagliente [mm]	
Forma dell'inserto	
A	C, M
H, O, P	L
R	S
T	W

8

Numero di denti

9

Direzione di taglio	
Code	Descrizione
L	Sinistra

10

Con raffreddamento interno

11

Gli utensili con accoppiamento di tipo B e alimentazione interna di refrigerante richiedono le seguenti parti di ricambio:



Vite di fissaggio refrigerante



Rondella del refrigerante



Parti di ricambio (accoppiamento di tipo B con alimentazione interna di refrigerante)

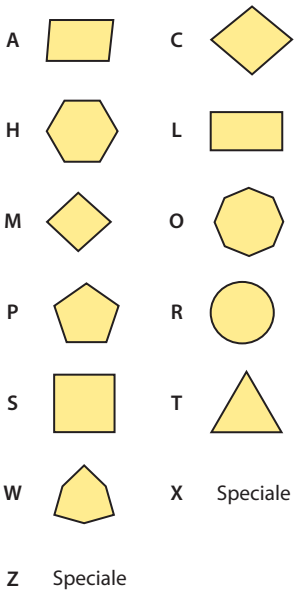
		B27	B32	B40	B40
	Ø	**80**	**100**	**125**	**160**
	**Vite di fissaggio refrigerante**	LDB27C	LDB32C	LDB40C	LDB40C
	**Rondella del refrigerante**	B27-002-CP	B32-002-CP	B40-002-CP	B40-003-CP

Al momento dell'acquisto di un utensile con alimentazione interna di refrigerante e accoppiamento di tipo B, queste parti di ricambio sono incluse.

Inserti per fresatura Codice ISO – inserti

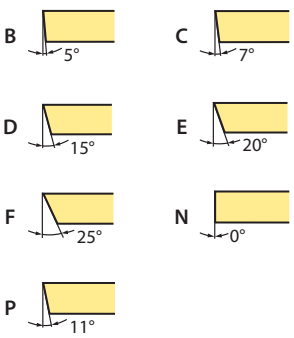
S	P	K	N	12	04	ED	T21K	R	–	DM
1	2	3	4	5	6	7	8	9		10

Forma dell'inserto



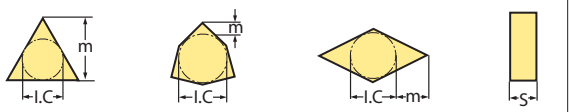
1

Angolo di spoglia inferiore



2

Grado di tolleranza

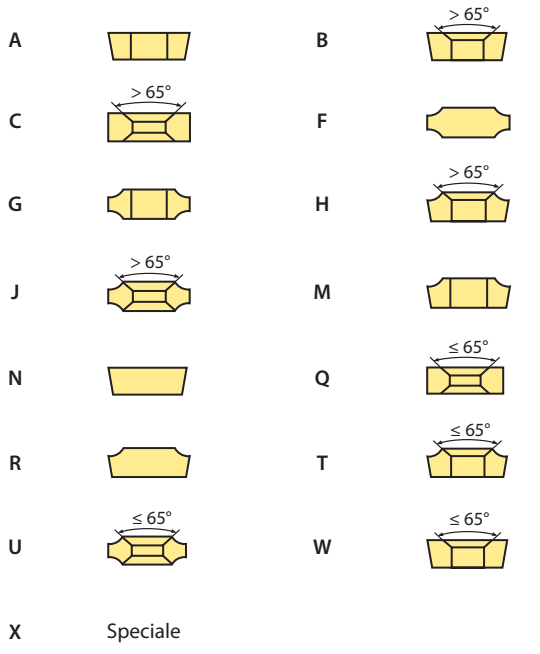


Code	I.C [mm]	m [mm]	S [mm]
A	±0,025	±0,005	±0,025
C	±0,025	±0,013	±0,025
E	±0,025	±0,025	±0,025
F	±0,013	±0,005	±0,025
G	±0,025	±0,025	±0,130
H	±0,013	±0,013	±0,025
J	±0,05–0,13	±0,005	±0,025
K	±0,05–0,13	±0,013	±0,025
L	±0,05–0,13	±0,025	±0,025
M	±0,05–0,13	±0,08–0,18	±0,130
N	±0,05–0,13	±0,08–0,18	±0,025
U	±0,08–0,25	±0,13–0,38	±0,130

3

Caratteristiche di fissaggio (metrico)

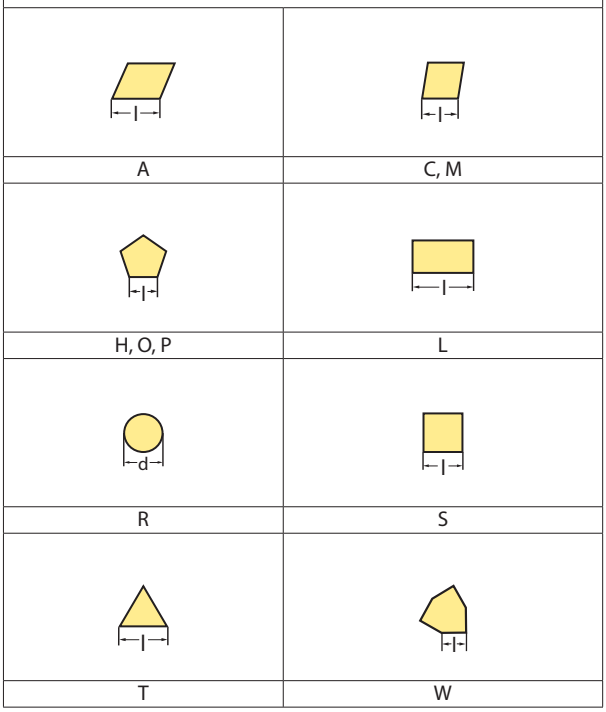
Forma dell'inserto



4

Lunghezza tagliente [mm]

Forma dell'inserto



5

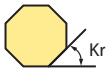
Spessore dell'inserto S [mm]



Code	S	Code	S
00	0,79	**05**	5,56
T0	0,99	**T5**	5,95
01	1,59	**06**	6,35
T1	1,98	**T6**	6,75
02	2,38	**07**	7,94
T2	2,58	**09**	9,52
03	3,18	**T9**	9,72
T3	3,97	**11**	11,11
04	4,76	**12**	12,70
T4	4,96		

6

Angolo





Code	Kr	Code	αn
A	45°	**A**	3°
D	60°	**B**	5°
E	75°	**C**	7°
F	85°	**D**	15°
P	90°	**E**	20°
Z	Speciale	**F**	25°
		G	30°
		N	0°
		P	11°
		Z	Speciale

7

Smusso

Code	Versione	Code	Angolo	Code	Larghezza [mm]	Code	Posizione
F		**0**	5°	**0**	0,10	**K**	
E		**1**	10°	**1**	0,15		
T		**2**	15°	**2**	0,20	**P**	
S		**3**	20°	**3**	0,25		
		4	25°	**4**	0,30	**W**	
		5	30°	**5**	0,35		
				6	0,40	**–**	
				7	0,45		

8

Direzione di taglio

Code	Descrizione
R	Destra
L	Sinistra
N	Destro e sinistro

9

Panoramica rompitrucioli
(da pagina B20)

10

Inserti per fresatura Codice sistema – frese a disco

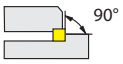
SM	P	03	–	160	×	16	–	K	40	–	M	P	12	–	12	L
1	2	3		4		5		6	7		8	9	10		11	12

Versione

Code	Descrizione
SM	Frese a disco

1

Angolo di inclinazione [mm]

P 

2

Codice seriale

3

Diametro nominale [mm]

4

Larghezza di taglio [mm]

5

Tipologia alloggiamento

Code	Descrizione	Code	Descrizione
A	Tipo A	B	Tipo B
C	Tipo C	D	Tipo D
K	Con linguetta		

6

Diametro del foro della sede [mm]

7

Forma dell'inserto

M 

S 

8

Angolo di spoglia inferiore

N 

P 

9

Dimensioni dell'inserto [mm]

10

Numero di denti

11

Direzione di taglio

Code	Descrizione
R	Destra
L	Sinistra

12

QCH – 35 – SDMT 09 – Q 18 – 03

1	2	3	4	5	6	7

Serie

Code	Descrizione
QCH	Sistema di testine intercambiabili

1

Diametro nominale [mm]

Code	Descrizione
16	16
20	20
25	25
35	35
...	

2

Forma inserto

3

Lunghezza tagliente l [mm]

A 

R 

S 

4

Tipo di filettatura

Code	Descrizione
M	Metrico
Q	Filettatura Q

5

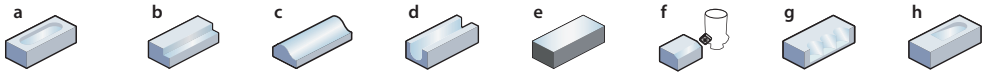
Dimensione filetto [mm]

Code	Descrizione
8	8
10	10
12	12
14	14
...	

6

Numero di taglienti

7



a Fresatura di cave b Fresatura ad angolo c Profilatura d Fresatura di fessure
e Fresatura a spianare f Fresatura a spallamento g Fresatura a tuffo h Fresatura circolare/a rampe

Inserti per fresatura

Codice sistema – attacchi QCH

G	25	–	QCH	–	Q	12	–	250	C	–	(ZJ)	(115)
1	2		3		4	5		6	7		8	9

Forma di serraggio

Code	Descrizione
G	Cilindrico
XP	Weldon

1

Diametro di serraggio [mm]

Code	Descrizione
12	12
16	16
20	20
25	25
32	32

2

Serie

Code	Descrizione
QCH	Sistema di testine intercambiabili

3

Tipo filettatura

Code	Descrizione
M	Metrico
Q	Filettatura Q

4

Dimensioni filettatura [mm]

Code	Descrizione
8	8
10	10
12	12
14	14
...	

5

Lunghezza totale [mm]

Code	Descrizione
85	85
150	150
200	200
...	

6

Materiale

Code	Descrizione
C	Metallo duro integrale
S	Acciaio

7

Attacco

Code	Descrizione
ZJ	Conico
–	Cilindrico a gradini

8

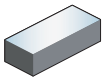
Lunghezza cono [mm]

Code	Descrizione
90	90
115	115
...	

9

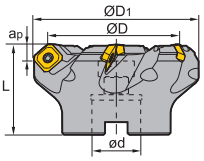
Fresa a spianare

FMA01 Kr: 45°

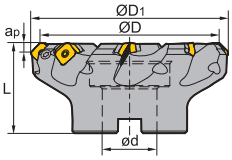




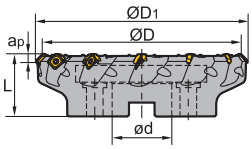
Passo stretto



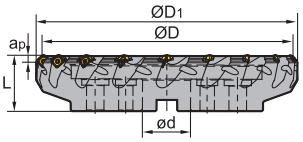
A



B



C



D

Articolo	✲	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA01-050-A22-SE12-04		●	○	50	61	22	40	6	4	A	0,3	SEET12T3
FMA01-050-A22-SE12-04C	✲	●	○	50	61	22	40	6	4	A	0,3	
FMA01-063-A22-SE12-05		●		63	74	22	40	6	5	A	0,5	
FMA01-063-A22-SE12-05C	✲	●	○	63	74	22	40	6	6	A	1,2	
FMA01-080-A27-SE12-06		●	●	80	91	27	50	6	6	A	1,2	
FMA01-080-A27-SE12-06C	✲	●	○	80	91	27	50	6	6	A	1,2	
FMA01-100-B32-SE12-07		●	○	100	107	32	50	6	7	B	1,2	
FMA01-100-B32-SE12-07C	✲	○	○	100	107	32	50	6	7	B	1,2	
FMA01-125-B40-SE12-08		●	●	125	136	40	63	6	8	B	2,6	
FMA01-125-B40-SE12-08C	✲	○		125	136	40	63	6	8	B	2,6	
FMA01-160-B40-SE12-10		●	●	160	170	40	63	6	10	B	4,3	
FMA01-160-B40-SE12-10C	✲	○		160	170	40	63	6	10	B	4,3	
FMA01-200-C60-SE12-12		●	○	200	210	60	63	6	12	C	7,6	
FMA01-250-C60-SE12-14		●	○	250	260	60	63	6	14	C	13,5	
FMA01-315-D60-SE12-18		●	○	315	325	60	70	6	18	D	20,8	
FMA01-100-B32-SE18-04		○	○	100	120	32	63	10	4	B	1,2	SEET18T6
FMA01-125-B40-SE18-05		○	○	125	145	40	63	10	5	B	2,6	
FMA01-160-C40-SE18-06		○	○	160	180	40	63	10	6	C	4,3	
FMA01-200-C60-SE18-08		●	○	200	220	60	63	10	8	C	7,6	
FMA01-250-C60-SE18-10		●		250	270	60	63	10	10	C	13,5	
FMA01-315-D60-SE18-12		○	○	315	335	60	80	10	12	D	20,8	

● In magazzino ○ Su richiesta

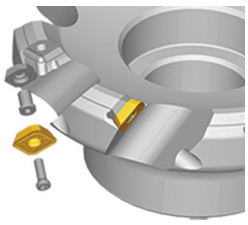
✲ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Fresa a spianare

Parti di ricambio

	Inserto	SEET12T3	SEET12T3	SEET18T6
	ØD	50-100	125 - 315	100- 315
	Vite (inserti)	I60M3,5×10 (2,7 Nm)	I60M3,5×12 (2,7 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)		SM5×7XA	SM8×9XA
	Sottoplacchetta		S13BS	S18BS
	Chiave (sottoplacchetta)		WH35L	WH50L
	Chiave (inserti)	WT15IS	WT15IS	
	Chiave (inserti)			WT20IT

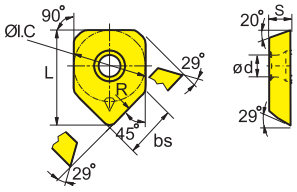


● Buone condizioni di lavorazione
◐ Condizioni di lavorazione normali
◐ Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
12 T3	17,82	13,4	3,97	4,1

Inserti - Fresatura

SE** Inserti - Fresatura



	HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
P	◐	◐	◐	◐	◐	◐	●		◐	◐		◐	◐	◐	●	●	●		
M		◐	◐	◐	◐	◐			◐	◐		◐	◐	◐	◐	◐	◐		
K						●	●	●							●			◐	
N								◐										◐	◐
S				◐		◐		●	●		●	●	●	◐					
H																			

ISO		R	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SEET12T3-W**		9,46							○							●					○	○		

● In magazzino ○ Su richiesta

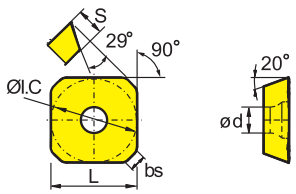
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
12 T3	13,4	13,4	3,97	4,1
18 T6	18	18	6,1	5,5



SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SEET12T3-CF	2,55							○			●												
	SEET12T3-CM	2,55							●			●												
	SEET12T3-CR	2,55							●	●		○												
	SEET12T3-DF	2,55	●	●			○	●					○					○			○	○		
	SEET12T3-DM	2,55	●	●	●	●	○	●					○				●	●						
	SEET18T6-DM	2,29	●			●																		
	SEET12T3-DR	2,55		●	●			●		○			○					○						
	SEET12T3-EF	2,55											○					●						
	SEET12T3-EM	2,55					○	●					○					●						
	SEET12T3-LH	2,55									○												●	●

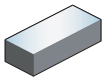
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

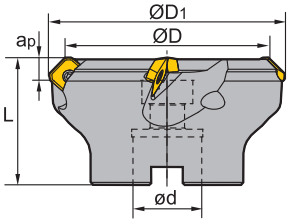
Fresa a spianare

FMA02 Kr: 45°

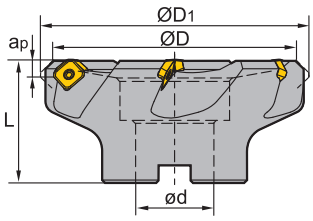




Passo normale e largo



A



B

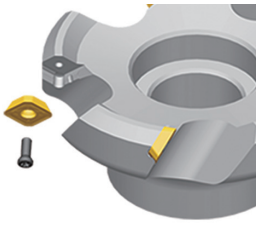
Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA02-050-A22-SE12-03		●	50	61	22	40	6	3	A	0,4	SEET12T3
FMA02-063-A22-SE12-04		●	63	74	22	40	6	4	A	0,6	
FMA02-080-A27-SE12-04		●	80	91	27	50	6	4	A	1,3	
FMA02-100-B32-SE12-05		●	100	107	32	50	6	5	B	1,3	
FMA02-125-B40-SE12-06		○	125	131	40	63	6	6	B	2,6	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SEET12T3
	ØD	50-125
	Vite (inserti)	I60M3,5×10 (2,7 Nm)
	Chiave (inserti)	WT15IS



Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
12 T3	17,82	13,4	3,97	4,1

Inserti - Fresatura

SE** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		R	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SEET12T3-W**		9,46							○							●					○	○		

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
12 T3	13,4	13,4	3,97	4,1

Inserti - Fresatura

SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SEET12T3-CF**	2,55						○			●												
	**SEET12T3-CM**	2,55						●			●												
	**SEET12T3-CR**	2,55						●	●		○												

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

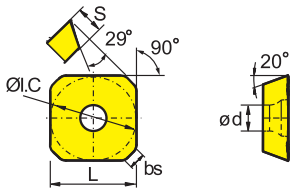
Inserti per fresatura

Fresa a spianare

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
12 T3	13,4	13,4	3,97	4,1

Inserti - Fresatura



SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P	●	●	●	●	●	●		●		●	●		●	●	●	●	●	●		
		M		●	●	●	●	●				●	●		●	●	●	●	●	●		
		K							●	●									●			●
		N								●												●
		S				●		●			●	●		●	●	●		●				
		H																				
ISO		bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SEET12T3-DF	2,55	●	●			○	●					○					○			○	○		
	SEET12T3-DM	2,55	●	●	●	●	○	●					○				●	●						
	SEET12T3-DR	2,55		●	●			●		○			○					○						
	SEET12T3-EF	2,55											○					●						
	SEET12T3-EM	2,55					○	●					○					●						
	SEET12T3-LH	2,55									○												●	●

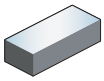
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

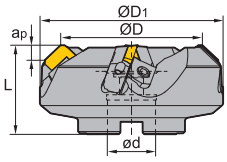
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

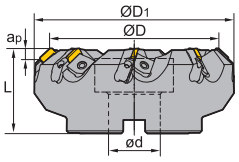
FMA03 Kr: 45°



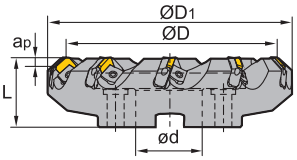




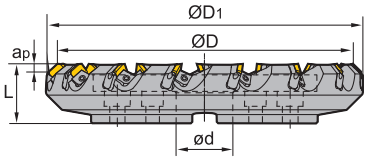
A



B



C



D

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	ØD$_1$	ød	L	a$_{p\ max}$	Denti	Attacco	kg	Inserto
FMA03-080-A27-SE12-04		○	○	80	103	27	50	5,5	4	A	1,8	SEEN1203 SEKN1203 SEKR1203
FMA03-100-B32-SE12-05		○	○	100	122	32	50	5,5	5	B	2,4	
FMA03-125-B40-SE12-06		○	○	125	147	40	63	5,5	6	B	4,4	
FMA03-160-B40-SE12-08		○	○	160	181	40	63	5,5	8	B	6,4	
FMA03-200-C60-SE12-10		○	○	200	221	60	63	5,5	10	C	8,5	
FMA03-250-C60-SE12-12		○	○	250	270	60	63	5,5	12	C	14,1	
FMA03-315-D60-SE12-15		○	○	315	353	60	63	5,5	15	D	22,2	
FMA03-080-A27-SE15-04		○		80	103	27	50	7,5	4	A	1,7	SEKN1504 SEKR1504
FMA03-100-B32-SE15-05		○		100	122	32	50	7,5	5	B	2,3	
FMA03-125-B40-SE15-06		○		125	147	40	63	7,5	6	B	4,2	
FMA03-160-B40-SE15-08		○		160	181	40	63	7,5	8	B	6,1	
FMA03-200-C60-SE15-10		○		200	221	60	63	7,5	10	C	8,3	
FMA03-250-C60-SE15-12		○		250	270	60	63	7,5	12	C	13,6	
FMA03-315-D60-SE15-15		○	○	315	353	60	63	7,5	15	D	21,8	

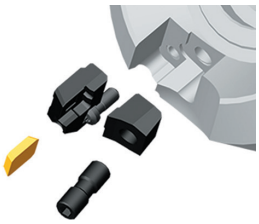
● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Parti di ricambio

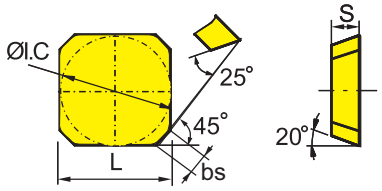
	Inserto	SEEN1203 SEKN1203 SEKR1203	SEKN1504 SEKR1504
	ØD	80- 315	80- 315
	Vite di regolazione	LOM5×15.1	LOM5×15.1
	Cassetta (sinistra)	LSE12L	LSE15L
	Cassetta (destra)	LSE12R	LSE15R
	Vite (cuneo)	DM8×21X (10,2 Nm)	DM8×21X (10,2 Nm)
	Cuneo (sinistra)	W01L	W01L
	Cuneo (destra)	W01R	W01R
	Chiave (vite di regolazione)	WT20T	WT20T
	Chiave (cuneo)	WH40T	WH40T



Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SEKN	L	I.C	S
12 03	12,7	12,7	3,18
15 04	15,875	15,875	4,76



SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SEKN1203AFN	1,8		○						○														
	SEKN1203AFTN	1,8		●		●	●	○		○			○								●	●		○
	SEKN1504AFTN	1,6		●	○		●	●									●							
	SEKN1504AZ	1,6		○																				○

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SEEN	L	I.C	S
12 03	12,7	12,7	3,18

Inserti - Fresatura

SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SEEN1203AFTN	1,8																		●				

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SEKR	L	I.C	S
12 03	12,7	12,7	3,18

Inserti - Fresatura

SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SEKR1203AFN	1,8		●								○												

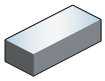
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

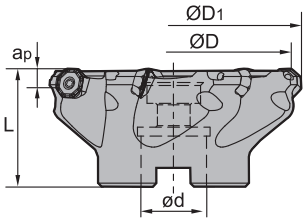
Fresa a spianare

FMA04 Kr: 45°

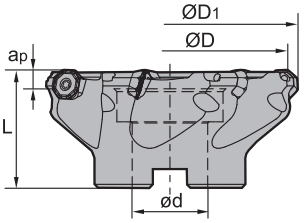




Bloccaggio a vite



A



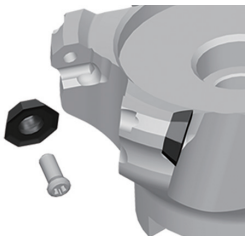
B

Articolo	*	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA04-050-A22-OF05-04		●		50	56	22	40	3,5	4	A	0,3	OFKT05T3
FMA04-050-A22-OF05-05		●		50	56	22	40	3,5	5	A	0,4	
FMA04-050-A22-OF05-05C	*	○		50	56	22	40	3,5	5	A	0,4	
FMA04-063-A22-OF05-05		●		63	69	22	40	3,5	5	A	0,5	
FMA04-063-A22-OF05-05C	*	○		63	69	22	40	3,5	5	A	0,5	
FMA04-080-A27-OF05-06		●	○	80	86	27	50	3,5	6	A	0,8	
FMA04-080-A27-OF05-06C	*	●		80	86	27	50	3,5	6	A	0,8	
FMA04-100-B32-OF05-07		●	○	100	106	32	50	3,5	7	B	1,2	
FMA04-100-B32-OF05-07C	*	○		100	106	32	50	3,5	7	B	1,2	
FMA04-125-B40-OF05-08		●		125	130	40	63	3,5	8	B	2,7	
FMA04-125-B40-OF05-08C	*	○		125	130	40	63	3,5	8	B	2,7	
FMA04-160-B40-OF05-10		●		160	165	40	63	3,5	10	B	5,1	

● In magazzino ○ Su richiesta

* Con raffreddamento interno

Parti di ricambio

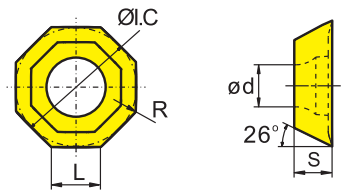
	Inserto	OFKT05T3	OFKT05T3	
	ØD	50-63	80-160	
	Vite (inserti)	I60M4×8,4 (3,4 Nm)	I60M4×10 (3,4 Nm)	
	Chiave (inserti)	WT15IS	WT15IS	

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

OFKT	L	I.C	S	d
05 T3	5,26	12,7	3,97	4,4



OF** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		R	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**OFKT05T3-DF**	0,5									●	○												
	**OFKT05T3-DM**	0,5					○	●			●	○						●						
	**OFKT05T3-LH**	0,5																					●	

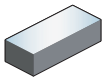
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

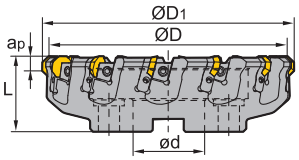
Fresa a spianare

FMA04 Kr: 45°

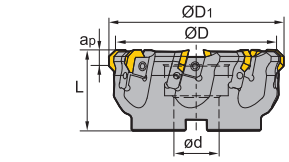




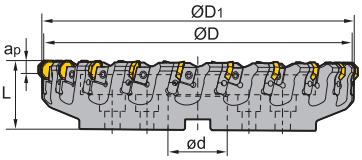
Bloccaggio a cuneo



C



B



D

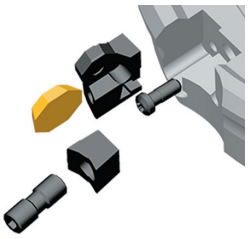
Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA04-125-B40-OF07-08		○		125	136	40	63	5	8	B	3,9	
FMA04-160-B40-OF07-10		○		160	171	40	63	5	10	B	5,9	
FMA04-200-C60-OF07-12		○		200	211	60	63	5	12	C	7,6	OFKR0704
FMA04-250-C60-OF07-16		○		250	261	60	63	5	16	C	13,3	
FMA04-315-D60-OF07-20		○	○	315	321	60	63	5	20	D	20,3	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**OFKR0704**
	ØD	**125 - 315**
	Vite di regolazione	LOM5×15.1
	Cassetta (sinistra)	LOF07L
	Cassetta (destra)	LOF07R
	Vite (cuneo)	DM8×21X (10,2 Nm)
	Cuneo (sinistra)	W02L
	Cuneo (destra)	W02R
	Chiave (vite di regolazione)	WT20T
	Chiave (cuneo)	WH40T

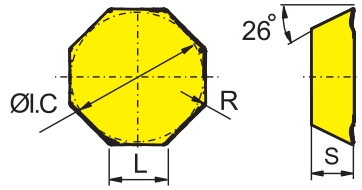


Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

OFKR	L	I.C	S
07 04	7,45	17,94	4,76

Inserti - Fresatura

OF** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		R	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**OFKR0704-DF**	0,8					○					○												
	**OFKR0704-DM**	0,8		○	○		○	○		○			○					○						
	OFKR0704W-DM	0,8		○						○						○								
	**OFKR0704-LH**	0,8																					○	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

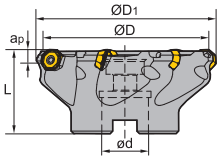
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

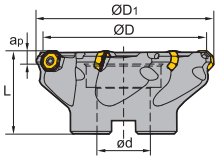
FMA04 Kr: 45°



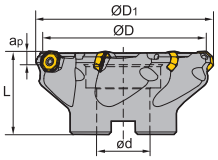
Bloccaggio a vite



A



B



C

Articolo	✻	Stock	Dimensioni [mm]					Denti	kg	Inserto
			ØD	$ØD_1$	ød	L	$a_{p\ max}$			
FMA04-050-A22-OD06-04C	✻	●	50	60	22	40	4	4	0,284	OD*T0605**
FMA04-063-A22-OD06-05C	✻	●	63	73	22	40	4	5	0,409	
FMA04-080-A27-OD06-06C	✻	●	80	90	27	50	4	6	1,017	
FMA04-100-A32-OD06-07C	✻	●	100	110	32	50	4	7	1,536	
FMA04-125-B40-OD06-08		○	125	135	40	63	4	8	2,931	
FMA04-160-C40-OD06-10		○	160	170	40	63	4	10	3,838	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

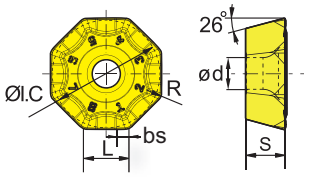
	Inserto	**OD*T0605****
	ØD	**50-160**
	Vite (inserti)	I60M5×13 (6,7 Nm)
	Chiave (inserti)	WT20IS

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

ODHT
06 05
06 05



OD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
	P																				
	M																				
	K																				
	N																				
	S																				
	H																				
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ODHT060508-GH**				●			●	●							●							
	**ODHT060508-GL**			○				○								●							
	**ODHT060508-GM**	●			●			●								●							
	**ODHT060508-LH**																					●	○
	**ODMT060512-GM**															○							

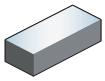
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

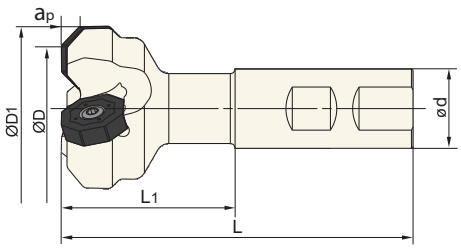
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

FMA07 Kr: 45°







Stelo Weldon

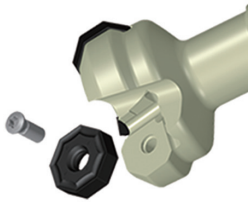
Articolo	✲	Stock	Dimensioni [mm] ØD	ØD1	ød	L1	L	ap max	Denti	kg	Inserto
FMA07-025-XP20-ON06-02		○	25	37	20	45	95	4	2	0,2	ONHU0604
FMA07-025-XP20-ON06-02C	✲	○	25	37	20	45	95	4	2	0,2	
FMA07-032-XP25-ON06-02C	✲	○	32	44	25	55	111	4	2	0,4	
FMA07-040-XP25-ON06-03		○	40	52	25	50	106	4	3	0,4	
FMA07-032-XP25-ON08-02		○	32	47	25	55	111	5	2	0,4	ONHU08T5
FMA07-040-XP25-ON08-03		○	40	55	25	55	111	5	3	0,5	
FMA07-040-XP25-ON08-03C	✲	○	40	55	25	55	111	5	3	0,5	
FMA07-050-XP25-ON08-04		○	50	65	25	55	111	5	4	0,6	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	ONHU0604	ONHU08T5
	ØD	25-40	32-50
	Vite (inserti)	I60M4×10 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Chiave (inserti)	WT15IS	
	Chiave (inserti)		WT20IT

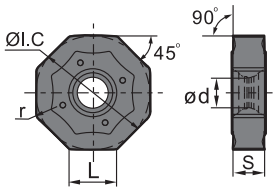


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

ONHU	L	I.C	S	d
06 04	6,58	15,875	4,76	4,4
08 T5	8,39	20,2	5,77	5,3



ON** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)										HT	HC²	HW	
		P																					
		M																					
		K																					
		N																					
		S																					
		H																					
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	ONHU060408-CM								○															
	ONHU08T512-CM		○						○															
	ONHU060408-PF	0,8	○			○			●				○											
	ONHU08T508-PF	0,8	○			○			○				○				○							
	ONHU060408-PM	0,8	●			●		●	●							●								
	ONHU08T508-PM	0,8	○			○		○	○															

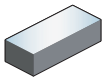
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

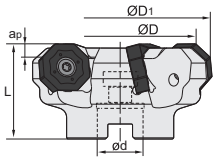
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

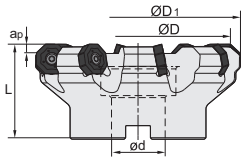
FMA07 Kr: 45°



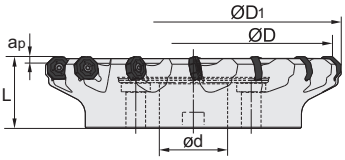




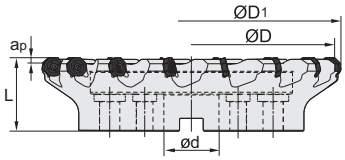
A



B



C



D

Articolo	✲	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA07-050-A22-ON06-05		○	○	50	62	22	40	4	5	A	0,3	ONHU0604
FMA07-050-A22-ON06-05C	✲	○		50	62	22	40	4	5	A	0,3	
FMA07-063-A22-ON06-06		○		63	75	22	40	4	6	A	0,5	
FMA07-063-A22-ON06-06C	✲	○		63	75	22	40	4	6	A	0,5	
FMA07-080-A27-ON06-07C	✲	○		80	92	27	50	4	7	A	1	
FMA07-080-B27-ON06-07		○		80	92	27	50	4	7	B	1	
FMA07-100-B32-ON06-08		○		100	112	32	63	4	8	B	1,9	
FMA07-100-B32-ON06-08C	✲	○		100	112	32	63	4	8	B	1,9	
FMA07-125-B40-ON06-09		○		125	137	40	63	4	9	B	3,5	
FMA07-125-B40-ON06-09C	✲	○		125	137	40	63	4	9	B	3,5	
FMA07-160-C40-ON06-11		○	○	160	172	40	63	4	11	C	4,3	
FMA07-200-C60-ON06-13		○		200	212	60	63	4	13	C	6,4	
FMA07-250-C60-ON06-15		○		250	262	60	63	4	15	C	13,4	
FMA07-315-D60-ON06-17		○		315	327	60	80	4	17	D	21,9	
FMA07-063-A22-ON08-05		○		63	78	22	40	5	5	A	0,5	ONHU08T5
FMA07-063-A22-ON08-05C	✲	○		63	78	22	40	5	5	A	0,5	
FMA07-080-A27-ON08-06C	✲	○		80	95	27	50	5	6	A	0,9	
FMA07-080-B27-ON08-06		○	○	80	95	27	50	5	6	B	0,9	
FMA07-100-B32-ON08-07		○		100	115	32	63	5	7	B	1,8	
FMA07-100-B32-ON08-07C	✲	○		100	115	32	63	5	8	B	3,1	
FMA07-125-B40-ON08-08		○	○	125	140	40	63	5	8	B	3,1	
FMA07-125-B40-ON08-08C	✲	○		125	140	40	63	5	8	B	3,1	
FMA07-160-C40-ON08-10		○	○	160	175	40	63	5	10	C	4,1	
FMA07-200-C60-ON08-12		○	○	200	215	60	63	5	12	C	6,1	
FMA07-250-C60-ON08-14		○	○	250	265	60	63	5	14	C	12	
FMA07-315-D60-ON08-16		○	○	315	330	60	80	5	16	D	21	

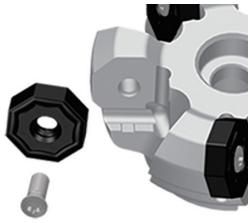
● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Parti di ricambio

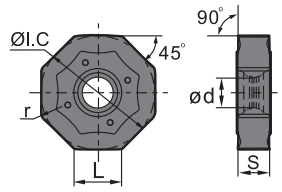
	Inserto	ONHU0604	ONHU08T5
	ØD	50- 315	63- 315
	Vite (inserti)	l60M4×10 (3,4 Nm)	l60M5×13 (6,7 Nm)
	Chiave (inserti)	WT15IS	
	Chiave (inserti)		WT20IT



- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

ONHU	L	l.C	S	d
06 04	6,58	15,875	4,76	4,4
08 T5	8,39	20,2	5,77	5,3

Inserti - Fresatura



ON** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
	ISO	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	ONHU060408-CM								○															
	ONHU08T512-CM		○						○															
	ONHU060408-PF	0,8	○			○			●				○											
	ONHU08T508-PF	0,8	○			○			○				○				○							
	ONHU060408-PM	0,8	●			●		●	●							●								
	ONHU08T508-PM	0,8	○			○		○	○															

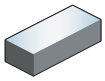
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

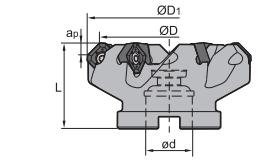
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

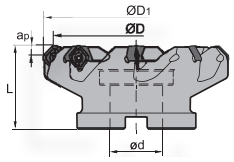
FMA11 Kr: 45°



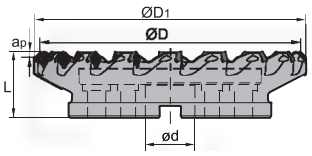




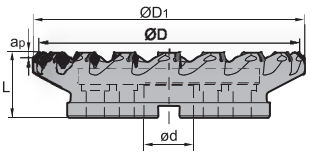
A



B



C



D

Articolo	✲	Stock	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA11-063-A22-SN12-05C	✲	●	63	74,47	22	40	5,5	5	A	0,55	SNEG1205
FMA11-063-A22-SN12-06C	✲	●	63	74,47	22	40	5,5	6	A	0,58	
FMA11-080-A27-SN12-06C	✲	●	80	91,47	27	50	5,5	6	A	1,14	
FMA11-100-B32-SN12-07		●	100	111,47	32	50	5,5	7	B	1,42	
FMA11-100-B32-SN12-07C	✲	○	100	111,47	32	50	5,5	7	B	1,42	
FMA11-100-B32-SN12-10C	✲	●	100	111,47	32	50	5,5	10	B	1,42	
FMA11-125-B40-SN12-08		●	125	136,47	40	63	5,5	8	B	2,86	
FMA11-125-B40-SN12-08C	✲	○	125	136,47	40	63	5,5	8	B	2,86	
FMA11-125-B40-SN12-12C	✲	●	125	136,47	40	63	5,5	12	B	2,86	
FMA11-160-C40-SN12-10		●	160	171,47	40	63	5,5	10	C	4,06	
FMA11-160-C40-SN12-15		●	160	171,47	40	63	5,5	15	C	4,06	
FMA11-200-C60-SN12-14		●	200	212,08	60	63	5,5	14	C	6,89	
FMA11-063-A22-SN15-05C	✲	●	63	77,4	22	40	7	5	A	0,56	SNEG1506
FMA11-080-A27-SN15-06C	✲	●	80	94,4	27	50	7	6	A	1,06	
FMA11-100-B32-SN15-07		●	100	114,4	32	50	7	7	B	1,47	
FMA11-100-B32-SN15-07C	✲	○	100	114,4	32	50	7	7	B	1,47	
FMA11-100-B32-SN15-09C	✲	●	100	114,4	32	50	7	9	B	1,47	
FMA11-125-B40-SN15-08		●	125	139,4	40	63	7	8	B	2,7	
FMA11-125-B40-SN15-08C	✲	○	125	139,4	40	63	7	8	B	2,7	
FMA11-125-B40-SN15-10C	✲	●	125	140,25	40	63	7	10	B	3,1	
FMA11-160-C40-SN15-10		●	160	174,4	40	63	7	10	C	3,92	
FMA11-160-C40-SN15-13		●	160	175,25	40	63	7	13	C	4,14	
FMA11-200-C60-SN15-12		●	200	214,4	60	63	7	12	C	5,46	
FMA11-250-C60-SN15-14		●	250	264,4	60	63	7	14	C	11,26	
FMA11-315-D60-SN15-18		○	315	329,4	60	80	7	18	D	20	
FMA11-125-B40-SN19-07		●	125	142,63	40	63	9	7	B	3	SNEG1907
FMA11-125-B40-SN19-07C	✲	●	125	142,63	40	63	9	7	B	3	
FMA11-160-C40-SN19-09		●	160	167,63	40	63	9	9	C	4,25	
FMA11-200-C60-SN19-11		●	200	217,63	60	63	9	11	C	6,18	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

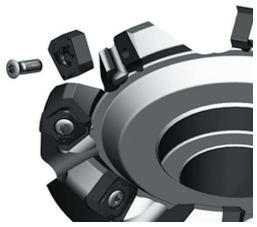
Articolo	✻	Stock	Dimensioni [mm] ØD	ØD$_1$	ød	L	$a_{p\,max}$	Denti	Attacco	kg	Inserto
FMA11-250-C60-SN19-13		●	250	267,63	60	63	9	13	C	11,55	SNEG1907
FMA11-315-D60-SN19-16		○	315	332,63	60	80	9	16	D	20,9	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SNEG1205	SNEG1506	SNEG1907
	ØD	63-200	63-315	125-315
	Vite (inserti)	I60M3,5×10 (2,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)
	Chiave (inserti)	WT15IS		
	Chiave (inserti)		WT20IT	WT25IT

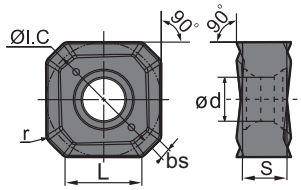


Inserti - Fresatura

● Buone condizioni di lavorazione
● Condizioni di lavorazione normali
● Condizioni di lavorazione sfavorevoli

SNEG	L	I.C	S	d
12 05	7,6	12	4,76	4,6
15 06	9,4	15	5,6	5,5
19 07	12,1	19	7	7,2

SN** Inserti negativi



	HC[1] (CVD)								HC[1] (PVD)									HT	HC[2]	HW	
P	●	●	●	●	●	●	●	●		●	●		●	●	●		●	●	●		
M		●	●	●	●	●	●			●	●		●	●	●	●	●	●	●		
K							●	●	●								●			●	
N									●											●	●
S				●		●			●	●		●	●	●		●					
H																					

ISO		r	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SNEG1506ANR-E**	0,9	1,3														●								
	**SNEG1205ANR-GM**	0,8	1,05	●			●			●								●							
	SNEG1506ANR-GM	0,9	1,3	●			●			●							●								

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

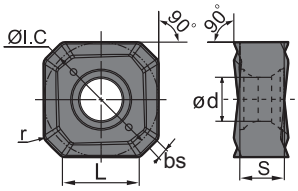
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Fresa a spianare

SNEG	L	I.C	S	d
12 05	7,6	12	4,76	4,6
15 06	9,4	15	5,6	5,5
19 07	12,1	19	7	7,2

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SN** Inserti negativi				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
	ISO	r	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SNEG1205ANR-GR	0,8	1,05	●			●			●						○				○					
	SNEG1506ANR-GR	0,9	1,3	●			●			●						○				○					
	SNEG1907ANR-GR	1	1,67	●			●			●	●														
	SNEG1506ANR-HGR																○								

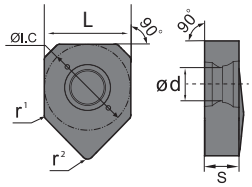
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

SNEG	L	I.C	S	d
12 05	12	12	4,76	4,6

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SN** Inserti negativi				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
	ISO	r1	r2	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SNEG1205ANR-W	0,6	0,8														●								

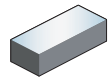
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

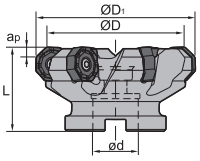
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

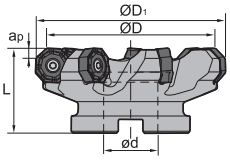
FMA12 Kr: 45°



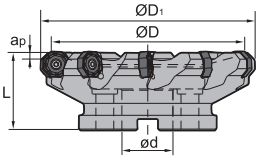




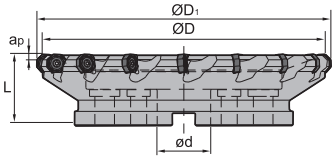
A



B



C



D

Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMA12-050-A22-ON06-04C	✻	●	50	59	22	40	4	4	A	0,309	ON*U0604**
FMA12-050-A22-ON06-05C	✻	●	50	59	22	40	4	5	A	0,352	
FMA12-063-A27-ON06-05C	✻	●	63	72	27	50	4	5	A	0,645	
FMA12-063-A27-ON06-07C	✻	●	63	72	27	50	4	7	A	0,695	
FMA12-080-A27-ON06-07C	✻	●	80	90	27	50	4	7	A	1,071	
FMA12-080-A27-ON06-09C	✻	●	80	90	27	50	4	9	A	1,098	
FMA12-100-A32-ON06-08C	✻	●	100	110	32	50	4	8	A	1,599	
FMA12-100-A32-ON06-11C	✻	●	100	110	32	50	4	11	A	1,616	
FMA12-125-B40-ON06-10		●	125	135	40	63	4	10	B	3,114	
FMA12-125-B40-ON06-14		●	125	135	40	63	4	14	B	3,151	
FMA12-160-C40-ON06-12		●	160	170	40	63	4	12	C	4,504	
FMA12-160-C40-ON06-18		●	160	170	40	63	4	18	C	4,568	
FMA12-063-A22-ON08-05		○	63	78	22	50	5	5	A	0,6	ONHU08T6
FMA12-080-A27-ON08-06		○	80	95	27	50	5	6	A	0,97	
FMA12-100-B32-ON08-07		○	100	115	32	50	5	7	B	1,28	
FMA12-100-B32-ON08-07C	✻	○	100	115	32	50	5	7	B	1,28	
FMA12-125-B40-ON08-08		○	125	140	40	63	5	8	B	2,59	
FMA12-125-B40-ON08-08C	✻	○	125	140	40	63	5	8	B	2,59	
FMA12-160-C40-ON08-10		○	160	175	40	63	5	10	C	4,1	
FMA12-200-C60-ON08-12		○	200	215	60	63	5	12	C	5,68	
FMA12-250-C60-ON08-14		○	250	265	60	63	5	14	C	11,9	
FMA12-315-D60-ON08-18		○	315	330	60	80	5	18	D	20,41	

● In magazzino ○ Su richiesta

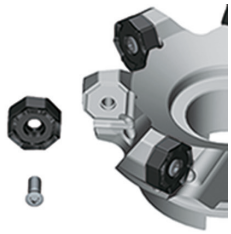
✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Fresa a spianare

Parti di ricambio

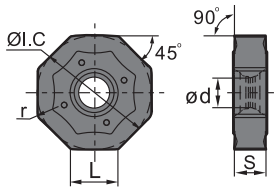
	Inserto	ON*U0604**	ONHU08T6
	ØD	50-160	63- 315
	Vite (inserti)		I60M5×13 (6,7 Nm)
	Chiave (inserti)	WT15IS	
	Chiave (inserti)		WT20IT



- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

ONHU	L	I.C	S	d
06 04	6,15	15,875	5,54	6
08 T6	6,38	20,2	6,3	5,3

Inserti - Fresatura



ON** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO	r		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	ONHU060408ANN-GH					●			●	●						●	●		○					
	ONMU060408-GH									●							●							
	ONHU060404ANN-GL					●			○							●	●		○					
	ONHU060408ANN-GM	0,8				●			●							●	●							
	ONHU08T624R-GM	2,4				○			○							○								
	ONMU060408-GM					○			○								●		●					

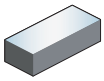
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

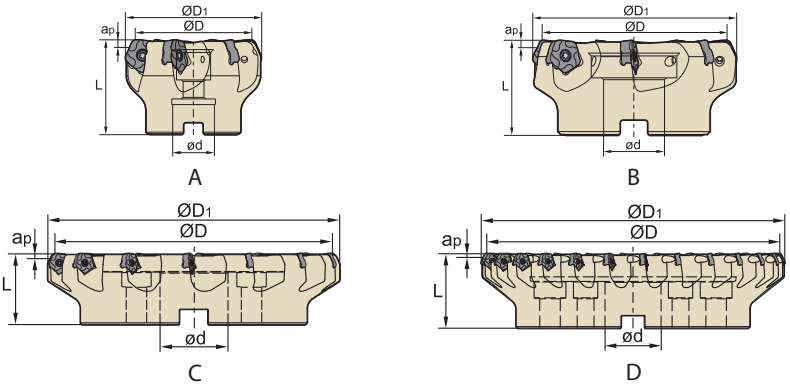
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

FMD02 Kr: 67°







Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMD02-050-A22-PN11-04		●	○	50	60,1	22	50	5	4	A	0,6	
FMD02-050-A22-PN11-04C	✻	○		50	60,1	22	50	5	4	A	0,6	
FMD02-050-A22-PN11-05		●		50	60,1	22	50	5	5	A	0,6	
FMD02-050-A22-PN11-05C	✻	●		50	60,1	22	50	5	5	A	0,6	
FMD02-063-A22-PN11-05		●	○	63	73,1	22	50	5	5	A	0,8	
FMD02-063-A22-PN11-05C	✻	○		63	73,1	22	50	5	5	A	0,8	
FMD02-063-A22-PN11-06		●		63	73,1	22	50	5	6	A	0,9	
FMD02-063-A22-PN11-06C	✻	●		63	73,1	22	50	5	6	A	0,9	
FMD02-080-A27-PN11-06		●		80	90,1	27	50	5	6	A	1,1	
FMD02-080-A27-PN11-08		●		80	90,1	27	50	5	8	A	1,2	
FMD02-080-A27-PN11-08C	✻	●		80	90,1	27	50	5	8	A	1,2	
FMD02-100-B32-PN11-07		●		100	110,1	32	50	5	7	B	1,8	
FMD02-100-B32-PN11-07C	✻	○		100	110,1	32	50	5	7	B	1,8	
FMD02-100-B32-PN11-10		●		100	110,1	32	50	5	10	B	1,9	
FMD02-100-B32-PN11-10C	✻	○		100	110,1	32	50	5	10	B	1,9	PNEG1105
FMD02-125-B40-PN11-08		●	●	125	135,1	40	63	5	8	B	2,9	
FMD02-125-B40-PN11-08C	✻	○		125	135,1	40	63	5	8	B	2,9	
FMD02-125-B40-PN11-12		●	○	125	135,1	40	63	5	12	B	3,2	
FMD02-125-B40-PN11-12C	✻	○		125	135,1	40	63	5	12	B	3,2	
FMD02-160-B40-PN11-10		●	○	160	170,1	40	63	5	10	B	5,6	
FMD02-160-B40-PN11-14		●	○	160	170,1	40	63	5	14	B	6,4	
FMD02-200-C60-PN11-12		○	○	200	210,1	60	63	5	12	C	7,9	
FMD02-200-C60-PN11-16		●		200	210,1	60	63	5	16	C	8,5	
FMD02-200-C60-PN11-20		○		200	210,1	60	63	5	20	C	8,5	
FMD02-200-C60-PN11-24		●		200	210,1	60	63	5	24	C	8,6	
FMD02-250-C60-PN11-14		○		250	260,1	60	63	5	14	C	13,4	
FMD02-250-C60-PN11-18		●	○	250	260,1	60	63	5	18	C	18	
FMD02-250-C60-PN11-30		○		250	260,1	60	63	5	30	C	13,5	
FMD02-315-D60-PN11-26		○	○	315	325,1	60	80	5	26	D	24,5	

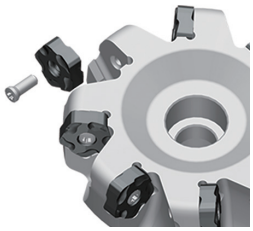
● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Parti di ricambio

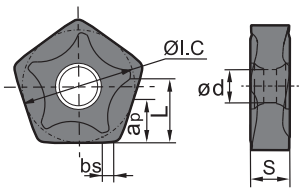
	Inserto	PNEG1105
	ØD	50- 315
	Vite (inserti)	l60M4×10 (3,4 Nm)
	Chiave (inserti)	WT15IS



- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

PNEG	L	I.C	S	d
11 05	7,5	15,875	5,56	4,64

Inserti - Fresatura



PN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
				YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
P				●	●	●	●	●	●	●	●		●	●		●	●	●			●	●	●		
M					●	●	●	●	●				●	●		●	●	●	●	●	●	●			
K										●	●	●									●			●	
N												●												●	●
S							●		●			●	●			●	●	●		●					
H																									
ISO		bs	a_p max																						
	PNEG110512L-PF	1,6	7,5	○																					
	PNEG110512R-PF	1,6	7,5	○			○																		
	PNEG110512L-PM	1,6	7,5	○			○																		
	PNEG110512R-PM			●			●			○															
	PNEG110512L-PR	1,6	7,5	○			●																		
	PNEG110512R-PR	1,6	7,5	○			●																		

● In magazzino ○ Su richiesta

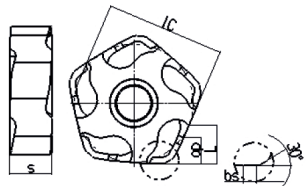
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

PNEG	L	I.C	S	d
11 05	5,4	15,875	5,56	4,64

Inserti - Fresatura



PN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P	⊛	⊛	⊛	⊛	⊛	⊛	⊛		⊛	⊛		⊛	⊛	⊛		●	●	●		
			M		⊛	⊛	⊛	⊛	⊛			⊛	⊛		⊛	⊛	⊛	⊛	●	●	●		
			K						⊛	⊛	●								●			⊛	
			N								⊛											⊛	⊛
			S				⊛		⊛			●	⊛		⊛	⊛	⊛		⊛				
			H																				
	ISO	bs	$a_{p\,max}$	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**PNEG110512L-CF**	1,6	5							○															
	PNEG110512R-CF	1,6	5							●															
	**PNEG110512L-CM**	1,6	5							○															
	PNEG110512R-CM	1,6	5							●															
	**PNEG110512L-CR**	1,6	5							○	○														
	PNEG110512R-CR	1,6	5							●	●														

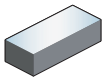
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

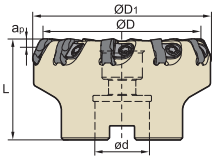
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

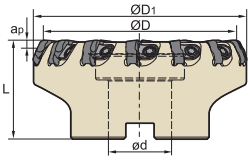
FMD02 Kr: 67°



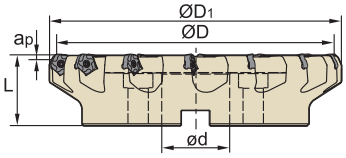




A



B



C

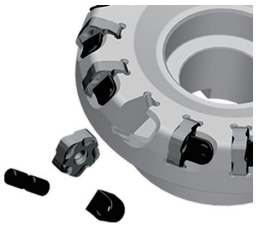
Articolo	✲	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMD02-080-A27-PN11-10		●		80	90,1	27	50	5	10	A	1,3	PNEG1105
FMD02-100-B32-PN11-14		●	○	100	110,1	32	50	5	14	B	1,6	
FMD02-125-B40-PN11-18		●		125	135,1	40	63	5	18	B	3,2	
FMD02-160-B40-PN11-22		●		160	170,1	40	63	5	22	B	5,8	
FMD02-200-C60-PN11-28		○	○	200	210,1	60	63	5	28	C	8,5	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**PNEG1105**
	ØD	**80-200**
	Vite (cuneo)	DM6×20A (7,0 Nm)
	Cuneo	W18N
	Chiave (cuneo)	WT15IT

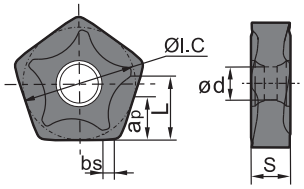


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

PNEG	L	I.C	S	d
11 05	7,5	15,875	5,56	4,64

Inserti - Fresatura



PN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		bs	a_p max	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**PNEG110512L-PF**	1,6	7,5	○																					
	PNEG110512R-PF	1,6	7,5	○			○																		
	**PNEG110512L-PM**	1,6	7,5	○			○																		
	PNEG110512R-PM			●			●			○															
	**PNEG110512L-PR**	1,6	7,5	○			●																		
	PNEG110512R-PR	1,6	7,5	○			●																		

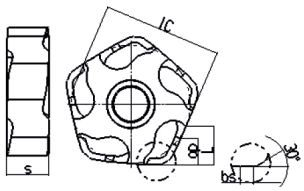
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

PNEG	L	I.C	S	d
11 05	5,4	15,875	5,56	4,64

Inserti - Fresatura



PN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		bs	$a_{p\ max}$	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**PNEG110512L-CF**	1,6	5							○															
	PNEG110512R-CF	1,6	5							●															

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

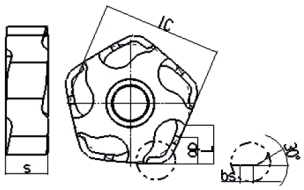
Inserti per fresatura

Fresa a spianare

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

PNEG	L	I.C	S	d
11 05	5,4	15,875	5,56	4,64

Inserti - Fresatura



PN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		bs	$a_{p\,max}$	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**PNEG110512L-CM**	1,6	5							○															
	PNEG110512R-CM	1,6	5							●															
	**PNEG110512L-CR**	1,6	5							○	○														
	PNEG110512R-CR	1,6	5							●	●														

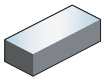
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

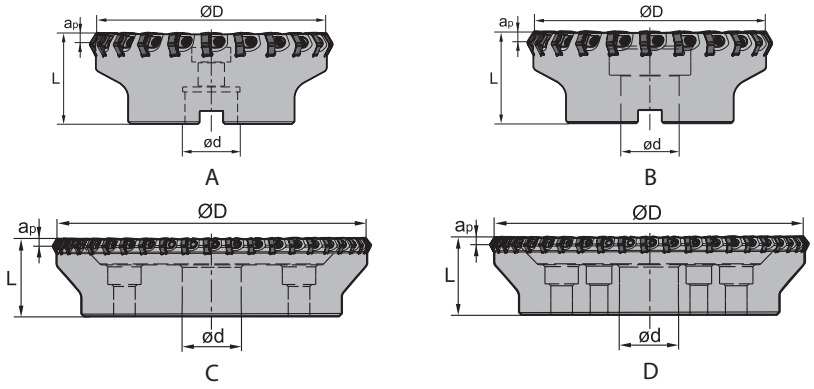
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

FMD02 Kr: 55°







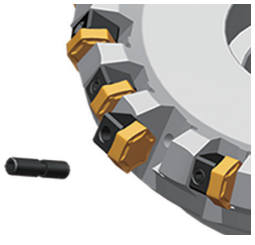
Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	Dimensioni [mm] ød	Dimensioni [mm] L	Dimensioni [mm] $a_{p\,max}$	Denti	Attacco	kg	Inserto
FMD02-080-A27-HN09-08		○		80	27	50	6	8	A	1,19	
FMD02-100-B32-HN09-10		○		100	32	50	6	10	B	1,77	
FMD02-125-B40-HN09-14		○		125	40	63	6	14	B	3,55	
FMD02-125-B40-HN09-18		○		125	40	63	6	18	B	3,7	
FMD02-160-B40-HN09-18		●		160	40	63	6	18	B	5,62	HNEX0905
FMD02-160-B40-HN09-22		○		160	40	63	6	22	B	5,6	
FMD02-200-C60-HN09-22		○		200	60	63	6	22	C	6,7	
FMD02-250-C60-HN09-28		○	○	250	60	63	6	28	C	13	
FMD02-315-D60-HN09-44		○		315	60	63	6	44	D	21,7	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**HNEX0905**
	ØD	**80- 315**
	Vite (cuneo)	DM6×20A (7,0 Nm)
	Cuneo	W18N
	Chiave (cuneo)	WT15IT

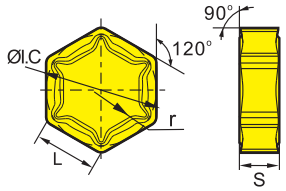


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

HNEX	L	I.C	S
09 05	9,16	15,875	5,56

HN** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**HNEX090512-DR**	1,2							●	●														

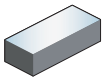
● In magazzino ○ Su richiesta

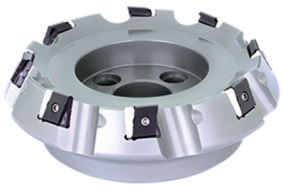
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

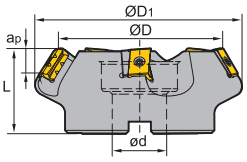
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

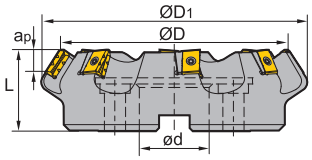
FMD03 Kr: 60°



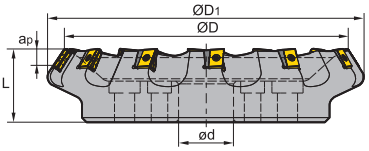




B



C



D

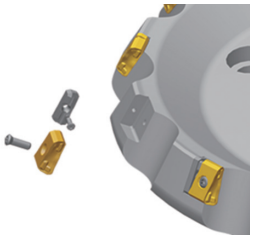
Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FMD03-100-B32-LN20-05		○		100	129	32	63	12	5	B	3,02	LNKT2007-ZR
FMD03-125-B40-LN20-06		●		125	153	40	63	12	6	B	4,5	
FMD03-160-C40-LN20-08		●		160	187	40	63	12	8	C	6,9	
FMD03-160-C40-LN20-09		○		160	187	40	63	12	9	C	6,7	
FMD03-200-C60-LN20-10		●		200	227	60	70	12	10	C	10,5	
FMD03-250-C60-LN20-12		●		250	276	60	70	12	12	C	13,4	
FMD03-315-D60-LN20-15		○		315	339	60	80	12	15	D	26,2	
FMD03-125-B40-LN25-05		○		125	154	40	63	16	5	B	4,5	LNKT2510-ZR
FMD03-160-C40-LN25-06		●		160	189	40	63	16	6	C	6,9	
FMD03-200-C60-LN25-08		●		200	229	60	70	16	8	C	10,5	
FMD03-250-C60-LN25-10		●		250	278	60	70	16	10	C	16,7	
FMD03-315-D60-LN25-12		○	○	315	346	60	80	16	12	D	27,3	
FMD03-400-D60-LN25-16		○	○	400	427	60	80	16	16	D	47,1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	LNKT2007-ZR	LNKT2510-ZR
	ØD	100- 315	125 -400
	Vite (inserti)	I60M4×15 (3,4 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)	I60M3×7	I60M3.5×10.4
	Sottoplacchetta	LLN20R-ZR	LLN25R-ZR
	Chiave (sottoplacchetta)	WT09IS	WT15IS
	Chiave (inserti)	WT15IS	
	Chiave (inserti)		WT20IT

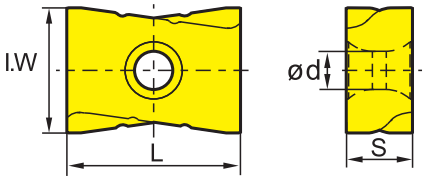


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

LNKT	L	S	d
20 07	20	7,94	4,6
25 10	25	9,525	5,5

LN** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNKT2007DN-ZR**	17				●		●		○								●						
	LNKT2510-ZR	18						●		●								●						

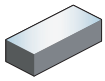
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

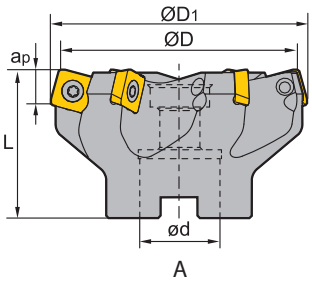
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

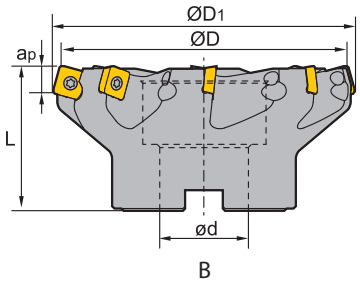
Fresa a spianare

FME02 Kr: 75°









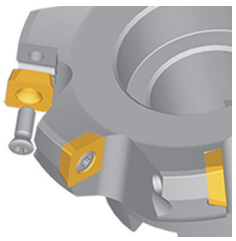
Articolo	✻	Stock	Dimensioni [mm]					Denti	Attacco	kg	Inserto
			ØD	$ØD_1$	ød	L	$a_{p\,max}$				
FME02-050-A22-SP12-04		●	50	54	22	40	6	4	A	0,3	SPKT1204 SPKW1204
FME02-063-A22-SP12-05		●	63	66	22	50	6	5	A	0,6	
FME02-080-A27-SP12-06		●	80	83	27	50	6	6	A	0,9	
FME02-100-B32-SP12-07		●	100	103	32	50	6	7	B	1,4	
FME02-125-B40-SP12-08		●	125	128	40	63	6	8	B	2,5	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPKT1204 SPKW1204**
	ØD	**50-125**
	Vite (inserti)	I60M5×13,2 (6,7 Nm)
	Chiave (inserti)	WT20IS



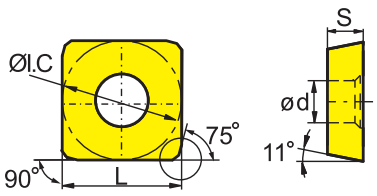
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Fresa a spianare

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPKW	L	I.C	S	d
12 04	12,7	12,7	4,76	5,56

Inserti - Fresatura

SP** Inserti fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPKW1204EDFR**										○												
	SPKW1204EDSR										○												

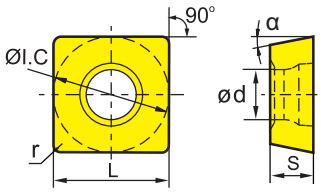
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPKT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,56

Inserti - Fresatura

SP** Inserti fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPKT1204EDR**										○												

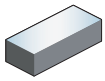
● In magazzino ○ Su richiesta

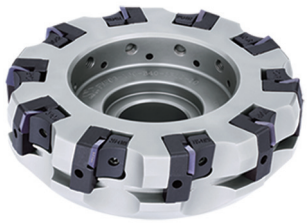
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

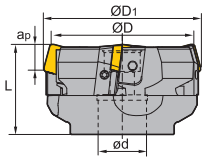
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

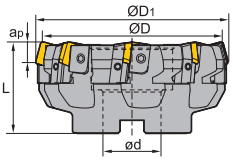
FME03 Kr: 75°



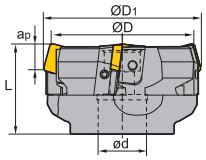




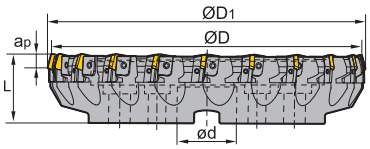
A



B



C



D

Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FME03-080-A27-SP12-04		○		80	84	27	50	6	4	A	1,1	SPKN1203 SPKR1203 SPEX1203
FME03-100-B32-SP12-06		●		100	104	32	50	6	6	B	1,9	
FME03-125-B40-SP12-08		○	○	125	129	40	63	6	8	B	3,5	
FME03-160-B40-SP12-10		●	○	160	164	40	63	6	10	B	5,7	
FME03-200-C60-SP12-12		○	○	200	203	60	63	6	12	C	8,2	
FME03-250-C60-SP12-16		○	○	250	253	60	63	6	16	C	13,8	
FME03-315-D60-SP12-20		○		315	318	60	70	6	20	D	23,5	
FME03-080-A27-SP15-04		○	○	80	84	27	50	8	4	A	1	SPKN1504 SPKR1504 SPEX1504
FME03-100-B27-SP15-06		○		100	104	27	50	8	6	B	1,8	
FME03-125-B40-SP15-08		●	○	125	129	40	63	8	8	B	3,3	
FME03-160-B40-SP15-10		○	○	160	164	40	63	8	10	B	5,4	
FME03-200-C60-SP15-12		○	○	200	204	60	63	8	12	C	7,9	
FME03-250-C60-SP15-16		○	○	250	253	60	63	8	16	C	13,6	
FME03-315-D60-SP15-20		○	○	315	318	60	70	8	20	D	23,1	

● In magazzino ○ Su richiesta

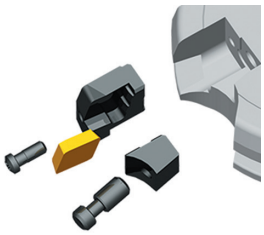
✻ Con raffreddamento interno

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Fresa a spianare

Parti di ricambio

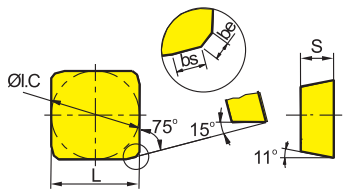
	Inserto	SPKN1203 SPKR1203 SPEX1203	SPKN1203 SPKR1203 SPEX1203	SPKN1504 SPKR1504 SPEX1504
	ØD	80-100	125 - 315	80- 315
	Vite di regolazione	LOM5×15.1	LOM5×15.1	LOM5×15.1
	Cassetta (sinistra)	LSP12L	LSP12L	LSP15L
	Cassetta (destra)	LSP12R	LSP12R	LSP15R
	Vite (cuneo)	WM8×17	WM8×22	WM8×22
	Cuneo (sinistra)	W04L	W04L	W04L
	Cuneo (destra)	W04R	W04R	W04R
	Chiave (vite di regolazione)	WT20T	WT20T	WT20T
	Chiave (cuneo)	WT25T	WT25T	WT25T



● Buone condizioni di lavorazione
● Condizioni di lavorazione normali
● Condizioni di lavorazione sfavorevoli

SPKN	L	I.C	S
12 03	12,7	12,7	3,18
15 04	15,875	15,875	4,76

Inserti - Fresatura



SP** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●		
	M		●	●	●	●	●			●	●		●	●	●	●	●	●		
	K							●	●								●			●
	N								●											●
	S				●		●			●	●		●	●	●		●				
	H																			

ISO	be	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
SPKN1203EDFL	1	1,4																					●	
SPKN1203EDFR	1	1,4		○								○											●	
SPKN1203EDSKL	1	1,4		●																				
SPKN1203EDSKR	1	1,4		●						○			○					●						
SPKN1203EDTKR	1	1,4						○										○						
SPKN1504EDFL	1	1,4																					○	
SPKN1504EDFR	1	1,4																					○	
SPKN1504EDS32PR	1	1,4		○										○										
SPKN1504EDSKL	1	1,4																○						
SPKN1504EDSKR	1	1,4		●						●			○					●						
SPKN1504EDTKR	1	1,4											○											

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPKR	L	I.C	S
12 03	12,7	12,7	3,18
15 04	15,875	15,875	4,76

SP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		be	bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SPKR1203EDL-GM	1	1,4					○																	
	SPKR1203EDR-GM	1	1,4					●																	
	SPKR1504EDR-GM	1	1,4				○							○											
	SPKR1203EDR	1	1,4		○																				

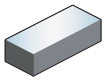
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

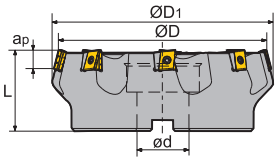
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

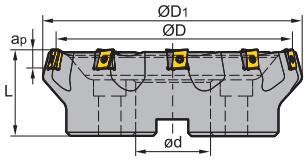
FME04 Kr: 75°



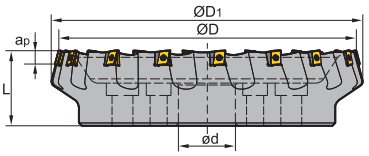




B



C



D

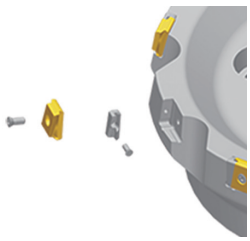
Articolo	✲	Stock	Dimensioni [mm] ØD	ØD1	ød	L	ap max	Denti	Attacco	kg	Inserto
FME04-125-B40-LN15-06		●	125	137	40	63	10	6	B	3,8	LNKT1506-ZR
FME04-200-C60-LN15-10		●	200	208	60	70	10	10	C	9,6	
FME04-250-C60-LN15-12		○	250	257	60	70	10	12	C	13,4	
FME04-315-D60-LN15-16		○	315	328	60	80	10	16	D	25,2	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	LNKT1506-ZR
	ØD	125 - 315
	Vite (inserti)	I60M4×12 (3,4 Nm)
	Vite (sottoplacchetta)	I60M3×7
	Sottoplacchetta	LLN15-ZR
	Chiave (sottoplacchetta)	WT09IS
	Chiave (inserti)	WT15IS

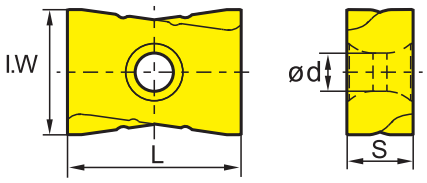


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

LNKT	L	S	d
15 06	15,875	6,35	4,6

Inserti - Fresatura



LN** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P	⊛	⊛	⊛	⊛	⊛	⊛			⊛	⊛		⊛	⊛	⊛		●	●	●		
		M		⊛	⊛	⊛	⊛	⊛			⊛	⊛		⊛	⊛	⊛	⊛	●	●	●		
		K							⊛	⊛	●								●			⊛	
		N									⊛											⊛	⊛
		S				⊛		⊛			●	⊛		⊛	⊛	⊛		⊛					
		H																					
ISO		I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNKT1506EN-ZR**	14		●			○	●	●	●								○						

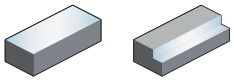
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

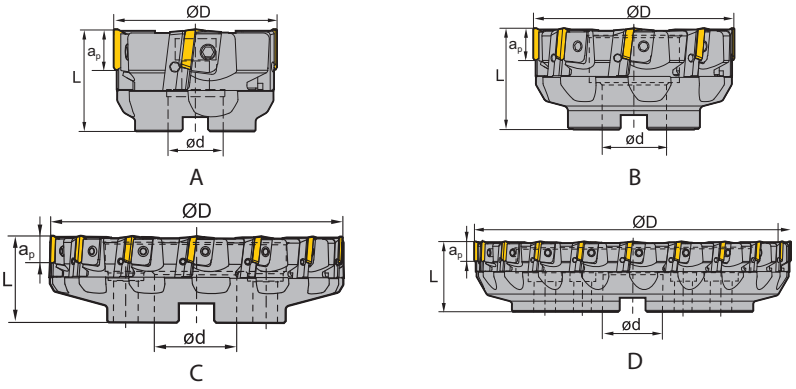
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

FMP01 Kr: 90°







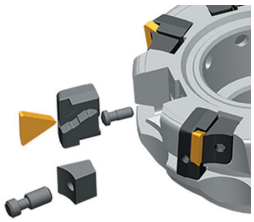
Articolo	✻	Stock R	Stock L	Dimensioni [mm] ØD	Dimensioni [mm] ød	Dimensioni [mm] L	Dimensioni [mm] $a_{p\,max}$	Denti	Attacco	kg	Inserto
FMP01-080-A27-TP22-04		●		80	27	50	18	4	A	1,2	
FMP01-100-B32-TP22-06		●		100	32	50	18	6	B	1,7	
FMP01-125-B40-TP22-08		●	○	125	40	63	18	8	B	3,2	
FMP01-160-B40-TP22-10		●	○	160	40	63	18	10	B	5,1	TPKN2204
FMP01-200-C60-TP22-12		●	○	200	60	63	18	12	C	7,4	
FMP01-250-C60-TP22-16		○	○	250	60	63	18	16	C	12,3	
FMP01-315-D60-TP22-20		○	○	315	60	70	18	20	D	21,9	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	TPKN2204	TPKN2204
	ØD	80-100	125 - 315
	Vite di regolazione	LOM5×15.1	LOM5×15.1
	Cassetta (sinistra)	LTP4L1	LTP4L
	Cassetta (destra)	LTP4R1	LTP4R
	Vite (cuneo)	WM8×17	WM8×22
	Cuneo (sinistra)	W04L	W04L
	Cuneo (destra)	W04R	W04R
	Chiave (vite di regolazione)	WT20T	WT20T
	Chiave (cuneo)	WT25T	WT25T



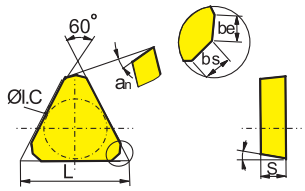
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TPKN	L	I.C	S
22 04	22	12,7	4,76

Inserti - Fresatura

TP** Inserti fresatura



	HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
P	❁	❁	❁	❁	❁	❁	❁		❁	❁		❁	❁	❁	●	●	●		
M		❁	❁	❁	❁	❁			❁	❁		❁	❁	❁	❁	●	●		
K						❁	❁	●							●				❁
N								❁										❁	❁
S				❁		❁		●	❁		❁	❁	❁		❁				
H																			

	ISO	be	bs	an	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**TPKN2204PDFR**	1,4	0,7	11°										○												●
	TPKN2204PDS32PR	1,4	0,7	11°												○		○								
	TPKN2204PDSKL	1,4	0,7	11°		○																				
	TPKN2204PDSKR	1,4	0,7	11°		●	●			●		●			○			●		●						
	TPKN2204PDTKR	1,4	0,7	11°										●												

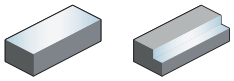
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

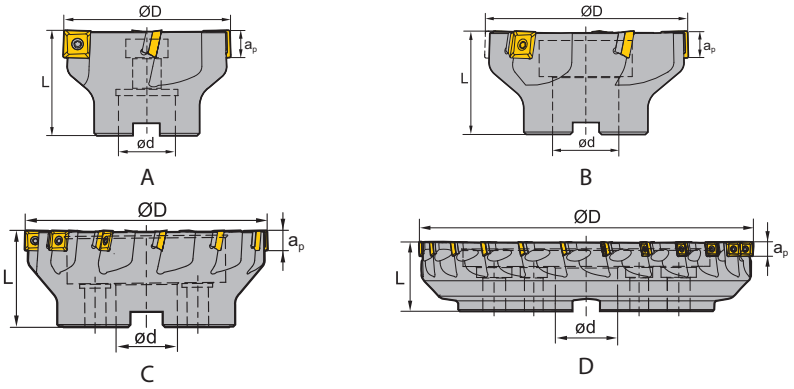
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

FMP02 Kr: 90°







Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L	$a_{p\ max}$	Denti	Attacco	kg	Inserto
FMP02-050-A22-SE09-05		●	50	22	40	6,7	5	A	0,3	SEET09T3
FMP02-050-A22-SE09-05C	✻	●	50	22	40	6,7	5	A	0,3	
FMP02-063-A22-SE09-06		●	63	22	40	6,7	6	A	0,5	
FMP02-063-A22-SE09-06C	✻	●	63	22	40	6,7	6	A	0,5	
FMP02-080-A27-SE09-08		●	80	27	50	6,7	8	A	0,9	
FMP02-100-B32-SE09-08		○	100	32	50	6,7	8	B	1,7	
FMP02-100-B32-SE09-10		○	100	32	50	6,7	10	B	1,7	
FMP02-100-B32-SE09-10C	✻	○	100	32	50	6,7	10	B	1,7	
FMP02-125-B40-SE09-12		●	125	40	63	6,7	12	B	2,6	
FMP02-125-B40-SE09-12C	✻	○	125	40	63	6,7	12	B	2,6	
FMP02-050-A22-SE12-03		○	50	22	40	10,8	3	A	0,3	SEET1203
FMP02-050-A22-SE12-03C	✻	○	50	22	40	10,8	3	A	0,3	
FMP02-050-A22-SE12-04		●	50	22	40	10,8	4	A	0,3	
FMP02-050-A22-SE12-04C	✻	●	50	22	40	10,8	4	A	0,3	
FMP02-050-A22-SE12-05		●	50	22	40	10,8	5	A	0,2	
FMP02-050-A22-SE12-05C	✻	○	50	22	40	10,8	5	A	0,2	
FMP02-063-A22-SE12-04		○	63	22	40	10,8	4	A	0,4	
FMP02-063-A22-SE12-05		●	63	22	40	10,8	5	A	0,4	
FMP02-063-A22-SE12-05C	✻	●	63	22	40	10,8	5	A	0,4	
FMP02-063-A22-SE12-06		●	63	22	40	10,8	6	A	0,4	
FMP02-063-A22-SE12-06C	✻	○	63	22	40	10,8	6	A	0,4	
FMP02-080-A27-SE12-04		○	80	27	50	10,8	4	A	0,9	
FMP02-080-A27-SE12-06		●	80	27	50	10,8	6	A	0,8	
FMP02-080-A27-SE12-06C	✻	●	80	27	50	10,8	6	A	0,8	
FMP02-080-A27-SE12-08		●	80	27	50	10,8	8	A	0,8	
FMP02-080-A27-SE12-08C	✻	○	80	27	50	10,8	8	A	0,8	
FMP02-100-B32-SE12-05		●	100	32	50	10,8	5	B	1,2	
FMP02-100-B32-SE12-07		●	100	32	50	10,8	7	B	1,2	
FMP02-100-B32-SE12-10		●	100	32	50	10,8	10	B	1,2	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

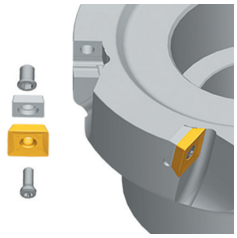
Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L	$a_{p\,max}$	Denti	Attacco	kg	Inserto
FMP02-100-B32-SE12-10C	✻	○	100	32	50	10,8	10	B	1,2	SEET1203
FMP02-125-B40-SE12-06		○	125	40	63	10,8	6	B	3,1	
FMP02-125-B40-SE12-08		●	125	40	63	10,8	8	B	3	
FMP02-125-B40-SE12-08C	✻	○	125	40	63	10,8	8	B	3	
FMP02-125-B40-SE12-12		●	125	40	63	10,8	12	B	2,9	
FMP02-160-C40-SE12-08		●	160	40	63	10,8	8	C	4,1	
FMP02-160-C40-SE12-12		●	160	40	63	10,8	12	C	3,9	
FMP02-250-C60-SE12-12		○	250	60	63	10,8	12	C	11,1	
FMP02-250-C60-SE12-18		●	250	60	63	10,8	18	C	10,9	
FMP02-315-D60-SE12-24		○	315	60	63	10,8	24	D	21,6	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

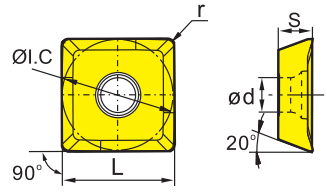
	Inserto	SEET09T3	SEET1203	SEET1203
	ØD	50-125	50	63- 315
	Vite (inserti)	I60M3×7 (1,8 Nm)	I60M3,5×10 (2,7 Nm)	I60M3,5×12 (2,7 Nm)
	Vite (sottoplacchetta)			SM5×7XA
	Sottoplacchetta			S12BSX
	Chiave (sottoplacchetta)			WH35L
	Chiave (inserti)	WT09IS	WT15IS	WT15IS



Inserti - Fresatura

● Buone condizioni di lavorazione
✻ Condizioni di lavorazione normali
✻ Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
09 T3	9,525	9,525	4,01	3,3
12 03	13,308	13,308	4,04	4,1

SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P	✻	✻	✻	✻	✻	✻	✻		✻	✻		✻	✻	✻	●		●	●		
		M		✻	✻	✻	✻	✻	✻		✻	✻		✻	✻	✻	✻	●	●	●		
		K						✻	✻	●							●				✻	
		N								✻											✻	✻
		S			✻		✻				●	✻		✻	✻	✻		✻					
		H																				
	ISO	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SEET09T308PER-APF**	0,8						○									●							

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

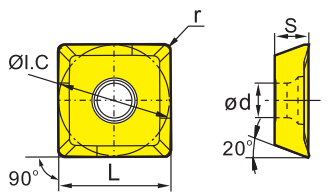
Inserti per fresatura

Fresa a spianare

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SEET	L	I.C	S	d
09 T3	9,525	9,525	4,01	3,3
12 03	13,308	13,308	4,04	4,1



SE** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO	r		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SEET09T308PER-APM	0,8						○									●							
	SEET09T308PER-APR	0,8						○									○							
	SEET120308PER-APF	0,8						○				○					●							
	SEET120308PER-APM	0,8						●				○					●							
	SEET120308PER-APR	0,8						●				○					●							
	SEET120308-LH	0,8									○	○											●	
	SEET09T308PER-PF	0,8											○											
	SEET120308PER-PF	0,8	○																					
	SEET09T308PER-PM	0,8							○				○											
	SEET120308PER-PM	0,8	○				○	○	○	○		○	○					○						
	SEET09T308PER-PR	0,8							○									○						
	SEET120308PER-PR	0,8	○					○	○	○		○	○					○						

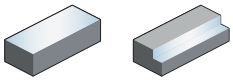
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

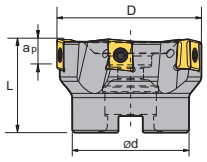
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

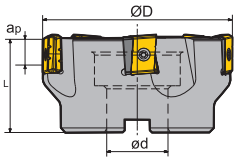
FMP03 Kr: 89°



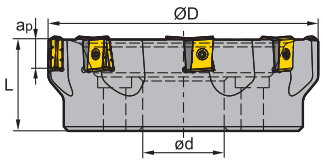




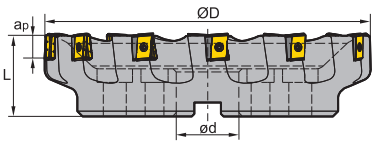
A



B



C



D

Articolo	✲	Stock R	Stock L	ØD	ød	L	$a_{p\ max}$	Denti	Attacco	kg	Inserto
FMP03-050-A22-LN12-04C	✲	●		50	22	40	7	4	A	0,3	LNKT120608-ZR
FMP03-050-A22-LN12-05C	✲	○		50	22	40	7	5	A	0,3	
FMP03-063-A22-LN12-05C	✲	●		63	22	40	7	5	A	0,5	
FMP03-063-A27-LN12-05C	✲	○		63	27	50	7	5	A	0,64	
FMP03-063-A22-LN12-06C	✲	○		63	22	40	7	6	A	0,5	
FMP03-063-A27-LN12-06C	✲	●		63	27	50	7	6	A	0,65	
FMP03-063-A27-LN12-07C	✲	○		63	27	50	7	7	A	0,64	
FMP03-080-A27-LN12-06C	✲	●		80	27	50	7	6	A	1	
FMP03-080-A27-LN12-07C	✲	○		80	27	50	7	7	A	1	
FMP03-100-B32-LN12-06		○		100	32	50	7	6	B	1,47	
FMP03-125-B40-LN15-06		●		125	40	63	12	6	B	3,2	LNKT1506EN-ZR
FMP03-160-C40-LN15-08		●		160	40	63	12	8	C	5,1	
FMP03-160-C40-LN15-09		○		160	40	63	12	9	C		
FMP03-200-C60-LN15-10		●		200	60	70	12	10	C	7,5	
FMP03-250-C60-LN15-12		○		250	60	70	12	12	C	12,2	
FMP03-250-C60-LN15-13		○		250	60	70	12	13	C		
FMP03-315-D60-LN15-16		○		315	60	80	12	16	D	23,7	
FMP03-125-B40-LN20-06		○		125	40	63	16	6	B	3,3	LNKT2007DN-ZR
FMP03-160-C40-LN20-08		●		160	40	63	16	8	C	5,3	
FMP03-200-C60-LN20-10		●		200	60	70	16	10	C	8,8	
FMP03-200-C60-LN20-11		○		200	60	70	16	11	C		
FMP03-250-C60-LN20-12		●		250	60	70	16	12	C	14	
FMP03-315-D60-LN20-15		○		315	60	80	16	15	D	23,9	
FMP03-125-B40-LN25-05		○		125	40	63	20	5	B	3,3	LNKT2510-ZR
FMP03-160-C40-LN25-06		○	○	160	40	63	20	6	C	5,1	
FMP03-200-C60-LN25-08		○		200	60	70	20	8	C	8,9	
FMP03-250-C60-LN25-10		●	○	250	60	70	20	10	C	12	
FMP03-315-D60-LN25-12		○	○	315	60	80	20	12	D	21,9	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

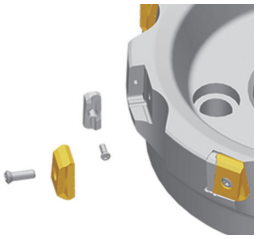
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura

Fresa a spianare

Parti di ricambio

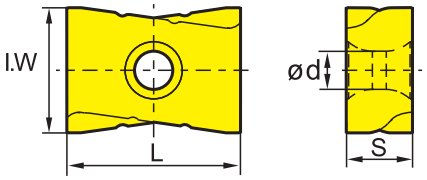
	Inserto	LNKT120608-ZR	LNKT1506EN-ZR	LNKT2007DN-ZR	LNKT2510-ZR
	ØD	50-100	125 - 315	125 - 315	125 - 315
	Vite (inserti)	I60M4×12 (3,4 Nm)	I60M4×12 (3,4 Nm)	I60M4×15 (3,4 Nm)	I60M5×17 (6,7 Nm)
	Vite (sottoplacchetta)		I60M3×7	I60M3×7	I60M3.5×10.4
	Sottoplacchetta		LLN15-ZR	LLN20R-ZR	LLN25R-ZR
	Chiave (sottoplacchetta)		WT09IS	WT09IS	WT15IS
	Chiave (inserti)	WT15IS	WT15IS	WT15IS	
	Chiave (inserti)				WT20IT



LNKT	L	S	d
12 06	12,7	6,65	4,4
15 06	15,875	6,35	4,6
20 07	20	7,94	4,6
25 10	25	9,525	5,5

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

LN** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNKT120608-ZR**	12	●			●											●							
	LNKT1506EN-ZR	14		●			○	●	●	●								○						
	LNKT2007DN-ZR	17				●		●		○								●						
	LNKT2510-ZR	18						●		●								●						

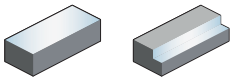
● In magazzino ○ Su richiesta

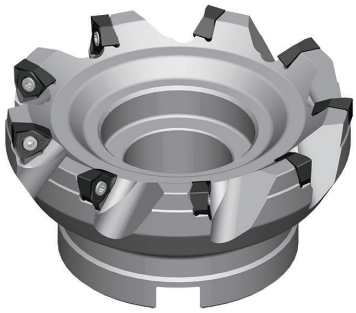
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

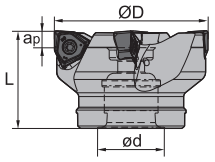
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

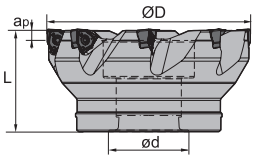
FMP12 Kr: 90°



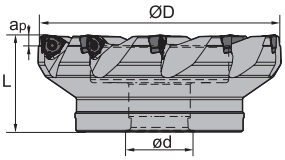




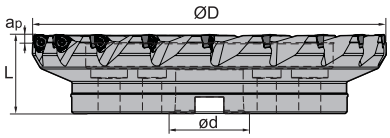
A



B



C



D

Articolo	✲	Stock	Dimensioni [mm] ØD	ød	$a_{p\,max}$	Denti	Attacco	kg	Inserto
FMP12-050-A22-WN06-05C	✲	○	50	22	5,7	5	A	0,55	WNHU0604
FMP12-063-A22-WN06-06C	✲	●	63	22	5,7	6	A	0,45	
FMP12-080-A27-WN06-07C	✲	●	80	27	5,7	7	A	1	
FMP12-100-B32-WN06-09		●	100	32	5,7	9	A	1,4	
FMP12-100-B32-WN06-09C	✲	●	100	32	5,7	9	A	1,4	
FMP12-125-B40-WN06-11C	✲	○	125	40	5,7	11	B	3,4	
FMP12-160-C40-WN06-14		○	160	40	5,7	14	C	5,4	
FMP12-063-A22-WN08-04C	✲	●	63	22	7,7	4	A	0,39	WNHU0806
FMP12-063-A22-WN08-05C	✲	●	63	22	7,7	5	A	0,45	
FMP12-080-A27-WN08-05C	✲	●	80	27	7,7	5	A	0,95	
FMP12-100-B32-WN08-06		●	100	32	7,7	6	B	1,32	
FMP12-100-B32-WN08-06C	✲	●	100	32	7,7	6	B	1,32	
FMP12-125-B40-WN08-08C	✲	○	125	40	7,7	8	B	3,3	
FMP12-160-C40-WN08-10		○	160	40	7,7	10	C	5,2	
FMP12-200-C60-WN08-12		○	200	60	7,7	12	C		
FMP12-250-C60-WN08-14		○	250	60	7,7	14	C		
FMP12-315-D60-WN08-18		○	315	60	7,7	18	D		

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

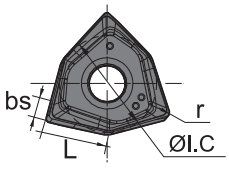
	Inserto	**WNHU0604**	**WNHU0806**
	ØD	**50-315**	**50-315**
	Vite (inserti)	I60M3×9 (1,8 Nm)	I60M4×10 (3,4 Nm)
	Chiave (inserti)	WT09IS	
	Chiave (inserti)		WT20IT

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

WNHU	L	I.C	S	d
06 04	5,73	9,525	4,704	3,5
08 06	7,76	12,7	6,32	4,4

Inserti - Fresatura

WN** Inserti negativi			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**WNHU060404PNR-GM**	0,4				○			○							○								
	WNHU060408PNR-GM	0,8				●			○	○						○								
	WNHU080608PNR-GM	0,8				●			●	●						●								
	WNHU080616PNR-GM	1,6				○			●	○														

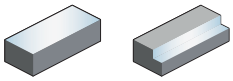
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

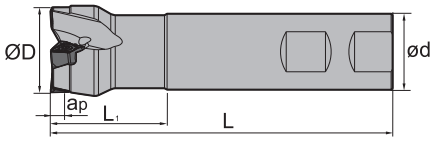
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa a spianare

FMP12 Kr: 90°







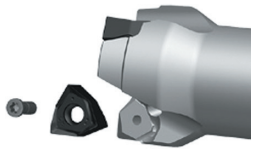
Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L_1	L	$a_{p\,max}$	Denti	Attacco	kg	Inserto
FMP12-025-XP25-WN06-02C	✻	○	25	25	30	100	5,7	2	XP	0,38	WNHU0604
FMP12-032-XP25-WN06-03C	✻	○	32	25	40	120	5,7	3	XP	0,47	
FMP12-040-XP32-WN06-04C	✻	○	40	32	40	140	5,7	4	XP	0,85	
FMP12-050-XP40-WN06-05C	✻	○	50	40	40	169	5,7	5	XP	1,59	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**WNHU0604**
	ØD	**25-50**
	Vite (inserti)	I60M3x9 (1,8 Nm)
	Chiave (inserti)	WT09IS

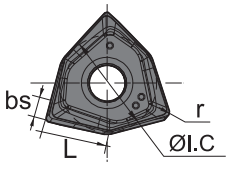


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

WNHU	L	I.C	S	d
06 04	5,73	9,525	4,704	3,5

Inserti - Fresatura

WN** Inserti negativi			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**WNHU060404PNR-GM**	0,4				○			○	○						○								
	WNHU060408PNR-GM	0,8				●			○	○						○								

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

INFORMAZIONI IMPORTANTI

Nota di impiego per la **serie FMWX**

Si prega di osservare obbligatoriamente quanto segue: Corpo fresa dotato esclusivamente di due inserti contrapposti.

Selezionare la sede inserto **1.1** con **1.2** *oppure* la sede inserto **2.1** con **2.2**.

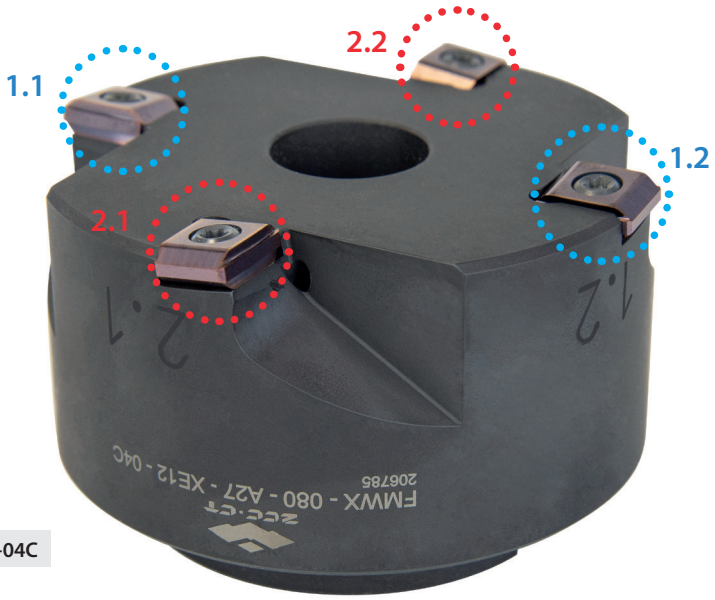


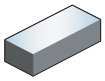
Fig.: **FMWX-063-A27-XE12-04C**

Dati di taglio

Gruppo ISO	Materiale	v_c (m/min)	F_n [mm/g]	a_p [mm]
P	Acciaio	300–400	3,50–5,00	0,02–0,05
M	Acciaio inossidabile	280–300	3,50–5,00	0,02–0,05
K	Ghise	300–400	3,50–5,00	0,02–0,05

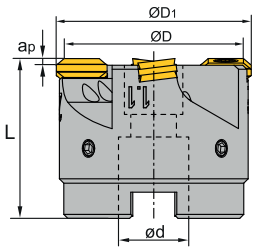
Fresa a spianare

FMWX





Bloccaggio a vite



Articolo	✲	Stock	Dimensioni [mm]				Denti	Attacco	kg	Inserto
			$ØD_1$	ød	L	$a_{p\ max}$				
FMWX-050-A22-XE12-04C	✲	○	46	22	40	0,1	4	A	0,3	
FMWX-063-A27-XE12-04C	✲	○	59	27	40	0,1	4	A	0,5	
FMWX-080-A27-XE12-04C	✲	○	76	27	50	0,1	4	A	1	XEEC1209
FMWX-100-B32-XE12-06C	✲	○	96	32	50	0,1	6	B	1,9	
FMWX-125-B40-XE12-06C	✲	○	121	40	63	0,1	6	B	3,5	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

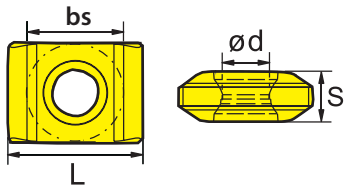
	Inserto	**XEEC1209**
	ØD	**50-125**
	Vite (inserti)	I60M4×10 (3,4 Nm)

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

XEEC
12 09

Inserti - Fresatura



XE** Inserti - Fresatura		HC[1] (CVD)							HC[1] (PVD)									HT		HC[2]		HW	
	P																						
	M																						
	K																						
	N																						
	S																						
	H																						
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	XEEC120904							●															

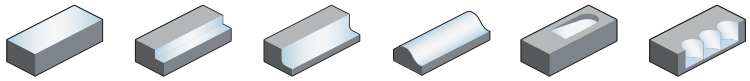
● In magazzino ○ Su richiesta

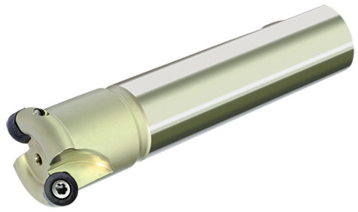
HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

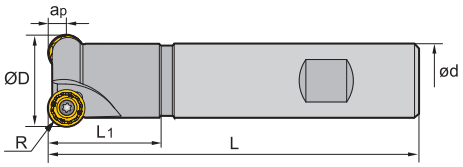
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

FMR01





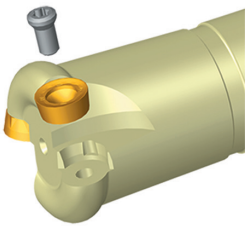


Articolo	✻	Stock	Dimensioni [mm]						Denti	kg	Inserto
			R	ØD	ød	L_1	L	$a_{p\,max}$			
FMR01-025-XP20-RC10-02		○	5	25	20	30	100	5	2	0,2	RCKT10T3
FMR01-025-XP20-RC10-02C	✻	○	5	25	20	30	100	5	2	0,2	
FMR01-032-XP25-RC10-02		●	5	32	25	35	120	5	2	0,5	
FMR01-032-XP25-RC10-02C	✻	●	5	32	25	35	120	5	2	0,5	
FMR01-040-XP32-RC12-03		●	6	40	32	40	120	6	3	0,7	RCKT1204 RCGX1204
FMR01-040-XP32-RC12-03C	✻	●	6	40	32	40	120	6	3	0,7	
FMR01-050-XP32-RC12-03		●	6	50	32	40	120	6	3	0,8	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

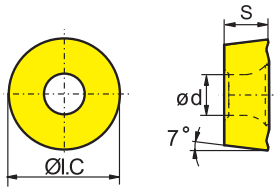
	Inserto	**RCKT10T3**	**RCKT1204 RCGX1204**	
	ØD	**25-32**	**40-50**	
	Vite (inserti)	I60M4×8,4 (3,4 Nm)	I60M3,5×10 (2,7 Nm)	
	Chiave (inserti)	WT15S	WT15S	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RCKT	I.C	S	d
10 T3	10	3,97	4,4
12 04	12	4,76	4

RC** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RCKT10T3MO-DM**		○									○				●	○						
	RCKT1204MO-DM		○	○		○	●	○				○				●	○						
	**RCKT1204MO-DR**		○	○		○	●								●								
	**RCKT1204MO-ER**				●																		
	**RCKT1204MO-NM**												○										

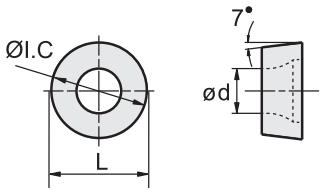
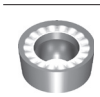
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RCGX	I.C	S	d
12 04	12	4,76	4

RC** Inserti positivi		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RCGX1204MO-LH**																					●	

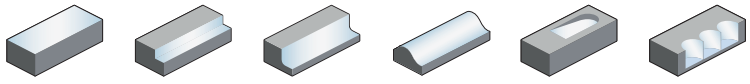
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

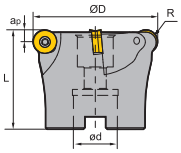
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

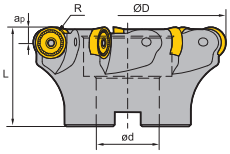
FMR02



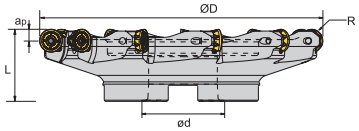




A



B



C

Articolo	✲	Stock	Dimensioni [mm] R	ØD	ød	L	$a_{p\ max}$	Denti	Attacco	kg	Inserto
FMR02-050-A22-RC12-05C	✲	●	6	50	22	40	6	5	A	0,7	RCGX1204 RCKT1204 RCMW1204
FMR02-050-A22-RC12-06C	✲	○	6	50	22	40	6	6	A	0,7	
FMR02-052-A22-RC12-05C	✲	●	6	52	22	40	6	5	A	0,7	
FMR02-063-A22-RC12-04		●	6	63	22	40	6	4	A	0,7	
FMR02-063-A22-RC12-05C	✲	●	6	63	22	40	6	5	A	0,7	
FMR02-063-A22-RC12-06		●	6	63	22	40	6	6	A	0,7	
FMR02-063-A22-RC12-06C	✲	●	6	63	22	40	6	6	A	0,7	
FMR02-080-A27-RC12-07C	✲	●	6	80	27	50	6	7	B	0,7	
FMR02-100-B32-RC12-08C	✲	●	6	100	32	50	6	8	B	0,89	
FMR02-063-A22-RC16-04		●	8	63	22	40	8	4	A	0,7	RCKT1606
FMR02-063-A22-RC16-04C	✲	○	8	63	22	40	8	4	A	0,7	
FMR02-063-A22-RC16-05C	✲	○	8	63	22	40	8	5	A	0,7	
FMR02-066-A27-RC16-05C(FB)	✲	●	8	66	27	50	8	5	A	0,5	
FMR02-080-B27-RC16-05		●	8	80	27	50	8	5	B	0,7	
FMR02-080-B27-RC16-07		●	8	80	27	50	8	7	B	0,7	
FMR02-100-B32-RC16-06		●	8	100	32	63	8	6	B	1,2	
FMR02-100-A32-RC16-06C	✲	○	8	100	32	63	8	6	B	1,2	
FMR02-125-B40-RC16-07		●	8	125	40	63	8	7	B	2,5	
FMR02-125-B40-RC16-07C	✲	○	8	125	40	63	8	7	B	2,5	
FMR02-160-B40-RC16-10(FB)		○	8	160	40	63	8	10	B	3,94	
FMR02-200-C60-RC16-12(FB)		●	8	200	60	63	8	12	C	5,4	
FMR02-080-A27-RC20-04		●	10	80	27	50	10	4	A	0,7	RCKT2006
FMR02-080-A27-RC20-04C(FB)	✲	●	10	80	27	50	10	4	A	0,7	
FMR02-100-B32-RC20-05		●	10	100	32	63	10	5	B	1,2	
FMR02-100-B32-RC20-06		●	10	100	32	63	10	6	B	1,2	
FMR02-100-B32-RC20-06C	✲	○	10	100	32	63	10	6	B	1,2	
FMR02-125-B32-RC20-05		○	10	125	32	63	10	5	B	1,2	
FMR02-125-B40-RC20-06		●	10	125	40	63	10	6	B	1,2	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

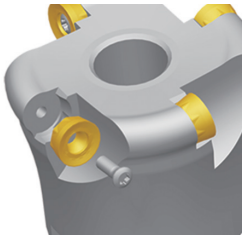
Inserti per fresatura

Articolo	✲	Stock	Dimensioni [mm]					Denti	Attacco	kg	Inserto
			R	ØD	ød	L	$a_{p\,max}$				
FMR02-125-B40-RC20-07		●	10	125	40	63	10	7	B	2,2	RCKT2006
FMR02-125-B40-RC20-07C	✲	○	10	125	40	63	10	7	B	2,2	
FMR02-160-B40-RC20-08		●	10	160	40	63	10	8	B	4,2	
FMR02-160-B40-RC20-08C	✲	○	10	160	40	63	10	8	B	4,2	
FMR02-250-C60-RC20-10		●	10	250	60	63	10	10	C	8,49	
FMR02-250-C60-RC20-11		○	10	250	60	63	10	11	C	8,37	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**RCGX1204 RCKT1204 RCMW1204**	**RCKT1606**	**RCKT2006**	
	ØD	**50-100**	**63-200**	**80-250**	
	Vite (inserti)	I60M3,5×10 (2,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)	
	Chiave (inserti)	WT15IS			
	Chiave (inserti)		WT20IT	WT25IT	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

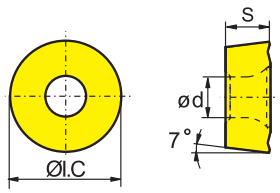
Inserti per fresatura

Fresa a spianare

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RCKT	I.C	S	d
12 04	12	4,76	4
16 06	16	6,35	5,56
20 06	20	6,35	6,55



RC** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	RCKT1204MO-DM		○	○		○	●	○				○				●	○						
	RCKT1606MO-DM		○												●		●						
	RCKT2006MO-DM		○																				
	RCKT1204MO-DR		○	○		○	●								●								
	RCKT1606MO-DR	●	○	●			●		●							●							
	RCKT2006MO-DR	●	○	●			○		●			○					○						
	RCKT1204MO-ER				●																		
	RCKT1606MO-ER				●																		
	RCKT2006MO-ER				●																		
	RCKT1204MO-NM												○										
	RCKT1606MO-NM												○										

● In magazzino ○ Su richiesta

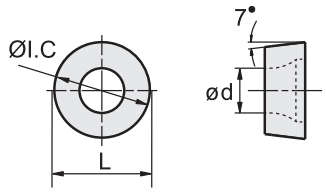
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RCGX	I.C	S	d
12 04	12	4,76	4

Inserti - Fresatura

RC** Inserti positivi		HC[1] (CVD)							HC[1] (PVD)									HT	HC[2]	HW	
	**P**																				
	M																				
	K																				
	N																				
	S																				
	H																				
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RCGX1204MO-LH**																				●		

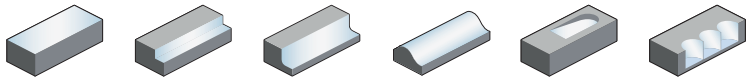
● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

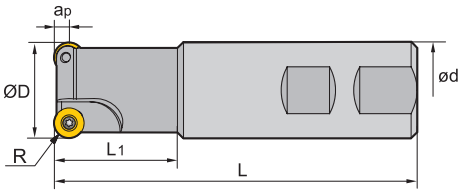
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

FMR03







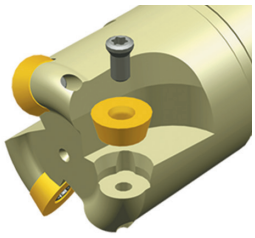
Articolo	✲	Stock	Dimensioni [mm] R	ØD	ød	L_1	L	$a_{p\,max}$	Denti	kg	Inserto
FMR03-016-XP16-RD08-02		○	4	16	16	25	100	4	2	0,1	RD**0803
FMR03-025-XP25-RD08-02		●	4	25	25	30	100	4	2	0,3	
FMR03-025-XP25-RD08-02C	✲	○	4	25	25	30	100	4	2	0,3	
FMR03-032-XP32-RD10-02		●	5	32	32	40	120	5	2	0,7	RD**10T3
FMR03-040-XP32-RD12-03		●	6	40	32	40	120	6	3	0,7	RD**1204
FMR03-050-XP32-RD12-04		●	6	50	32	40	120	6	4	0,8	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	RD**0803	RD**10T3	RD**1204
	ØD	16-25	32	40-50
	Vite (inserti)	I60M3×7 (1,8 Nm)	I60M4×10 (3,4 Nm)	I60M4×10 (3,4 Nm)
	Chiave (inserti)	WT09IP	WT15IP	WT15IP

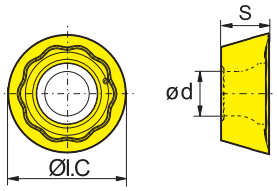


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RDKT
10 T3
12 04

RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKT10T3MO-MM**																	○					
	RDKT1204MO-MM																	○					

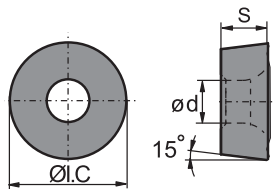
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RDKW	I.C	S	d
08 03	8	3,18	3,4
10 T3	10	3,97	4,4
12 04	12	4,76	4,4

Inserti - Fresatura

RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKW0803MO**						●				○												
	RDKW10T3MO	●	○				○			●	○						○						
	RDKW1204MO	●				○	●			●	○				●	●	○						

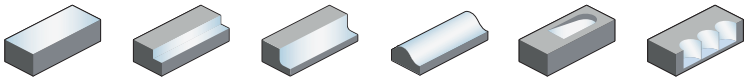
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

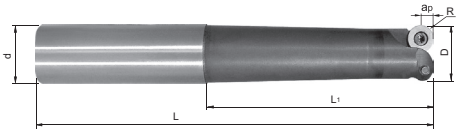
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

FMR03







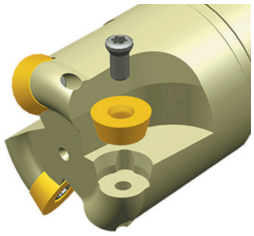
Articolo	✲	Stock	Dimensioni [mm]						Denti	Inserto
			R	ØD	ød	L_1	L	$a_{p\,max}$		
FMR03-015-G16-XS-RD0702-02		●	3,5	15	16	40	88	3,5	2	
FMR03-015-G16-XS-RD0702-02C	✲	○	3,5	15	16	40	88	3,5	2	
FMR03-015-G16-S-RD0702-02		●	3,5	15	16	60	108	3,5	2	
FMR03-015-G16-S-RD0702-02C	✲	○	3,5	15	16	60	108	3,5	2	RDKW0702
FMR03-015-G20-M-RD0702-02		●	3,5	15	20	80	130	3,5	2	
FMR03-015-G20-M-RD0702-02C	✲	○	3,5	15	20	80	130	3,5	2	
FMR03-015-G25-XL-RD0702-02C	✲	○	3,5	15	25	120	176	3,5	2	
FMR03-020-G20-XS-RD1003-02C	✲	○	5	20	20	40	90	5	2	
FMR03-020-G20-S-RD1003-02C	✲	○	5	20	20	60	110	5	2	
FMR03-020-G25-M-RD1003-02C	✲	○	5	20	25	80	136	5	2	RDKW1003
FMR03-020-G25-L-RD1003-02C	✲	○	5	20	25	100	156	5	2	
FMR03-020-G25-XL-RD1003-02C	✲	○	5	20	25	120	176	5	2	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	RDKW0702	RDKW1003
	ØD	15	20
	Vite (inserti)		l60M3,5×6,5TT (2,7 Nm)
	Vite (inserti)	l60M2,5×5,0 (1,0 Nm)	
	Chiave (inserti)		WT10IP
	Chiave (inserti)	WT07P	

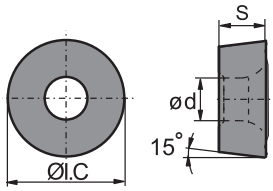


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RDKW	I.C	S	d
07 02	7	2,38	2,7
10 03	10	3,18	3,9



RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
P		●	●	●	●	●	●	●			●	●		●	●	●		●	●			
M			●	●	●	●	●				●	●		●	●	●	●	●	●			
K								●	●	●								●			●	
N									●												●	●
S				●		●			●	●			●	●	●		●					
H																						
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKW0702MO-1**						●				○				●								
	RDKW0702MO-2										●												
	RDKW1003MO-1					○	●					○			●	●							
	RDKW1003MO-2										●												
	RDKW1003MO-3				●										●								

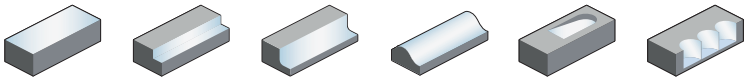
● In magazzino ○ Su richiesta

Informazioni importanti sul design sono riportate a pagina B102.

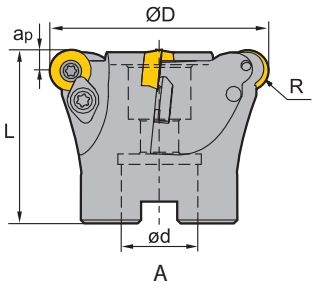
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

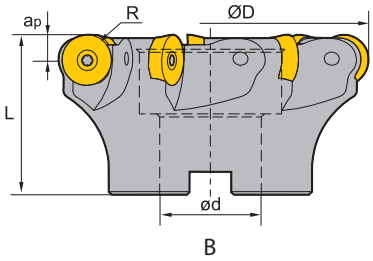
Fresa a spianare

FMR04









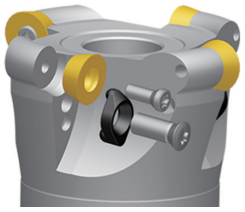
Articolo	✲	Stock	Dimensioni [mm] R	ØD	ød	L	$a_{p\,max}$	Denti	Attacco	kg	Inserto
FMR04-050-A22-RD12-03		●	6	50	22	40	6	3	A	0,3	RD**1204
FMR04-063-A22-RD12-04		●	6	63	22	50	6	4	A	0,5	
FMR04-080-B27-RD16-05		●	8	80	27	50	8	5	B	1,2	RD**1605
FMR04-100-B32-RD16-06		●	8	100	32	50	8	6	B	1	
FMR04-100-B32-RD20-06C	✲	○	10	100	32	50	8	6	B	1	RD**2006
FMR04-125-B40-RD20-06		○	10	125	40	63	10	6	B	1,9	
FMR04-125-B40-RD20-06C	✲	○	10	125	40	63	10	6	B	1,9	
FMR04-160-B40-RD20-07		○	10	160	40	63	10	7	B	3,7	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**RD**1204**	**RD**1605**	**RD**2006**
	ØD	**50-63**	**80-100**	**100-160**
	Staffa	WD-204	WD-207	
	Vite (staffa)	I60M4×10 (3,4 Nm)	I60M5×13 (6,7 Nm)	
	Vite (inserti)	I60M3,5×10 (2,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)
	Chiave (staffa)	WT15IP		
	Chiave (staffa)		WT20IT	
	Chiave (inserti)	WT15IP		
	Chiave (inserti)		WT20IT	WT25IT

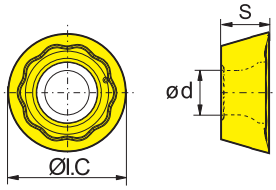


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- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RDKT
12 04

Inserti - Fresatura

RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKT1204MO-MM**																	○					

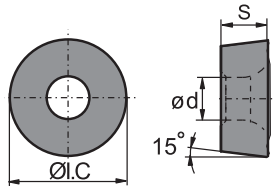
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RDKW	I.C	S	d
12 04	12	4,76	4,4
16 05	16	5,56	5,5
20 06	20	6,35	6,5

Inserti - Fresatura

RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKW1204MO**	●				○	●			●	○				●	●	○						
	RDKW1605MO						○				○	○					○						
	RDKW2006MO		○				○		○														
	**RDKW2006MO-3**														●								

● In magazzino ○ Su richiesta

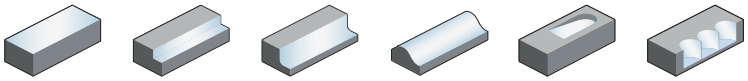
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Informazioni importanti sul design sono riportate a pagina B102.

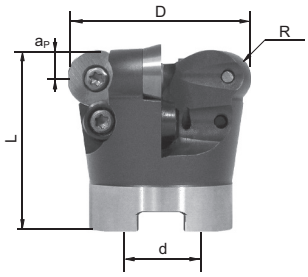
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa a spianare

FMR04







Articolo	✲	Stock	Dimensioni [mm]					Denti	Inserto
			R	ØD	ød	L	$a_{p\,max}$		
FMR04-042-A16-RD1003-06		○	5	42	16	44	5	6	RDKW1003
FMR04-042-A16-RD1003-06C	✲	●	5	42	16	44	5	6	
FMR04-052-A22-RD1003-07		○	5	52	22	50	5	7	
FMR04-052-A22-RD1003-07C	✲	●	5	52	22	50	5	7	
FMR04-042-A16-RD12T3-05		○	6	42	16	42	6	5	RDKW12T3
FMR04-042-A16-RD12T3-05C	✲	●	6	42	16	42	6	5	
FMR04-052-A22-RD12T3-05		○	6	52	22	50	6	5	
FMR04-052-A22-RD12T3-05C	✲	●	6	52	22	50	6	5	
FMR04-066-A27-RD12T3-06		○	6	66	27	50	6	6	
FMR04-066-A27-RD12T3-06C	✲	●	6	66	27	50	6	6	
FMR04-080-A27-RD12T3-07		○	6	80	27	50	6	7	
FMR04-080-A27-RD12T3-07C	✲	●	6	80	27	50	6	7	
FMR04-052-A22-RD1604-04		○	8	52	22	50	8	4	RDKW1604
FMR04-052-A22-RD1604-04C	✲	●	8	52	22	50	8	4	
FMR04-066-A27-RD1604-05		○	8	66	27	50	8	5	
FMR04-066-A27-RD1604-05C	✲	●	8	66	27	50	8	5	
FMR04-080-A27-RD1604-06		○	8	80	27	52	8	6	
FMR04-080-A27-RD1604-06C	✲	●	8	80	27	52	8	6	
FMR04-100-B32-RD1604-07		○	8	100	32	52	8	7	
FMR04-100-B32-RD1604-07C	✲	●	8	100	32	52	8	7	
FMR04-125-B40-RD1604-08		○	8	125	40	52	8	8	
FMR04-160-B40-RD1604-09		○	8	160	40	52	8	9	
FMR04-160-B40-RD1604-09C	✲	●	8	160	40	52	8	9	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

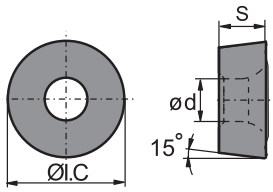
Parti di ricambio

	Inserto	RDKW1003	RDKW12T3	RDKW12T3	RDKW1604	RDKW1604
	ØD	42-52	42	52-80	52	66-160
	Staffa					WX16N
	Staffa			LOM3.5×7.1		
	Vite (staffa)					I60M4,5×10 (5,0 Nm)
	Vite (inserti)	I60M3,5×6,5TT (2,7 Nm)				
	Vite (inserti)		I60M3,5×7,7 (2,7 Nm)	I60M3,5×7,7 (2,7 Nm)	I60M4,5×10 (5,0 Nm)	I60M4,5×10 (5,0 Nm)
	Chiave (staffa)			WT15P		
	Chiave (staffa)					WT20T
	Chiave (inserti)	WT10IP				
	Chiave (inserti)		WT15P	WT15P		
	Chiave (inserti)				WT20T	WT20T

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

RDKW	I.C	S	d
10 03	10	3,18	3,9
12 T3	12	3,97	3,9
16 04	16	4,76	5,2

Inserti - Fresatura



RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	RDKW1003MO-1					○	●					○			●	●							
	RDKW1003MO-2										●												
	RDKW1003MO-3				●										●								
	RDKW12T3MO-1					○	●					○			●	●							
	RDKW12T3MO-2										●				○								
	RDKW12T3MO-3				●										●								
	RDKW1604MO-1						●					○			●	●	●						
	RDKW1604MO-2										○												
	RDKW1604MO-3	○			●				●		○				●		●						

● In magazzino ○ Su richiesta

Informazioni importanti sul design sono riportate a pagina B102.

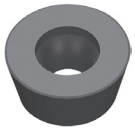
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

INFORMAZIONI IMPORTANTI

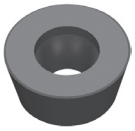
Versione tagliente **RDKW**

RDKW*MO–1



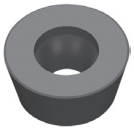
Lavorazione generica

RDKW*MO–2

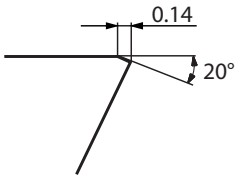


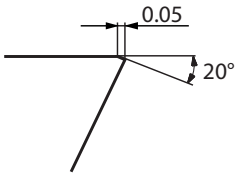
Geometria per taglio dolce (Finitura)

RDKW*MO–3



Sgrossatura





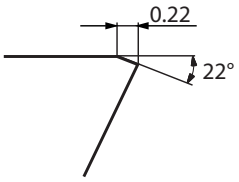
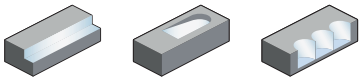




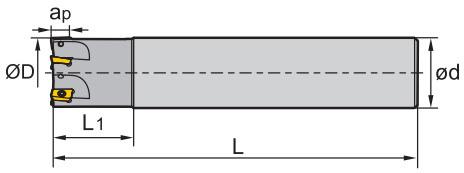
Fig.: **FMR04-052-B22-RD12T3-05C**

Fresa per spallamento

EMP01 Kr: 90°







Stelo cilindrico

Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L_1	L	$a_{p\,max}$	Denti	kg	Inserto
EMP01-012-G12-AP07-02C	✻	●	12	12	25	75	6,4	2	0,31	
EMP01-014-G16-AP07-03C	✻	●	14	16	25	85	6,4	3	0,61	APKT0702
EMP01-016-G16-AP07-04C	✻	●	16	16	30	90	6,4	4	0,75	
EMP01-012-G16-AP11-01		●	12	16	25	85	10,5	1	0,1	
EMP01-016-G16-AP11-02		●	16	16	25	90	10,5	2	0,1	
EMP01-016-G16-AP11-02C	✻	○	16	16	25	90	10,5	2	0,1	
EMP01-020-G20-AP11-02		●	20	20	30	100	10,5	2	0,2	
EMP01-020-G20-AP11-02C	✻	●	20	20	30	100	10,5	2	0,2	
EMP01-020-G20-AP11-03		○	20	20	30	100	10,5	3	0,2	
EMP01-020-G20-AP11-03C	✻	●	20	20	30	100	10,5	3	0,2	APKT11T3
EMP01-025-G25-AP11-03		●	25	25	35	115	10,5	3	0,4	
EMP01-025-G25-AP11-03C	✻	○	25	25	35	115	10,5	3	0,4	
EMP01-025-G25-AP11-04		●	25	25	35	115	10,5	4	0,4	
EMP01-025-G25-AP11-04C	✻	●	25	25	35	115	10,5	4	0,4	
EMP01-032-G32-AP11-04		●	32	32	40	125	10,5	4	0,7	
EMP01-025-G25-AP16-02		●	25	25	35	115	15,5	2	0,4	
EMP01-025-G25-AP16-02C	✻	●	25	25	35	115	15,5	2	0,4	
EMP01-032-G32-AP16-03		●	32	32	40	125	15,5	3	0,7	
EMP01-032-G32-AP16-03C	✻	●	32	32	40	125	15,5	3	0,7	
EMP01-040-G32-AP16-03		●	40	32	42	130	15,5	3	0,7	APKT1604
EMP01-040-G32-AP16-03C	✻	●	40	32	42	130	15,5	3	0,7	
EMP01-040-G32-AP16-04C	✻	○	40	32	42	130	15,5	4	0,8	
EMP01-050-G32-AP16-05		●	50	32	45	135	15,5	5	1	
EMP01-063-G32-AP16-06		●	63	32	45	135	15,5	6	1,4	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

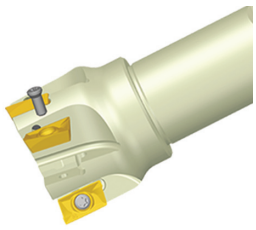
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura

Fresa per spallamento

Parti di ricambio

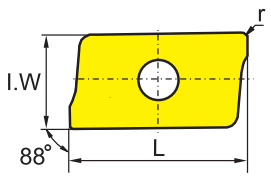
	Inserto	APKT0702	APKT11T3	APKT1604
	ØD	12-25	12-32	25-63
	Vite (inserti)	I60M1,8×4 (0,5 Nm)		I60M4×8,4 (3,4 Nm)
	Vite (inserti)		I60M2,5×6,5T (1,0 Nm)	
	Chiave (inserti)	WT05IP	WT08IP	
	Chiave (inserti)			WT15S



APKT	L	S	d
07 02	4,26	2,38	2
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●			
			M		●	●	●	●	●			●	●		●	●	●	●	●	●			
			K							●	●								●			●	
			N								●											●	●
			S				●		●			●	●		●	●	●		●				
			H																				
	ISO			r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APKT11T304-ALH			0,4	6,5									●												●	●
	APKT11T308-ALH			0,8	6,5									●												●	●
	APKT160408-ALH			0,8	9,33									●												●	●
	APKT11T304-APF			0,4	6,5														●								
	APKT11T308-APF			0,8	6,5													○	●		○						
	APKT160408-APF			0,8	9,33													○	●	○	○						
	APKT070204-APM			0,4	6,91														●								
	APKT11T304-APM			0,4	6,5				●		●								●								
	APKT11T308-APM			0,8	6,5				●		●							○	●		○						
	APKT11T312-APM			1,2	6,5				●		●								●								
	APKT11T316-APM			1,6	6,5				●		●								●								
	APKT11T320-APM			2	6,5				●		●								●								
	APKT160408-APM			0,8	9,33				●		●	●						○	●		○						
	APKT160416-APM			1,6	9,33				●		●								●								
	APKT160420-APM			2	9,33				●		●								●								
	APKT160424-APM			2,4	9,33				●		●								●								
	APKT160430-APM			3	9,33				●										●								
	APKT11T304-LH			0,4	6,5																					○	○
	APKT11T308-LH			0,8	6,5																					○	●
	APKT160408-LH			0,8	9,33																					○	○

● In magazzino ○ Su richiesta

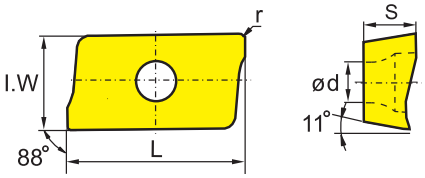
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema > B26 | Scelta gradi > B24 | Informazioni tecniche > B527 | Dati di taglio > B230

APKT	L	S	d
07 02	4,26	2,38	2
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



AP** Inserti - Fresatura				HC¹ (CVD)								HC¹ (PVD)									HT	HC²	HW	
			P																					
			M																					
			K																					
			N																					
			S																					
			H																					
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**APKT11T308-NM**															●				●					
	APKT11T312-NM															●				●					
	**APKT11T304-PF**	0,4	6,5		○			○				○	○						○						
	APKT11T308-PF	0,8	6,5										○												
	APKT11T316-PF	1,6	6,5										○												
	APKT160408-PF	0,8	9,33		○				○				○						○						
	APKT160430-PF	3	9,33	○																					
	**APKT11T304-PM**	0,4	6,5	○	○	○		○	○			○	○						○						
	APKT11T308-PM	0,8	6,5	○	○		○	○	●	○	○	○	○				○		○						
	APKT11T312-PM	1,2	6,5					○				○	○						○						
	APKT11T316-PM	1,6	6,5					○				○	○						○						
	APKT160408-PM	0,8	9,33	○	○	○	●		●	○	○	○	○				○		●						
	APKT160416-PM	1,6	9,33	○									○												
	**APKT11T304-PR**	0,4	6,5						○										○						
	APKT11T316-PR	1,6	6,5																○						
	**APKT11T3XR**										●							●							

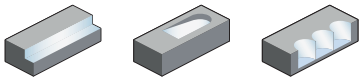
● In magazzino ○ Su richiesta

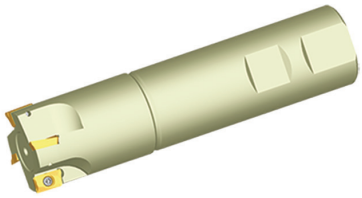
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

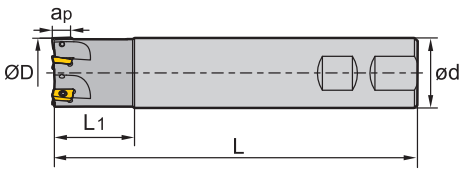
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

EMP01 Kr: 90°







Stelo Weldon

Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L_1	L	$a_{p\,max}$	Denti	kg	Inserto
EMP01-020-XP20-AP07-05C	✻	●	20	20	30	100	6,4	5	0,31	APKT0702
EMP01-025-XP25-AP07-07C	✻	●	25	25	35	115	6,4	7	0,61	
EMP01-012-XP16-AP11-01		●	12	16	25	85	10,5	1	0,1	APKT11T3
EMP01-012-XP16-AP11-01C	✻	○	12	16	25	85	10,5	1	0,1	
EMP01-016-XP16-AP11-02		●	16	16	25	90	10,5	2	0,1	
EMP01-016-XP16-AP11-02C	✻	○	16	16	25	90	10,5	2	0,1	
EMP01-020-XP20-AP11-02		●	20	20	30	100	10,5	2	0,2	
EMP01-020-XP20-AP11-02C	✻	○	20	20	30	100	10,5	2	0,2	
EMP01-020-XP20-AP11-03		●	20	20	30	100	10,5	3	0,2	
EMP01-020-XP20-AP11-03C	✻	●	20	20	30	100	10,5	3	0,2	
EMP01-025-XP25-AP11-03		●	25	25	35	115	10,5	3	0,4	
EMP01-025-XP25-AP11-03C	✻	●	25	25	35	115	10,5	3	0,4	
EMP01-025-XP25-AP11-04		●	25	25	35	115	10,5	4	0,4	
EMP01-025-XP25-AP11-04C	✻	○	25	25	35	115	10,5	4	0,4	
EMP01-032-XP32-AP11-04		●	32	32	40	125	10,5	4	0,7	
EMP01-032-XP32-AP11-04C	✻	○	32	32	40	125	10,5	4	0,7	
EMP01-025-XP25-AP16-02		●	25	25	35	115	15,5	2	0,4	APKT1604
EMP01-025-XP25-AP16-02C	✻	○	25	25	35	115	15,5	2	0,4	
EMP01-032-XP32-AP16-03		●	32	32	40	125	15,5	3	0,7	
EMP01-032-XP32-AP16-03C	✻	○	32	32	40	125	15,5	3	0,7	
EMP01-040-XP32-AP16-04		●	40	32	42	130	15,5	4	0,8	
EMP01-040-XP32-AP16-04C	✻	○	40	32	42	130	15,5	4	0,8	
EMP01-050-XP32-AP16-05		●	50	32	45	135	15,5	5	1	
EMP01-063-XP32-AP16-06		○	63	32	45	135	15,5	6	1,4	

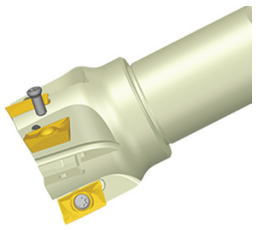
● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Parti di ricambio

	Inserto	APKT0702	APKT11T3	APKT1604
	ØD	12-25	12-32	25-63
	Vite (inserti)	I60M1,8×4 (0,5 Nm)		I60M4×8,4 (3,4 Nm)
	Vite (inserti)		I60M2,5×6,5T (1,0 Nm)	
	Chiave (inserti)	WT05IP	WT08IP	
	Chiave (inserti)			WT15S

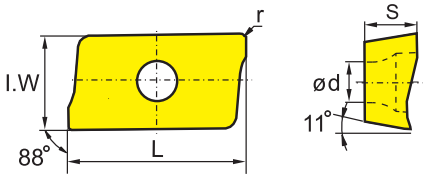


APKT	L	S	d
07 02	4,26	2,38	2
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura

AP** Inserti - Fresatura



	HC[1] (CVD)							HC[1] (PVD)								HT	HC[2]	HW	
P	◉	◉	◉	◉	◉	◉	◉		◉	◉		◉	◉	◉	◉	◉	◉		
M		◉	◉	◉	◉	◉			◉	◉		◉	◉	◉	◉	◉	◉		
K						◉	◉	◉							◉				◉
N								◉										◉	◉
S			◉		◉			◉	◉		◉	◉	◉	◉					
H																			

ISO	r	l.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
APKT11T304-ALH	0,4	6,5									●												●	●
APKT11T308-ALH	0,8	6,5									●												●	●
APKT160408-ALH	0,8	9,33									●												●	●
APKT11T304-APF	0,4	6,5															●							
APKT11T308-APF	0,8	6,5													○		●		○					
APKT160408-APF	0,8	9,33													○		●	○	○					
APKT070204-APM	0,4	6,91															●							
APKT11T304-APM	0,4	6,5				●			●								●							
APKT11T308-APM	0,8	6,5				●			●						○		●		○					
APKT11T312-APM	1,2	6,5				●			●								●							
APKT11T316-APM	1,6	6,5				●			●								●							
APKT11T320-APM	2	6,5				●			●								●							
APKT160408-APM	0,8	9,33				●			●	●					○		●		○					
APKT160416-APM	1,6	9,33				●			●								●							
APKT160420-APM	2	9,33				●			●								●							
APKT160424-APM	2,4	9,33				●			●								●							
APKT160430-APM	3	9,33				●											●							
APKT11T304-LH	0,4	6,5																					○	○
APKT11T308-LH	0,8	6,5																					○	●
APKT160408-LH	0,8	9,33																					○	○

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

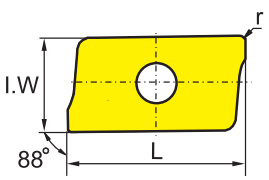
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APKT	L	S	d
07 02	4,26	2,38	2
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4



AP** Inserti - Fresatura				HC¹ (CVD)								HC¹ (PVD)									HT	HC²	HW	
			P	◉	◉	◉	◉	◉	◉		◉			◉	◉		◉	◉	◉	◉	◉	◉	◉		
			M		◉	◉	◉	◉	◉					◉	◉		◉	◉	◉	◉	◉	◉	◉		
			K							◉	◉		◉								◉			◉	
			N									◉												◉	◉
			S				◉		◉				◉	◉		◉	◉	◉		◉					
			H																					
	ISO			r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APKT11T308-NM																	●				●					
	APKT11T312-NM																	●				●					
	APKT11T304-PF			0,4	6,5		○			○				○	○						○						
	APKT11T308-PF			0,8	6,5										○												
	APKT11T316-PF			1,6	6,5										○												
	APKT160408-PF			0,8	9,33		○				○				○						○						
	APKT160430-PF			3	9,33	○																					
	APKT11T304-PM			0,4	6,5	○	○	○		○	○			○	○						○						
	APKT11T308-PM			0,8	6,5	○	○		○	○	●	○	○	○	○				○		○						
	APKT11T312-PM			1,2	6,5					○				○	○						○						
	APKT11T316-PM			1,6	6,5					○				○	○						○						
	APKT160408-PM			0,8	9,33	○	○	○	●		●	○	○	○	○				○		●						
	APKT160416-PM			1,6	9,33	○									○												
	APKT11T304-PR			0,4	6,5						○										○						
	APKT11T316-PR			1,6	6,5																○						
	APKT11T3XR												●							●						

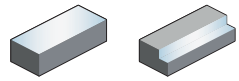
● In magazzino ○ Su richiesta

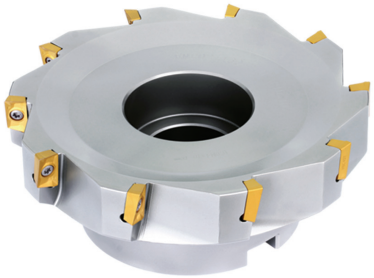
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

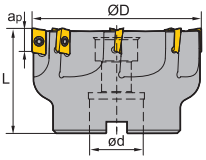
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

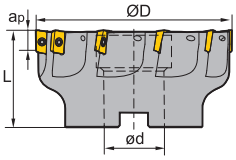
EMP02 Kr: 90°



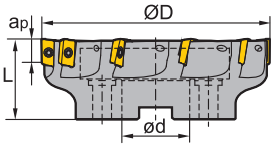




A



B



C

Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L	$a_{p\ max}$	Denti	Attacco	kg	Inserto
EMP02-032-A16-AP07-08C	✻	●	32	16	35	6,4	8	A	0,34	
EMP02-040-A16-AP07-10C	✻	●	40	16	40	6,4	10	A	0,4	APKT0702
EMP02-050-A22-AP07-12C	✻	●	50	22	40	6,4	12	A	0,6	
EMP02-040-A16-AP11-04C	✻	●	40	16	40	11	4	A	0,237	
EMP02-040-A16-AP11-05C	✻	●	40	16	40	11	5	A	0,177	
EMP02-040-A16-AP11-06C	✻	●	40	16	40	11	6	A	0,234	
EMP02-050-A22-AP11-06		●	50	22	40	11	6	A	0,3	
EMP02-050-A22-AP11-06C	✻	●	50	22	40	11	6	A	0,3	
EMP02-050-A22-AP11-07C	✻	●	50	22	40	11	7	A	0,39	
EMP02-063-A22-AP11-08		●	63	22	40	11	8	A	0,6	
EMP02-063-A22-AP11-08C	✻	●	63	22	40	11	8	A	0,6	APKT11T3
EMP02-063-A22-AP11-09C	✻	●	63	22	40	11	9	A	0,54	
EMP02-080-A27-AP11-08		●	80	27	50	11	8	A	1,2	
EMP02-080-A27-AP11-08C	✻	●	80	27	50	11	8	A	1,2	
EMP02-080-A27-AP11-10C	✻	●	80	27	50	11	10	A	1,13	
EMP02-100-B32-AP11-10		●	100	32	50	11	10	B	1,7	
EMP02-100-B32-AP11-10C	✻	○	100	32	50	11	10	B	1,7	
EMP02-125-B40-AP11-10		○	125	40	63	11	10	B	3,42	
EMP02-040-A16-AP16-03		○	40	16	40	15,5	3	A	0,17	
EMP02-040-A16-AP16-04C	✻	●	40	16	40	15,5	4	A	0,17	
EMP02-050-A22-AP16-05		●	50	22	40	15,5	5	A	0,3	
EMP02-050-A22-AP16-05C	✻	●	50	22	40	15,5	5	A	0,3	
EMP02-063-A22-AP16-06		●	63	22	40	15,5	6	A	0,5	
EMP02-063-A22-AP16-06C	✻	●	63	22	40	15,5	6	A	0,5	APKT1604
EMP02-080-A27-AP16-06C	✻	○	80	27	50	15,5	6	A	1,08	
EMP02-080-A27-AP16-07		●	80	27	50	15,5	7	A	1,1	
EMP02-080-A27-AP16-07C	✻	●	80	27	50	15,5	7	A	1,1	
EMP02-100-B32-AP16-08		●	100	32	50	15,5	8	B	1,6	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

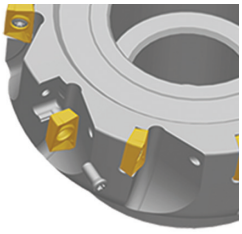
Inserti per fresatura

Articolo	✲	Stock	Dimensioni [mm]				Denti	Attacco	kg	Inserto
			ØD	ød	L	$a_{p\,max}$				
EMP02-100-B32-AP16-08C	✲	●	100	32	50	15,5	8	B	1,6	APKT1604
EMP02-125-B40-AP16-06C	✲	○	125	40	63	15,5	6	B	3,18	
EMP02-125-B40-AP16-10		○	125	40	63	15,5	10	B	3,2	
EMP02-125-B40-AP16-10C	✲	○	125	40	63	15,5	10	B	3,2	
EMP02-160-B40-AP16-07C	✲	○	160	40	63	15,5	7	B	4,3	
EMP02-160-B40-AP16-10		○	160	40	63	15,5	10	B	6,3	
EMP02-160-B40-AP16-10C	✲	○	160	40	63	15,5	10	B	6,3	
EMP02-200-C60-AP16-12		○	200	60	63	15,5	12	C	8,1	
EMP02-250-C60-AP16-12		○	250	60	63	15,5	12	C	11,2	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

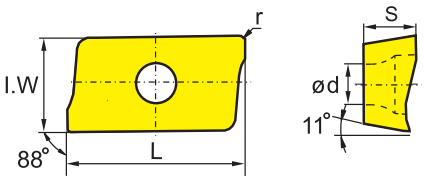
	Inserto	**APKT11T3**	**APKT1604**	**APKT1604**	
	ØD	**40-125**	**40-160**	**160-250**	
	Cassetta			Locator-APKT16	
	Vite (inserti)		I60M4×10 (3,4 Nm)	I60M4×10 (3,4 Nm)	
	Vite (inserti)	I60M2,5×6,5T (1,0 Nm)			
	Chiave (inserti)	WT08IS	WT15IS	WT15IS	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

APKT	L	S	d
07 02	4,26	2,38	2
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4



AP** Inserti - Fresatura				HC¹ (CVD)								HC¹ (PVD)									HT	HC²	HW	
			P	●	●	●	●	●	●		●			●	●		●	●	●		●	●			
			M		●	●	●	●	●					●	●		●	●	●	●	●	●			
			K							●	●	●									●			●	
			N									●												●	●
			S				●		●				●	●		●	●	●		●					
			H																						
	ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APKT11T304-ALH		0,4	6,5									●												●	●
	APKT11T308-ALH		0,8	6,5									●												●	●
	APKT160408-ALH		0,8	9,33									●												●	●
	APKT11T304-APF		0,4	6,5															●							
	APKT11T308-APF		0,8	6,5													○		●		○					
	APKT160408-APF		0,8	9,33													○		●	○	○					
	APKT070204-APM		0,4	6,91															●							
	APKT11T304-APM		0,4	6,5				●			●								●							
	APKT11T308-APM		0,8	6,5				●			●						○		●		○					
	APKT11T312-APM		1,2	6,5				●			●								●							
	APKT11T316-APM		1,6	6,5				●			●								●							
	APKT11T320-APM		2	6,5				●			●								●							
	APKT160408-APM		0,8	9,33				●			●	●					○		●		○					
	APKT160416-APM		1,6	9,33				●			●								●							
	APKT160420-APM		2	9,33				●			●								●							
	APKT160424-APM		2,4	9,33				●			●								●							
	APKT160430-APM		3	9,33				●											●							
	APKT11T304-LH		0,4	6,5																					○	○
	APKT11T308-LH		0,8	6,5																					○	●
	APKT160408-LH		0,8	9,33																					○	○
	APKT11T308-NM																●				●					
	APKT11T312-NM																●				●					
	APKT11T304-PF		0,4	6,5		○			○					○	○					○						
	APKT11T308-PF		0,8	6,5											○											
	APKT11T316-PF		1,6	6,5											○											
	APKT160408-PF		0,8	9,33		○				○					○					○						
	APKT160430-PF		3	9,33	○																					
	APKT11T304-PM		0,4	6,5	○	○	○		○	○				○	○					○						
	APKT11T308-PM		0,8	6,5	○	○		○	○	●	○	○		○	○			○		○						
	APKT11T312-PM		1,2	6,5					○					○	○					○						
	APKT11T316-PM		1,6	6,5					○					○	○					○						
	APKT160408-PM		0,8	9,33	○	○	○	●		●	○	○		○	○			○		●						
	APKT160416-PM		1,6	9,33	○										○											

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

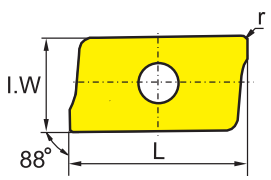
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APKT	L	S	d
07 02	4,26	2,38	2
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4



AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**APKT11T304-PR**	0,4	6,5						○										○						
	APKT11T316-PR	1,6	6,5																○						
	**APKT11T3XR**										●							●							

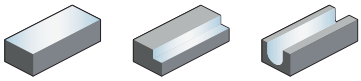
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

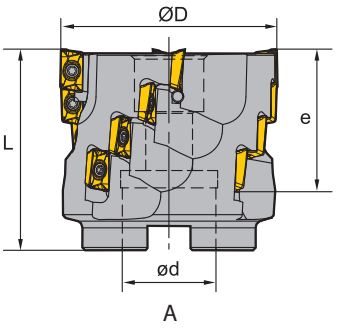
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

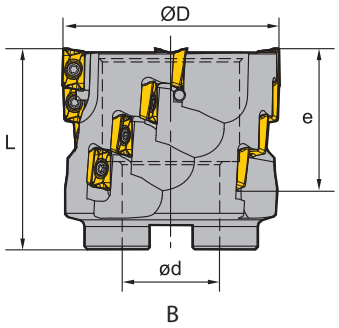
Fresa per spallamento

EMP03 Kr: 90°









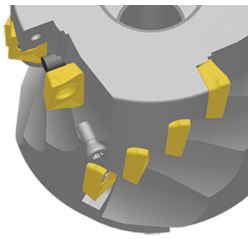
Articolo	✻	Stock	Dimensioni [mm]				Denti	Attacco	Numero inserti	kg	Inserto
			ØD	e	ød	L					
EMP03-050-A22-AP11-04		●	50	39	22	58	4	A	16	0,5	APKT11T3
EMP03-050-A22-AP11-04C	✻	○	50	39	22	58	4	A	16	0,5	
EMP03-063-A27-AP11-04		●	63	39	27	58	4	A	16	0,9	
EMP03-063-A27-AP11-04C	✻	○	63	39	27	58	4	A	16	0,9	
EMP03-080-B32-AP11-05		●	80	39	32	63	5	B	20	1,3	
EMP03-080-B32-AP11-05C	✻	○	80	39	32	63	5	B	20	1,3	
EMP03-100-B40-AP11-06		●	100	39	40	63	6	B	24	2	
EMP03-100-B40-AP11-06C	✻	○	100	39	40	63	6	B	24	2	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**APKT11T3**
	ØD	**50-100**
	Vite (inserti)	l60M2,5×6,5T (1,0 Nm)
	Chiave (inserti)	WT08IS



Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

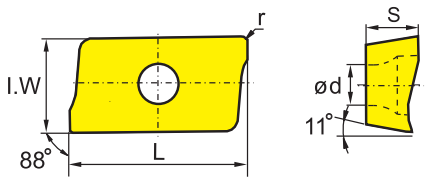
Inserti per fresatura

Fresa per spallamento

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APKT	L	S	d
11 T3	12,24	3,6	2,8

Inserti - Fresatura



AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
	ISO	r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APKT11T304-ALH	0,4	6,5									●												●	●
	APKT11T308-ALH	0,8	6,5									●												●	●
	APKT11T304-APF	0,4	6,5															●							
	APKT11T308-APF	0,8	6,5													○		●		○					
	APKT11T304-APM	0,4	6,5				●			●								●							
	APKT11T308-APM	0,8	6,5				●			●						○		●		○					
	APKT11T312-APM	1,2	6,5				●			●								●							
	APKT11T316-APM	1,6	6,5				●			●								●							
	APKT11T320-APM	2	6,5				●			●								●							
	APKT11T304-LH	0,4	6,5																					○	○
	APKT11T308-LH	0,8	6,5																					○	●
	APKT11T308-NM															●				●					
	APKT11T312-NM															●				●					
	APKT11T304-PF	0,4	6,5		○			○					○	○					○						
	APKT11T308-PF	0,8	6,5											○											
	APKT11T316-PF	1,6	6,5											○											
	APKT11T304-PM	0,4	6,5	○	○	○		○	○				○	○					○						
	APKT11T308-PM	0,8	6,5	○	○		○	○	●	○	○		○	○			○		○						
	APKT11T312-PM	1,2	6,5					○					○	○					○						
	APKT11T316-PM	1,6	6,5					○					○	○					○						
	APKT11T304-PR	0,4	6,5						○										○						
	APKT11T316-PR	1,6	6,5																○						
	APKT11T3XR										●							●							

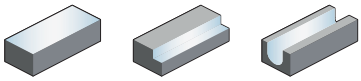
● In magazzino ○ Su richiesta

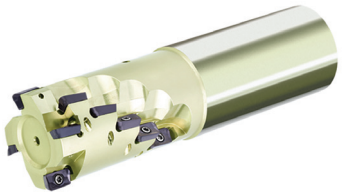
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

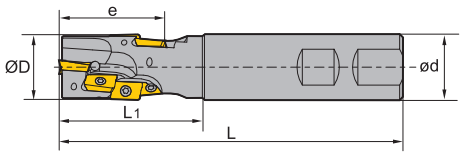
Codice sistema > B26 | Scelta gradi > B24 | Informazioni tecniche > B527 | Dati di taglio > B230

Fresa per spallamento

EMP04 Kr: 90°







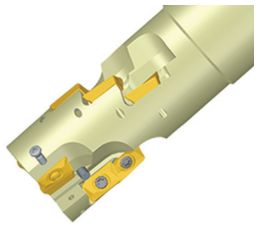
Stelo Weldon

Articolo	✻	Stock	Dimensioni [mm]					Denti	Numero inserti	kg	Inserto
			ØD	e	ød	L_1	L				
EMP04-020-XP20-AP11-01		●	20	29,4	20	45	120	1	3	0,3	APKT11T3
EMP04-025-XP25-AP11-02		●	25	38,9	25	55	130	2	8	0,4	
EMP04-032-XP32-AP11-02		●	32	48,5	32	65	140	2	10	0,7	
EMP04-040-XP40-AP11-02		●	40	58	40	75	150	2	14	1,3	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**APKT11T3**	
	ØD	**20-40**	
	Vite (inserti)	l60M2,5×6,5T (1,0 Nm)	
	Chiave (inserti)	WT08IS	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

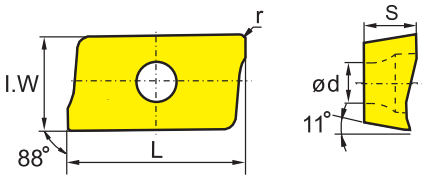
Inserti per fresatura

Fresa per spallamento

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APKT	L	S	d
11 T3	12,24	3,6	2,8

Inserti - Fresatura



AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
	ISO	r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APKT11T304-ALH	0,4	6,5									●												●	●
	APKT11T308-ALH	0,8	6,5									●												●	●
	APKT11T304-APF	0,4	6,5															●							
	APKT11T308-APF	0,8	6,5													○		●		○					
	APKT11T304-APM	0,4	6,5				●			●								●							
	APKT11T308-APM	0,8	6,5				●			●						○		●		○					
	APKT11T312-APM	1,2	6,5				●			●								●							
	APKT11T316-APM	1,6	6,5				●			●								●							
	APKT11T320-APM	2	6,5				●			●								●							
	APKT11T304-LH	0,4	6,5																					○	○
	APKT11T308-LH	0,8	6,5																					○	●
	APKT11T308-NM															●				●					
	APKT11T312-NM															●				●					
	APKT11T304-PF	0,4	6,5		○			○					○	○					○						
	APKT11T308-PF	0,8	6,5											○											
	APKT11T316-PF	1,6	6,5											○											
	APKT11T304-PM	0,4	6,5	○	○	○		○	○				○	○					○						
	APKT11T308-PM	0,8	6,5	○	○		○	○	●	○	○		○	○			○		○						
	APKT11T312-PM	1,2	6,5					○					○	○					○						
	APKT11T316-PM	1,6	6,5					○					○	○					○						
	APKT11T304-PR	0,4	6,5						○										○						
	APKT11T316-PR	1,6	6,5																○						
	APKT11T3XR										●							●							

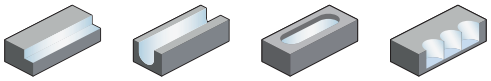
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

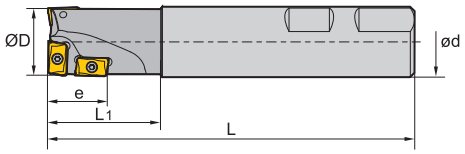
Codice sistema > B26 | Scelta gradi > B24 | Informazioni tecniche > B527 | Dati di taglio > B230

Fresa per spallamento

EMP05 Kr: 90°







Stelo Weldon

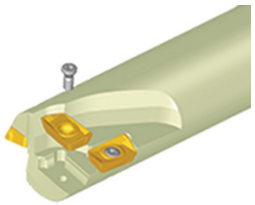
Articolo	✻	Stock	Dimensioni [mm]					Denti	kg	Inserto
			ØD	e	ød	L_1	L			
EMP05-025-XP25-C	✻	●	25	20	25	40	130	3	0,5	APMT1135

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**APMT1135**
	ØD	**25**
	Vite (inserti)	l60M2,5×6,5T (1,0 Nm)
	Chiave (inserti)	WT08IP



Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

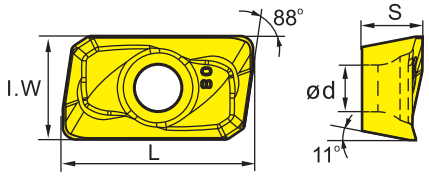
Inserti per fresatura

Fresa per spallamento

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APMT	L	S	d
11 35	11,25	3,5	2,8

Inserti - Fresatura



AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT		HC²		HW	
			P																					
			M																					
			K																					
			N																					
			S																					
			H																					
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APMT1135PDR	0,8	6,2					○									●		○						

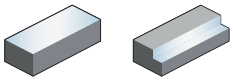
● In magazzino ○ Su richiesta

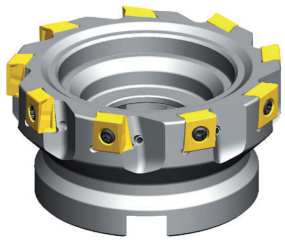
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

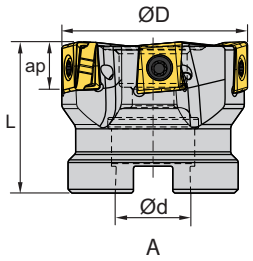
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

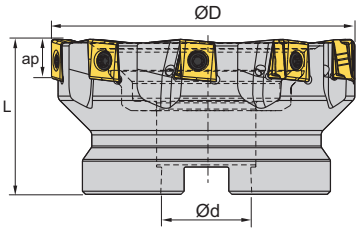
EMP09 Kr: 90°







A



B

Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L	$a_{p\,max}$	Denti	Attacco	kg	Inserto
EMP09-040-A16-LN08-05C	✻	●	40	16	40	8	5	A		LNKT0804PNR
EMP09-050-A22-LN08-06C	✻	●	50	22	40	8	6	A		
EMP09-063-A22-LN08-08C	✻	●	63	22	40	8	8	A		
EMP09-080-A27-LN08-10C	✻	○	80	27	50	8	10	A		
EMP09-040-A16-LN12-04C	✻	●	40	16	40	11,5	4	A	0,19	LNKT1206PNR
EMP09-050-A22-LN12-05C	✻	●	50	22	40	11,5	5	A	0,33	
EMP09-063-A22-LN12-06C	✻	●	63	22	40	11,5	6	A	0,53	
EMP09-080-A27-LN12-07C	✻	●	80	27	50	11,5	7	A	1,18	
EMP09-100-B32-LN12-09C	✻	●	100	32	50	11,5	9	B	1,62	
EMP09-125-B40-LN12-11C	✻	●	125	40	63	11,5	11	B	3,25	
EMP09-080-A27-LN16-06C	✻	●	80	27	50	15	6	A		LNKT1607PNR
EMP09-100-B32-LN16-08C	✻	●	100	32	50	15	8	B		
EMP09-125-B40-LN16-10C	✻	●	125	40	63	15	10	B		
EMP09-160-B40-LN16-12C	✻	●	160	40	63	15	12	B		
EMP09-200-C60-LN16-16		○	200	60	70	15	16	C		
EMP09-250-C60-LN16-12		○	250	60	70	15	12	C		
EMP09-315-D60-LN16-16		○	315	60	80	15	16	D		

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**LNKT0804PNR**	**LNKT1206PNR**	**LNKT1607PNR**
	ØD	**40-80**	**40-125**	**80-360**
	Vite (staffa)	I60M3×7 (1,8 Nm)	I60M4×12 (3,4 Nm)	
	Vite (inserti)			I60M5×17 (6,7 Nm)
	Chiave	WT10IS	WT15IS	
	Chiave (inserti)			WT20IS

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

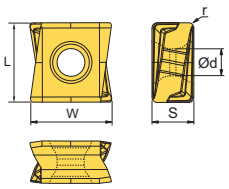
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

LNKT	L	S
08 04	8,75	4,45
12 06	12,7	6,75
16 07	16,05	7,35



LN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNKT080404PNR-GL**	8,5	0,4								●							●		●					
	LNKT120608PNR-GL	13	0,8								●							●		●					
	LNKT160708PNR-GL	15	0,8								●							●		●					
	**LNKT080404PNR-GM**	8,5	0,4				●											●							
	LNKT120608PNR-GM	13	0,8				●				●							●							
	LNKT160708PNR-GM	15	0,8				●			○								●							

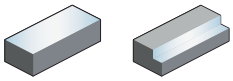
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

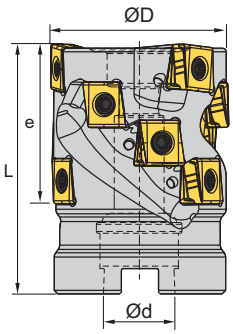
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

EMP09 Kr: 90°







Articolo	✻	Stock	Dimensioni [mm]				File di denti	Denti	Attacco	kg	Inserto
			ØD	e	ød	L					
EMP09-040x43-A16-LN12-02C	✻	○	40	43	16	70	2	8	A	0,4	LNKT1206PNR
EMP09-050x43-A22-LN12-03C	✻	●	50	43	22	70	3	12	A	0,64	
EMP09-063x53-A27-LN12-04C	✻	●	63	53	27	80	4	20	A	1,31	
EMP09-080x53-A27-LN12-05C	✻	○	80	53	27	80	5	25	A	2,33	
EMP09-080x53-A32-LN12-05C	✻	○	80	54,6	32	80	5	25	A	2,33	
EMP09-080x74-A32-LN12-05C	✻	○	80	74	32	100	5	35	A		

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**LNKT1206PNR**
	ØD	**40-80**
	Vite (staffa)	I60M4x12 (3,4 Nm)
	Chiave	WT15IS

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

LNKT	L	S
12 06	12,7	6,75

Inserti - Fresatura

LN** Inserti - Fresatura				HC[1] (CVD)							HC[1] (PVD)								HT	HC[2]	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
	ISO	W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNKT120608PNR-GL**	13	0,8								●							●		●					
	**LNKT120608PNR-GM**	13	0,8				●				●							●							

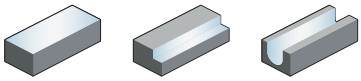
● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

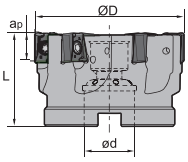
Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Fresa per spallamento

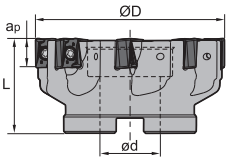
EMP13 Kr: 90°



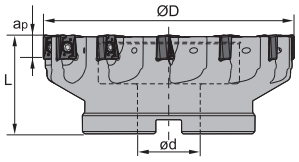




A



B



C

Articolo	✻	Stock	Dimensioni [mm] ØD	ød	L	$a_{p\ max}$	Denti	Attacco	kg	Inserto
EMP13-040-A16-AN11-04C	✻	○	40	16	40	11,2	4	A	0,45	
EMP13-050-A22-AN11-06C	✻	●	50	22	40	11,2	6	A	0,3	
EMP13-063-A22-AN11-06	✻	○	63	22	40	11,2	6	A	0,49	
EMP13-063-A22-AN11-07C	✻	●	63	22	40	11,2	7	A	0,49	
EMP13-080-A27-AN11-07	✻	○	80	27	50	11,2	7	A	1,18	
EMP13-080-A27-AN11-09C	✻	●	80	27	50	11,2	9	A	1,18	ANGX1105
EMP13-100-B32-AN11-12		●	100	32	50	11,2	12	B	1,46	
EMP13-100-B32-AN11-12C	✻	○	100	32	50	11,2	12	B	1,46	
EMP13-125-B40-AN11-14		●	125	40	63	11,2	14	B	2,92	
EMP13-125-B40-AN11-14C	✻	○	125	40	63	11,2	14	B	2,92	
EMP13-160-C40-AN11-16		●	160	40	63	11,2	16	C	4,3	
EMP13-050-A22-AN15-04C	✻	●	50	22	40	14,5	4	A	0,26	
EMP13-060-A22-AN15-05C	✻	○	60	22	40	14,5	5	A	0,53	
EMP13-063-A22-AN15-05C	✻	●	63	22	40	14,5	5	A	0,53	
EMP13-080-A27-AN15-06C	✻	●	80	27	50	14,5	6	A	1,23	
EMP13-100-B32-AN15-08		●	100	32	50	14,5	8	B	1,52	
EMP13-100-B32-AN15-08C	✻	○	100	32	50	14,5	8	B	1,52	ANGX1506
EMP13-125-B40-AN15-10		●	125	40	63	14,5	10	B	3,05	
EMP13-125-B40-AN15-10C	✻	○	125	40	63	14,5	10	B	3,05	
EMP13-160-C40-AN15-12		●	160	40	63	14,5	12	C	4,46	
EMP13-200-C60-AN15-16		○	200	60	63	14,5	16	C	6,26	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura

Fresa per spallamento

Parti di ricambio

	Inserto	ANGX1105	ANGX1506
	ØD	40-160	50-200
	Vite (staffa)		I60M4×12 (3,4 Nm)
	Vite (inserti)	I60M3×9 (1,8 Nm)	I60M4×12 (3,4 Nm)
	Chiave		WT15IS
	Chiave (inserti)	WT09IS	WT15IS

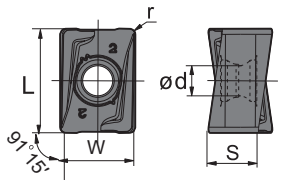


- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

ANGX	L	S	d
11 05	11,85	5,7	3,5
15 06	15,43	7,3	4,4

Inserti - Fresatura

AN** Inserti - Fresatura



		HC¹ (CVD)								HC¹ (PVD)									HT	HC²	HW	
	P																					
	M																					
	K																					
	N																					
	S																					
	H																					
ISO		W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	ANGX110504PNR-GM	8,4	0,4				●			●							●	●							
	ANGX110508PNR-GM	8,4	0,8	●			●			●	●						●	●							
	ANGX110520PNR-GM	8,4	2				●				●						●								
	ANGX150608PNR-GM	11	0,8	○			●			●	●						●	●							
	ANGX150616PNR-GM	11	1,6				●			●							●								
	ANGX150620PNR-GM	11	2							●	●						●								
	ANGX110504PNR-LH	8,4	0,4																					●	
	ANGX150608PNR-LH	11	0,8																					●	

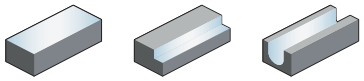
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

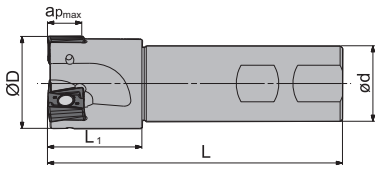
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

EMP13 Kr: 90°







Stelo Weldon

Articolo	✲	Stock	Dimensioni [mm] ØD	ød	L_1	L	$a_{p\,max}$	Denti	kg	Inserto
EMP13-025-XP25-AN11-02C	✲	●	25	25	32	100	11,2	2	0,31	ANGX1105
EMP13-032-XP32-AN11-03C	✲	●	32	32	40	115	11,2	3	0,61	
EMP13-040-XP32-AN11-04C	✲	●	40	32	40	125	11,2	4	0,75	
EMP13-032-XP32-AN15-02C	✲	●	32	32	40	125	11,2	2	0,66	ANGX1506
EMP13-040-XP32-AN15-03C	✲	●	40	32	40	125	11,2	3	0,76	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	ANGX1105	ANGX1506
	ØD	25-40	25-40
	Vite (inserti)	I60M3×9 (1,8 Nm)	I60M4×12 (3,4 Nm)
	Chiave (inserti)	WT09IS	WT15IS



Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

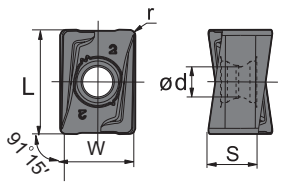
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

ANGX	L	S	d
11 05	11,85	5,7	3,5
15 06	15,43	7,3	4,4



AN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
ISO		W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ANGX110504PNR-GM**	8,4	0,4				●			●							●	●							
	ANGX110508PNR-GM	8,4	0,8	●			●			●	●						●	●							
	ANGX110520PNR-GM	8,4	2				●				●						●								
	ANGX150608PNR-GM	11	0,8	○			●			●	●						●	●							
	ANGX150616PNR-GM	11	1,6				●			●							●								
	ANGX150620PNR-GM	11	2							●	●						●								
	**ANGX110504PNR-LH**	8,4	0,4																					●	
	ANGX150608PNR-LH	11	0,8																					●	

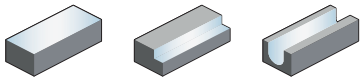
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

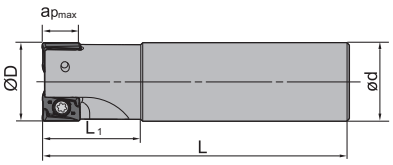
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

EMP13 Kr: 90°







Stelo cilindrico

Articolo	✲	Stock	Dimensioni [mm] ØD	e	ød	L_1	L	$a_{p\,max}$	Denti	kg	Inserto
EMP13-025-G25-AN11-02C	✲	●	25	11,2	25	32	100	11,2	2	0,31	ANGX1105
EMP13-032-G32-AN11-03C	✲	●	32	11,2	32	40	115	11,2	3	0,61	
EMP13-040-G32-AN11-04C	✲	●	40	11,2	32	40	125	11,2	4	0,75	
EMP13-032-G32-AN15-02C	✲	●	32	14,5	32	40	125	14,5	2	0,66	ANGX1506
EMP13-040-G32-AN15-03C	✲	●	40	14,5	32	40	125	14,5	3	0,76	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	ANGX1105	ANGX1506
	ØD	25-40	25-40
	Vite (inserti)	I60M3×9 (1,8 Nm)	I60M4×12 (3,4 Nm)
	Chiave (inserti)	WT09IS	WT15IS



Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

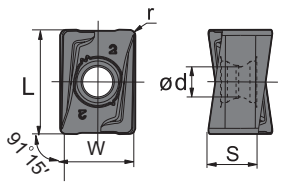
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

ANGX	L	S	d
11 05	11,85	5,7	3,5
15 06	15,43	7,3	4,4



AN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
	ISO	W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ANGX110504PNR-GM**	8,4	0,4				●			●							●	●							
	ANGX110508PNR-GM	8,4	0,8	●			●			●	●						●	●							
	ANGX110520PNR-GM	8,4	2				●				●						●								
	ANGX150608PNR-GM	11	0,8	○			●			●	●						●	●							
	ANGX150616PNR-GM	11	1,6				●			●							●								
	ANGX150620PNR-GM	11	2							●	●						●								
	**ANGX110504PNR-LH**	8,4	0,4																					●	
	ANGX150608PNR-LH	11	0,8																					●	

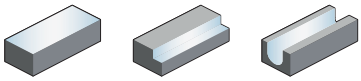
● In magazzino ○ Su richiesta

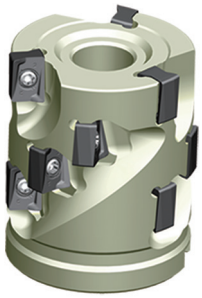
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

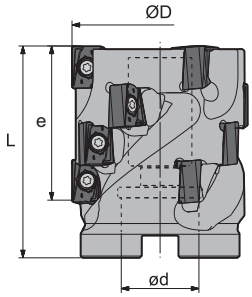
Codice sistema > B26 | Scelta gradi > B24 | Informazioni tecniche > B527 | Dati di taglio > B230

Fresa per spallamento

EMP13 Kr: 90°







Articolo	✲	Stock	Dimensioni [mm]				Denti	Numero inserti	kg	Inserto
			ØD	e	ød	L				
EMP13-050x43-A22-AN11-03		●	50	43	22	60	3	12	0,52	ANGX1105
EMP13-063x64-A27-AN11-04		○	63	64	27	80	4	24	1,15	
EMP13-063x53-A27-AN15-03		○	63	53	27	75	3	12	1,14	ANGX1506
EMP13-080x53-A32-AN15-04		●	80	53	32	75	4	16	1,82	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	**ANGX1105**	**ANGX1506**	
	ØD	**50-63**	**63-80**	
	Vite (inserti)	I60M3×9 (1,8 Nm)	I60M4×12 (3,4 Nm)	
	Chiave (inserti)	WT09IS	WT15IS	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

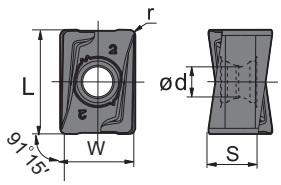
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

ANGX	L	S	d
11 05	11,85	5,7	3,5
15 06	15,43	7,3	4,4



AN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
ISO		W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ANGX110504PNR-GM**	8,4	0,4				●			●							●	●							
	ANGX110508PNR-GM	8,4	0,8	●			●			●	●						●	●							
	ANGX110520PNR-GM	8,4	2				●				●						●								
	ANGX150608PNR-GM	11	0,8	○			●			●	●						●	●							
	ANGX150616PNR-GM	11	1,6				●			●							●								
	ANGX150620PNR-GM	11	2							●	●						●								
	**ANGX110504PNR-LH**	8,4	0,4																					●	
	ANGX150608PNR-LH	11	0,8																					●	

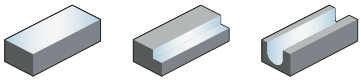
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

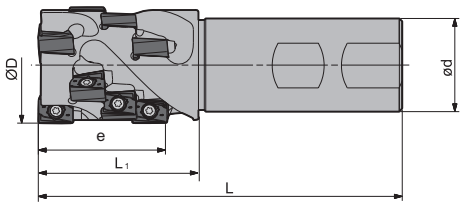
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa per spallamento

EMP13 Kr: 90°







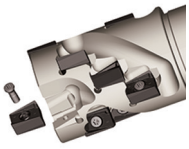
Stelo Weldon

Articolo	✻	Stock	Dimensioni [mm]					Denti	Numero inserti	kg	Inserto
			ØD	e	ød	L_1	L				
EMP13-032x43-XP32-AN11-02		○	32	43	32	48	115	2	8	0,61	ANGX1105
EMP13-040x43-XP32-AN11-03		○	40	43	32	55	125	3	12	0,79	
EMP13-040x40-XP32-AN15-02		○	40	40	32	55	115	2	6	0,79	ANGX1506
EMP13-050x53-XP40-AN15-02		○	50	53	40	70	145	2	8	1,53	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**ANGX1105**	**ANGX1506**	
	ØD	**32-40**	**40-50**	
	Vite (inserti)	I60M3×9 (1,8 Nm)	I60M4×12 (3,4 Nm)	
	Chiave (inserti)	WT09IS	WT15IS	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

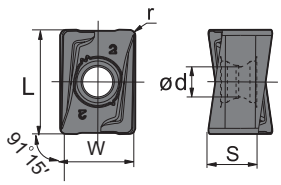
Inserti per fresatura

Fresa per spallamento

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

ANGX	L	S	d
11 05	11,85	5,7	3,5
15 06	15,43	7,3	4,4



AN** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
				P																		
				M																		
				K																		
				N																		
				S																		
				H																		
	ISO	W	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ANGX110504PNR-GM**	8,4	0,4				●			●							●	●							
	ANGX110508PNR-GM	8,4	0,8	●			●			●	●						●	●							
	ANGX110520PNR-GM	8,4	2				●				●						●								
	ANGX150608PNR-GM	11	0,8	○			●			●	●						●	●							
	ANGX150616PNR-GM	11	1,6				●			●							●								
	ANGX150620PNR-GM	11	2							●	●						●								
	**ANGX110504PNR-LH**	8,4	0,4																					●	
	ANGX150608PNR-LH	11	0,8																					●	

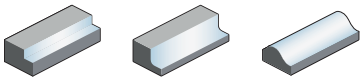
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

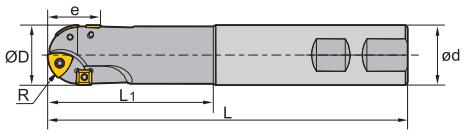
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa profilata

BMR01







Stelo Weldon

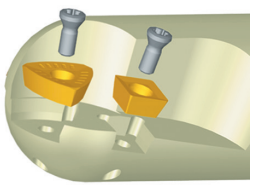
Articolo	✻	Stock	Dimensioni [mm]						Denti		kg	Inserto
			R	ØD	e	ød	L_1	L	ZDET	SPMT		
BMR01-020-XP20-S		○	10	20	20	20	50	125	2	2	0,3	ZDET08T2 & SPMT0603
BMR01-020-XP20-M		○	10	20	20	20	75	150	2	2	0,3	
BMR01-020-XP20-L		○	10	20	20	20	100	200	2	2	0,4	
BMR01-025-XP25-S		○	12,5	25	23	25	70	150	2	2	0,5	ZDET1103 & SPMT0603
BMR01-025-XP25-M		○	12,5	25	23	25	95	175	2	2	0,6	
BMR01-025-XP25-L		○	12,5	25	23	25	100	200	2	2	0,7	
BMR01-032-XP32-S		○	16	32	31	32	85	175	2	2	0,9	ZDET13T2 & SDMT0903
BMR01-032-XP32-M		○	16	32	31	32	100	200	2	2	1,1	
BMR01-032-XP32-L		○	16	32	31	32	150	250	2	2	1,4	
BMR01-040-XP40-S		○	20	40	41	40	85	175	3	2	1,4	ZPNT2204 & SPMT1204
BMR01-040-XP40-M		○	20	40	41	40	100	200	3	2	1,7	
BMR01-040-XP40-L		○	20	40	41	40	150	250	3	2	2,1	
BMR01-050-XP40-S		○	25	50	45	40	100	200	3	2	1,8	
BMR01-050-XP40-M		○	25	50	45	40	100	300	3	2	2,8	
BMR01-063-XP40-S		○	31,5	63	52	40	100	200	4	2	3	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**ZDET08T2 & SPMT0603**	**ZDET1103 & SPMT0603**	**ZDET13T2 & SDMT0903**	**ZPNT2204 & SPMT1204**
	ØD	**20**	**25**	**32**	**40-63**
	Vite (inserti)	I43M2,5×5,7 (1,0 Nm)	I43M2,5×5,7 (1,0 Nm)	I43M4×8 (3,4 Nm)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT07IP	WT07IP		
	Chiave (inserti)			WT15IS	WT20IS



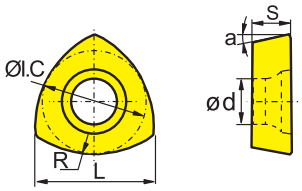
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Fresa profilata

ZDET	L	I.C	S	d
08 T2	8,4	6,75	2,78	2,8
11 03	10,6	8,5	3,18	2,8
13 T3	13,2	10,5	3,97	4,4
22 04	16,1	12,7	4,76	5,56

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



ZD** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		R	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ZDET13T3CYR16-PM**	16					○					○												
	**ZDET08T2CYR10**	10					○																	
	ZDET1103CYR12.5	12,5					○																	
	**ZPNT2204CY(R20)**	20					○																	
	ZPNT2204CY(R25)	25					●																	
	ZPNT2204CY(R31)	31,5					○																	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
06 03	6,35	6,35	3,18	2,8
12 04	12,7	12,7	4,76	5,5

SP** Inserti fresatura		HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
	P																				
	M																				
	K																				
	N																				
	S																				
	H																				
ISO	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SPMT060304-KT		○																				
	SPMT060304	0,4				●											○						
	SPMT120408	0,8	○	●	○		●	○									○						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SDMT	L	I.C	S	d
09 03	9,525	9,525	3,18	4,4

Inserti - Fresatura

SD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
	P																				
	M																				
	K																				
	N																				
	S																				
	H																				
ISO	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SDMT090308	0,8				●																	

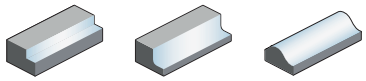
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

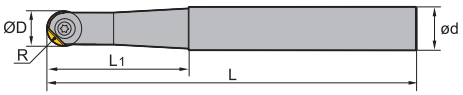
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Fresa profilata

BMR02







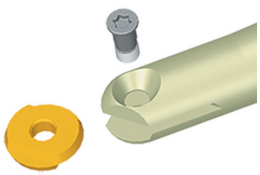
Articolo	✻	Stock	Dimensioni [mm]					kg	Inserto
			R	ØD	ød	L_1	L		
BMR02-012-G16-S		●	6	12	16	40	110	0,1	ROHX1203
BMR02-012-G16-M		●	6	12	16	50	130	0,2	
BMR02-012-G16-L		●	6	12	16	50	160	0,2	
BMR02-016-G20-S		●	8	16	20	45	140	0,3	ROHX1604
BMR02-016-G20-M		●	8	16	20	65	170	0,3	
BMR02-016-G20-L		●	8	16	20	65	200	0,4	
BMR02-020-G25-S		●	10	20	25	60	160	0,5	ROHX2005
BMR02-020-G25-M		●	10	20	25	80	200	0,6	
BMR02-020-G25-L		●	10	20	25	80	240	0,8	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	ROHX1203	ROHX1604	ROHX2005
	ØD	12	16	20
	Vite (inserti)	I70M4×10TT (3,4 Nm)	I70M5×12TT (6,7 Nm)	I70M5×16TT (6,7 Nm)
	Chiave (inserti)	WT15IS	WT20IS	WT20IS

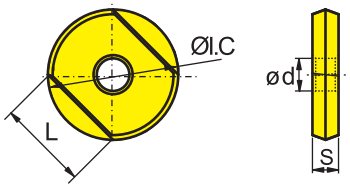


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

ROHX	L	I.C	S	d
12 03	8,5	12	3	4
16 04	11,3	16	4	5
20 05	14,1	20	5	5

RO** Inserti positivi		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ROHX1203**									○	○								●				
	ROHX1604											○							●				
	ROHX2005											○							●				

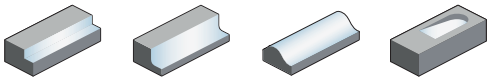
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

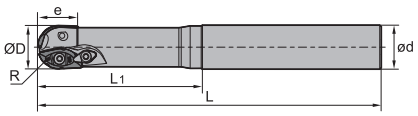
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa profilata

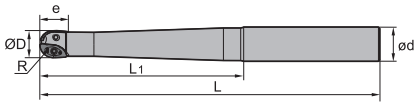
BMR03







A



B

Stelo cilindrico

Articolo	✻	Stock	Dimensioni [mm]						Denti	Attacco	kg	Inserto
			R	ØD	e	ød	L_1	L				
BMR03-016-G20-S		●	8	16	16	20	70	150	2	B	0,3	XPHT16
BMR03-016-G20-M		●	8	16	16	20	80	180	2	B	0,4	
BMR03-020-G25-S		●	10	20	20	25	80	180	2	B	0,5	XPHT20
BMR03-020-G25-M		●	10	20	20	25	100	200	2	B	0,6	
BMR03-020-G25-L		●	10	20	20	25	150	250	2	B	0,7	
BMR03-020-G25-XL		○	10	20	20	25	110	300	2	B	1	
BMR03-025-G25-S		●	12,5	25	25	25	80	180	2	B	0,6	XPHT25
BMR03-025-G25-M		●	12,5	25	25	25	100	200	2	B	0,7	
BMR03-025-G25-L		○	12,5	25	25	25	110	250	2	B	0,8	
BMR03-025-G25-XL		○	12,5	25	25	25	120	300	2	B	1	
BMR03-030-G32-S		○	15	30	30	32	120	200	2	A	1	XPHT30
BMR03-030-G32-M		●	15	30	30	32	150	250	2	A	1,3	
BMR03-030-G32-L		○	15	30	30	32	200	300	2	A	1,6	
BMR03-032-G32-S		●	16	32	32	32	120	200	2	A	1,1	XPHT32
BMR03-032-G32-M		●	16	32	32	32	150	250	2	A	1,4	
BMR03-032-G32-L		●	16	32	32	32	200	300	2	A	1,6	
BMR03-032-G32-XL		○	16	32	32	32	200	350	2	A	2	
BMR03-040-G40-S		○	20	40	40	40	120	200	2	A	1,6	XPHT40
BMR03-040-G40-M		○	20	40	40	40	150	250	2	A	2	
BMR03-040-G40-L		●	20	40	40	40	200	300	2	A	2,5	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

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Parti di ricambio

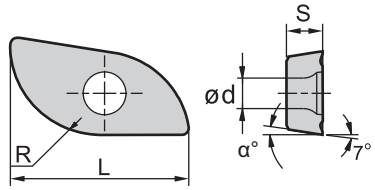
	Inserto	XPHT16	XPHT20	XPHT25	XPHT30	XPHT32	XPHT40
	ØD	16	20	25	30	32	40
	Staffa						CBH5R1
	Staffa				WD-208	WD-208	
	Vite (staffa)				I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)
	Vite (inserti)	I60M2,5×6,5 (1,0 Nm)		I60M4×10 (3,4 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)
	Vite (inserti)		I60M3,5×08TT (2,7 Nm)				
	Chiave (staffa)				WT20IT	WT20IT	WT25IT
	Chiave (inserti)		WT10IP				
	Chiave (inserti)				WT20IT	WT20IT	WT25IT
	Chiave (inserti)	WT07P					
	Chiave (inserti)			WT15S			



XPHT	L	S	d
16	16	3,18	3,1
20	20	3,97	4
25	25	4,76	4,7
30	30	6,35	5,8
32	32	6,35	5,8
40	40	7,94	6,8

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



XP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		R	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	XPHT16R0803-GM	8	9																●						
	XPHT20R10T3-GM	10	9																●						
	XPHT25R1204-GM	12,5	9																●						
	XPHT30R1506-GM	15	11																●						
	XPHT32R1606-GM	16	9																●						
	XPHT40R2007-GM	20	9																●						

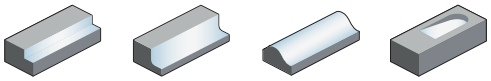
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

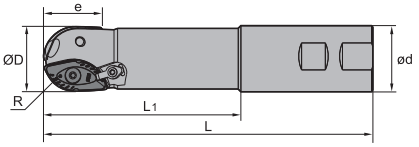
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Fresa profilata

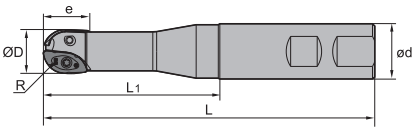
BMR03







A



B

Stelo Weldon

Articolo	✻	Stock	Dimensioni [mm]						Denti	Attacco	kg	Inserto
			R	ØD	e	ød	L_1	L				
BMR03-016-XP20-M		●	8	16	16	20	60	111	2	B	0,2	XPHT16
BMR03-020-XP25-M		●	10	20	20	25	70	127	2	B	0,3	XPHT20
BMR03-020-XP25-L		●	10	20	20	25	80	150	2	B	0,4	
BMR03-025-XP25-M		●	12,5	25	25	25	80	137	2	B	0,4	XPHT25
BMR03-025-XP25-L		●	12,5	25	25	25	100	200	2	B	0,6	
BMR03-030-XP32-M		●	15	30	30	32	100	161	2	A	0,8	XPHT30
BMR03-030-XP32-L		●	15	30	30	32	150	250	2	A	1,3	
BMR03-032-XP32-M		●	16	32	32	32	100	161	2	A	0,8	XPHT32
BMR03-032-XP32-L		○	16	32	32	32	120	250	2	A	1,3	
BMR03-040-XP40-M		○	20	40	40	40	100	175	2	A	1,3	XPHT40
BMR03-040-XP40-L		●	20	40	40	40	120	250	2	A	2	
BMR03-050-XP50-M		○	25	50	50	50	100	200	2	A	2,5	XPHT50
BMR03-050-XP50-L		○	25	50	50	50	150	250	2	A	3,1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Parti di ricambio

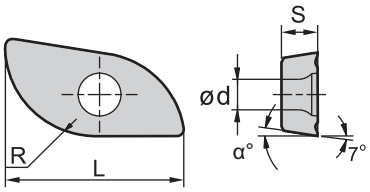
	Inserto	XPHT16	XPHT20	XPHT25	XPHT30	XPHT32	XPHT40	XPHT50
	ØD	16	20	25	30	32	40	50
	Staffa						CBH5R1	CBH5R1
	Staffa				WD-208	WD-208		
	Vite (staffa)				I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)	I43M6×16 (9,1 Nm)
	Vite (inserti)	I60M2,5×6,5 (1,0 Nm)		I60M4×10 (3,4 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)	I43M8×21 (16,2 Nm)
	Vite (inserti)		I60M3,5×08TT (2,7 Nm)					
	Chiave (staffa)				WT20IT	WT20IT	WT25IT	WT25IT
	Chiave (inserti)		WT10IP					
	Chiave (inserti)				WT20IT	WT20IT	WT25IT	WT30IT
	Chiave (inserti)	WT07P						
	Chiave (inserti)			WT15S				



XPHT	L	S	d
16	16	3,18	3,1
20	20	3,97	4
25	25	4,76	4,7
30	30	6,35	5,8
32	32	6,35	5,8
40	40	7,94	6,8
50	50	7,94	9,2

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



XP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)									HT		HC²	HW	
				P																				
				M																				
				K																				
				N																				
				S																				
				H																				
ISO		R	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	XPHT16R0803-GM	8	9																●						
	XPHT20R10T3-GM	10	9																●						
	XPHT25R1204-GM	12,5	9																●						
	XPHT30R1506-GM	15	11																●						
	XPHT32R1606-GM	16	9																●						
	XPHT40R2007-GM	20	9																●						
	XPHT50R2507-GM	25	9																●						

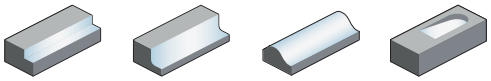
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

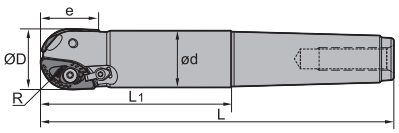
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa profilata

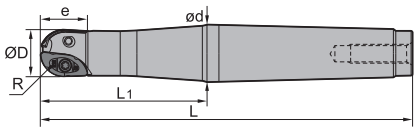
BMR03







A



B

Stelo a conicità Morse

Articolo	✻	Stock	Dimensioni [mm]						Denti	Attacco	kg	Inserto
			R	ØD	e	ød	L_1	L				
BMR03-020-MT3-M		○	10	20	20	18,7	70	156	2	B	0,4	XPHT20
BMR03-020-MT3-L		○	10	20	20	18,7	100	186	2	B	0,4	
BMR03-025-MT3-M		○	12,5	25	25	23,5	70	156	2	B	0,4	XPHT25
BMR03-025-MT3-L		○	12,5	25	25	23,5	100	186	2	B	0,4	
BMR03-030-MT4-M		○	15	30	30	28,2	70	189	2	A	0,8	XPHT30
BMR03-030-MT4-L		○	15	30	30	28,2	120	229	2	A	1	
BMR03-032-MT4-M		○	16	32	32	29,2	70	179	2	A	0,9	XPHT32
BMR03-032-MT4-L		●	16	32	32	29,2	100	209	2	A	0,9	
BMR03-040-MT5-L		○	20	40	40	36,9	90	226	2	A	1,8	XPHT40
BMR03-050-MT5-M		●	25	50	50	46,8	100	236	2	A	2,2	XPHT50
BMR03-050-MT5-L		○	25	50	50	46,8	150	286	2	A	2,9	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Parti di ricambio

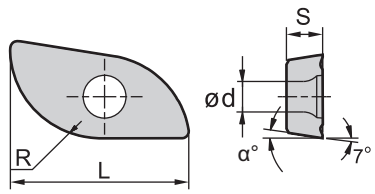
	Inserto	XPHT20	XPHT25	XPHT30	XPHT32	XPHT40	XPHT50
	ØD	20	25	30	32	40	50
	Staffa					CBH5R1	CBH5R1
	Staffa			WD-208	WD-208		
	Vite (staffa)			I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)	I43M6×16 (9,1 Nm)
	Vite (inserti)		I60M4×10 (3,4 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I43M6×16 (9,1 Nm)	I43M8×21 (16,2 Nm)
	Vite (inserti)	I60M3,5×08TT (2,7 Nm)					
	Chiave (staffa)			WT20IT	WT20IT	WT25IT	WT25IT
	Chiave (inserti)	WT10IP					
	Chiave (inserti)			WT20IT	WT20IT	WT25IT	WT30IT
	Chiave (inserti)		WT15S				



XPHT	L	S	d
20	20	3,97	4
25	25	4,76	4,7
30	30	6,35	5,8
32	32	6,35	5,8
40	40	7,94	6,8
50	50	7,94	9,2

● Buone condizioni di lavorazione
● Condizioni di lavorazione normali
● Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



XP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)									HT		HC²		HW	
			P																						
			M																						
			K																						
			N																						
			S																						
			H																						
ISO		R	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**XPHT20R10T3-GM**	10	9																●						
	XPHT25R1204-GM	12,5	9																●						
	XPHT30R1506-GM	15	11																●						
	XPHT32R1606-GM	16	9																●						
	XPHT40R2007-GM	20	9																●						
	XPHT50R2507-GM	25	9																●						

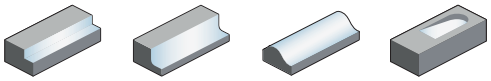
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

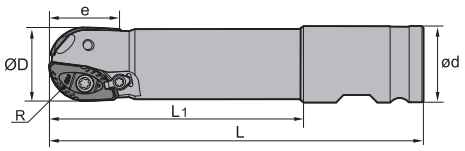
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa profilata

BMR03







Stelo complesso

Articolo	✲	Stock	Dimensioni [mm]						Denti	kg	Inserto
			R	ØD	e	ød	L_1	L			
BMR03-040-XPX-M		○	20	40	40	50,8	170	250	2	1,3	
BMR03-040-XPX-L		○	20	40	40	50,8	220	300	2	3,1	XPHT40
BMR03-040-XPX-XL		○	20	40	40	50,8	270	350	2	3,5	
BMR03-050-XPX-M		○	25	50	50	50,8	170	250	2	3,1	
BMR03-050-XPX-L		○	25	50	50	50,8	200	300	2	3,8	XPHT50
BMR03-050-XPX-XL		○	25	50	50	50,8	270	350	2	4,4	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	XPHT40	XPHT50
	ØD	40	50
	Staffa	CBH5R1	CBH5R1
	Vite (staffa)	I43M6×16 (9,1 Nm)	I43M6×16 (9,1 Nm)
	Vite (inserti)	I43M6×16 (9,1 Nm)	I43M8×21 (16,2 Nm)
	Chiave (staffa)	WT25IT	WT25IT
	Chiave (inserti)	WT25IT	WT30IT

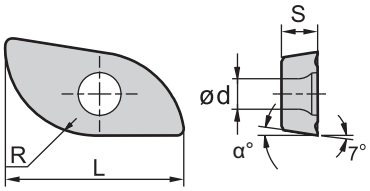


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

XPHT	L	S	d
40	40	7,94	6,8
50	50	7,94	9,2



XP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		R	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**XPHT40R2007-GM**	20	9																●						
	XPHT50R2507-GM	25	9																●						

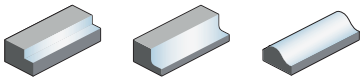
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

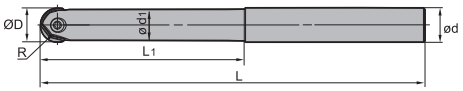
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa profilata

BMR04







Stelo cilindrico

Articolo	✻	Stock	Dimensioni [mm]						kg	Inserto
			R	ØD	ød	Ød1	L_1	L		
BMR04-012-G12-M		●	6	12	12	11	35	125	0,1	ZOHX12
BMR04-012-G12-L		●	6	12	12	11	45	150	0,1	
BMR04-016-G16-M		●	8	16	16	14	40	150	0,2	ZOHX16
BMR04-016-G16-L		●	8	16	16	14	55	180	0,3	
BMR04-020-G20-M		●	10	20	20	18	65	180	0,4	ZOHX20
BMR04-020-G20-L		●	10	20	20	18	100	250	0,6	
BMR04-025-G25-M		●	12,5	25	25	23	70	200	0,7	ZOHX25
BMR04-025-G25-L		●	12,5	25	25	23	100	250	0,9	
BMR04-030-G32-M		●	15	30	32	27	80	250	1,2	ZOHX30
BMR04-030-G32-L		●	15	30	32	27	110	300	1,5	
BMR04-032-G32-M		●	16	32	32	29	80	250	1,4	ZOHX32
BMR04-032-G32-L		●	16	32	32	29	110	300	1,7	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

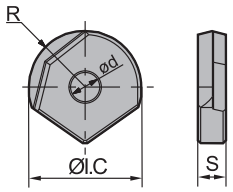
	Inserto	**ZOHX12**	**ZOHX16**	**ZOHX20**	**ZOHX25**	**ZOHX30**	**ZOHX32**	
	ØD	**12**	**16**	**20**	**25**	**30**	**32**	
	Vite (inserti)	I70M4×10TT (3,4 Nm)	I70M5×12TT (6,7 Nm)	I70M5×16TT (6,7 Nm)	I70M6×20TT (9,1 Nm)	I70M8×25TT (16,2 Nm)	I70M8×25TT (16,2 Nm)	
	Chiave (inserti)	WT15IP	WT20IP	WT20IP	WT20IP			
	Chiave (inserti)					WT30IT	WT30IT	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

ZOHX	I.C	S	d
12	12	1,5	4
16	16	4	5
20	20	5	5
25	25	6	6
30	30	7	8
32	32	7	8

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



ZO** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		R	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	ZOHX1203-GF	6																		●				
	ZOHX1604-GF	8																		●				
	ZOHX2005-GF	10																		●				
	ZOHX2506-GF	12,5																		○				
	ZOHX3007-GF	15																		●				
	ZOHX3207-GF	16																		●				
	ZOHX1203-GM	6																		●				
	ZOHX1604-GM	8																		●				
	ZOHX2005-GM	10																		●				
	ZOHX2506-GM	12,5																		○				
	ZOHX3007-GM	15																		●				
	ZOHX3207-GM	16																		●				

● In magazzino ○ Su richiesta

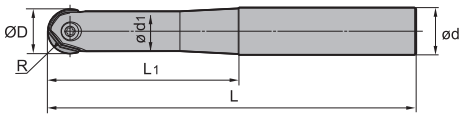
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Fresa profilata

BMR04





Stelo cilindrico

Articolo	✻	Stock	Dimensioni [mm] R	ØD	ød	Ød1	L_1	L	kg	Inserto
BMR04-012-G16-M		●	6	12	16	11	50	125	0,2	ZOHX12
BMR04-012-G16-L		●	6	12	16	11	70	150	0,2	
BMR04-016-G20-M		●	8	16	20	14	60	150	0,3	ZOHX16
BMR04-016-G20-L		●	8	16	20	14	80	180	0,3	
BMR04-020-G25-M		●	10	20	25	18	75	180	0,6	ZOHX20
BMR04-020-G25-L		●	10	20	25	18	95	200	0,6	
BMR04-025-G32-M		●	12,5	25	32	23	90	200	1	ZOHX25
BMR04-025-G32-L		●	12,5	25	32	23	110	250	1,3	
BMR04-030-G40-M		●	15	30	40	27	110	250	2	ZOHX30
BMR04-032-G40-L		●	16	32	40	29	125	300	2,4	ZOHX32

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

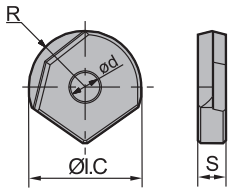
	Inserto	ZOHX12	ZOHX16	ZOHX20	ZOHX25	ZOHX30	ZOHX32	
	ØD	12	16	20	25	30	32	
	Vite (inserti)	I70M4×10TT (3,4 Nm)	I70M5×12TT (6,7 Nm)	I70M5×16TT (6,7 Nm)	I70M6×20TT (9,1 Nm)	I70M8×25TT (16,2 Nm)	I70M8×25TT (16,2 Nm)	
	Chiave (inserti)	WT15IP	WT20IP	WT20IP	WT20IP			
	Chiave (inserti)					WT30IT	WT30IT	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

ZOHX	I.C	S	d
12	12	1,5	4
16	16	4	5
20	20	5	5
25	25	6	6
30	30	7	8
32	32	7	8

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



ZO** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		R	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ZOHX1203-GF**	6																	●					
	ZOHX1604-GF	8																	●					
	ZOHX2005-GF	10																	●					
	ZOHX2506-GF	12,5																	○					
	ZOHX3007-GF	15																	●					
	ZOHX3207-GF	16																	●					
	**ZOHX1203-GM**	6																	●					
	ZOHX1604-GM	8																	●					
	ZOHX2005-GM	10																	●					
	ZOHX2506-GM	12,5																	○					
	ZOHX3007-GM	15																	●					
	ZOHX3207-GM	16																	●					

● In magazzino ○ Su richiesta

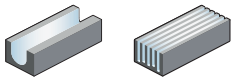
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

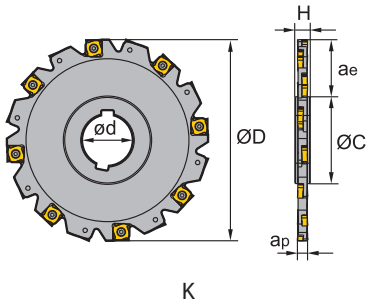
Note

Frese a disco

SMP01 Kr: 90°







K

Articolo	✻	Stock	Dimensioni [mm]						Attacco	kg	Inserto
			ØD	ød	Øc	H	a_p	$a_{e\ max}$			
SMP01-100x4-K27-SN12-10		○	100	27	45	12	4	25	K	0,2	
SMP01-125x4-K40-SN12-12		○	125	40	56	12	4	32	K	0,3	XSEQ1202
SMP01-160x4-K40-SN12-16		●	160	40	67	12	4	44	K	0,5	
SMP01-100x5-K27-SN12-10		○	100	27	45	12	5	25	K	0,2	
SMP01-125x5-K40-SN12-12		○	125	40	56	12	5	32	K	0,3	XSEQ1203
SMP01-160x5-K40-SN12-16		○	160	40	67	12	5	44	K	0,6	
SMP01-100x7-K27-SN12-10		○	100	27	45	12	7	25	K	0,3	
SMP01-125x7-K40-SN12-12		○	125	40	56	12	7	32	K	0,4	
SMP01-160x7-K40-SN12-16		○	160	40	67	12	7	44	K	0,8	XSEQ1204
SMP01-200x7-K50-SN12-18		○	200	50	71	12	7	62	K	1,2	
SMP01-250x7-K50-SN12-24		○	250	50	71	12	7	87	K	1,9	
SMP01-100x6-K27-SN12-10		○	100	27	45	12	6	25	K	0,3	
SMP01-125x6-K40-SN12-12		○	125	40	56	12	6	32	K	0,4	
SMP01-160x6-K40-SN12-16		○	160	40	67	12	6	44	K	0,7	XSEQ12T3
SMP01-200x6-K50-SN12-18		○	200	50	71	12	6	62	K	1,1	
SMP01-250x6-K50-SN12-24		○	250	50	71	12	6	87	K	1,7	
SMP01-315x6-K50-SN12-32		○	315	50	72	11,15	6	119,6	K	2,9	
SMP01-100x8-K27-SN12-10		○	100	27	45	12	8	25	K	0,3	
SMP01-125x8-K40-SN12-12		○	125	40	56	12	8	32	K	0,5	
SMP01-160x8-K40-SN12-16		○	160	40	67	12	8	44	K	0,9	XSEQ12T4
SMP01-200x8-K50-SN12-18		○	200	50	71	12	8	62	K	1,4	
SMP01-250x8-K50-SN12-24		○	250	50	71	12	8	87	K	2,2	

● In magazzino ○ Su richiesta

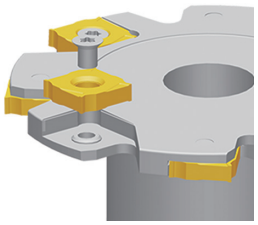
✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Frese a disco

Parti di ricambio

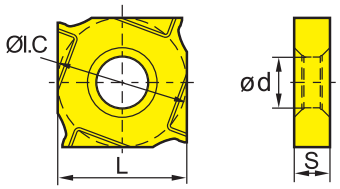
	Inserto	XSEQ1202	XSEQ1203	XSEQ1204	XSEQ12T3	XSEQ12T4
	ØD	63-160	63-160	63-250	63-360	63-250
	Vite (inserti)	I91M4×3,2X (3,4 Nm)	I91M4×3,2X (3,4 Nm)	I91M4×6,1X (3,4 Nm)	I91M4×5,1X (3,4 Nm)	I91M4×7,1X (3,4 Nm)
	Chiave (inserti)	WT08IP	WT08IP	WT08IP	WT08IP	WT08IP



XSEQ	L	I.C	S	d
12 02	12,7	12,7	2,3	5
12 03	12,7	12,7	3	5
12 T3	12,7	12,7	3,5	5
12 04	12,7	12,7	4	5
12 T4	12,7	12,7	4,5	5

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli



XS** Inserti fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P	●	●	●	●	●	●		●	●	●		●	●	●	●	●	●		
	M		●	●	●	●	●			●	●		●	●	●	●	●	●		
	K							●	●							●				●
	N								●											●
	S				●		●			●	●		●	●	●		●				
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	XSEQ1202																○						
	XSEQ1203	○			●												●						
	XSEQ1204																●						
	XSEQ12T3		●														●					○	
	XSEQ12T4																●						

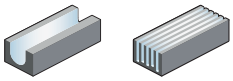
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

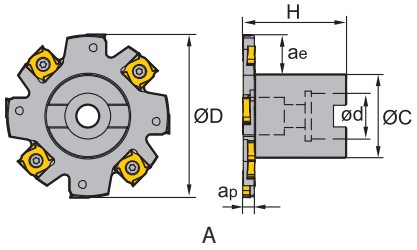
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

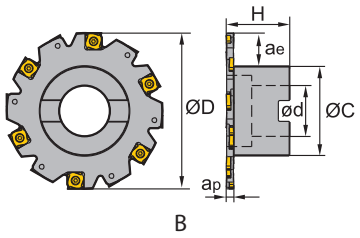
Frese a disco

SMP01 Kr: 90°









Articolo	✻	Stock	Dimensioni [mm]						Denti	Attacco	kg	Inserto
			ØD	ød	Øc	H	a_p	$a_{e\,max}$				
SMP01-063x4-A22-SN12-06		○	63	22	32	40	4	14	6	A	0,2	
SMP01-080x4-A22-SN12-08		○	80	22	40	40	4	18	8	A	0,4	XSEQ1202
SMP01-100x4-A27-SN12-10		○	100	27	48	50	4	23	10	A	0,6	
SMP01-063x5-A22-SN12-06		○	63	22	32	40	5	14	6	A	0,2	
SMP01-080x5-A22-SN12-08		○	80	22	40	40	5	18	8	A	0,4	XSEQ1203
SMP01-100x5-A27-SN12-10		○	100	27	48	50	5	23	10	A	0,7	
SMP01-063x7-A22-SN12-06		○	63	22	32	40	7	14	6	A	0,2	
SMP01-080x7-A22-SN12-08		○	80	22	40	40	7	18	8	A	0,5	
SMP01-100x7-A27-SN12-10		○	100	27	48	50	7	23	10	A	0,7	XSEQ1204
SMP01-125x7-B40-SN12-12		○	125	40	72	50	7	23	12	B	1,1	
SMP01-160x7-B40-SN12-16		○	160	40	70	60	7	41	16	B	1,4	
SMP01-063x6-A22-SN12-06		○	63	22	32	40	6	14	6	A	0,2	
SMP01-080x6-A22-SN12-08		○	80	22	40	40	6	18	8	A	0,5	
SMP01-100x6-A27-SN12-10		○	100	27	48	50	6	23	10	A	0,7	XSEQ12T3
SMP01-125x6-B40-SN12-12		○	125	40	72	50	6	23	12	B	1	
SMP01-160x6-B40-SN12-16		○	160	40	70	60	6	41	16	B	1,3	
SMP01-063x8-A22-SN12-06		○	63	22	32	40	8	14	6	A	0,2	
SMP01-080x8-A22-SN12-08		○	80	22	40	40	8	18	8	A	0,5	
SMP01-100x8-A27-SN12-10		○	100	27	48	50	8	23	10	A	0,8	XSEQ12T4
SMP01-125x8-B40-SN12-12		○	125	40	72	50	8	23	12	B	1,1	
SMP01-160x8-B40-SN12-16		○	160	40	70	60	8	41	16	B	1,5	

● In magazzino ○ Su richiesta

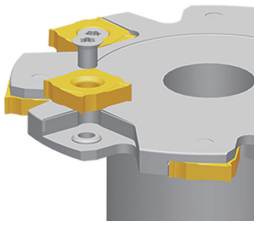
✻ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Frese a disco

Parti di ricambio

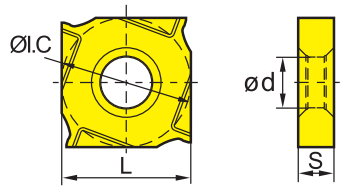
	Inserto	XSEQ1202	XSEQ1203	XSEQ1204	XSEQ12T3	XSEQ12T4
	ØD	63-160	63-160	63-250	63-250	63-250
	Vite (inserti)	I91M4×3,2X (3,4 Nm)	I91M4×3,2X (3,4 Nm)	I91M4×6,1X (3,4 Nm)	I91M4×5,1X (3,4 Nm)	I91M4×7,1X (3,4 Nm)
	Chiave (inserti)	WT08IP	WT08IP	WT08IP	WT08IP	WT08IP



XSEQ	L	I.C	S	d
12 02	12,7	12,7	2,3	5
12 03	12,7	12,7	3	5
12 T3	12,7	12,7	3,5	5
12 04	12,7	12,7	4	5
12 T4	12,7	12,7	4,5	5

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

XS** Inserti fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	XSEQ1202																○						
	XSEQ1203	○			●												●						
	XSEQ1204																●						
	XSEQ12T3		●														●					○	
	XSEQ12T4																●						

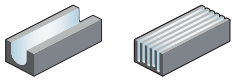
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

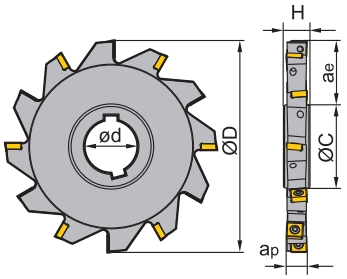
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a disco

SMP03 Kr: 90°







K

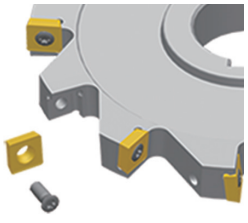
Articolo	✻	Stock	Dimensioni [mm] ØD	ød	Øc	H	a_p	$a_{e\,max}$	Denti	Attacco	kg	Inserto
SMP03-080x8-K27-MP06-10		○	80	27	44	12	8	17,6	10	K	0,2	MPHT0603
SMP03-100x8-K32-MP06-14		○	100	32	49	12	8	25,1	14	K	0,3	
SMP03-100x10-K32-MP06-14		○	100	32	49	14	10	25,1	14	K	0,4	
SMP03-125x10-K40-MP06-16		○	125	40	57	14	10	33,6	16	K	0,6	
SMP03-125x12-K40-MP08-12		○	125	40	58,3	16	12	32,6	12	K	0,7	MPHT0803
SMP03-160x12-K40-MP08-14		○	160	40	64,3	16	12	31,5	14	K	1,3	
SMP03-160x16-K40-MP12-12		○	160	40	64,6	20	16	47,6	12	K	1,6	MPHT1204
SMP03-160x18-K40-MP12-12		○	160	40	65,3	24	18	47,3	12	K	1,9	
SMP03-160x20-K40-MP12-12		○	160	40	65,3	26	20	47,3	12	K	2,1	
SMP03-200x16-K50-MP12-14		○	200	50	74,6	20	16	62,6	14	K	2,5	
SMP03-200x18-K50-MP12-14		○	200	50	75,3	24	18	62,3	14	K	2,9	
SMP03-200x20-K50-MP12-14		○	200	50	75,3	26	20	62,3	14	K	3,3	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**MPHT0603**	**MPHT0803**	**MPHT1204**
	ØD	**80-125**	**125 -160**	**160-200**
	Vite (inserti)	I60M2,5×6,5 (1,0 Nm)	I60M3×7 (1,8 Nm)	I60M5×13 (6,7 Nm)
	Chiave (inserti)	WT07IP	WT09IP	
	Chiave (inserti)			WT20IS

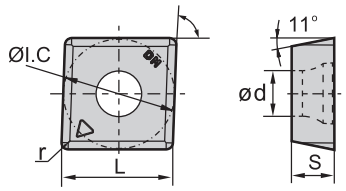


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

MPHT	L	I.C	S	d
06 03	6,35	6,35	3,18	2,8
08 03	8,3	8,3	3,18	3,4
12 04	12,7	12,7	4,76	5,56



MP** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●	●		
		M		●	●	●	●	●			●	●		●	●	●	●	●	●	●		
		K						●	●	●								●			●	
		N								●											●	●
		S			●		●				●	●		●	●	●		●				
		H																				
	ISO	r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**MPHT060304-DM**	0,4	●				●											●						
	MPHT080305-DM	0,5	●				○											●						
	MPHT120408-DM	0,8	●				○		●									●						

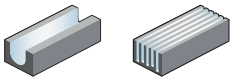
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

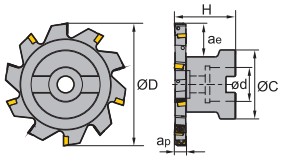
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a disco

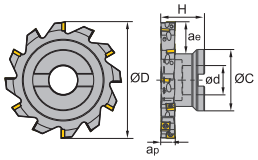
SMP03 Kr: 90°



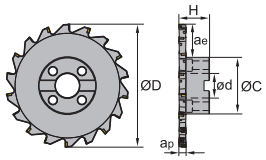




A



B



C

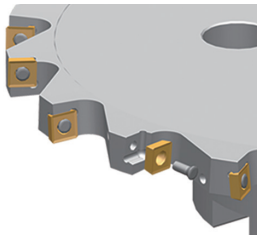
Articolo	✻	Stock	Dimensioni [mm]						Denti	Attacco	kg	Inserto
			ØD	ød	Øc	H	a_p	$a_{e\,max}$				
SMP03-080x8-A22-MP06-10		○	80	22	45	40	8	21	10	A	0,4	MPHT0603
SMP03-100x8-B27-MP06-14		○	100	27	55	40	8	24,5	14	B	0,6	
SMP03-100x10-B27-MP06-14		●	100	27	55	40	10	24,5	14	B	0,7	
SMP03-125x10-B32-MP06-16		○	125	32	65	45	10	33,3	16	B	1,1	
SMP03-125x12-B32-MP08-12		○	125	32	65	45	12	33	12	B	1,4	MPHT0803
SMP03-160x12-B40-MP08-14		○	160	40	80	50	12	44	14	B	1,9	
SMP03-200x12-C40-MP08-18		○	200	40	92	50	12	52	18	C	3,2	
SMP03-125x16-B32-MP12-10		○	125	32	65	50	16	33	10	B	2,3	MPHT1204
SMP03-160x16-B40-MP12-12		○	160	40	80	60	16	45	12	B	2,3	
SMP03-160x18-B40-MP12-12		○	160	40	80	60	18	45	12	B	2,4	
SMP03-200x16-C40-MP12-14		○	200	40	92	50	16	52	14	C	3,6	
SMP03-200x18-C40-MP12-14		○	200	40	92	50	18	52	14	C	3,9	
SMP03-200x20-C40-MP12-14		○	200	40	92	50	20	52	14	C	4,2	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**MPHT0603**	**MPHT0803**	**MPHT1204**
	ØD	**80-125**	**125 -200**	**125 -200**
	Vite (inserti)	I60M2,5×6,5 (1,0 Nm)	I60M3×7 (1,8 Nm)	I60M5×13 (6,7 Nm)
	Chiave (inserti)	WT07IP	WT09IP	
	Chiave (inserti)			WT20IS



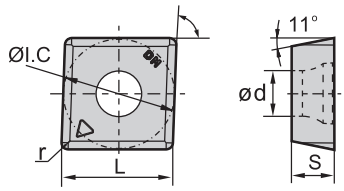
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Frese a disco

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

MPHT	L	I.C	S	d
06 03	6,35	6,35	3,18	2,8
08 03	8,3	8,3	3,18	3,4
12 04	12,7	12,7	4,76	5,56



MP** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●	●		
		M		●	●	●	●	●			●	●		●	●	●	●	●	●	●		
		K						●	●	●								●			●	
		N								●											●	●
		S			●		●				●	●		●	●	●		●				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**MPHT060304-DM**	0,4	●				●											●						
	MPHT080305-DM	0,5	●				○											●						
	MPHT120408-DM	0,8	●				○		●									●						

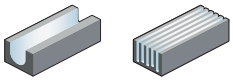
● In magazzino ○ Su richiesta

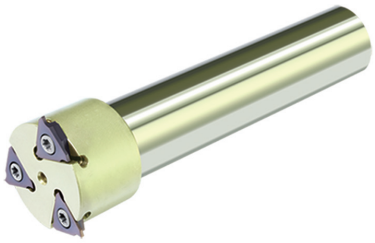
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

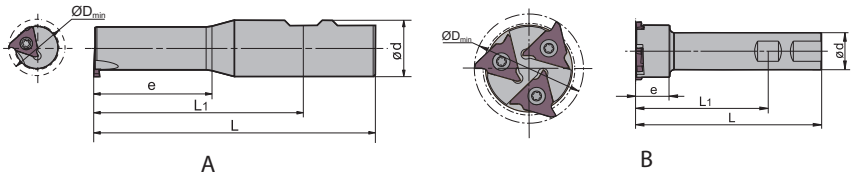
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a disco

SMP05 Kr: 90°





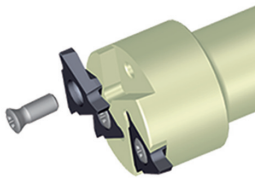


Articolo	✻	Stock	Dimensioni [mm]					Denti	Attacco	Inserto
			e	ØDmin	ød	L_1	L			
SMP05-025x3.0-XP25-QC16-01		●	40	25	25	89	125	1	A	QC16L
SMP05-039x3.0-XP25-QC16-03		●	23	39	25	89	125	3	B	
SMP05-044x4.8-XP25-QC22-03		●	23	44	25	89	125	3	B	QC22L

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

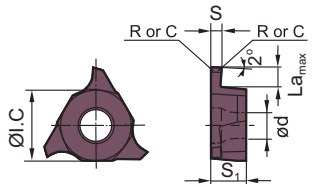
	Inserto	**QC16L**	**QC16L**	**QC22L**	
	ØD	**25**	**39**	**44**	
	Vite (inserti)	I60M3,5×10 (2,7 Nm)	I60M3,5×10 (2,7 Nm)	I60M5×13 (6,7 Nm)	
	Chiave (inserti)	WT15IP	WT15IP	WT20IP	

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

QC16	I.C	d
16	9,525	4,4
22	12,7	5,5



QC ** Inserti - Tornitura/Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P	●	●	◉	●	●	●		●		◉	◉		◉	●	●	●	●	●	
	M		◎	◉	●	●	●				◎	◉		◎	●	●	●	◎	◎	
	K							◉	◉	○							◎			◉
	N								◉											◉
	S				◉		◉			●	●		◉	◉	●		◉			
	H																			
ISO		S±0.025	La_{max}	R/C	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	QC16L075-R01	0,75	2	0.1														○								
	QC16L095-R01	0,95	2	0.1														○								
	QC16L100-R01	1	2	0.1														○								
	QC16L110-R01	1,1	2	0.1											○			●								
	QC16L120-R01	1,2	2	0.1														○								
	QC16L125-R02	1,25	2	0.2														●								
	QC16L130-R02	1,3	2	0.2														○								
	QC16L145-R02	1,45	2	0.2														●								
	QC16L150-R02	1,5	2	0.2														○								
	QC16L160-R02	1,6	2	0.2														●								
	QC16L165-R02	1,65	2	0.2														○								
	QC16L170-R02	1,7	2	0.2														○								
	QC16L175-R02	1,75	2	0.2														○								
	QC16L185-R02	1,85	2,5	0.2														○								
	QC16L200-R02	2	2,5	0.2														●								
	QC16L210-R02	2,1	2,5	0.2														○								
	QC16L210-R05	2,1	2,5	0.5														○								
	QC16L220-R02	2,2	2,5	0.2														○								
	QC16L250-R02	2,5	2,5	0.2														●								
	QC16L300-R02	3	3	0.2														●								

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

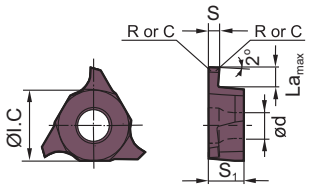
Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

QC16	I.C	d
16	9,525	4,4
22	12,7	5,5

QC ** Inserti - Tornitura/Fresatura



	HC¹ (CVD)								HC¹ (PVD)									HT		HC²		HW	
P	◉	◉	◉	◉	◉	◉		◉			◉	◉		◉	◉	◉	◉	◉	◉	◉			
M		◉	◉	◉	◉	◉					◉	◉		◉	◉	◉	◉	◉	◉	◉			
K							◉	◉	○														◉
N									◉													◉	◉
S				◉		◉				○	◉		◉	◉	◉		◉						
H																							

ISO	S±0.025	La_{max}	R/C	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
QC22L100-R02	1	2	0.2														○								
QC22L125-R02	1,25	2	0.2														○								
QC22L145-R02	1,45	2	0.2														○								
QC22L150-R02	1,5	3,5	0.2														○								
QC22L175-R02	1,75	3,5	0.2														○								
QC22L185-R02	1,85	3,5	0.2														○								
QC22L200-R02	2	3,5	0.2														○								
QC22L230-R02	2,3	3,5	0.2														○								
QC22L250-R03	2,5	4	0.3														○								
QC22L265-R03	2,65	4	0.3														●								
QC22L280-R03	2,8	4	0.3														○								
QC22L300-R03	3	4	0.3														○								
QC22L320-R03	3,2	4	0.3														○								
QC22L330-R03	3,3	4	0.3														○								
QC22L350-R03	3,5	5	0.3														○								
QC22L400-R04	4	5	0.4														●								
QC22L430-R04	4,3	5	0.4											○			○								
QC22L450-R04	4,5	5	0.4														○							○	
QC22L480-R04	4,8	5	0.4														○								

● In magazzino ○ Su richiesta

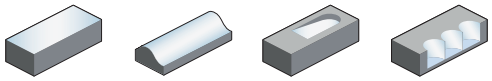
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

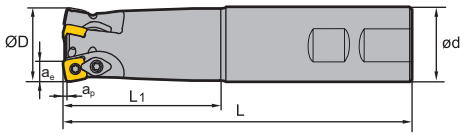
Note

Frese ad alto avanzamento

XMR01 Kr: 15°







Inserto tipo S, stelo Weldon

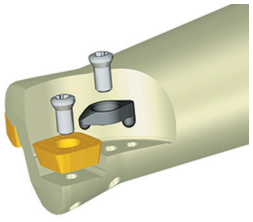
Articolo	✲	Stock	Dimensioni [mm] ØD	ød	a_p	ae	L_1	L	Denti	kg	Inserto
XMR01-020-XP20-SD06-04C	✲	○	20	20	0,8	5,8	50	130	4	0,24	SDMT06T2
XMR01-025-XP25-SD06-03C	✲	○	25	25	0,8	5,8	60	140	3	0,46	
XMR01-025-XP25-SD06-05C	✲	○	25	25	0,8	5,8	60	140	5	0,44	
XMR01-032-XP32-SD06-06C	✲	○	32	32	0,8	5,8	70	150	6		
XMR01-025-XP25-SD09-02		○	25	25	1,4	8,8	60	140	2	0,5	SDMT09T3
XMR01-032-XP32-SD09-03C	✲	○	32	32	1,4	8,8	70	150	3	0,8	
XMR01-035-XP32-SD09-03		○	35	32	1,4	8,8	70	150	3	0,8	
XMR01-040-XP40-SD12-03		○	40	40	1,8	11,7	70	150	3	1,3	SDMT1204
XMR01-040-XP40-SD12-03C	✲	○	40	40	1,8	11,7	70	150	3	1,2	
XMR01-040-XP40-SD15-02		○	40	40	2,2	14	70	200	2	1,6	SDMT1505

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Parti di ricambio

	Inserto	SDMT06T2	SDMT09T3	SDMT1204	SDMT1505
	ØD	20-63	25-63	32-100	40-160
	Staffa		WD-204	WD-204	WD-208
	Vite (staffa)		I60M4×8,4 (3,4 Nm)	I60M4×8,4 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Vite (inserti)	I60M2,2×5,5 (0,8 Nm)		I60M4×8,4 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Vite (inserti)		I60M3,5×08TT (2,7 Nm)		
	Chiave (staffa)		WT15IP	WT15IP	WT20IP
	Chiave (inserti)	WT07IP	WT10IP	WT15IP	WT20IP



Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

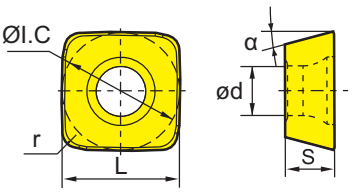
Inserti per fresatura

Frese ad alto avanzamento

SDMT	L	I.C	S	d
06 T2	6,35	6,35	2,58	5,5
09 T3	9,525	9,525	3,97	4
12 04	12,7	12,7	4,76	4,4
15 05	15,875	15,875	5,56	5,5

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



SD** Inserti - Fresatura				HC¹ (CVD)								HC¹ (PVD)								HT		HC²		HW	
			P																						
			M																						
			K																						
			N																						
			S																						
			H																						
	ISO	r	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SDMT06T208-DM	0,8	15						○					○		○				○					
	SDMT09T312-DM	1,2	15	●					●		○			○	○				●						
	SDMT120412-DM	1,2	15	●					●		●			○	○										
	SDMT150520-DM	2	15											○											
	SDMT09T312-NM						●								○	●				●					
	SDMT120412-NM						●								○	●		●		●					
	SDMT06T208-PM	0,8	15	●			●									○	●			○					
	SDMT09T312-PM	1,2	15				●				○			○			●								
	SDMT120412-PM	1,2	15				●							○			●								
	SDMT150520-PM	2	15				○										○								

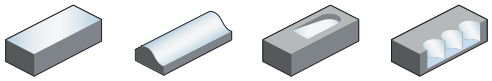
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

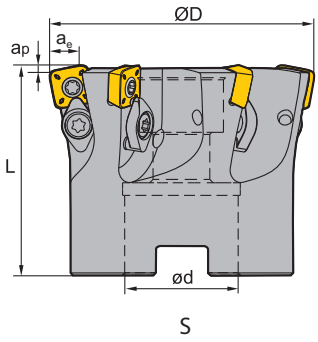
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Frese ad alto avanzamento

XMR01 Kr: 15°







Articolo	✲	Stock	Dimensioni [mm] ØD	ød	a_p	ae	L	Denti	Attacco	kg	Inserto
XMR01-040-A16-SD06-07C	✲	○	40	16	0,8	5,8	40	7	A	0,178	
XMR01-050-A22-SD06-07C	✲	○	50	22	0,8	5,8	40	7	A	0,36	
XMR01-050-A22-SD06-08C	✲	○	50	22	0,8	5,8	40	8	A	0,36	SDMT06T2
XMR01-063-A22-SD06-10C	✲	○	63	22	0,8	5,8	40	10	A	0,53	
XMR01-063-A27-SD06-10C	✲	○	63	27	0,8	5,8	50	10	A	0,57	
XMR01-040-A16-SD09-04		○	40	16	1,4	8,8	40	4	A	0,182	
XMR01-040-A16-SD09-04C	✲	○	40	16	1,4	8,8	40	4	A	0,182	
XMR01-040-A16-SD09-05		○	40	16	1,4	8,8	40	5	A	0,181	
XMR01-050-A22-SD09-04C	✲	●	50	22	1,4	8,8	40	4	A	0,3	
XMR01-050-A22-SD09-05C	✲	○	50	22	1,4	8,8	40	5	A	0,3	SDMT09T3
XMR01-063-A22-SD09-06C	✲	●	63	22	1,4	8,8	40	6	A	0,5	
XMR01-063-A27-SD09-06C	✲	○	63	27	1,4	8,8	50	6	A	0,6	
XMR01-063-A22-SD09-07C	✲	●	63	22	1,4	8,8	40	7	A	0,44	
XMR01-063-A27-SD09-07C	✲	○	63	27	1,4	8,8	50	7	A		
XMR01-050-A22-SD12-03C	✲	○	50	22	1,8	11,7	40	3	A		
XMR01-050-A22-SD12-04C	✲	●	50	22	1,8	11,7	40	4	A		
XMR01-052-A22-SD12-04C	✲	○	52	22	1,8	11,7	40	4	A		
XMR01-052-A22-SD12-05C	✲	○	52	22	1,8	11,7	40	5	A		
XMR01-063-A22-SD12-05C	✲	●	63	22	1,8	11,7	40	5	A	0,5	
XMR01-063-A27-SD12-05C	✲	●	63	27	1,8	11,7	50	5	A	0,6	
XMR01-063-A22-SD12-06C	✲	●	63	22	1,8	11,7	50	6	A	0,55	
XMR01-066-A27-SD12-05C	✲	○	66	27	1,8	11,7	50	5	A	0,56	SDMT1204
XMR01-080-A27-SD12-05C	✲	●	80	27	1,8	11,7	63	5	A	0,9	
XMR01-080-A27-SD12-06C	✲	●	80	27	1,8	11,7	50	6	A	0,9	
XMR01-080-A27-SD12-07C	✲	●	80	27	1,8	11,7	50	7	A	0,93	
XMR01-080-A27-SD12-08C	✲	●	80	27	1,8	11,7	50	8	A	0,92	
XMR01-100-B32-SD12-06		●	100	32	1,8	11,7	50	6	B	1,8	
XMR01-100-B32-SD12-06C	✲	●	100	32	1,8	11,7	50	6	B	1,8	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura

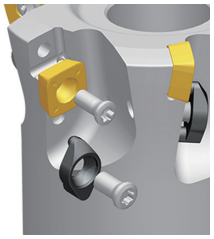
Articolo	✻	Stock	Dimensioni [mm]					Denti	Attacco	kg	Inserto
			ØD	ød	a_p	ae	L				
XMR01-100-B32-SD12-07C	✻	●	100	32	1,8	11,7	50	7	B		SDMT1204
XMR01-125-B40-SD12-08C	✻	●	125	40	1,8	11,7	63	8	B		
XMR01-125-B40-SD12-09C	✻	●	125	40	1,8	11,7	63	9	B		
XMR01-063-A22-SD15-04C	✻	○	63	22	2,2	14	40	4	A		SDMT1505
XMR01-100-B32-SD15-07		○	100	32	2,2	14	50	7	B	1,2	
XMR01-125-B40-SD15-09		○	125	40	2,2	14	63	9	B	2,9	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SDMT06T2**	**SDMT09T3**	**SDMT1204**	**SDMT1505**
	ØD	**20-63**	**25-63**	**32-160**	**40-160**
	Staffa		WD-204	WD-204	WD-208
	Vite (staffa)		I60M4×8,4 (3,4 Nm)	I60M4×8,4 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Vite (inserti)	I60M2,2×5,5 (0,8 Nm)		I60M4×8,4 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Vite (inserti)		I60M3,5×08TT (2,7 Nm)		
	Chiave (staffa)		WT15IP	WT15IP	WT20IP
	Chiave (inserti)	WT07IP	WT10IP	WT15IP	WT20IP

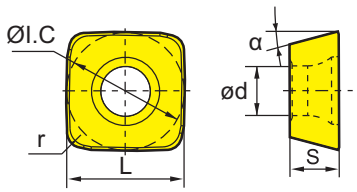


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

SDMT	L	I.C	S	d
06 T2	6,35	6,35	2,58	5,5
09 T3	9,525	9,525	3,97	4
12 04	12,7	12,7	4,76	4,4
15 05	15,875	15,875	5,56	5,5

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



SD** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT		HC²		HW	
				P																					
				M																					
				K																					
				N																					
				S																					
				H																					
ISO		r	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SDMT06T208-DM	0,8	15						○					○		○				○					
	SDMT09T312-DM	1,2	15	●					●		○			○	○				●						
	SDMT120412-DM	1,2	15	●					●		●			○	○										
	SDMT150520-DM	2	15											○											
	SDMT09T312-NM						●								○	●				●					
	SDMT120412-NM						●								○	●		●		●					
	SDMT06T208-PM	0,8	15	●			●									○	●			○					
	SDMT09T312-PM	1,2	15				●				○			○			●								
	SDMT120412-PM	1,2	15				●							○			●								
	SDMT150520-PM	2	15				○										○								

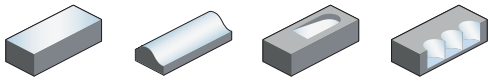
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

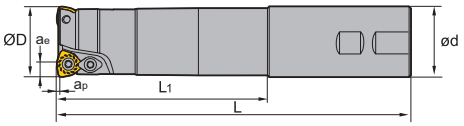
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese ad alto avanzamento

XMR01 Kr: 11°-22°







Inserto tipo W, stelo Weldon

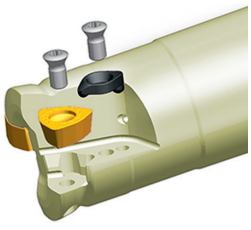
Articolo	✲	Stock	Dimensioni [mm] ØD	ød	a_p	ae	L_1	L	Denti	kg	Inserto
XMR01-020-XP20-WP05-02C-M	✲	○	20	20	1,5	3,8	50	130	2	0,2	WPGT0503
XMR01-020-XP20-WP05-02-L		○	20	20	1,5	3,8	100	180	2	0,3	
XMR01-020-XP20-WP05-02-XL		○	20	20	1,5	3,8	130	250	2	0,8	
XMR01-025-XP25-WP06-02C-M	✲	○	25	25	1,5	4,35	60	140	2	0,4	WPGT0604
XMR01-025-XP25-WP06-02-L		○	25	25	1,5	4,35	120	200	2	0,6	
XMR01-025-XP25-WP06-02-XL		○	25	25	1,5	4,35	180	300	2	1	
XMR01-032-XP32-WP06-03C-M	✲	○	32	32	1,5	4,35	70	150	3	0,8	
XMR01-032-XP32-WP06-03-L		○	32	32	1,5	4,35	120	200	3	1	
XMR01-032-XP32-WP06-03-XL		○	32	32	1,5	4,35	180	300	3	1,6	
XMR01-040-XP32-WP06-03C-M	✲	○	40	32	1,5	4,35	50	150	3	0,9	
XMR01-040-XP32-WP06-03-XL		○	40	32	1,5	4,35	50	300	3	1,8	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Angolo di inclinazione variabile (l'angolo di inclinazione dipende dalla dimensione dell'inserto)
angolo di attacco: WPGT05: 16°; WPGT06: 22°; WPGT08: 11°; WPGT09: 21°

Parti di ricambio

	Inserto	WPGT0503	WPGT0604	
	ØD	20	25-40	
	Vite (inserti)	I60M3,5×6,5 (2,7 Nm)	I60M4×8,4 (3,4 Nm)	
	Chiave (inserti)	WT10IP	WT15IP	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

WPGT	I.C	S	d
05 03	7,94	3,5	4
06 04	9,525	4,2	4,4

WP** Inserti positivi			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**WPGT050315ZSR-PM**	1,5														●								
	WPGT060415ZSR-PM	1,5	●												●	●			●					
	**WPGT050315ZSR**	1,5	●					●						●										
	WPGT060415ZSR	1,5	●					●						●		●								

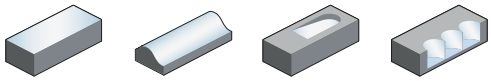
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

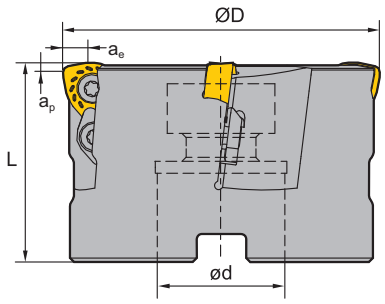
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese ad alto avanzamento

XMR01 Kr: 11°-22°







Inserto tipo W, fresa a manicotto

Articolo	✲	Stock	Dimensioni [mm] ØD	ød	a_p	ae	L	Denti	Attacco	kg	Inserto
XMR01-050-A22-WP06-04		●	50	22	1,5	4,35	50	4	A	0,4	WPGT0604
XMR01-050-A22-WP06-04C	✲	●	50	22	1,5	4,35	50	4	A	0,4	
XMR01-050-A22-WP08-03		○	50	22	1,5	5,66	50	3	A	0,4	WPGT0806
XMR01-063-A27-WP08-04		●	63	27	1,5	5,66	50	4	A	0,7	
XMR01-063-A22-WP08-04C	✲	●	63	22	1,5	5,66	50	4	A	0,7	
XMR01-063-A27-WP08-04C	✲	○	63	27	1,5	5,66	50	4	A	0,7	
XMR01-080-A27-WP08-05C	✲	●	80	27	1,5	5,66	63	5	A	1,5	
XMR01-100-B32-WP08-06		●	100	32	1,5	5,66	63	6	B	2,2	
XMR01-125-B40-WP08-07		●	125	40	1,5	5,66	63	7	B	3,5	
XMR01-160-B40-WP08-08		○	160	40	1,5	5,66	63	8	B	6	
XMR01-063-A22-WP09-03C	✲	○	63	22	3	6,8	50	3	A	0,7	WPGT0907
XMR01-080-A27-WP09-04C	✲	○	80	27	3	6,8	63	4	A	1,4	
XMR01-100-B32-WP09-05		○	100	32	3	6,8	63	5	B	2,1	
XMR01-125-B40-WP09-06		○	125	40	3	6,8	63	6	B	3,7	
XMR01-160-B40-WP09-07		○	160	40	3	6,8	63	7	B	6,3	

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Angolo di inclinazione variabile (l'angolo di inclinazione dipende dalla dimensione dell'inserto)
angolo di attacco: WPGT05: 16°; WPGT06: 22°; WPGT08: 11°; WPGT09: 21°

Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Parti di ricambio

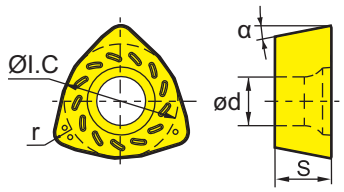
	Inserto	WPGT0604	WPGT0806	WPGT0907
	ØD	50	50-160	3-160
	Staffa		WD-208	WD-208
	Vite (staffa)		I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)
	Vite (inserti)	I60M4×8,4 (3,4 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)
	Chiave (staffa)		WT20IT	WT20IT
	Chiave (inserti)	WT15IS		
	Chiave (inserti)		WT20IT	WT20IT



WPGT	I.C	S	d
06 04	9,525	4,2	4,4
08 06	12,85	6,35	5,5
09 07	15	7	5,5

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



WP** Inserti positivi			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**WPGT060415ZSR-PM**	1,5	●												●	●			●					
	WPGT080615ZSR-PM	1,5	●												●	●			●					
	WPGT090725ZSR-PM	2,5														●								
	**WPGT060415ZSR**	1,5	●					●						●		●								
	WPGT080615ZSR	1,5	●					●						●		●								
	WPGT090725ZSR	2,5						●						○		●								

● In magazzino ○ Su richiesta

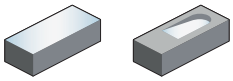
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

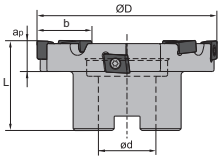
Note

Frese a forare

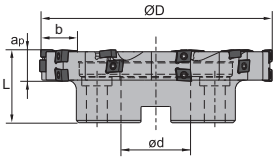
XMP01 Kr: 90°



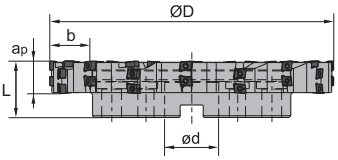




B



C



D

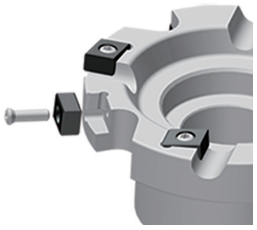
Articolo	✻	Stock	Dimensioni [mm]					Denti	Attacco	kg	Inserto
			ØD	ød	b	a_p	L				
XMP01-080*18-B27-CNE1210-08		●	80	27	18	15	50	8	B	0,67	CNE12
XMP01-100*18-B32-CNE1210-08		●	100	32	18	20	50	8	B	0,99	
XMP01-125*27-B40-CNE1210-15		●	125	40	27	22,5	63	15	B	2,46	
XMP01-160*27-C40-CNE1210-18		●	160	40	27	25	63	18	C	3,7	
XMP01-200*27-C60-CNE1210-21		●	200	60	27	31,5	63	21	C	5,46	
XMP01-250*36-C60-CNE1210-32		●	250	40	36	56,5	63	32	C	9,79	
XMP01-315*36-D60-CNE1210-42		●	315	60	36	47,5	63	42	D	17,65	
XMP01-400*36-D60-CNE1210-52		●	400	60	36	36	63	52	D	27,36	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**CNE12**
	ØD	**80-400**
	Vite (inserti)	I60M4×12 (3,4 Nm)
	Chiave (inserti)	WT15IP

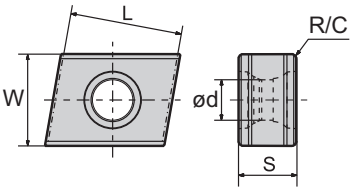


Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

CNE	L	S	d
12	12,8	6,35	4,4

Inserti - Fresatura



CN** Inserti - Fresatura		HC[1] (CVD)							HC[1] (PVD)								HT	HC[2]	HW	
P		●	●	●	●	●	●	●		●	●		●	●	●	●	●	●		
M			●	●	●	●	●			●	●		●	●	●	●	●	●		
K							●	●	●								●			●
N									●										●	●
S				●		●				●	●		●	●	●					
H																				
ISO		R/C	W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**CNE121006A**	0,4	10				●																		
	**CNE121006B**	0,6	10				○			●															

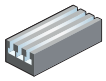
● In magazzino ○ Su richiesta

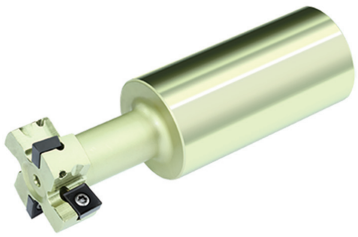
HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

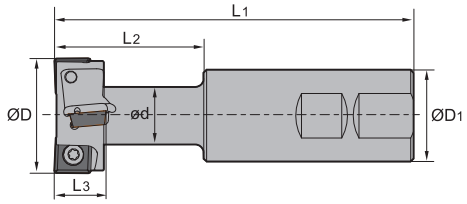
Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Frese per scanalature a T

TMP01 Kr: 90°







Stelo Weldon

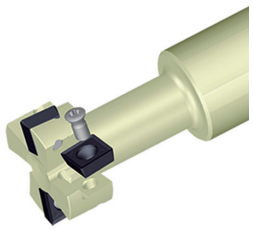
Articolo	✻	Stock	Dimensioni [mm]						Denti	Numero inserti	per scanalature a T	Inserto
			ØD	$ØD_1$	ød	L_1	L_2	L_3				
TMP01-021-XP25-MP06-01		●	21	25	10	100	32	9	1	2	12	MPHT0603
TMP01-025-XP25-MP06-01		●	25	25	12	100	35	11	1	2	14	
TMP01-032-XP32-MP08-02		●	32	32	15	110	45	14	2	4	18	MPHT0803
TMP01-040-XP32-MP12-02C	✻	●	40	32	19	125	55	18	2	4	22	MPHT1204
TMP01-050-XP40-MP12-02C	✻	●	50	40	25	140	65	22	2	4	28	
TMP01-060-XP50-MP12-02		●	60	50	32	160	80	28	2	6	36	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	MPHT0603	MPHT0803	MPHT1204
	ØD	21-25	32	40-60
	Vite (inserti)	I60M2,5×5,5 (1,0 Nm)	I60M3×7 (1,8 Nm)	I60M5×10 (6,7 Nm)
	Chiave (inserti)	WT07IP	WT09IP	
	Chiave (inserti)			WT20IT



Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

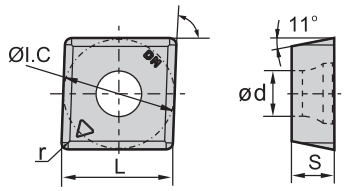
Inserti per fresatura

Frese per scanalature a T

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

MPHT	L	I.C	S	d
06 03	6,35	6,35	3,18	2,8
08 03	8,3	8,3	3,18	3,4
12 04	12,7	12,7	4,76	5,56



MP** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●	●		
		M		●	●	●	●	●			●	●		●	●	●	●	●	●	●		
		K						●	●	●								●			●	
		N								●											●	●
		S			●		●				●	●		●	●	●		●				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**MPHT060304-DM**	0,4	●				●											●						
	MPHT080305-DM	0,5	●				○											●						
	MPHT120408-DM	0,8	●				○		●									●						

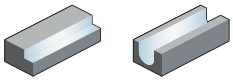
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

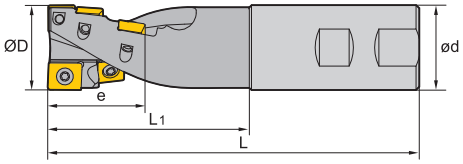
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Frese elicoidali

HMP01 Kr: 90°







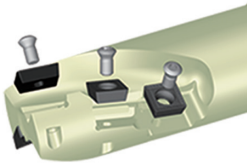
Stelo Weldon

Articolo	✻	Stock	Dimensioni [mm]					File di denti	Denti		Tipo attacco	Inserto
			ØD	e	ød	L_1	L		APKT	SPMT		
HMP01-040x55-XP40-SP12-02		●	40	55	40	95	175	2	1	5	Weldon	APKT1504 & SPMT1204
HMP01-050x55-XP40-SP12-04		●	50	55	40	95	175	4	2	10	Weldon	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**APKT1504 & SPMT1204**	**APKT1504 & SPMT1204**	
	ØD	**40**	**50**	
	Vite (inserti)	I60M5×10 (6,7 Nm)	I60M5×13 (6,7 Nm)	
	Chiave (inserti)	WT20T	WT20T	

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Frese elicoidali

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

APKT	L	S	d
15 04	16,33	4,76	5,4

AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**APKT150412-PM**	1,2	12,7				●												●						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

SP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
ISO		r		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-PM**	0,8					●												●						

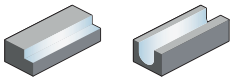
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

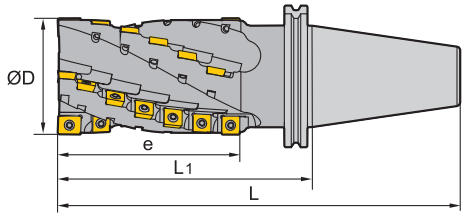
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese elicoidali

HMP01 Kr: 90°







Articolo	✻	Stock	Dimensioni [mm]				File di denti	Denti		Tipo attacco	Inserto
			ØD	e	L_1	L		APKT	SPMT		
HMP01-050x84-BT50-SP12-04		○	50	84	145	246,8	4	2	16	BT	APKT1504 & SPMT1204
HMP01-050x84-JT50-SP12-04		○	50	84	145	246,75	4	2	16	JT	
HMP01-063x74-BT50-SP12-04		○	63	74	135	236,8	4	2	14	BT	
HMP01-063x74-JT50-SP12-04		○	63	74	135	236,75	4	2	14	JT	
HMP01-063x104-BT50-SP12-04		○	63	104	165	266,8	4	2	20	BT	
HMP01-063x104-JT50-SP12-04		●	63	104	165	266,75	4	2	20	JT	
HMP01-063x134-BT50-SP12-04		○	63	134	195	296,8	4	2	26	BT	
HMP01-063x134-JT50-SP12-04		○	63	134	195	296,75	4	2	26	JT	
HMP01-080x104-BT50-SP12-04		○	80	104	165	266,8	4	2	20	BT	
HMP01-080x104-JT50-SP12-04		○	80	104	165	266,75	4	2	20	JT	
HMP01-080x144-BT50-SP12-04		○	80	144	205	306,8	4	2	28	BT	
HMP01-080x144-JT50-SP12-04		○	80	144	205	306,75	4	2	28	JT	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**APKT1504 & SPMT1204**	
	ØD	**50-80**	
	Vite (inserti)	I60M5×10 (6,7 Nm)	
	Chiave (inserti)	WT20IS	

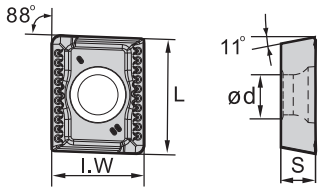
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Frese elicoidali

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

APKT	L	S	d
15 04	16,33	4,76	5,4

AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**APKT150412-PM**	1,2	12,7				●												●						

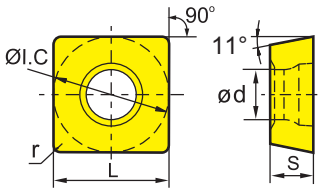
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

SP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
ISO		r		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-PM**	0,8					●												●						

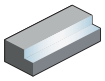
● In magazzino ○ Su richiesta

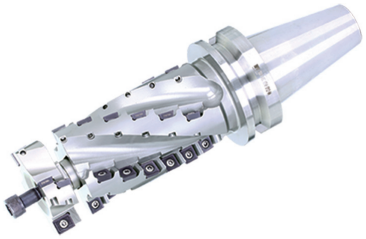
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

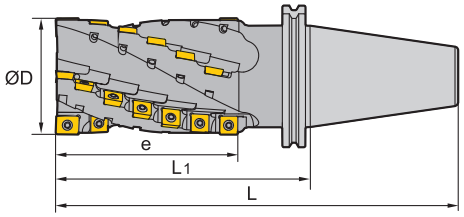
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese elicoidali

HMP01 EC Kr: 90°





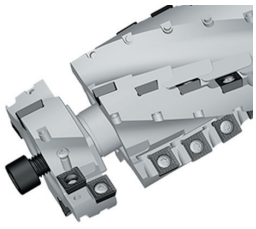


Articolo	✻	Stock	Dimensioni [mm]				File di denti	Denti		Tipo attacco	Inserto
			ØD	e	L_1	L		APKT	SPMT		
HMP01-050x84EC-BT50-SP12-04		○	50	84	145	246,8	4	2	16	BT	APKT1504 & SPMT1204
HMP01-050x84EC-JT50-SP12-04		●	50	84	145	246,75	4	2	16	JT	
HMP01-063x74EC-BT50-SP12-04		○	63	74	135	236,8	4	2	14	BT	
HMP01-063x74EC-JT50-SP12-04		○	63	74	135	236,75	4	2	14	JT	
HMP01-063x104EC-BT50-SP12-04		○	63	104	165	266,8	4	2	20	BT	
HMP01-063x104EC-JT50-SP12-04		○	63	104	165	266,75	4	2	20	JT	
HMP01-063x134EC-BT50-SP12-04		○	63	134	195	296,8	4	2	26	BT	
HMP01-063x134EC-JT50-SP12-04		●	63	134	195	296,75	4	2	26	JT	
HMP01-080x104EC-BT50-SP12-04		○	80	104	165	266,8	4	2	20	BT	
HMP01-080x104EC-JT50-SP12-04		○	80	104	165	266,75	4	2	20	JT	
HMP01-080x144EC-BT50-SP12-04		○	80	144	205	306,8	4	2	28	BT	
HMP01-080x144EC-JT50-SP12-04		○	80	144	205	306,75	4	2	28	JT	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	APKT1504 & SPMT1204	APKT1504 & SPMT1204	APKT1504 & SPMT1204	
	ØD	**50**	**63**	**80**	
	Testa intercambiabile	050EC	063EC	080EC	
	Vite (testa)	M10×50 (16,6 Nm)	M10×50 (16,6 Nm)	M12×55 (25,2 Nm)	
	Vite (inserti)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	I60M5×13 (6,7 Nm)	
	Chiave (testa)	WH80L	WH80L	WH100L	
	Chiave (inserti)	WT20IS	WT20IS	WT20IS	

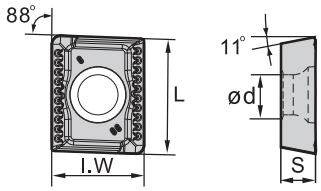
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Frese elicoidali

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

APKT	L	S	d
15 04	16,33	4,76	5,4

AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**APKT150412-PM**	1,2	12,7				●												●						

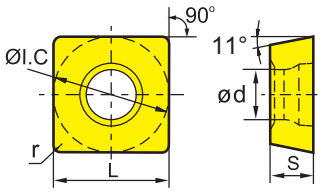
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

SP** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
			P																			
			M																			
			K																			
			N																			
			S																			
			H																			
ISO		r		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-PM**	0,8					●												●						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a smusso

CMZ01 Kr: 30°







Stelo cilindrico

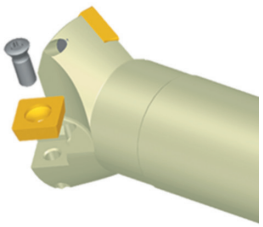
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	ød	L_1	L			
CMZ01-012-G20-SP12-01		●	12	20	40	100	1	0,2	SPMT1204
CMZ01-025-G25-SP12-02		●	25	25	40	120	2	0,8	
CMZ01-032-G32-SP12-03		●	32	32	40	180	3	1,1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPMT1204**
	ØD	**12-32**
	Vite (inserti)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT20IS

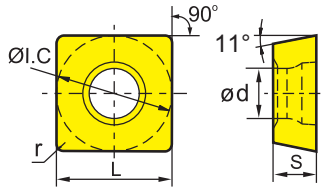


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

Inserti - Fresatura

SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-HT-1**	0,8												○										
	**SPMT120408**	0,8	○	●	○		●	○										○						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a smusso

CMZ01 Kr: 30°







Stelo Weldon

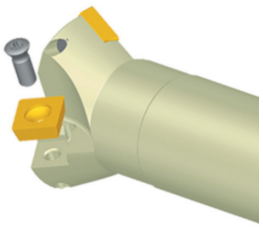
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	ød	L_1	L			
CMZ01-025-XP25-SP12-02		●	25	25	40	120	2	0,6	SPMT1204
CMZ01-032-XP32-SP12-03		●	32	32	40	180	3	1	
CMZ01-012-XP20-SP12-01		●	12	20	40	100	1	0,2	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPMT1204**
	ØD	**12-32**
	Vite (inserti)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT20IS

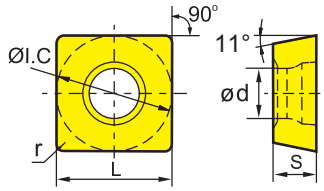


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

Inserti - Fresatura



SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P	●	●	●	●	●	●	●			●	●		●	●	●	●	●	●		
		M		●	●	●	●	●	●			●	●		●	●	●	●	●	●		
		K							●	●									●			●
		N								●												●
		S				●		●			●	●		●	●	●		●				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-HT-1**	0,8												○										
	**SPMT120408**	0,8	○	●	○		●	○										○						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a smusso

CMA01 Kr: 45°







Stelo cilindrico

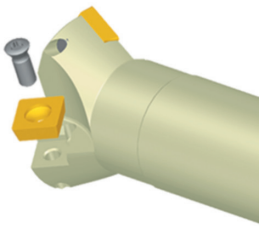
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	ød	L_1	L			
CMA01-012-G20-SP12-01		●	12	20	40	100	1	0,2	SPMT1204
CMA01-025-G25-SP12-02		●	25	25	40	120	2	0,8	
CMA01-032-G32-SP12-03		●	32	32	40	180	3	1,1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPMT1204**
	ØD	**12-32**
	Vite (inserti)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT20IS

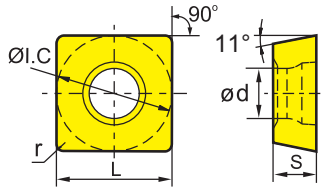


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

Inserti - Fresatura

SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SPMT120408-HT-1	0,8												○										
	SPMT120408	0,8	○	●	○		●	○										○						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a smusso

CMA01 Kr: 45° 





Stelo Weldon

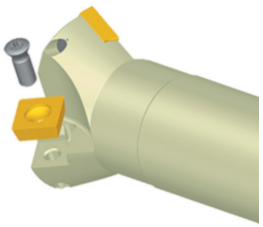
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	ød	L_1	L			
CMA01-012-XP20-SP12-01		●	12	20	40	100	1	0,2	SPMT1204
CMA01-025-XP25-SP12-02		●	25	25	40	120	2	0,6	
CMA01-032-XP32-SP12-03		●	32	32	40	100	3	1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPMT1204**
	ØD	**12-32**
	Vite (inserti)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT20IS

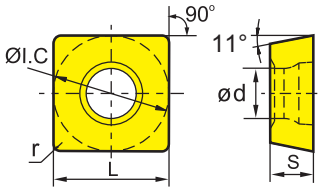


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

Inserti - Fresatura

SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-HT-1**	0,8												○										
	**SPMT120408**	0,8	○	●	○		●	○										○						

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

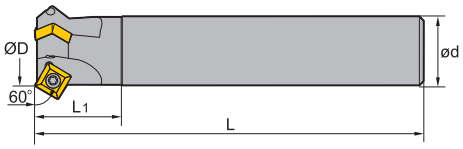
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a smusso

CMD01 Kr: 60°







Stelo cilindrico

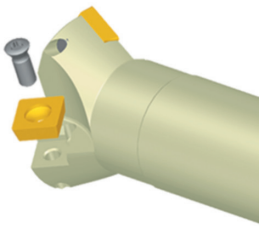
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	ød	L_1	L			
CMD01-012-G20-SP12-01		●	12	20	40	100	1	0,2	SPMT1204
CMD01-025-G25-SP12-02		●	25	25	40	120	2	0,8	
CMD01-036-G32-SP12-03		●	36	32	40	180	3	1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPMT1204**
	ØD	**12-36**
	Vite (inserti)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT20IS

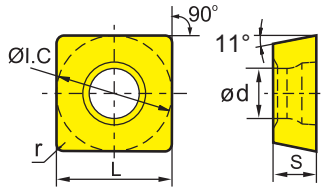


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

Inserti - Fresatura



SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P	●	●	◉	●	●	◉		◉	◉	◉	◉	◉	◉	◉	●	●	●		
		M		◉	◉	◉	◉	◉			◉	◉	◉	◉	◉	◉	●	●	●		
		K						◉	◉	●							●				◉
		N								◉											◉ ◉
		S			◉		◉				●	◉		◉	◉	◉		◉				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101 YD201
	SPMT120408-HT-1	0,8												○									
	SPMT120408	0,8	○	●	○		●	○										○					

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

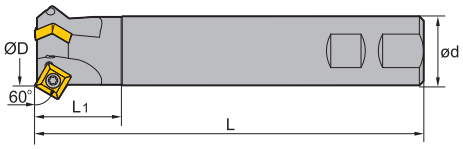
Codice sistema > B26 Scelta gradi > B24 Informazioni tecniche > B527 Dati di taglio > B230

Frese a smusso

CMD01 Kr: 60°







Stelo Weldon

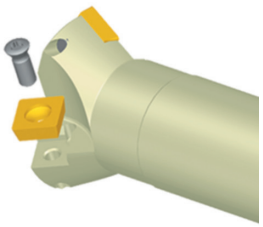
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	ød	L_1	L			
CMD01-012-XP20-SP12-01		●	12	20	40	100	1	0,2	SPMT1204
CMD01-025-XP25-SP12-02		●	25	25	40	120	2	0,6	
CMD01-036-XP32-SP12-03		●	36	32	40	180	3	1	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	**SPMT1204**
	ØD	**12-36**
	Vite (inserti)	I43M5×11 (6,7 Nm)
	Chiave (inserti)	WT20IS



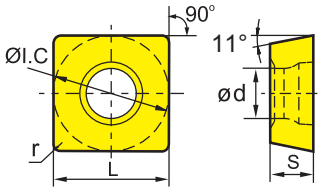
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Frese a smusso

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
12 04	12,7	12,7	4,76	5,5

Inserti - Fresatura

SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPMT120408-HT-1**	0,8												○										
	**SPMT120408**	0,8	○	●	○		●	○										○						

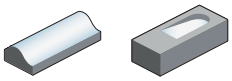
● In magazzino ○ Su richiesta

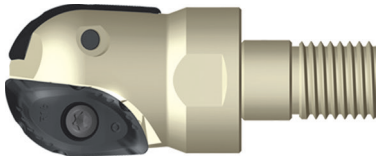
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

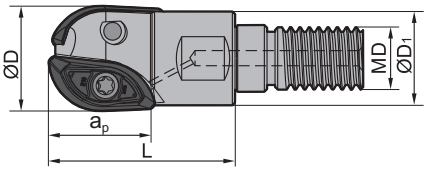
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Frese a profilo

QCH - XPHT







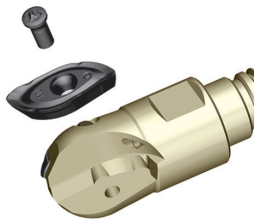
Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	ap	L	MD	Denti	kg	Inserto
QCH-16-XPHT16-M10		●	16	17	16	28	10	2	0,036	XPHT16
QCH-20-XPHT20-M12		○	20	19	20	30	12	2	0,051	XPHT20
QCH-25-XPHT25-M12		●	25	24	25	35	12	2	0,071	XPHT25
QCH-30-XPHT30-M16		●	30	29	30	45	16	2	0,14	XPHT30
QCH-32-XPHT32-M16		●	32	30	32	45	16	2	0,162	XPHT32

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	XPHT16	XPHT20	XPHT25	XPHT30	XPHT32
	ØD	**16**	**20**	**25**	**30**	**32**
	Vite (inserti)	I60M2,5×6,5 (1,0 Nm)		I60M4×10 (3,4 Nm)	I60M5×13,2 (6,7 Nm)	I60M5×13,2 (6,7 Nm)
	Vite (inserti)		I60M3,5×08TT (2,7 Nm)			
	Chiave (inserti)		WT10IP			
	Chiave (inserti)				WT20IT	WT20IT
	Chiave (inserti)	WT07P				
	Chiave (inserti)			WT15S		



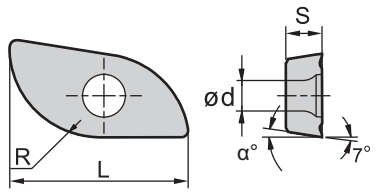
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Serie QCH

XPHT	L	S	d
16	16	3,18	3,1
20	20	3,97	4
25	25	4,76	4,7
30	30	6,35	5,8
32	32	6,35	5,8

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



XP** Inserti fresatura		HC¹ (CVD)								HC¹ (PVD)									HT		HC²		HW	
P		◔	◔	◕	◔	◔	◔		◔			◔	◕		◔	◔	◕	○	○		○		○		
M			◔	◕	◔	◔	◕					◔	◕		◔	◕	◔	◕	○	○		○			
K								◕	◕		●								●					◕	
N										◕														◕	◕
S					◕		◕				○	◔			◔	◔	◔		◕						
H																									

ISO		R	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**XPHT16R0803-GM**	8	9																●						
	XPHT20R10T3-GM	10	9																●						
	XPHT25R1204-GM	12,5	9																●						
	XPHT30R1506-GM	15	11																●						
	XPHT32R1606-GM	16	9																●						

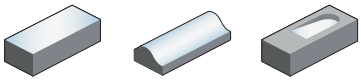
● In magazzino ○ Su richiesta

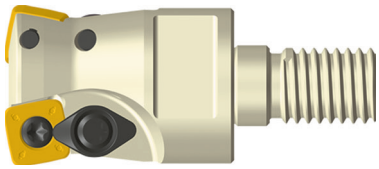
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

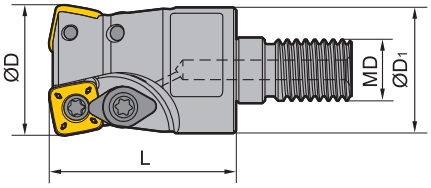
Codice sistema > B26 | Scelta gradi > B24 | Informazioni tecniche > B527 | Dati di taglio > B230

Frese ad alto avanzamento

QCH - SDMT Kr: 15°







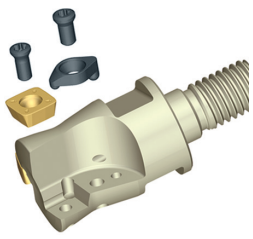
Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	L	MD	Denti	kg	Inserto
QCH-20-SDMT06-M10-03		●	20	19	30	10	3	0,058	SDMT06T2
QCH-25-SDMT06-M12-04		●	25	24	35	12	4	0,097	
QCH-32-SDMT06-M16-05		○	32	30	45	16	5	0,183	
QCH-25-SDMT09-M12-02		○	25	24	35	12	2	0,088	SDMT09T3
QCH-30-SDMT09-M16-03		●	30	29	45	16	3	0,176	
QCH-35-SDMT09-M16-03		○	35	30	45	16	3	0,216	
QCH-32-SDMT12-M16-02		●	32	30	45	16	2	0,175	SDMT1204
QCH-35-SDMT12-M16-02		○	35	30	45	16	2	0,2	
QCH-40-SDMT12-M16-03		○	40	30	45	16	3	0,3	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	SDMT06T2	SDMT09T3	SDMT1204
	ØD	20-35	25-35	32-40
	Staffa		WD-204	WD-204
	Vite (staffa)			I60M4×8,4 (3,4 Nm)
	Vite (staffa)		I60M3,5×08TT (2,7 Nm)	
	Vite (inserti)	I60M2,2×5,5 (0,8 Nm)	I60M4×8,4 (3,4 Nm)	I60M4×8,4 (3,4 Nm)
	Chiave (staffa)		WT10IP	WT15IP
	Chiave (inserti)	WT07IP	WT15IP	WT15IP



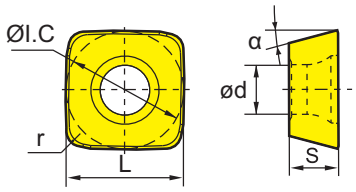
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Serie QCH

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SDMT	L	I.C	S	d
06 T2	6,35	6,35	2,58	5,5
09 T3	9,525	9,525	3,97	4
12 04	12,7	12,7	4,76	4,4



SD** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT		HC²		HW	
			P																						
			M																						
			K																						
			N																						
			S																						
			H																						
ISO		r	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SDMT06T208-DM	0,8	15						○					○		○				○					
	SDMT09T312-DM	1,2	15	●					●		○			○	○				●						
	SDMT120412-DM	1,2	15	●					●		●			○	○										
	SDMT09T312-NM						●								○	●				●					
	SDMT120412-NM						●								○	●		●		●					
	SDMT06T208-PM	0,8	15	●			●									○	●			○					
	SDMT09T312-PM	1,2	15				●				○			○			●								
	SDMT120412-PM	1,2	15				●							○			●								

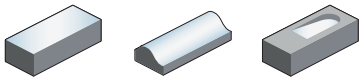
● In magazzino ○ Su richiesta

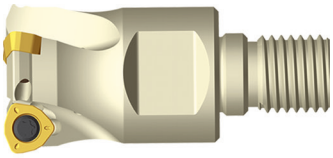
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

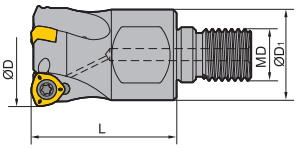
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

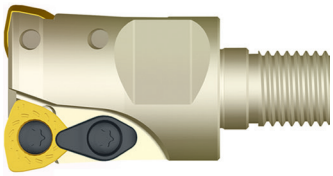
Frese ad alto avanzamento

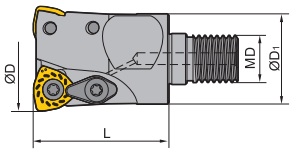
QCH - WPGT Kr: 11°-22°











Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	$ØD_1$	L	MD			
QCH-20-WPGT05-M10-02		○	20	18	30	10	2	0,056	WPGT0503
QCH-25-WPGT06-M12-02		○	25	21	35	12	2	0,097	WPGT0604
QCH-32-WPGT06-M16-03		●	32	29	43	16	3	0,185	
QCH-35-WPGT06-M16-03		●	35	30	45	16	3	0,201	
QCH-42-WPGT06-M16-04		○	42	29	43	16	4		
QCH-35-WPGT08-M16-02		●	35	30	45	16	2	0,196	WPGT0806

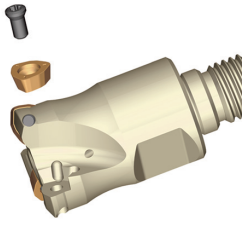
● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Angolo di inclinazione variabile (l'angolo di inclinazione dipende dalla dimensione dell'inserto)
angolo di attacco: WPGT05: 16°; WPGT06: 22°; WPGT08: 11°; WPGT09: 21°

Parti di ricambio

	Inserto	**WPGT0503**	**WPGT0604**	**WPGT0806**
	ØD	**20**	**25-42**	**35**
	Staffa			WD-208
	Vite (staffa)			I60M5×13 (6,7 Nm)
	Vite (inserti)		I60M4×8,4 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Vite (inserti)	I60M3,5×08TT (2,7 Nm)		
	Chiave (staffa)			WT20IT
	Chiave (inserti)			WT20IT
	Chiave (inserti)	WT10P	WT15P	



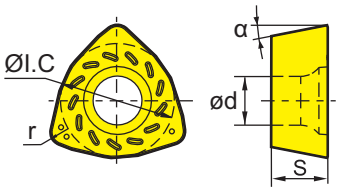
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti per fresatura Serie QCH

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

WPGT	I.C	S	d
05 03	7,94	3,5	4
06 04	9,525	4,2	4,4
08 06	12,85	6,35	5,5



WP** Inserti positivi			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**WPGT050315ZSR-PM**	1,5														●								
	WPGT060415ZSR-PM	1,5	●												●	●			●					
	WPGT080615ZSR-PM	1,5	●												●	●			●					
	**WPGT050315ZSR**	1,5	●					●						●										
	WPGT060415ZSR	1,5	●					●						●		●								
	WPGT080615ZSR	1,5	●					●						●		●								

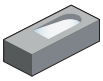
● In magazzino ○ Su richiesta

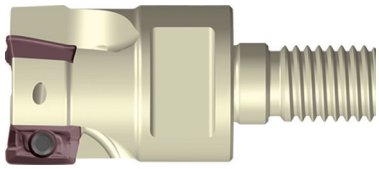
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

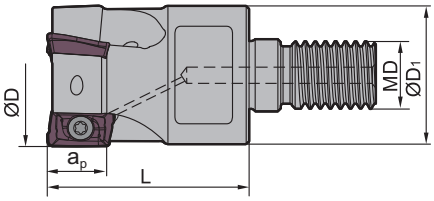
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Serie QCH

QCH - APKT Kr: 90°







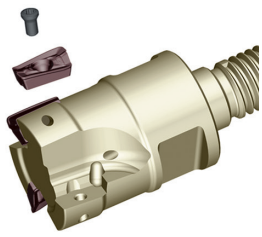
Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	ap	L	MD	Denti	kg	Inserto
QCH-16-APKT11-M8-02		●	16	12,5	10,5	25	8	2	0,028	
QCH-20-APKT11-M10-03		●	20	18	10,5	30	10	3	0,059	
QCH-25-APKT11-M12-04		●	25	21	10,5	35	12	4	0,104	APKT11T3
QCH-32-APKT11-M16-05		●	32	29	10,5	43	16	5		
QCH-40-APKT11-M16-06		●	40	29	10,5	43	16	6		
QCH-25-APKT16-M12-02		○	25	21	10,5	38	12	2	0,09	
QCH-32-APKT16-M16-03		●	32	29	10,5	46	16	3		APKT1604
QCH-40-APKT16-M16-04		○	40	29	10,5	46	16	4		

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	APKT11T3	APKT1604
	ØD	16-40	25-40
	Vite (inserti)		I60M4×8,4 (3,4 Nm)
	Vite (inserti)	I60M2,5×6,5T (1,0 Nm)	
	Chiave (inserti)	WT08IP	WT15IP



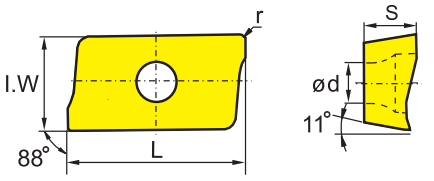
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti per fresatura Serie QCH

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APKT	L	S	d
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4



AP** Inserti - Fresatura				HC¹ (CVD)								HC¹ (PVD)									HT	HC²	HW	
				P																				
				M																				
				K																				
				N																				
				S																				
				H																				
	ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	APKT11T304-ALH		0,4	6,5									●											●	●
	APKT11T308-ALH		0,8	6,5									●											●	●
	APKT160408-ALH		0,8	9,33									●											●	●
	APKT11T304-APF		0,4	6,5															●						
	APKT11T308-APF		0,8	6,5													○		●		○				
	APKT160408-APF		0,8	9,33													○		●	○	○				
	APKT11T304-APM		0,4	6,5				●			●								●						
	APKT11T308-APM		0,8	6,5				●			●						○		●		○				
	APKT11T312-APM		1,2	6,5				●			●								●						
	APKT11T316-APM		1,6	6,5				●			●								●						
	APKT11T320-APM		2	6,5				●			●								●						
	APKT160408-APM		0,8	9,33				●			●	●					○		●		○				
	APKT160416-APM		1,6	9,33				●			●								●						
	APKT160420-APM		2	9,33				●			●								●						
	APKT160424-APM		2,4	9,33				●			●								●						
	APKT160430-APM		3	9,33				●											●						
	APKT11T304-LH		0,4	6,5																				○	○
	APKT11T308-LH		0,8	6,5																				○	●
	APKT160408-LH		0,8	9,33																				○	○
	APKT11T308-NM																●				●				
	APKT11T312-NM																●				●				
	APKT11T304-PF		0,4	6,5		○			○					○	○					○					
	APKT11T308-PF		0,8	6,5											○										
	APKT11T316-PF		1,6	6,5											○										
	APKT160408-PF		0,8	9,33		○				○					○					○					
	APKT160430-PF		3	9,33	○																				
	APKT11T304-PM		0,4	6,5	○	○	○		○	○				○	○					○					
	APKT11T308-PM		0,8	6,5	○	○		○	○	●	○	○		○	○			○		○					
	APKT11T312-PM		1,2	6,5					○					○	○					○					
	APKT11T316-PM		1,6	6,5					○					○	○					○					
	APKT160408-PM		0,8	9,33	○	○	○	●		●	○	○		○	○			○		●					
	APKT160416-PM		1,6	9,33	○										○										

● In magazzino ○ Su richiesta

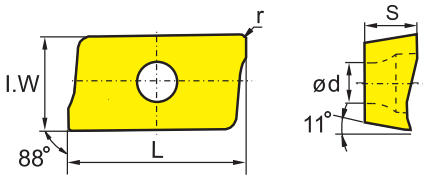
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

APKT	L	S	d
11 T3	12,24	3,6	2,8
16 04	17,877	5,76	4,4



AP** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**APKT11T304-PR**	0,4	6,5						○										○						
	APKT11T316-PR	1,6	6,5																○						
	**APKT11T3XR**										●							●							

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

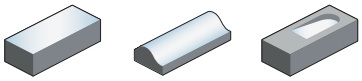
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

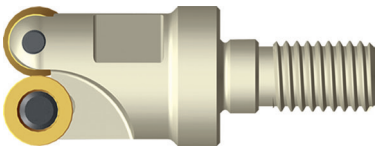
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

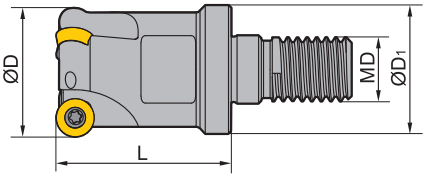
Inserti per fresatura Serie QCH

Serie QCH

QCH - RD







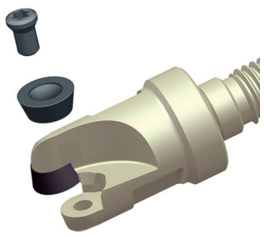
Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	$ØD_1$	L	MD			
QCH-16-RD07-M8-02		●	16	15	25	8	2	0,027	
QCH-20-RD07-M10-03		○	20	18	30	10	3	0,058	RDKW0702
QCH-25-RD07-M12-03		○	25	21	35	12	3	0,093	
QCH-20-RD10-M10-02		○	20	19	30	10	2	0,054	
QCH-25-RD10-M12-02		○	25	24	35	12	2	0,097	RDKW10T3
QCH-32-RD10-M16-03		○	32	30	45	16	3	0,183	
QCH-32-RD16-M16-02		○	32	30	45	16	2	0,156	RDKW1605

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	RDKW0702	RDKW10T3	RDKW1605
	ØD	16-25	20-32	32
	Vite (inserti)	I60M2,5×5,0 (1,0 Nm)	I60M4×8 (3,4 Nm)	I60M5×13 (6,7 Nm)
	Chiave (inserti)	WT08IP	WT15IP	
	Chiave (inserti)			WT20IT

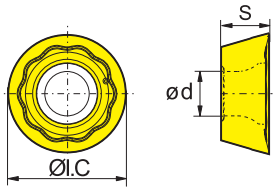


Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RDKT
10 T3

RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKT10T3MO-MM**																	○					

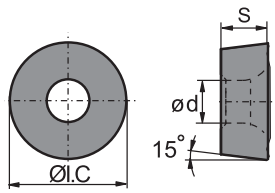
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

RDKW	I.C	S	d
07 02	7	2,38	2,7
10 T3	10	3,97	4,4
16 05	16	5,56	5,5

Inserti - Fresatura

RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**RDKW10T3MO**	●	○				○			●	○						○						
	RDKW1605MO						○				○	○					○						
	**RDKW0702MO-1**						●				○				●								
	RDKW0702MO-2									●													

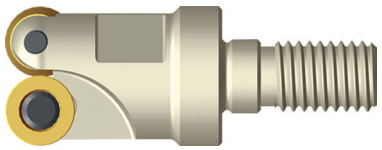
● In magazzino ○ Su richiesta

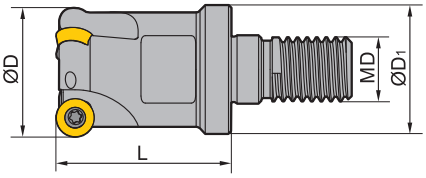
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Serie QCH

QCH - RD





Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	L	MD	Denti	kg	Inserto
QCH-15-RDKW0702-M8-02		●	15	12,5	23	8	2		RDKW0702
QCH-15-RDKW0702-M8-03		●	15	12,5	23	8	3		
QCH-20-RDKW0702-M10-04		●	20	18	30	10	4		
QCH-25-RDKW0702-M12-05		●	25	21	35	12	5		
QCH-20-RDKW1003-M10-02		●	20	18	30	10	2		RDKW1003
QCH-25-RDKW1003-M12-02		●	25	21	35	12	2		
QCH-25-RDKW1003-M12-03		●	25	21	35	12	3		
QCH-30-RDKW1003-M16-04		●	30	29	43	16	4		
QCH-35-RDKW1003-M16-04		●	35	29	43	16	4		
QCH-42-RDKW1003-M16-05		●	42	29	43	16	5		
QCH-24-RDKW12T3-M12-02		●	24	21	35	12	2		RDKW12T3
QCH-35-RDKW12T3-M16-03		●	35	29	43	16	3		
QCH-42-RDKW12T3-M16-04		●	42	29	43	16	4		
QCH-32-RDKW1604-M16-02		●	32	29	43	16	2		RDKW1604

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

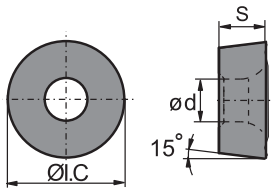
	Inserto	RDKW0702	RDKW1003	RDKW12T3	RDKW1604
	ØD	15-25	20-42	24-42	32
	Staffa				WX16N
	Vite (staffa)				I60M4,5×10 (5,0 Nm)
	Vite (staffa)			LOM3.5×7.1	
	Vite (inserti)	I60M2,5×5,0 (1,0 Nm)	I60M3,5×7,7 (2,7 Nm)	I60M3,5×7,7 (2,7 Nm)	I60M4,5×10 (5,0 Nm)
	Chiave (inserti)	WT07P	WT15P	WT15P	
	Chiave (inserti)				WT20T

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

RDKW	I.C	S	d
07 02	7	2,38	2,7
10 03	10	3,18	3,9
12 T3	12	3,97	3,9
16 04	16	4,76	5,2

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



RD** Inserti - Fresatura		HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
	P																				
	M																				
	K																				
	N																				
	S																				
	H																				
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	RDKW0702MO-1						●					○			●								
	RDKW0702MO-2										●												
	RDKW1003MO-1					○	●					○			●	●							
	RDKW1003MO-2										●												
	RDKW1003MO-3				●										●								
	RDKW12T3MO-1					○	●					○			●	●							
	RDKW12T3MO-2										●				○								
	RDKW12T3MO-3				●										●								
	RDKW1604MO-1						●					○			●	●	●						
	RDKW1604MO-2										○												
	RDKW1604MO-3	○			●				●		○				●		●						

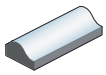
● In magazzino ○ Su richiesta

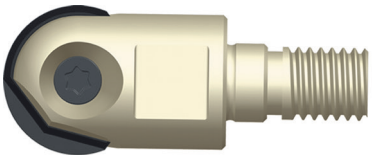
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

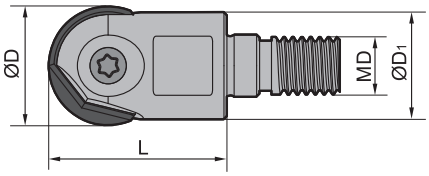
Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Serie QCH

QCH - ZOHX







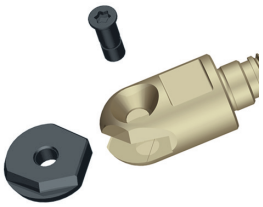
Articolo	✻	Stock	Dimensioni [mm]				kg	Inserto
			ØD	ØD1	L	MD		
QCH-16-ZOHX16-M8		●	16	15	28	8	0,029	ZOHX16
QCH-20-ZOHX20-M10		●	20	19	30	10	0,048	ZOHX20
QCH-25-ZOHX25-M12		●	25	24	35	12	0,087	ZOHX25
QCH-30-ZOHX30-M16		●	30	29	45	16	0,17	ZOHX30
QCH-32-ZOHX32-M16		●	32	30	45	16	0,18	ZOHX32

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

	Inserto	ZOHX16	ZOHX20	ZOHX25	ZOHX30	ZOHX32
	ØD	16	20	25	30	32
	Vite (inserti)	I70M5×12TT (6,7 Nm)	I70M5×16TT (6,7 Nm)	I70M6×20TT (9,1 Nm)	I70M8×25TT (16,2 Nm)	I70M8×25TT (16,2 Nm)
	Chiave (inserti)	WT20IP	WT20IP	WT20IP		
	Chiave (inserti)				WT30IT	WT30IT

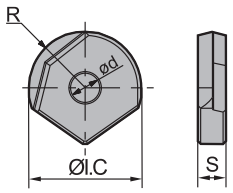


Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

ZOHX	I.C	S	d
16	16	4	5
20	20	5	5
25	25	6	6
30	30	7	8
32	32	7	8

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



ZO** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		R	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**ZOHX1604-GF**	8																		●				
	ZOHX2005-GF	10																		●				
	ZOHX2506-GF	12,5																		○				
	ZOHX3007-GF	15																		●				
	ZOHX3207-GF	16																		●				
	**ZOHX1604-GM**	8																		●				
	ZOHX2005-GM	10																		●				
	ZOHX2506-GM	12,5																		○				
	ZOHX3007-GM	15																		●				
	ZOHX3207-GM	16																		●				

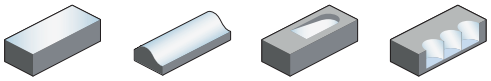
● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

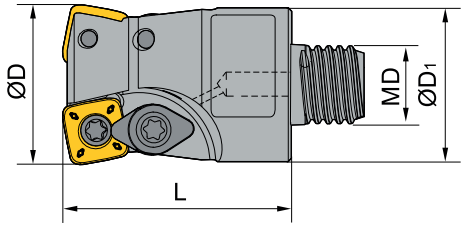
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Serie QCH

QCH-SDMT-Q







Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	L	MD	Denti	kg	Inserto
QCH-25-SDMT09-Q14-02	✻	○	25	24	35	14	2	0,088	SDMT09T3
QCH-35-SDMT09-Q18-03	✻	○	35	30	45	18	3	0,216	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

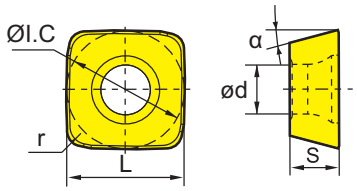
	Inserto	SDMT09T3
	ØD	25-35
	Staffa	WD-204
	Vite (staffa)	I60M4×8,4 (3,4 Nm)
	Vite (inserti)	I60M3,5×08TT (2,7 Nm)
	Chiave (inserti)	WT10IP

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SDMT	L	I.C	S	d
09 T3	9,525	9,525	3,97	4



SD** Inserti - Fresatura				HC¹ (CVD)							HC¹ (PVD)									HT		HC²		HW	
			P																						
			M																						
			K																						
			N																						
			S																						
			H																						
ISO		r	α	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SDMT09T312-DM**	1,2	15	●					●		○			○	○				●						
	**SDMT09T312-NM**						●								○	●				●					
	**SDMT09T312-PM**	1,2	15				●				○			○			●								

● In magazzino ○ Su richiesta

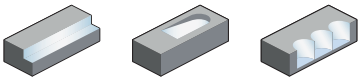
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

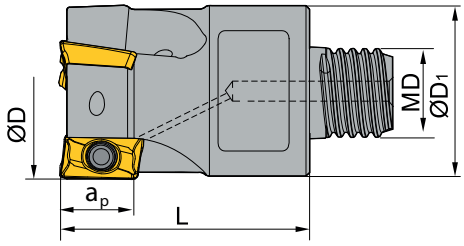
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Serie QCH

QCH-APKT-Q Kr: 90°







Articolo	✻	Stock	Dimensioni [mm] ØD	ØD1	ap	L	MD	Denti	kg	Inserto
QCH-16-APKT11-Q10-02	✻	●	16	15,2	10,5	28	10	2	0,028	
QCH-20-APKT11-Q12-02	✻	○	20	19	10,5	30	12	2	0,059	APKT11T3
QCH-25-APKT11-Q14-03	✻	●	25	24	10,5	35	14	3	0,104	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

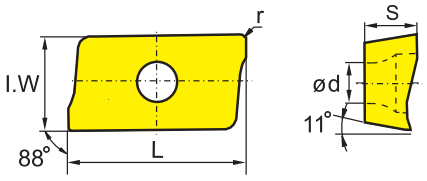
	Inserto	APKT11T3
	ØD	16-25
	Vite (inserti)	I60M2,5×5,5 (1,0 Nm)
	Chiave (inserti)	WT07IP

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

APKT	L	S	d
11 T3	12,24	3,6	2,8



AP** Inserti - Fresatura				HC¹ (CVD)								HC¹ (PVD)									HT		HC²		HW	
			P																							
			M																							
			K																							
			N																							
			S																							
			H																							
ISO		r	I.W	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201		
	APKT11T304-ALH	0,4	6,5									●												●	●		
	APKT11T308-ALH	0,8	6,5									●												●	●		
	APKT11T304-APF	0,4	6,5															●									
	APKT11T308-APF	0,8	6,5													○		●		○							
	APKT11T304-APM	0,4	6,5				●			●								●									
	APKT11T308-APM	0,8	6,5				●			●						○		●		○							
	APKT11T312-APM	1,2	6,5				●			●								●									
	APKT11T316-APM	1,6	6,5				●			●								●									
	APKT11T320-APM	2	6,5				●			●								●									
	APKT11T304-LH	0,4	6,5																					○	○		
	APKT11T308-LH	0,8	6,5																					○	●		
	APKT11T308-NM															●				●							
	APKT11T312-NM															●				●							
	APKT11T304-PF	0,4	6,5		○			○					○	○					○								
	APKT11T308-PF	0,8	6,5											○													
	APKT11T316-PF	1,6	6,5											○													
	APKT11T304-PM	0,4	6,5	○	○	○		○	○				○	○					○								
	APKT11T308-PM	0,8	6,5	○	○		○	○	●	○	○		○	○			○		○								
	APKT11T312-PM	1,2	6,5					○					○	○					○								
	APKT11T316-PM	1,6	6,5					○					○	○					○								
	APKT11T304-PR	0,4	6,5						○										○								
	APKT11T316-PR	1,6	6,5																○								
	APKT11T3XR										●							●									

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

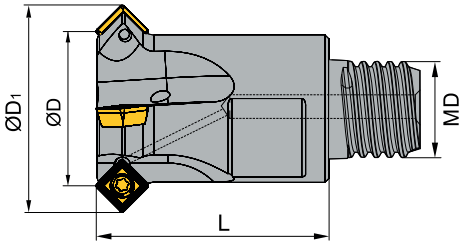
Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Serie QCH

QCH-SPGT-Q







Articolo	✻	Stock	Dimensioni [mm]				Denti	kg	Inserto
			ØD	$ØD_1$	L	MD			
QCH-16-SPGT05-Q10-45-03	✻	○	16	22,6	25	10	3	0,032	SPGT0502
QCH-20-SPGT05-Q12-45-04	✻	○	20	26,6	30	12	4	0,644	

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Parti di ricambio

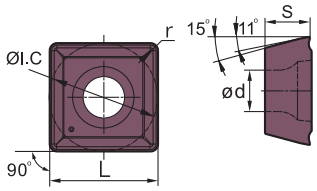
	Inserto	**SPGT0502**
	ØD	**16-20**
	Vite (inserti)	l60M2×4,3 (0,5 Nm)
	Chiave (inserti)	WT06IP

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPGT
05 02

Inserti - Fresatura

SP ** Inserti - Foratura		HC[1] (CVD)							HC[1] (PVD)								HT	HC[2]	HW	
	P																			
	M																			
	K																			
	N																			
	S																			
	H																			
ISO		YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**SPGT050204-EM**												●		●								
	**SPGT050204-PM**												●		●								

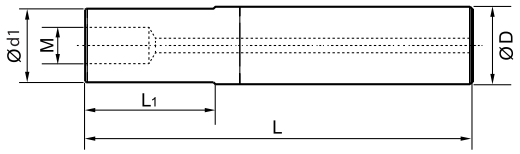
● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

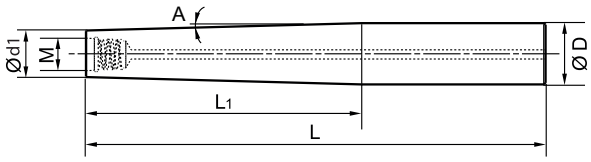
Sistema di attacchi

Stelo in metallo duro integrale, scaricato, filetto tipo Q



Articolo	Dimensioni [mm]				Angolo (M)	Stock
	D	d1	L	L1		
G12-QCH-Q08-80C	12	11,5	80	30	Q8	●
G12-QCH-Q08-100C	12	11,5	100	50	Q8	●
G12-QCH-Q08-120C	12	11,5	120	70	Q8	●
G16-QCH-Q10-90C	16	15,2	90	40	Q10	●
G16-QCH-Q10-120C	16	15,2	120	70	Q10	●
G16-QCH-Q10-150C	16	15,2	150	100	Q10	●
G20-QCH-Q12-100C	20	19	100	40	Q12	●
G20-QCH-Q12-140C	20	19	140	80	Q12	●
G20-QCH-Q12-180C	20	19	180	120	Q12	●
G25-QCH-Q14-120C	25	24	120	50	Q14	●
G25-QCH-Q14-170C	25	24	170	100	Q14	●
G25-QCH-Q14-220C	25	24	220	150	Q14	●
G32-QCH-Q18-140C	32	30	140	70	Q18	●
G32-QCH-Q18-200C	32	30	200	130	Q18	●
G32-QCH-Q18-260C	32	30	260	190	Q18	●
G32-QCH-Q18-320C	32	30	320	250	Q18	●

Stelo in metallo duro integrale, conico, filetto tipo Q



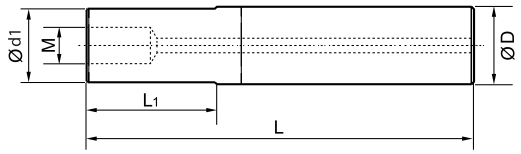
Articolo	Dimensioni [mm]				Filetto (M)	Angolo (A)	Stock
	D	d1	L	L1			
G16-QCH-Q08-140C-ZJ90	16	11,5	140	90	Q8	1,0	●
G20-QCH-Q10-200C-ZJ140	20	15,2	200	140	Q8	0,8	●
G25-QCH-Q12-250C-ZJ180	25	19	250	180	Q8	0,8	●
G32-QCH-Q14-270C-ZJ200	32	30	270	200	Q10	0,8	●

Parti di ricambio

	Filetto	Q8 / Q10	Q12 / Q14	Q18
	Chiave	QCH-10×13	QCH-16×20	QCH-26

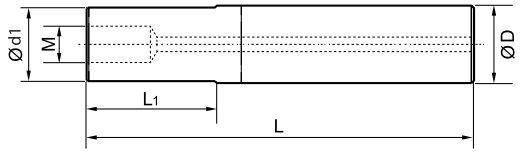
Sistema di attacchi

Codolo in acciaio, scaricato, filetto tipo Q



Articolo	Dimensioni [mm]				Angolo (M)	Stock
	D	d1	L	L1		
G12-QCH-Q08-65S	12	11,5	65	19	Q08	●
G16-QCH-Q10-100S	16	15,2	100	42	Q10	●
G20-QCH-Q12-110S	20	19	110	54	Q12	●

Stelo in metallo duro integrale, scaricato, filettatura metrica

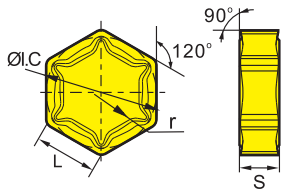


Articolo	Dimensioni [mm]				Angolo (M)	Stock
	D	d1	L	L1		
G16-QCH-M8-90C-125	16	12,5	90	35	M8	○
G16-QCH-M8-110C-125	16	12,5	110	55	M8	○
G16-QCH-M8-130C-125	16	12,5	130	75	M8	○
G16-QCH-M8-90C	16	15	90	35	M8	○
G16-QCH-M8-110C	16	15	110	55	M8	○
G16-QCH-M8-130C	16	15	130	75	M8	○
G16-QCH-M8-170C	16	15	170	115	M8	○
G16-QCH-M8-200C	16	15	200	145	M8	○
G20-QCH-M10-87C	20	18,5	87	30	M10	○
G20-QCH-M10-107C	20	18,5	107	50	M10	○
G20-QCH-M10-127C	20	18,5	127	70	M10	○
G20-QCH-M10-167C	20	18,5	167	110	M10	○
G20-QCH-M10-197C	20	18,5	197	140	M10	○
G25-QCH-M12-128C	25	23	128	65	M12	○
G25-QCH-M12-148C	25	23	148	85	M12	○
G25-QCH-M12-168C	25	23	168	105	M12	○
G25-QCH-M12-198C	25	23	198	135	M12	○
G25-QCH-M12-228C	25	23	228	165	M12	○
G32-QCH-M16-161C	32	29	161	95	M16	○
G32-QCH-M16-211C	32	29	211	145	M16	○
G32-QCH-M16-281C	32	29	281	215	M16	○
G32-QCH-M16-311C	32	29	311	245	M16	○
G32-QCH-M16-361C	32	29	361	295	M16	○

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

HNGX	L	I.C	S
09 05	9,16	15,875	5,56

Inserti - Fresatura

HN** Inserti - Fresatura			HC¹ (CVD)								HC¹ (PVD)									HT	HC²	HW	
		P																					
		M																					
		K																					
		N																					
		S																					
		H																					
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
HDR	**HNGX090530-HDR**	3							○	○														
MR	**HNGX090516-MR**	1,6							●															
	HNGX090520-MR	2							●															

● In magazzino ○ Su richiesta

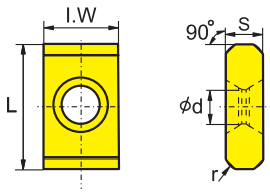
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema > B26 | Scelta gradi > B24 | Informazioni tecniche > B527 | Dati di taglio > B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

LNE3	I.W	L	S
2. 53	4,76	15,875	9,525



LN** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)										HT	HC²	HW	
		P																					
		M																					
		K																					
		N																					
		S																					
		H																					
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNE32.534**	1,6						○	○	○														

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

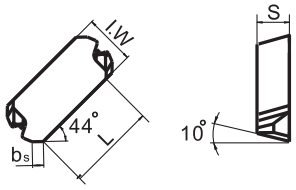
A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

LNCX	L	I.W	S
18 06	24	10	6,4

Inserti - Fresatura



LN** Inserti - Fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P	●	●	●	●	●	●		●		●	●		●	●	●		●	●		
		M		○	●	○	○	○				○	●		○	○	○	○	○		○		
		K							●	●	●								●				●
		N								●													●
		S				●		●			●	●		●	●	●		●					
		H																					
ISO		bs	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	**LNCX1806AZT11L**	2,0								○														
	LNCX1806AZT11R	2,0								○														

● In magazzino ○ Su richiesta

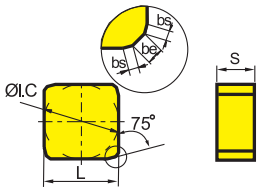
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

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Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SNKN	L	I.C	S
12 04	12,7	12,7	4,76
15 04	15,875	15,875	4,76



SN** Inserti fresatura				HC¹ (CVD)							HC¹ (PVD)										HT	HC²	HW	
			P																					
			M																					
			K																					
			N																					
			S																					
			H																					
ISO		bs	be	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SNKN1204ENN	1,5	0,9		●				●	●															
	SNKN1504ENN	1,5	0,9		○																				

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

A Tornitura
B Fresatura
C Foratura
D Informazioni tecniche
E Indice

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPCN	L	I.C	S
12 03	12,7	12,7	1,4
15 04	15,875	15,875	1,4

SP** Inserti fresatura				HC[1] (CVD)								HC[1] (PVD)								HT	HC[2]	HW	
			P																				
			M																				
			K																				
			N																				
			S																				
			H																				
ISO		bs	be	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SPCN1203EDSKR	3,2	1,0	●																					
	SPCN1504EDSKR	4,8	1,0	●																					

● In magazzino ○ Su richiesta

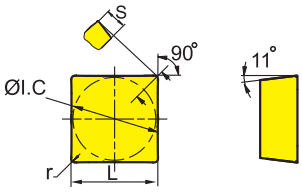
HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HC[2] Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

Inserti - Fresatura

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

SPMR	L	I.C	S
09 03	9,525	9,525	3,18
12 03	12,7	12,7	3,18



SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)										HT	HC²	HW	
		P																					
		M																					
		K																					
		N																					
		S																					
		H																					
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SPMR090304		0,4				○																	
	SPMR090308		0,8				○																	
	SPMR120304		0,4				●																	
	SPMR120308		0,8				●	○																
	SPMR120312		1,2					○																

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

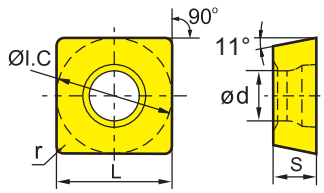
A Tornitura
B Fresatura
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Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SPMT	L	I.C	S	d
06 03	6,35	6,35	3,18	2,8
09 T3	9,525	9,525	3,97	4,4
12 04	12,7	12,7	4,76	5,5

SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)								HT	HC²	HW	
		P																			
		M																			
		K																			
		N																			
		S																			
		H																			
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
HT-1	**SPMT120408-HT-1**	0,8												○										
HT	**SPMT09T308-HT**	0,8					●		●			○												
KT	**SPMT060304-KT**	0,4		○																				

● In magazzino ○ Su richiesta

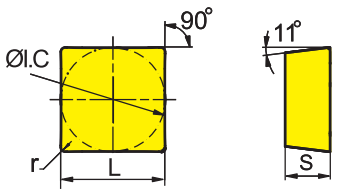
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

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Inserti - Fresatura

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

SP**	L	I.C	S
12 03	12,7	12,7	3,18
15 04	15,875	15,875	4,76



SP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)										HT	HC²	HW	
		P																					
		M																					
		K																					
		N																					
		S																					
		H																					
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	SPGN120304		0,4										○											
	SPGN120308		0,8										○											
	SPUN120308		0,8				●	○															○	
	SPUN120312		1,2				●																	
	SPUN150408		0,8																				○	
	SPUN150412		1,2																				○	

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

- Buone condizioni di lavorazione
- Condizioni di lavorazione normali
- Condizioni di lavorazione sfavorevoli

TPKN	L	I.C	S
16 03	16,5	9,525	3,18

Inserti - Fresatura

TP** Inserti fresatura					HC¹ (CVD)								HC¹ (PVD)								HT	HC²	HW	
					YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
P					❁	❁	❁	❁	❁	❁		❁		❁	❁		❁	❁	❁		●	●	●		
M						❁	❁	❁	❁	❁				❁	❁		❁	❁	❁	❁	○	○	○		
K											❁	❁	●								●			❁	
N													❁											❁	❁
S								❁		❁				●	❁		❁	❁	❁		❁				
H																									
ISO			bs	be	an																				
	TPKN1603PDTKR		1,0	1,2	11																			○	
	TPKN1603PPER		1,0	1,2	11		●																		
	TPKN1603PPFR		1,0	1,2	11																			○	

● In magazzino ○ Su richiesta

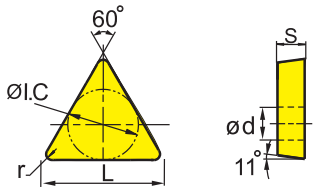
HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 | Scelta gradi B24 | Informazioni tecniche B527 | Dati di taglio B230

TP**	L	I.C	S
11 03	11	6,35	3,18
16 03	16,5	9,525	3,18
22 04	22	12,7	4,76

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Fresatura



TP** Inserti fresatura			HC¹ (CVD)							HC¹ (PVD)									HT	HC²	HW	
		P																				
		M																				
		K																				
		N																				
		S																				
		H																				
ISO		r	YBC302	YBC301	YBC401	YBM253	YBM251	YBM351	YBD152	YBD252	YBG101	YBG102	YBG202	YBG212	YBS203	YBG205	YB9320	YBG302	YBS303	YBG252	YNG151	YNG151C	YD101	YD201
	TPMR110304	0,4					●																	
	TPMR110308	0,8					●																	
	TPMR160304	0,4					●																	
	TPMR160308	0,8					●	●	○															
	TPMR160312	1,2					○																	
	TPMR220412	1,2					●																	
	TPUN110304	0,4					●																	
	TPUN110308	0,8					●																	
	TPUN160304	0,4					●																	○
	TPUN160308	0,8					●	○								○								○
	TPUN160312	1,2					●																	
	TPUN220408	0,8					●																	
	TPUN220412	1,2						○																

● In magazzino ○ Su richiesta

HC¹ Carburo cementato rivestito
HT Cermet non rivestito
HC² Cermet rivestito
HW Carburo cementato non rivestito

Codice sistema B26 Scelta gradi B24 Informazioni tecniche B527 Dati di taglio B230

Note

Note

Principi guida per i dati di taglio consigliati – Inserti per fresatura

Indexable milling – group 1 (FMA07/11/12, FMD02, EMP09/13)

1 2 3 4 5

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v$_c$ [m/min] HC (CVD) YBC302 a_e / D 1/1 | 3/4	YBC302 a_e / D 1/5	YBC401 a_e / D 1/1 | 3/4	YBC401 a_e / D 1/5	YBD152 a_e / D 1/1 | 3/4	YBD152 a_e / D 1/5	YBD252 a_e / D 1/1 | 3/4	YBD252 a_e / D 1/5
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1	260	300	225	260				
		ca. 0,45 % C	annealed	190	2	225	255	195	225				
		ca. 0,45 % C	tempered	250	3	210	240	180	210				
		ca. 0,75 % C	annealed	270	4	185	210	160	185				
		ca. 0,75 % C	tempered	300	5	170	195	150	170				
	Low-alloyed steel		annealed	180	6	225	255	195	225				
			tempered	275	7	185	210	160	185				
			tempered	300	8	170	195	150	170				
			tempered	350	9	145	165	125	145				
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	130	150	115	130				
			hardened ard tempered	325	11	95	105	80	95				
M	Stainless steel	ferritic/martensitic	annealed	200	12								
		martensitic	tempered	240	13								
		austenitic	quench harcened	180	14								
		austenitic-ferritic		230	15								
K	Grey cast iron	perlitic/ferritic		180	16					370	430	320	370
		perlitic (martensitic)		260	17					220	255	190	220
	Cast iron with spheroidal graphite	ferritic		160	18					255	295	220	255
		perlitic		250	19					170	200	145	170
	Malleable cast iron	ferritic		130	20					305	355	265	305
		perlitic		230	21					205	240	175	205
N	Aluminium wrought alloys	cannot be hardened		60	22								
		hardenable	hardened	100	23								
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24								
		≤ 12 % Si, hardenable	hardened	90	25								
		> 12 % Si, cannot be hardened		130	26								
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, Pb-free copper, electrolytic copper		100	29								
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30								
			hardened	280	31								
		Ni or Co bass	annealed	250	32								
			hardened	350	33								
			cast	320	34								
	Titanium alloys	pure titanium		R_m 400	35								
		α and β alloys	hardened	R_m 1050	36								
H	Hardened steel		hardened and tempered	55 HRC	37								
			hardened and tempered	60 HRC	38								
	Hard cast iron		cast	400	39								
	Hardened cast iron		hardened and tempered	55 HRC	40								
X	Non-metallic materials	Thermoplasts			41								
		Thermosetting plastics			42								
		Plastic, glass-fibre reinforced GFRP			43								
		Plastic, carbon fibre reinforced CFRP			44								
		Graphite			45								
		Wood			46								

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
Feed rate recommendations on page B248
For examples of material for cutting tool groups view page D22.

Recommend feed rate

Indexable milling – group1 (FMA07/11/12, FMD02, EMP09/13)

5

6

	Material group	Feed rate per cutting edge [mm]																	
		EMP09			EMP13			EMP13			FMA07			FMA07			FMA11		
		LNKT12			ANGX11			ANGX15			ONHU06			ONHU08			SNEG12		
		Application																	
		F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R
P	Unalloyed steel		0,25	0,50		0,23			0,25		0,19	0,23		0,19	0,23			0,20	0,23
P	Low-alloyed steel		0,23	0,47		0,22			0,23		0,17	0,22		0,17	0,22			0,19	0,21
P	High-alloyed steel and high-alloyed tool steel		0,22	0,44		0,20			0,22		0,16	0,20		0,16	0,20			0,18	0,20
M	Stainless steel		0,18	0,35														0,14	0,16
K	Grey cast iron		0,28	0,55		0,26			0,28		0,20	0,26		0,20	0,26			0,22	0,25
K	Cast iron with spheroidal graphite		0,25	0,50		0,23			0,25		0,19	0,23		0,19	0,23			0,20	0,23
K	Malleable cast iron		0,25	0,50		0,23			0,25		0,19	0,23		0,19	0,23			0,20	0,23
N	Aluminium wrought alloys					0,20			0,21										
N	Aluminium-Gusslegierungen					0,20			0,21										
N	Copper and copper alloys(bronze/brass)					0,18			0,19										
S	Heat-resistant alloys																		
S	Titanium alloys																		
H	Hardened steel																		
H	Hard cast iron																		
H	Hardened cast iron																		
X	Non-metallic materials																		

1. Selezionare la famiglia di prodotti / gruppi di dati di taglio adatta.
2. Selezionare il grado utilizzato.
3. Determinare il rapporto di contatto.
4. Selezionare il materiale utilizzato e ricavare la velocità di taglio.
5. Consultare le raccomandazioni separate sull'avanzamento.
6. Selezionare l'utensile impiegato, il tipo di lavorazione e il materiale utilizzato.

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 1 (FMA07/11/12, FMD02, FMP12, EMP09/13)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						HC (CVD)							
						YBC302		YBC401		YBD152		YBD252	
						a_e / D		a_e / D		a_e / D		a_e / D	
						1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	260	300	225	260				
		ca. 0,45 % C	Temprato	190	2	225	255	195	225				
		ca. 0,45 % C	pre-temprato	250	3	210	240	180	210				
		ca. 0,75 % C	Temprato	270	4	185	210	160	185				
		ca. 0,75 % C	pre-temprato	300	5	170	195	150	170				
	Acciaio al carbonio		Temprato	180	6	225	255	195	225				
			pre-temprato	275	7	185	210	160	185				
			pre-temprato	300	8	170	195	150	170				
			pre-temprato	350	9	145	165	125	145				
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	130	150	115	130				
			temprato e rinvenuto	325	11	95	105	80	95				
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16					370	430	320	370
		perlitico (martensitico)		260	17					220	255	190	220
	Ghisa sferodale	ferritico		160	18					255	295	220	255
		perlitico		250	19					170	200	145	170
	Ghisa malleabile	ferritico		130	20					305	355	265	305
		perlitico		230	21					205	240	175	205
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																
	HC (CVD)		HC (PVD)										HW				
	YBM253		YBG102		YB9320		YBG205		YBG252		YBG302		YD101		YD201		
	a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		
	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	
	260	300	270	315	245	285	235	275	230	265	225	260					
	225	255	230	270	210	245	200	235	200	230	195	225					
	210	240	220	255	200	230	190	220	185	215	180	210					
	185	210	190	225	175	200	165	195	165	190	160	185					
	170	195	180	205	160	190	155	180	150	175	150	170					
	225	255	230	270	210	245	200	235	200	230	195	225					
	185	210	190	225	175	200	165	195	165	190	160	185					
	170	195	180	205	160	190	155	180	150	175	150	170					
	145	165	150	175	135	160	130	155	130	150	125	145					
	130	150	135	160	125	145	120	140	115	135	115	130					
	95	105	95	115	90	100	85	100	85	95	80	95					
	130	150	135	160	125	145	120	140	115	135	115	130					
	110	130	115	135	105	120	100	120	100	115	95	110					
	140	160	145	170	130	155	125	150	125	145	120	140					
	110	130	115	135	105	120	100	120	100	115	95	110					
			300	345	270	315	260	300	255	295	250	290					
			180	205	160	190	155	180	150	175	150	170					
			205	240	185	215	180	210	175	200	170	195					
			135	160	125	145	120	140	115	135	115	130					
			245	285	225	260	215	250	210	240	205	235					
			165	190	150	175	145	165	140	160	135	160					
													1505	1735	1450	1670	
													1225	1420	1180	1370	
													540	620	515	600	
													435	505	420	485	
													220	255	215	250	
													170	195	160	190	
													210	245	205	235	
													385	445	370	430	

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 2 (FMA01/02/03/04, FME01/02, FMP01/02, EMP01/02/03/04)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						HC (CVD)							
						YBC302		YBC401		YBD152		YBD252	
						a_e / D		a_e / D		a_e / D		a_e / D	
						1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	245	285	210	245				
		ca. 0,45 % C	Temprato	190	2	210	245	180	210				
		ca. 0,45 % C	pre-temprato	250	3	200	230	170	200				
		ca. 0,75 % C	Temprato	270	4	175	200	150	175				
		ca. 0,75 % C	pre-temprato	300	5	160	190	140	160				
	Acciaio al carbonio		Temprato	180	6	210	245	180	210				
			pre-temprato	275	7	175	200	150	175				
			pre-temprato	300	8	160	190	140	160				
			pre-temprato	350	9	135	160	120	135				
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	125	145	105	125				
			temprato e rinvenuto	325	11	90	100	75	90				
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16					315	365	270	315
		perlitico (martensitico)		260	17					185	215	160	190
	Ghisa sferodale	ferritico		160	18					215	250	185	215
		perlitico		250	19					145	170	125	145
	Ghisa malleabile	ferritico		130	20					260	300	225	260
		perlitico		230	21					175	205	150	175
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

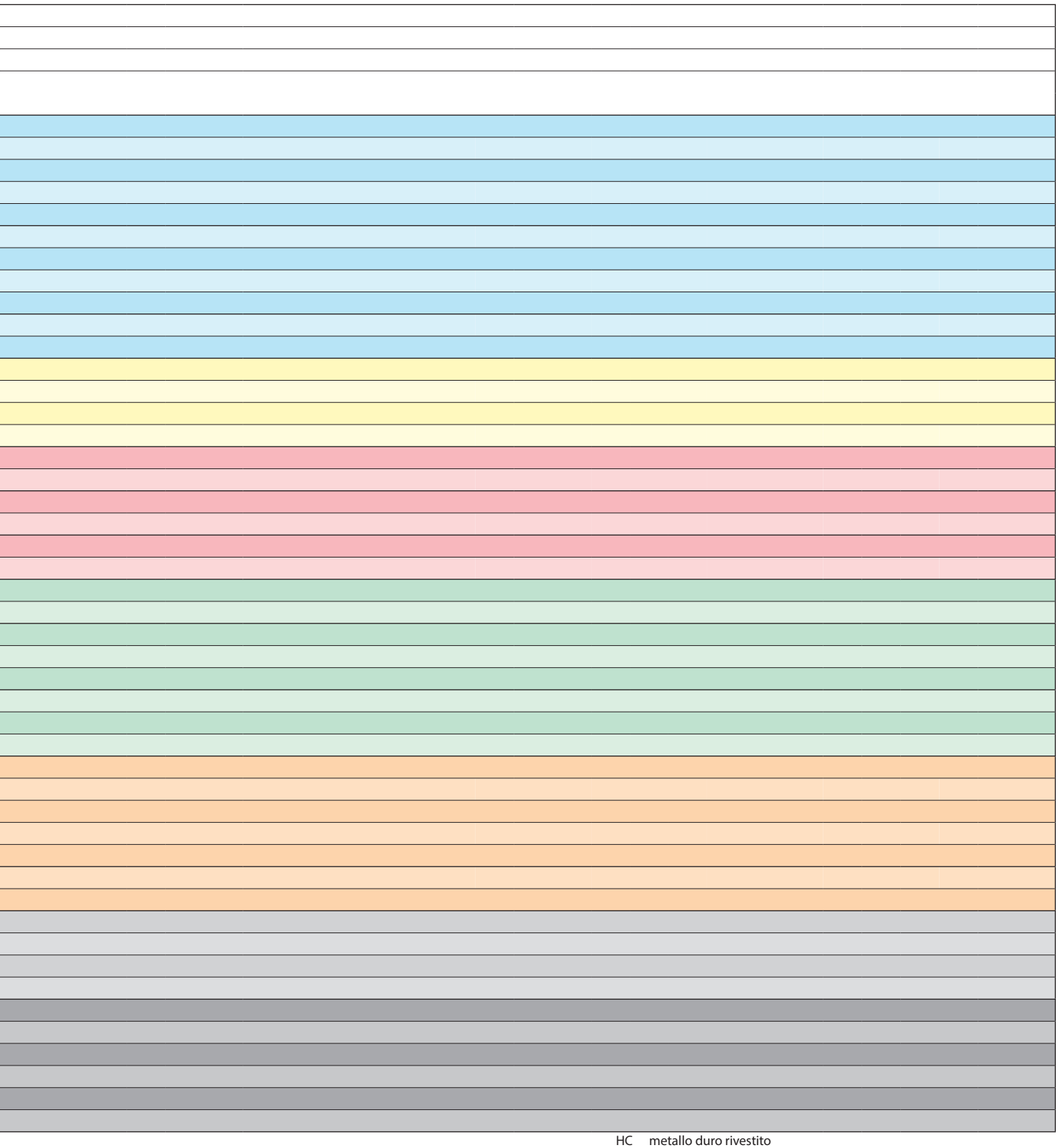
	Velocità di taglio v_c [m/min]																					
	HC (CVD)		HC (PVD)														HW				HT	
	YBM253		YBG101		YBG102		YBG152		YB9320		YBG205		YBG252		YBG302		YD101		YD201		YNG151	
	a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D	
	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5
	245	285			255	295	240	280	230	265	220	255	215	250	210	245					270	315
	210	245			220	255	205	240	200	230	190	220	185	215	180	210					235	270
	200	230			205	240	195	225	185	215	180	205	175	200	170	200					220	255
	175	200			180	210	170	200	165	190	155	180	155	175	150	175					195	220
	160	190			170	195	160	185	150	175	145	170	140	165	140	160					180	210
	210	245			220	255	205	240	200	230	190	220	185	215	180	210					235	270
	175	200			180	210	170	200	165	190	155	180	155	175	150	175					195	220
	160	190			170	195	160	185	150	175	145	170	140	165	140	160					180	210
	135	160			145	165	135	155	130	150	125	145	120	140	120	135					150	180
	125	145			130	150	120	140	115	135	110	130	110	125	105	125					140	160
	90	100			90	105	85	100	85	95	80	90	80	90	75	90					100	110
	125	145			130	150	120	140	115	135	110	130	110	125	105	125					135	160
	105	120			110	125	105	120	100	115	95	110	95	105	90	105					115	135
	130	155			140	160	130	150	125	145	120	140	115	135	115	130					145	170
	105	120			110	125	105	120	100	115	95	110	95	105	90	105					115	135
					285	330	265	305	255	295	245	285	240	280	235	275						
					170	195	160	185	150	175	145	170	140	165	140	160						
					195	225	180	210	175	200	165	195	165	190	160	185						
					130	150	120	140	115	135	110	130	110	125	105	125						
					230	270	220	255	210	240	200	230	195	225	190	225						
					155	180	145	170	140	160	135	155	130	150	130	150						
			1505	1735													1205	1390	1040	1200		
			1225	1420													980	1140	850	980		
			540	620													435	500	375	435		
			435	505													350	405	300	350		
			220	255													180	205	155	180		
			170	195													140	160	120	140		
			210	245													170	200	150	170		
			385	445													310	360	265	310		
					75	85	70	80	65	75	65	75	65	75	60	70						
					50	55	50	55	45	50	45	50	45	50	40	45						
					60	70	55	65	55	65	50	55	50	55	50	55						
					35	40	35	40	30	35	30	35	30	35	30	35						
					45	50	45	50	40	45	40	45	40	45	40	45						
					75	85	70	80	65	75	65	75	65	75	60	70						
					75	85	70	80	65	75	65	75	65	75	60	70						

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per frese – Gruppo 2 (FMA01/02/03/04, FME01/02, FMP01/02, EMP01/02/03/04)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC1 YNG151C a_e / D 1/1 | 3/4	1/5		
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	285	335		
		ca. 0,45 % C	Temprato	190	2	250	285		
		ca. 0,45 % C	pre-temprato	250	3	235	270		
		ca. 0,75 % C	Temprato	270	4	205	235		
		ca. 0,75 % C	pre-temprato	300	5	190	225		
	Acciaio al carbonio		Temprato	180	6	250	285		
			pre-temprato	275	7	205	235		
			pre-temprato	300	8	190	225		
			pre-temprato	350	9	160	190		
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	150	170		
			temprato e rinvenuto	325	11	105	120		
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	145	170		
		martensitico	pre-temprato	240	13	120	145		
		austenitico	quencing	180	14	155	180		
		austenitico-ferritico		230	15	120	145		
K	Ghisa grigia	perlitico/ferritico		180	16				
		perlitico (martensitico)		260	17				
	Ghisa sferodale	ferritico		160	18				
		perlitico		250	19				
	Ghisa malleabile	ferritico		130	20				
		perlitico		230	21				
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22				
		invecchiabile	indurito	100	23				
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24				
		≤ 12 % Si, invecchiabile	indurito	90	25				
		> 12 % Si, non invecchiabile		130	26				
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27				
		CuZn, CuSnZn		90	28				
		CuSn, rame senza piombo e rame elettrolitico		100	29				
S	Leghe resistenti al calore	Base Fe	Temprato	200	30				
			indurito	280	31				
		Base Ni o Co	Temprato	250	32				
			indurito	350	33				
			fuso	320	34				
	Leghe di titanio	Titanio puro		R_m 400	35				
		Leghe Alpha + Beta	indurito	R_m 1050	36				
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37				
			temprato e rinvenuto	60 HRC	38				
	Ghisa dura		fuso	400	39				
	Ghise temprate		temprato e rinvenuto	55 HRC	40				
X	Materiali non metallici	Termoplastiche			41				
		Termoindurenti			42				
		Vetroresina VTR			43				
		Plastica rinforzata in fibra di carbonio			44				
		Grafite			45				
		Legno			46				

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.



HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 3 (FMR01/02/03/04)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (CVD) YBC302 a_e / D 1/1 | 3/4	YBC302 a_e / D 1/5	YBC302 a_e / D 1/20	YBC401 a_e / D 1/1 | 3/4	YBC401 a_e / D 1/5	YBC401 a_e / D 1/20
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	260	300	390	225	260	340
		ca. 0,45 % C	Temprato	190	2	225	255	335	195	225	295
		ca. 0,45 % C	pre-temprato	250	3	210	240	315	180	210	275
		ca. 0,75 % C	Temprato	270	4	185	210	275	160	185	245
		ca. 0,75 % C	pre-temprato	300	5	170	195	255	150	170	225
	Acciaio al carbonio		Temprato	180	6	225	255	335	195	225	295
			pre-temprato	275	7	185	210	275	160	185	245
			pre-temprato	300	8	170	195	255	150	170	225
			pre-temprato	350	9	145	165	215	125	145	190
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	130	150	195	115	130	170
			temprato e rinvenuto	325	11	95	105	140	80	95	125
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12						
		martensitico	pre-temprato	240	13						
		austenitico	quencing	180	14						
		austenitico-ferritico		230	15						
K	Ghisa grigia	perlitico/ferritico		180	16						
		perlitico (martensitico)		260	17						
	Ghisa sferodale	ferritico		160	18						
		perlitico		250	19						
	Ghisa malleabile	ferritico		130	20						
		perlitico		230	21						
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22						
		invecchiabile	indurito	100	23						
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24						
		≤ 12 % Si, invecchiabile	indurito	90	25						
		> 12 % Si, non invecchiabile		130	26						
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27						
		CuZn, CuSnZn		90	28						
		CuSn, rame senza piombo e rame elettrolitico		100	29						
S	Leghe resistenti al calore	Base Fe	Temprato	200	30						
			indurito	280	31						
		Base Ni o Co	Temprato	250	32						
			indurito	350	33						
			fuso	320	34						
	Leghe di titanio	Titanio puro		R_m 400	35						
		Leghe Alpha + Beta	indurito	R_m 1050	36						
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37						
			temprato e rinvenuto	60 HRC	38						
	Ghisa dura		fuso	400	39						
	Ghise temprate		temprato e rinvenuto	55 HRC	40						
X	Materiali non metallici	Termoplastiche			41						
		Termoindurenti			42						
		Vetroresina VTR			43						
		Plastica rinforzata in fibra di carbonio			44						
		Grafite			45						
		Legno			46						

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																				
	HC (CVD)									HC (PVD)											
	YBD152			YBD252			YBM253			YBG102			YBG152			YB9320			YBG205		
	a_e / D			a_e / D			a_e / D			a_e / D			a_e / D			a_e / D			a_e / D		
	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20
							260	300	390	270	315	410	255	295	385	245	285	375	235	275	360
							225	255	335	230	270	355	220	255	335	210	245	320	200	235	310
							210	240	315	220	255	335	205	240	315	200	230	300	190	220	290
							185	210	275	190	225	295	180	210	275	175	200	260	165	195	255
							170	195	255	180	205	270	170	195	255	160	190	250	155	180	235
							225	255	335	230	270	355	220	255	335	210	245	320	200	235	310
							185	210	275	190	225	295	180	210	275	175	200	260	165	195	255
							170	195	255	180	205	270	170	195	255	160	190	250	155	180	235
							145	165	215	150	175	230	145	165	215	135	160	210	130	155	205
							130	150	195	135	160	210	130	150	195	125	145	190	120	140	185
							95	105	140	95	115	150	90	105	140	90	100	130	85	100	130
							130	150	195	135	160	205	130	150	195	125	145	190	120	140	180
							110	130	165	115	135	175	110	125	165	105	120	160	100	120	155
							140	160	210	145	170	220	140	160	205	130	155	200	125	150	195
							110	130	165	115	135	175	110	125	165	105	120	160	100	120	155
	345	400	520	300	345	450				300	345	450	285	330	430	270	315	410	260	300	390
	210	245	320	180	205	270				180	205	270	170	195	255	160	190	250	155	180	235
	240	280	365	205	240	315				205	240	315	195	225	295	185	215	280	180	210	275
	160	185	245	135	160	210				135	160	210	130	150	195	125	145	190	120	140	185
	285	330	430	245	285	375				245	285	375	230	270	355	225	260	340	215	250	325
	190	220	290	165	190	250				165	190	250	155	180	235	150	175	230	145	165	215

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 3 (FMR01/02/03/04)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (PVD) YBG212 a_e / D 1/1 | 3/4	YBG212 a_e / D 1/5	YBG212 a_e / D 1/20	YBG252 a_e / D 1/1 | 3/4	YBG252 a_e / D 1/5	YBG252 a_e / D 1/20
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	240	280	365	230	265	345
		ca. 0,45 % C	Temprato	190	2	205	240	315	200	230	300
		ca. 0,45 % C	pre-temprato	250	3	195	225	295	185	215	280
		ca. 0,75 % C	Temprato	270	4	170	200	260	165	190	250
		ca. 0,75 % C	pre-temprato	300	5	160	185	245	150	175	230
	Acciaio al carbonio		Temprato	180	6	205	240	315	200	230	300
			pre-temprato	275	7	170	200	260	165	190	250
			pre-temprato	300	8	160	185	245	150	175	230
			pre-temprato	350	9	135	155	205	130	150	195
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	120	140	185	115	135	180
			temprato e rinvenuto	325	11	85	100	130	85	95	125
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	120	140	185	115	135	175
		martensitico	pre-temprato	240	13	105	120	155	100	115	145
		austenitico	quencing	180	14	130	150	195	125	145	185
		austenitico-ferritico		230	15	105	120	155	100	115	145
K	Ghisa grigia	perlitico/ferritico		180	16	265	305	400	255	295	385
		perlitico (martensitico)		260	17	160	185	245	150	175	230
	Ghisa sferodale	ferritico		160	18	180	210	275	175	200	260
		perlitico		250	19	120	140	185	115	135	180
	Ghisa malleabile	ferritico		130	20	220	255	335	210	240	315
		perlitico		230	21	145	170	225	140	160	210
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22						
		invecchiabile	indurito	100	23						
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24						
		≤ 12 % Si, invecchiabile	indurito	90	25						
		> 12 % Si, non invecchiabile		130	26						
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27						
		CuZn, CuSnZn		90	28						
		CuSn, rame senza piombo e rame elettrolitico		100	29						
S	Leghe resistenti al calore	Base Fe	Temprato	200	30						
			indurito	280	31						
		Base Ni o Co	Temprato	250	32						
			indurito	350	33						
			fuso	320	34						
	Leghe di titanio	Titanio puro		R_m 400	35						
		Leghe Alpha + Beta	indurito	R_m 1050	36						
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37						
			temprato e rinvenuto	60 HRC	38						
	Ghisa dura		fuso	400	39						
	Ghise temprate		temprato e rinvenuto	55 HRC	40						
X	Materiali non metallici	Termoplastiche			41						
		Termoindurenti			42						
		Vetroresina VTR			43						
		Plastica rinforzata in fibra di carbonio			44						
		Grafite			45						
		Legno			46						

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]							
	HC (PVD)			HW				
	YBG302			YD101		YD201		
	a_e / D			a_e / D		a_e / D		
	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/1 | 3/4	1/5	
	225	260	340					
	195	225	295					
	180	210	275					
	160	185	245					
	150	170	225					
	195	225	295					
	160	185	245					
	150	170	225					
	125	145	190					
	115	130	170					
	80	95	125					
	115	130	170					
	95	110	145					
	120	140	185					
	95	110	145					
	250	290	380					
	150	170	225					
	170	195	255					
	115	130	170					
	205	235	310					
	135	160	210					
				1505	1735	1450	1670	
				1225	1420	1180	1370	
				540	620	515	600	
				435	505	420	485	
				220	255	215	250	
				170	195	160	190	
				210	245	205	235	
				385	445	370	430	

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 4 (BMR01/02/03/04, TMP01, CMZ01, CMA01, CMD01)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (CVD) YBC302 a_e / D 1/1 | 3/4	YBC302 a_e / D 1/5	YBC302 a_e / D 1/20	YBC401 a_e / D 1/1 | 3/4	YBC401 a_e / D 1/5	YBC401 a_e / D 1/20
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	235	275	360	200	230	300
		ca. 0,45 % C	Temprato	190	2	200	235	310	170	200	260
		ca. 0,45 % C	pre-temprato	250	3	190	220	290	160	185	245
		ca. 0,75 % C	Temprato	270	4	165	195	255	140	165	215
		ca. 0,75 % C	pre-temprato	300	5	155	180	235	130	150	195
	Acciaio al carbonio		Temprato	180	6	200	235	310	170	200	260
			pre-temprato	275	7	165	195	255	140	165	215
			pre-temprato	300	8	155	180	235	130	150	195
			pre-temprato	350	9	130	155	205	110	130	170
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	120	140	185	100	115	150
			temprato e rinvenuto	325	11	85	100	130	70	85	115
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12						
		martensitico	pre-temprato	240	13						
		austenitico	quencing	180	14						
		austenitico-ferritico		230	15						
K	Ghisa grigia	perlitico/ferritico		180	16						
		perlitico (martensitico)		260	17						
	Ghisa sferodale	ferritico		160	18						
		perlitico		250	19						
	Ghisa malleabile	ferritico		130	20						
		perlitico		230	21						
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22						
		invecchiabile	indurito	100	23						
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24						
		≤ 12 % Si, invecchiabile	indurito	90	25						
		> 12 % Si, non invecchiabile		130	26						
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27						
		CuZn, CuSnZn		90	28						
		CuSn, rame senza piombo e rame elettrolitico		100	29						
S	Leghe resistenti al calore	Base Fe	Temprato	200	30						
			indurito	280	31						
		Base Ni o Co	Temprato	250	32						
			indurito	350	33						
			fuso	320	34						
	Leghe di titanio	Titanio puro		R_m 400	35						
		Leghe Alpha + Beta	indurito	R_m 1050	36						
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37						
			temprato e rinvenuto	60 HRC	38						
	Ghisa dura		fuso	400	39						
	Ghise temprate		temprato e rinvenuto	55 HRC	40						
X	Materiali non metallici	Termoplastiche			41						
		Termoindurenti			42						
		Vetroresina VTR			43						
		Plastica rinforzata in fibra di carbonio			44						
		Grafite			45						
		Legno			46						

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																					
	HC (CVD)									HC (PVD)												
	YBD152			YBD252			YBM253			YBG102			YBG152			YB9320			YBG205		
	a_e / D			a_e / D			a_e / D			a_e / D			a_e / D			a_e / D			a_e / D		
	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20
							235	275	360	245	285	375	230	265	345	220	255	335	210	245	320
							200	235	310	210	245	320	200	230	300	190	220	290	180	210	275
							190	220	290	200	230	300	185	215	280	180	205	270	170	200	260
							165	195	255	175	200	260	165	190	250	155	180	235	150	175	230
							155	180	235	160	190	250	150	175	230	145	170	225	140	160	210
							200	235	310	210	245	320	200	230	300	190	220	290	180	210	275
							165	195	255	175	200	260	165	190	250	155	180	235	150	175	230
							155	180	235	160	190	250	150	175	230	145	170	225	140	160	210
							130	155	205	135	160	210	130	150	195	125	145	190	120	135	180
							120	140	185	125	145	190	115	135	180	110	130	170	105	125	165
							85	100	130	90	100	130	85	95	125	80	90	120	75	90	120
							120	140	180	125	145	190	115	135	175	110	130	170	105	125	160
							100	120	155	105	120	160	100	115	145	95	110	145	90	105	135
							125	150	195	130	155	200	125	145	185	120	140	180	115	130	170
							100	120	155	105	120	160	100	115	145	95	110	145	90	105	135
	300	345	450	260	300	390				270	315	410	255	295	385	245	285	375	235	275	360
	180	210	275	155	180	235				160	190	250	150	175	230	145	170	225	140	160	210
	210	245	320	180	210	275				185	215	280	175	200	260	165	195	255	160	185	245
	140	165	215	120	140	185				125	145	190	115	135	180	110	130	170	105	125	165
	250	290	380	215	250	325				225	260	340	210	240	315	200	230	300	190	225	295
	170	200	260	145	165	215				150	175	230	140	160	210	135	155	205	130	150	195

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 4 (BMR01/02/03/04, TMP01, CMZ01, CMA01, CMD01)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (PVD) YBG212 a_e / D 1/1 | 3/4	YBG212 a_e / D 1/5	YBG212 a_e / D 1/20	YBG252 a_e / D 1/1 | 3/4	YBG252 a_e / D 1/5	YBG252 a_e / D 1/20
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	215	250	325	205	240	315
		ca. 0,45 % C	Temprato	190	2	185	215	280	175	205	270
		ca. 0,45 % C	pre-temprato	250	3	175	200	260	165	195	255
		ca. 0,75 % C	Temprato	270	4	155	175	230	145	170	225
		ca. 0,75 % C	pre-temprato	300	5	140	165	215	135	160	210
	Acciaio al carbonio		Temprato	180	6	185	215	280	175	205	270
			pre-temprato	275	7	155	175	230	145	170	225
			pre-temprato	300	8	140	165	215	135	160	210
			pre-temprato	350	9	120	140	185	115	135	180
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	110	125	165	105	120	160
			temprato e rinvenuto	325	11	80	90	120	75	85	115
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	110	125	165	105	120	160
		martensitico	pre-temprato	240	13	95	105	140	90	105	135
		austenitico	quencing	180	14	115	135	175	110	130	170
		austenitico-ferritico		230	15	95	105	140	90	105	135
K	Ghisa grigia	perlitico/ferritico		180	16	240	280	365	230	265	345
		perlitico (martensitico)		260	17	140	165	215	135	160	210
	Ghisa sferodale	ferritico		160	18	165	190	250	155	180	235
		perlitico		250	19	110	125	165	105	120	160
	Ghisa malleabile	ferritico		130	20	195	225	295	185	220	290
		perlitico		230	21	130	150	195	125	145	190
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22						
		invecchiabile	indurito	100	23						
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24						
		≤ 12 % Si, invecchiabile	indurito	90	25						
		> 12 % Si, non invecchiabile		130	26						
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27						
		CuZn, CuSnZn		90	28						
		CuSn, rame senza piombo e rame elettrolitico		100	29						
S	Leghe resistenti al calore	Base Fe	Temprato	200	30						
			indurito	280	31						
		Base Ni o Co	Temprato	250	32						
			indurito	350	33						
			fuso	320	34						
	Leghe di titanio	Titanio puro		R_m 400	35						
		Leghe Alpha + Beta	indurito	R_m 1050	36						
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37						
			temprato e rinvenuto	60 HRC	38						
	Ghisa dura		fuso	400	39						
	Ghise temprate		temprato e rinvenuto	55 HRC	40						
X	Materiali non metallici	Termoplastiche			41						
		Termoindurenti			42						
		Vetroresina VTR			43						
		Plastica rinforzata in fibra di carbonio			44						
		Grafite			45						
		Legno			46						

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]			
	HC (PVD)			
	YBG302			
	a_e / D			
	1/1 | 3/4	1/5	1/20	
	200	230	300	
	170	200	260	
	160	185	245	
	140	165	215	
	130	150	195	
	170	200	260	
	140	165	215	
	130	150	195	
	110	130	170	
	100	115	150	
	70	85	115	
	100	115	150	
	85	100	130	
	110	125	160	
	85	100	130	
	220	255	335	
	130	150	195	
	150	175	230	
	100	115	150	
	180	210	275	
	120	140	185	

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 5 (SMP01/03/05)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]			
						HC (CVD)		HC (PVD)	
						YBC302	YBM253	YBG101	YB9320
						a_e / D 1/4	a_e / D 1/4	a_e / D 1/4	a_e / D 1/4
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	165	180	190	175
		ca. 0,45 % C	Temprato	190	2	145	155	165	150
		ca. 0,45 % C	pre-temprato	250	3	135	145	155	140
		ca. 0,75 % C	Temprato	270	4	120	130	135	125
		ca. 0,75 % C	pre-temprato	300	5	110	120	125	115
	Acciaio al carbonio		Temprato	180	6	145	155	165	150
			pre-temprato	275	7	120	130	135	125
			pre-temprato	300	8	110	120	125	115
			pre-temprato	350	9	95	100	105	100
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	85	90	95	90
			temprato e rinvenuto	325	11	60	65	70	65
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12		90	95	90
		martensitico	pre-temprato	240	13		80	80	75
		austenitico	quencing	180	14		100	105	95
		austenitico-ferritico		230	15		80	80	75
K	Ghisa grigia	perlitico/ferritico		180	16			215	190
		perlitico (martensitico)		260	17			125	115
	Ghisa sferodale	ferritico		160	18			145	135
		perlitico		250	19			95	90
	Ghisa malleabile	ferritico		130	20			175	160
		perlitico		230	21			115	105
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22				
		invecchiabile	indurito	100	23				
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24				
		≤ 12 % Si, invecchiabile	indurito	90	25				
		> 12 % Si, non invecchiabile		130	26				
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27				
		CuZn, CuSnZn		90	28				
		CuSn, rame senza piombo e rame elettrolitico		100	29				
S	Leghe resistenti al calore	Base Fe	Temprato	200	30				
			indurito	280	31				
		Base Ni o Co	Temprato	250	32				
			indurito	350	33				
			fuso	320	34				
	Leghe di titanio	Titanio puro		R_m 400	35				
		Leghe Alpha + Beta	indurito	R_m 1050	36				
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37				
			temprato e rinvenuto	60 HRC	38				
	Ghisa dura		fuso	400	39				
	Ghise temprate		temprato e rinvenuto	55 HRC	40				
X	Materiali non metallici	Termoplastiche			41				
		Termoindurenti			42				
		Vetroresina VTR			43				
		Plastica rinforzata in fibra di carbonio			44				
		Grafite			45				
		Legno			46				

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]		
	HC (PVD)		
	YBG205	YBG302	
	a_e / D	a_e / D	
	1/4	1/4	
	170	160	
	145	140	
	140	130	
	120	115	
	115	105	
	145	140	
	120	115	
	115	105	
	95	90	
	85	80	
	60	60	
	85	80	
	75	70	
	95	85	
	75	70	
	185	175	
	115	105	
	130	120	
	85	80	
	155	145	
	105	100	

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 6 (FMD03, FME04, FMP03, HMP01)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						HC (CVD)							
						YBC302		YBC401		YBD152		YBD252	
						a_e / D		a_e / D		a_e / D		a_e / D	
						1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	200	230	170	200				
		ca. 0,45 % C	Temprato	190	2	170	200	145	170				
		ca. 0,45 % C	pre-temprato	250	3	160	185	140	160				
		ca. 0,75 % C	Temprato	270	4	140	165	120	140				
		ca. 0,75 % C	pre-temprato	300	5	130	150	115	130				
	Acciaio al carbonio		Temprato	180	6	170	200	145	170				
			pre-temprato	275	7	140	165	120	140				
			pre-temprato	300	8	130	150	115	130				
			pre-temprato	350	9	110	130	95	110				
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	100	115	85	100				
			temprato e rinvenuto	325	11	70	85	60	70				
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16					255	295	220	255
		perlitico (martensitico)		260	17					150	175	130	150
	Ghisa sferodale	ferritico		160	18					175	205	150	175
		perlitico		250	19					115	135	100	115
	Ghisa malleabile	ferritico		130	20					210	245	180	210
		perlitico		230	21					140	165	120	140
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																
	HC (CVD)		HC (PVD)														
	YBM253		YBG102		YBG152		YB9320		YBG205		YBG212		YBG252		YBG302		
	a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		a_e / D		
	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	1/1 | 3/4	1/5	
	200	230	205	240	195	225	190	220	185	215	185	215	180	210	175	205	
	170	200	175	205	170	195	165	190	160	185	160	185	155	180	150	175	
	160	185	165	195	160	180	155	180	150	175	150	175	145	170	140	165	
	140	165	145	170	140	160	135	155	130	155	130	155	130	150	125	145	
	130	150	135	160	130	150	125	145	125	140	125	140	120	140	115	135	
	170	200	175	205	170	195	165	190	160	185	160	185	155	180	150	175	
	140	165	145	170	140	160	135	155	130	155	130	155	130	150	125	145	
	130	150	135	160	130	150	125	145	125	140	125	140	120	140	115	135	
	110	130	115	135	110	125	105	125	105	120	105	120	100	120	100	115	
	100	115	105	120	100	115	95	110	95	110	95	110	90	105	90	105	
	70	85	75	85	70	80	70	80	65	80	65	80	65	75	65	75	
	100	115	105	120	100	115	95	110	95	110	95	110	90	105	90	105	
	85	100	90	105	85	95	80	95	80	95	80	95	80	90	75	90	
	110	125	110	130	105	120	105	120	100	115	100	115	100	115	95	110	
	85	100	90	105	85	95	80	95	80	95	80	95	80	90	75	90	
			230	265	215	250	210	245	205	240	205	240	200	230	195	225	
			135	160	130	150	125	145	125	140	125	140	120	140	115	135	
			155	180	150	170	145	165	140	165	140	165	135	160	135	155	
			105	120	100	115	95	110	95	110	95	110	90	105	90	105	
			185	220	180	205	175	200	170	195	170	195	165	190	160	185	
			125	145	120	135	115	135	115	130	115	130	110	130	105	125	

HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 7 (XMR01, XMP01)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (CVD) YBC302 a_e / D 1/1 | 3/4	YBC302 a_e / D 1/5	YBC302 a_e / D 1/20	YBD152 a_e / D 1/1 | 3/4	YBD152 a_e / D 1/5	YBD152 a_e / D 1/20
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	260	300	390			
		ca. 0,45 % C	Temprato	190	2	225	255	335			
		ca. 0,45 % C	pre-temprato	250	3	210	240	315			
		ca. 0,75 % C	Temprato	270	4	185	210	275			
		ca. 0,75 % C	pre-temprato	300	5	170	195	255			
	Acciaio al carbonio		Temprato	180	6	225	255	335			
			pre-temprato	275	7	185	210	275			
			pre-temprato	300	8	170	195	255			
			pre-temprato	350	9	145	165	215			
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	130	150	195			
			temprato e rinvenuto	325	11	95	105	140			
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12						
		martensitico	pre-temprato	240	13						
		austenitico	quencing	180	14						
		austenitico-ferritico		230	15						
K	Ghisa grigia	perlitico/ferritico		180	16				335	390	510
		perlitico (martensitico)		260	17				200	230	300
	Ghisa sferodale	ferritico		160	18				225	260	340
		perlitico		250	19				150	175	230
	Ghisa malleabile	ferritico		130	20				275	320	420
		perlitico		230	21				185	215	280
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22						
		invecchiabile	indurito	100	23						
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24						
		≤ 12 % Si, invecchiabile	indurito	90	25						
		> 12 % Si, non invecchiabile		130	26						
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27						
		CuZn, CuSnZn		90	28						
		CuSn, rame senza piombo e rame elettrolitico		100	29						
S	Leghe resistenti al calore	Base Fe	Temprato	200	30						
			indurito	280	31						
		Base Ni o Co	Temprato	250	32						
			indurito	350	33						
			fuso	320	34						
	Leghe di titanio	Titanio puro		R_m 400	35						
		Leghe Alpha + Beta	indurito	R_m 1050	36						
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37						
			temprato e rinvenuto	60 HRC	38						
	Ghisa dura		fuso	400	39						
	Ghise temprate		temprato e rinvenuto	55 HRC	40						
X	Materiali non metallici	Termoplastiche			41						
		Termoindurenti			42						
		Vetroresina VTR			43						
		Plastica rinforzata in fibra di carbonio			44						
		Grafite			45						
		Legno			46						

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																				
	HC (CVD)						HC (PVD)														
	YBD252			YBM253			YBG102			YBG152			YB9320			YBG205			YBG212		
	a_e / D			a_e / D			a_e / D			a_e / D			a_e / D			a_e / D			a_e / D		
	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20	1/1 | 3/4	1/5	1/20
				260	300	390	270	315	410	255	295	385	245	285	375	235	275	360	240	280	365
				225	255	335	230	270	355	220	255	335	210	245	320	200	235	310	205	240	315
				210	240	315	220	255	335	205	240	315	200	230	300	190	220	290	195	225	295
				185	210	275	190	225	295	180	210	275	175	200	260	165	195	255	170	200	260
				170	195	255	180	205	270	170	195	255	160	190	250	155	180	235	160	185	245
				225	255	335	230	270	355	220	255	335	210	245	320	200	235	310	205	240	315
				185	210	275	190	225	295	180	210	275	175	200	260	165	195	255	170	200	260
				170	195	255	180	205	270	170	195	255	160	190	250	155	180	235	160	185	245
				145	165	215	150	175	230	145	165	215	135	160	210	130	155	205	135	155	205
				130	150	195	135	160	210	130	150	195	125	145	190	120	140	185	120	140	185
				95	105	140	95	115	150	90	105	140	90	100	130	85	100	130	85	100	130
				130	150	195	135	160	205	130	150	195	125	145	190	120	140	180	120	140	185
				110	130	165	115	135	175	110	125	165	105	120	160	100	120	155	105	120	155
				140	160	210	145	170	220	140	160	205	130	155	200	125	150	195	130	150	195
				110	130	165	115	135	175	110	125	165	105	120	160	100	120	155	105	120	155
	290	335	440				300	345	450	285	330	430	270	315	410	260	300	390	265	305	400
	170	195	255				180	205	270	170	195	255	160	190	250	155	180	235	160	185	245
	195	225	295				205	240	315	195	225	295	185	215	280	180	210	275	180	210	275
	130	150	195				135	160	210	130	150	195	125	145	190	120	140	185	120	140	185
	235	270	355				245	285	375	230	270	355	225	260	340	215	250	325	220	255	335
	160	180	235				165	190	250	155	180	235	150	175	230	145	165	215	145	170	225

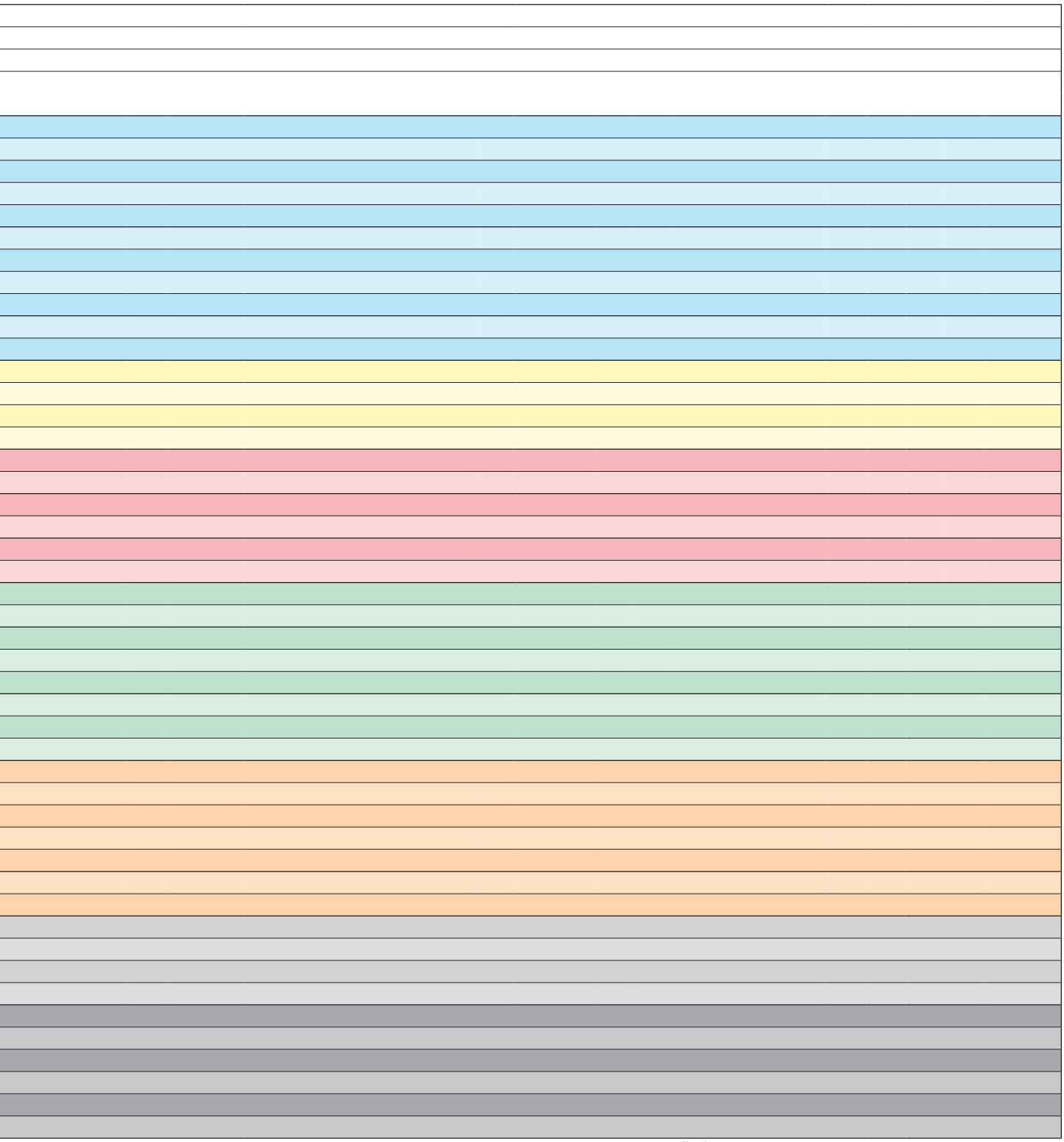
HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Inserti per fresatura Dati di taglio consigliati

Inserti per frese – Gruppo 7 (XMR01, XMP01)

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] HC (PVD) YBG252 a_e / D 1/1 | 3/4	YBG252 a_e / D 1/5	YBG252 a_e / D 1/20	YBG302 a_e / D 1/1 | 3/4	YBG302 a_e / D 1/5	YBG302 a_e / D 1/20
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	230	265	345	225	260	340
		ca. 0,45 % C	Temprato	190	2	200	230	300	195	225	295
		ca. 0,45 % C	pre-temprato	250	3	185	215	280	180	210	275
		ca. 0,75 % C	Temprato	270	4	165	190	250	160	185	245
		ca. 0,75 % C	pre-temprato	300	5	150	175	230	150	170	225
	Acciaio al carbonio		Temprato	180	6	200	230	300	195	225	295
			pre-temprato	275	7	165	190	250	160	185	245
			pre-temprato	300	8	150	175	230	150	170	225
			pre-temprato	350	9	130	150	195	125	145	190
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	115	135	180	115	130	170
			temprato e rinvenuto	325	11	85	95	125	80	95	125
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	115	135	175	115	130	170
		martensitico	pre-temprato	240	13	100	115	145	95	110	145
		austenitico	quencing	180	14	125	145	185	120	140	185
		austenitico-ferritico		230	15	100	115	145	95	110	145
K	Ghisa grigia	perlitico/ferritico		180	16	255	295	385	250	290	380
		perlitico (martensitico)		260	17	150	175	230	150	170	225
	Ghisa sferodale	ferritico		160	18	175	200	260	170	195	255
		perlitico		250	19	115	135	180	115	130	170
	Ghisa malleabile	ferritico		130	20	210	240	315	205	235	310
		perlitico		230	21	140	160	210	135	160	210
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22						
		invecchiabile	indurito	100	23						
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24						
		≤ 12 % Si, invecchiabile	indurito	90	25						
		> 12 % Si, non invecchiabile		130	26						
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27						
		CuZn, CuSnZn		90	28						
		CuSn, rame senza piombo e rame elettrolitico		100	29						
S	Leghe resistenti al calore	Base Fe	Temprato	200	30						
			indurito	280	31						
		Base Ni o Co	Temprato	250	32						
			indurito	350	33						
			fuso	320	34						
	Leghe di titanio	Titanio puro		R_m 400	35						
		Leghe Alpha + Beta	indurito	R_m 1050	36						
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37						
			temprato e rinvenuto	60 HRC	38						
	Ghisa dura		fuso	400	39						
	Ghise temprate		temprato e rinvenuto	55 HRC	40						
X	Materiali non metallici	Termoplastiche			41						
		Termoindurenti			42						
		Vetroresina VTR			43						
		Plastica rinforzata in fibra di carbonio			44						
		Grafite			45						
		Legno			46						

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B254.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.



HC metallo duro rivestito
HT metallo duro non rivestito, componente principale (TiC) o (TiN), Cermet
HC_1 Cermet rivestito
HW metallo duro non rivestito, componente principale (WC)

Dati di avanzamento consigliato

Inserti per frese – Gruppo 1 (FMA07/11/12, FMD02, EMP09/13)

Gruppo materiali		Avanzamento per tagliente [mm]																		
		EMP09			EMP09			EMP13			EMP13			FMA07			FMA07			
		LNKT08/12			LNKT16			ANGX11			ANGX15			ONHU06			ONHU08			
		Tipo lavorazione																		
		F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	
P	Acciaio non legato		0,25	0,50		0,28	0,55		0,23			0,25		0,19	0,23		0,19	0,23		
P	Acciaio al carbonio		0,23	0,47		0,26	0,51		0,22			0,23		0,17	0,22		0,17	0,22		
P	Acciaio alto legato e acciaio alto legato per utensili		0,22	0,44		0,24	0,48		0,20			0,22		0,16	0,20		0,16	0,20		
M	Acciaio inossidabile		0,18	0,35		0,19	0,39		0,16			0,18								
K	Ghisa grigia		0,28	0,55		0,30	0,61		0,26			0,28		0,20	0,26		0,20	0,26		
K	Ghise con grafite sferoidale		0,25	0,50		0,28	0,55		0,23			0,25		0,19	0,23		0,19	0,23		
K	Ghisa malleabile		0,25	0,50		0,28	0,55		0,23			0,25		0,19	0,23		0,19	0,23		
N	Lavorazioni plastiche di leghe di alluminio								0,20			0,21								
N	Leghe di alluminio fuso								0,20			0,21								
N	Rame e leghe di rame (bronzo/ottone)								0,18			0,19								
S	Leghe resistenti al calore																			
S	Leghe di titanio																			
H	Acciaio temprato																			
H	Ghisa dura																			
H	Ghise temprate																			
X	Materiali non metallici																			

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

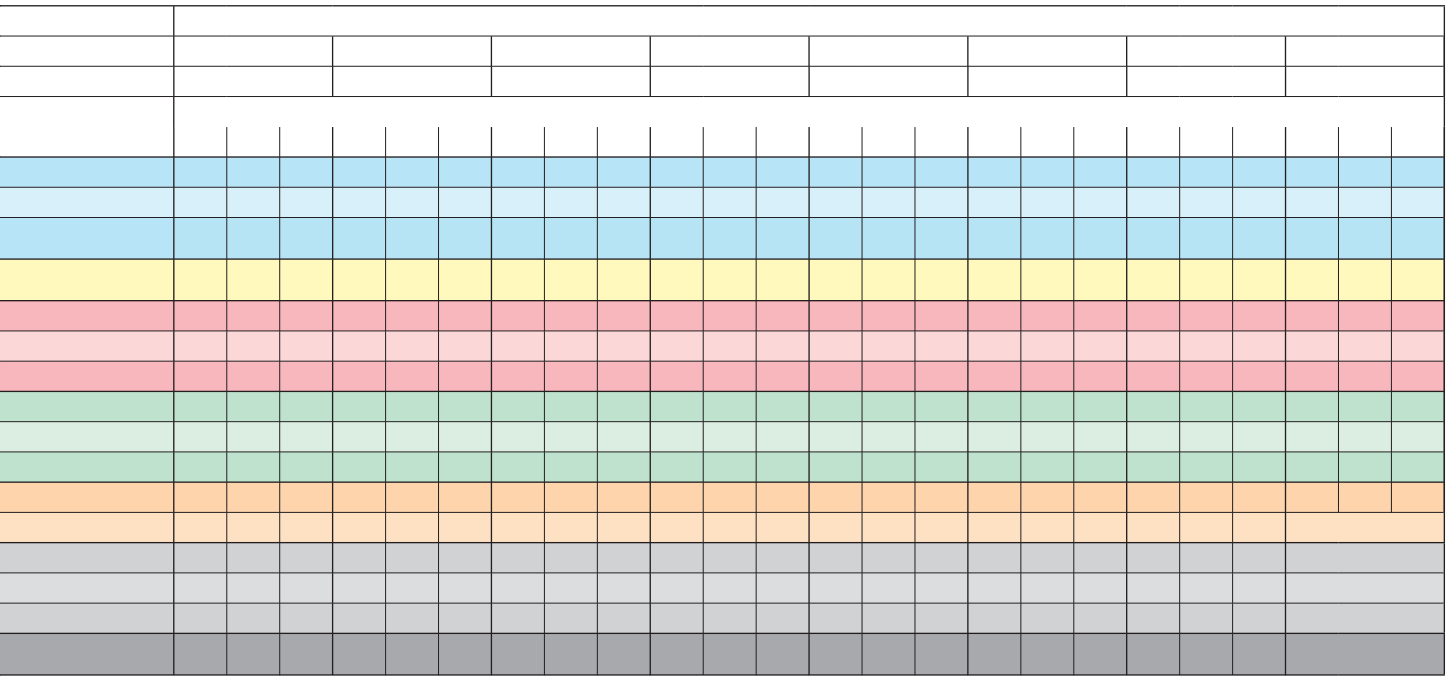
Inserti per frese – Gruppo 1 (FMA07/11/12, FMD02, EMP09/13)

Gruppo materiali		Avanzamento per tagliente [mm]																		
		FMP12																		
		WNHU08																		
		Tipo lavorazione																		
		F	M	R																
P	Acciaio non legato		0,25																	
P	Acciaio al carbonio		0,23																	
P	Acciaio alto legato e acciaio alto legato per utensili		0,22																	
M	Acciaio inossidabile		0,18																	
K	Ghisa grigia		0,28																	
K	Ghise con grafite sferoidale		0,25																	
K	Ghisa malleabile		0,25																	
N	Lavorazioni plastiche di leghe di alluminio																			
N	Leghe di alluminio fuso																			
N	Rame e leghe di rame (bronzo/ottone)																			
S	Leghe resistenti al calore																			
S	Leghe di titanio																			
H	Acciaio temprato																			
H	Ghisa dura																			
H	Ghise temprate																			
X	Materiali non metallici																			

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

	Avanzamento per tagliente [mm]																							
	FMA11			FMA11			FMA11			FMA12			FMA12			FMD02			FMD02			FMP12		
	SNEG12			SNEG15			SNEG19			ONHU06			ONHU08			PNEG11			HNEX09			WNHU06		
	Tipo lavorazione																							
	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R
		0,20	0,23		0,22	0,25			0,29	0,19	0,23			0,23		0,15	0,20	0,30					0,23	
		0,19	0,21		0,20	0,24			0,27	0,17	0,22			0,22		0,14	0,19	0,28					0,22	
		0,18	0,20		0,19	0,22			0,26	0,16	0,20			0,20		0,13	0,18	0,26					0,20	
		0,14	0,16		0,15	0,18			0,20					0,16									0,16	
		0,22	0,25		0,24	0,28			0,32	0,20	0,26			0,26		0,17	0,22	0,33	0,17	0,22	0,33		0,26	
		0,20	0,23		0,22	0,25			0,29	0,19	0,23			0,23		0,15	0,20	0,30	0,15	0,20	0,30		0,23	
		0,20	0,23		0,22	0,25			0,29	0,19	0,23			0,23		0,15	0,20	0,30	0,15	0,20	0,30		0,23	

F Finitura
M Asportazione media
R Sgrossatura



F Finitura
M Asportazione media
R Sgrossatura

Dati di avanzamento consigliato

Inserti per frese – Gruppo 2 (FMA01/02/03/04, FME01/02, FMP01/02, EMP01/02/03/04)

Gruppo materiali		Avanzamento per tagliente [mm]																	
		FMA01 | FMA02			FMA03			FMA03			FMA04			FMA04			FMA04		
		SEET12			SEKN12			SEKN15			OFKT05			OFKR07			ODHT06		
		Tipo lavorazione																	
		F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R
P	Acciaio non legato	0,15	0,20	0,25		0,18			0,20		0,20	0,25		0,20	0,25		0,20	0,25	
P	Acciaio al carbonio	0,14	0,19	0,23		0,17			0,19		0,19	0,23		0,19	0,23		0,19	0,23	
P	Acciaio alto legato e acciaio alto legato per utensili	0,13	0,18	0,22		0,16			0,18		0,18	0,22		0,18	0,22		0,18	0,22	
M	Acciaio inossidabile	0,11	0,14	0,18		0,13			0,14		0,14	0,18		0,14	0,18		0,14	0,18	
K	Ghisa grigia	0,17	0,22	0,28		0,20			0,22		0,22	0,28		0,22	0,28		0,22	0,28	
K	Ghise con grafite sferoidale	0,15	0,20	0,25		0,18			0,20		0,20	0,25		0,20	0,25		0,20	0,25	
K	Ghisa malleabile	0,15	0,20	0,25		0,18			0,20		0,20	0,25		0,20	0,25		0,20	0,25	
N	Lavorazioni plastiche di leghe di alluminio	0,13	0,17	0,21							0,17	0,21		0,17	0,21		0,17	0,21	
N	Leghe di alluminio fuso	0,13	0,17	0,21							0,17	0,21		0,17	0,21		0,17	0,21	
N	Rame e leghe di rame (bronzo/ottone)	0,11	0,15	0,19							0,15	0,19		0,15	0,19		0,15	0,19	
S	Leghe resistenti al calore	0,11	0,14	0,18							0,14	0,18		0,14	0,18		0,14	0,18	
S	Leghe di titanio	0,11	0,14	0,18							0,14	0,18		0,14	0,18		0,14	0,18	
H	Acciaio temprato																		
H	Ghisa dura																		
H	Ghise temprate																		
X	Materiali non metallici																		

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Inserti per frese – Gruppo 3 (FMR01/02/03/04) Fresatura a spianare

Gruppo materiali		Avanzamento per tagliente [mm]																	
		FMR01			FMR01			FMR02			FMR02			FMR02			FMR03		
		RCKT10			RC*12			RC*12			RCKT16			RCKT20			RDKW07		
		Tipo lavorazione																	
		F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R
P	Acciaio non legato		0,20	0,25		0,20	0,25		0,20	0,25		0,23	0,29		0,26	0,33		0,17	
P	Acciaio al carbonio		0,19	0,23		0,19	0,23		0,19	0,23		0,21	0,27		0,25	0,31		0,16	
P	Acciaio alto legato e acciaio alto legato per utensili		0,18	0,22		0,18	0,22		0,18	0,22		0,20	0,25		0,23	0,29		0,15	
M	Acciaio inossidabile		0,14	0,18		0,14	0,18		0,14	0,18		0,16	0,20		0,19	0,23		0,12	
K	Ghisa grigia		0,22	0,28		0,22	0,28		0,22	0,28		0,25	0,32		0,29	0,36		0,19	
K	Ghise con grafite sferoidale		0,20	0,25		0,20	0,25		0,20	0,25		0,23	0,29		0,26	0,33		0,17	
K	Ghisa malleabile		0,20	0,25		0,20	0,25		0,20	0,25		0,23	0,29		0,26	0,33		0,17	
N	Lavorazioni plastiche di leghe di alluminio					0,17	0,21		0,17	0,21									
N	Leghe di alluminio fuso					0,17	0,21		0,17	0,21									
N	Rame e leghe di rame (bronzo/ottone)					0,15	0,19		0,15	0,19									
S	Leghe resistenti al calore																		
S	Leghe di titanio																		
H	Acciaio temprato																		
H	Ghisa dura																		
H	Ghise temprate																		
X	Materiali non metallici																		

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

	Avanzamento per tagliente [mm]																							
	FME02			FME03			FME03			FMP01			FMP02			EMP01 | EMP02			EMP01 | EMP02			EMP03 | EMP04		
	SPK*12			SPK*12			SPK*15			TPKN22			SEET12			APKT11			APKT16			APKT11		
	Tipo lavorazione																							
	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R
		0,20			0,19			0,20			0,20		0,15	0,20	0,25	0,10	0,15	0,20	0,12	0,17	0,23	0,10	0,20	0,25
		0,19			0,17			0,19			0,19		0,14	0,19	0,23	0,09	0,14	0,19	0,11	0,16	0,21	0,09	0,19	0,23
		0,18			0,16			0,18			0,18		0,13	0,18	0,22	0,09	0,13	0,18	0,10	0,15	0,20	0,09	0,18	0,22
		0,14			0,13			0,14			0,14		0,11	0,14	0,18	0,07	0,11	0,14	0,08	0,12	0,16	0,07	0,14	0,18
		0,22			0,20			0,22			0,22		0,17	0,22	0,28	0,11	0,17	0,22	0,13	0,19	0,25	0,11	0,22	0,28
		0,20			0,19			0,20			0,20		0,15	0,20	0,25	0,10	0,15	0,20	0,12	0,17	0,23	0,10	0,20	0,25
		0,20			0,19			0,20			0,20		0,15	0,20	0,25	0,10	0,15	0,20	0,12	0,17	0,23	0,10	0,20	0,25
													0,13	0,17	0,21	0,09	0,13	0,17	0,10	0,15	0,20	0,09	0,17	0,21
													0,13	0,17	0,21	0,09	0,13	0,17	0,10	0,15	0,20	0,09	0,17	0,21
													0,11	0,15	0,19	0,08	0,11	0,15	0,09	0,13	0,18	0,08	0,15	0,19

F Finitura
M Asportazione media
R Sgrossatura

	Avanzamento per tagliente [mm]															
	FMR03			FMR03			FMR04			FMR04			FMR04			
	RDKW08			RD*10			RD*12			RDKW16			RDKW20			
	Tipo lavorazione															
	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	
		0,17			0,20		0,15	0,20	0,25	0,17	0,23	0,29	0,2	0,26	0,33	
		0,16			0,19		0,14	0,19	0,23	0,16	0,21	0,27	0,19	0,25	0,31	
		0,15			0,18		0,13	0,18	0,22	0,15	0,20	0,25	0,18	0,23	0,29	
		0,12			0,14		0,11	0,14	0,18	0,12	0,16	0,20	0,14	0,19	0,23	
		0,19			0,22		0,17	0,22	0,28	0,19	0,25	0,32	0,22	0,29	0,36	
		0,17			0,20		0,15	0,20	0,25	0,17	0,23	0,29	0,20	0,26	0,33	
		0,17			0,20		0,15	0,20	0,25	0,17	0,23	0,29	0,20	0,26	0,33	
					0,17		0,13	0,17	0,21							
					0,17		0,13	0,17	0,21							
					0,15		0,11	0,15	0,19							

F Finitura
M Asportazione media
R Sgrossatura

Inserti per fresatura Dati di taglio consigliati

Dati di avanzamento consigliato

Inserti per frese – Gruppo 3 (FMR01/02/03/04) Fresatura circolare

Gruppo materiali		Avanzamento per tagliente [mm]							
		FMR01	FMR01	FMR02	FMR02		FMR02		FMR03
		RCKT10	RC*12	RC*12	RCKT16		RCKT20		RDKW07
		Diametro utensile [mm]							
		25-32	40-50	50-100	63-125	160-200	80-125	160-250	15
P	Acciaio non legato	0,12	0,16	0,18	0,24	0,32	0,26	0,35	0,07
P	Acciaio al carbonio	0,11	0,14	0,16	0,21	0,28	0,23	0,31	0,06
P	Acciaio alto legato e acciaio alto legato per utensili	0,10	0,13	0,14	0,19	0,26	0,21	0,28	0,06
M	Acciaio inossidabile	0,07	0,09	0,10	0,14	0,18	0,15	0,20	0,04
K	Ghisa grigia	0,11	0,14	0,16	0,22	0,29	0,23	0,32	0,06
K	Ghise con grafite sferoidale	0,10	0,13	0,14	0,19	0,26	0,21	0,28	0,06
K	Ghisa malleabile	0,10	0,13	0,14	0,19	0,26	0,21	0,28	0,06
N	Lavorazioni plastiche di leghe di alluminio								
N	Leghe di alluminio fuso								
N	Rame e leghe di rame (bronzo/ottone)								
S	Leghe resistenti al calore								
S	Leghe di titanio								
H	Acciaio temprato								
H	Ghisa dura								
H	Ghise temprate								
X	Materiali non metallici								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Inserti per frese – Gruppo 4 (BMR01/02/03/04, TMP01, CMZ01, CMA01, CMD01)

Gruppo materiali		Avanzamento per tagliente [mm]								
		BMR01	BMR01	BMR01	BMR01	BMR02	BMR02	BMR02	BMR03	BMR03
		ZD*08 / SP*06	ZD*11 / SP*06	ZD*13 / SP*09	ZP*22 / SP*12	ROHX12	ROHX16	ROHX20	-	-
		Diametro utensile [mm]								
		20	25	32	40-63	12	16	20	16	20
P	Acciaio non legato	0,14	0,21	0,26	0,32	0,10	0,13	0,14	0,13	0,14
P	Acciaio al carbonio	0,10	0,15	0,18	0,22	0,07	0,09	0,10	0,09	0,10
P	Acciaio alto legato e acciaio alto legato per utensili	0,09	0,14	0,17	0,21	0,07	0,08	0,09	0,08	0,09
M	Acciaio inossidabile	0,08	0,12	0,14	0,18	0,06	0,07	0,08	0,07	0,08
K	Ghisa grigia	0,18	0,27	0,34	0,42	0,13	0,17	0,18	0,17	0,18
K	Ghise con grafite sferoidale	0,13	0,20	0,25	0,30	0,10	0,12	0,13	0,12	0,13
K	Ghisa malleabile	0,14	0,21	0,26	0,32	0,10	0,13	0,14	0,13	0,14
N	Lavorazioni plastiche di leghe di alluminio									
N	Leghe di alluminio fuso									
N	Rame e leghe di rame (bronzo/ottone)									
S	Leghe resistenti al calore									
S	Leghe di titanio									
H	Acciaio temprato									
H	Ghisa dura									
H	Ghise temprate									
X	Materiali non metallici									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

	Avanzamento per tagliente [mm]					
	FMR03	FMR03	FMR04	FMR04	FMR04	
	RDKW08	RD*10	RD*12	RDKW16	RDKW20	
	Diametro utensile [mm]					
	16-25	32	50-63	80-100	125-160	
	0,07	0,12	0,17	0,24	0,30	
	0,06	0,11	0,15	0,21	0,26	
	0,06	0,10	0,14	0,19	0,24	
	0,04	0,07	0,10	0,14	0,17	
	0,06	0,11	0,15	0,22	0,27	
	0,06	0,10	0,14	0,19	0,24	
	0,06	0,10	0,14	0,19	0,24	
		0,10	0,11			
		0,10	0,11			
		0,10	0,11			

	Avanzamento per tagliente [mm]											
	BMR03	BMR03	BMR03	BMR04	BMR04	BMR04	BMR04	BMR04	CMZ01	CMA01	CMD01	
	-	-	-	ZOHX12	ZOHX16	ZOHX20	ZOHX25	ZOHX30	SPMT12	SPMT12	SPMT12	
	Diametro utensile [mm]											
	25	30-32	40-50	12	16	20	25	30	12-32	12-32	12-36	
	0,21	0,26	0,30	0,10	0,13	0,14	0,16	0,17	0,23	0,23	0,23	
	0,15	0,18	0,21	0,07	0,09	0,10	0,11	0,12	0,16	0,16	0,16	
	0,14	0,17	0,20	0,07	0,08	0,09	0,10	0,11	0,15	0,15	0,15	
	0,12	0,14	0,17	0,06	0,07	0,08	0,09	0,09	0,13	0,13	0,13	
	0,27	0,34	0,39	0,13	0,17	0,18	0,21	0,22	0,30	0,30	0,30	
	0,20	0,25	0,29	0,10	0,12	0,13	0,15	0,16	0,22	0,22	0,22	
	0,21	0,26	0,30	0,10	0,13	0,14	0,16	0,17	0,23	0,23	0,23	

Dati di avanzamento consigliato

Inserti per frese – Gruppo 5 (SMP01/03/05)

Gruppo materiali		Avanzamento per tagliente [mm]								
		SMP01	SMP01	SMP01	SMP01	SMP01	SMP03	SMP03	SMP03	SMP05
		XSEQ1202	XSEQ1203	XSEQ12T3	XSEQ1204	XSEQ12T4	MPHT06	MPHT08	MPHT12	QC16
		Diametro utensile [mm]								
		63-100	63-100	63-160	63-160	63-160	80-125	125-200	120-200	25-39
P	Acciaio non legato	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,16	0,08
P	Acciaio al carbonio	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,15	0,08
P	Acciaio alto legato e acciaio alto legato per utensili	0,10	0,10	0,11	0,11	0,12	0,12	0,13	0,14	0,07
M	Acciaio inossidabile	0,10	0,10	0,11	0,11	0,12	0,12	0,13	0,14	0,07
K	Ghisa grigia	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,15	0,08
K	Ghise con grafite sferoidale	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,15	0,07
K	Ghisa malleabile	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,15	0,07
N	Lavorazioni plastiche di leghe di alluminio									
N	Leghe di alluminio fuso									
N	Rame e leghe di rame (bronzo/ottone)									
S	Leghe resistenti al calore									
S	Leghe di titanio									
H	Acciaio temprato									
H	Ghisa dura									
H	Ghise temprate									
X	Materiali non metallici									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Inserti per frese – Gruppo 6 (FMD03, FME04, FMP03, HMP01)

Gruppo materiali		Avanzamento per tagliente [mm]																	
		FMD03			FMD03			FME04			FMP03			FMP03			FMP03		
		LNKT20			LNKT25			LNKT15			LNKT12			LNKT15			LNKT20		
		Tipo lavorazione																	
		F	M	R	F	M	R	F	M	R	F	M	R	F	M	R	F	M	R
P	Acciaio non legato			0,50			0,50			0,45			0,45			0,45			0,50
P	Acciaio al carbonio			0,47			0,47			0,42			0,42			0,42			0,47
P	Acciaio alto legato e acciaio alto legato per utensili			0,44			0,44			0,40			0,40			0,40			0,44
M	Acciaio inossidabile			0,45			0,45			0,40			0,40			0,40			0,45
K	Ghisa grigia			0,55			0,55			0,50			0,50			0,50			0,55
K	Ghise con grafite sferoidale			0,50			0,50			0,45			0,45			0,45			0,50
K	Ghisa malleabile			0,50			0,50			0,45			0,45			0,45			0,50
N	Lavorazioni plastiche di leghe di alluminio																		
N	Leghe di alluminio fuso																		
N	Rame e leghe di rame (bronzo/ottone)																		
S	Leghe resistenti al calore																		
S	Leghe di titanio																		
H	Acciaio temprato																		
H	Ghisa dura																		
H	Ghise temprate																		
X	Materiali non metallici																		

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

	Avanzamento per tagliente [mm]	
	SMP05	
	QC22	
	Diametro utensile [mm]	
	44	
	0,08	
	0,08	
	0,07	
	0,07	
	0,08	
	0,07	
	0,07	

	Avanzamento per tagliente [mm]						
	FMP03			HMP01			
	LNKT25			SPMT-APKT			
	Tipo lavorazione						
	F	M	R	F	M	R	
			0,55		0,25		
			0,51		0,23		
			0,48		0,22		
			0,47		0,15		
			0,61		0,28		
			0,55		0,25		
			0,55		0,25		

F Finitura
M Asportazione media
R Sgrossatura

Dati di avanzamento consigliato

Inserti per frese – Gruppo 7 (XMR01, XMP01, QCH)

Gruppo materiali		Avanzamento per tagliente [mm]								
		Fresatura a spianare XMR01			Fresatura a tuffo XMR01			Fresatura circolare XMR01		
		SDMT/WPGT			SDMT/WPGT			SDMT/WPGT		
		Diametro utensile [mm]								
		20-25	30-50	63-160	20-25	30-50	63-160	20-25	30-50	63-160
P	Acciaio non legato	1,00	1,20	2,00	0,20	0,25	0,30	0,80	0,96	1,40
P	Acciaio al carbonio	0,93	1,12	1,86	0,19	0,23	0,28	0,74	0,89	1,30
P	Acciaio alto legato e acciaio alto legato per utensili	0,70	0,84	1,40	0,18	0,22	0,26	0,70	0,84	1,23
M	Acciaio inossidabile	0,50	0,60	1,00	0,14	0,18	0,21	0,56	0,67	0,98
K	Ghisa grigia	0,90	1,08	1,80	0,22	0,28	0,33	0,88	1,06	1,54
K	Ghise con grafite sferoidale	0,90	1,08	1,80	0,20	0,25	0,30	0,80	0,96	1,40
K	Ghisa malleabile	1,00	1,20	2,00	0,20	0,25	0,30	0,80	0,96	1,40
N	Lavorazioni plastiche di leghe di alluminio									
N	Leghe di alluminio fuso									
N	Rame e leghe di rame (bronzo/ottone)									
S	Leghe resistenti al calore									
S	Leghe di titanio									
H	Acciaio temprato									
H	Ghisa dura									
H	Ghise temprate									
X	Materiali non metallici									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

	Avanzamento per tagliente [mm]							
	XMP01	QCH	QCH	QCH	QCH	QCH	QCH	
	CNE	ZOHX	RD*	APKT	WPGT	SDMT	XPHT	
	Diametro utensile [mm]							
	80-400	16-32	15-32	16-40	20-42	20-40	16-32	
	0,20	0,20	0,20	0,15	1,00	1,00	0,20	
	0,20	0,19	0,19	0,14	0,93	0,93	0,19	
	0,20	0,18	0,18	0,13	0,70	0,70	0,18	
	0,20	0,14	0,14	0,11	0,50	0,50	0,14	
	0,20	0,22	0,22	0,17	0,90	0,90	0,22	
	0,20	0,20	0,20	0,15	0,90	0,90	0,20	
	0,20	0,20	0,20	0,15	1,00	1,00	0,20	
				0,13				
				0,13				
				0,11				



FRESE IN METALLO DURO INTEGRALE

Frese in metallo duro integrale

Panoramica prodotti	**B266-B275**
Panoramica gradi	**B276-B277**
Codice sistema – DIN-ISO	**B278**
Codice sistema – JIS	**B279**
Codice sistema - serie QCH	**B280-B282**
Serie GM	**B283-B338**
Serie PM	**B339-B360**
Serie PM Micro	**B361-B370**
Serie EPM	**B371-B386**
Serie VPM	**B387-B388**
Serie HM	**B389-B410**
Serie NM	**B411-B416**
Serie AL	**B417-B428**
Serie ALG/ALP	**B429-B438**
Serie TM	**B439-B454**
Serie HPC	**B455-B460**
Serie UM	**B461-B470**
Serie UMC	**B471-B472**
Serie VSM	**B473-B476**
Frese a sbavare – Serie FM	**B477-B480**
Serie QCH	**B481-B491**
Dati di taglio consigliati	**B492-B526**
Informazioni tecniche	**B537-B540**
Gli utensili speciali	**B541**

B

Frese in metallo duro integrale Panoramica prodotti

Fresatura ad alte prestazioni

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
PM-2E		2	1,0-20,0	✓	✓	✓			✓	Frese a candela	B339
PM-2EL		2	3,0-20,0	✓	✓	✓			✓	Frese a candela	B340
PM-4E-G		4	1,0-20,0	✓	✓	✓			✓	Frese a candela	B341
PM-4EL-G		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B342
PM-4EX-G		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B343
PM-4E		4	1,0-20,0	✓	✓	✓			✓	Frese a candela	B344
PM-4EL		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B345
PM-6E		6	6,0-20,0	✓	✓	✓			✓	Frese a candela	B346
PM-6EL		6	6,0-20,0	✓	✓	✓			✓	Frese a candela	B347
PM-2B		2	1,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B348
PM-2BL		2	2,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B349
PM-2BFP		2	1,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B350
PM-2BC		2	0,5-4,0	✓	✓	✓			✓	Frese a testa semisferica con collo conico	B351
PM-4B		4	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B354
PM-4BL		4	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B355
PM-2R		2	1,0-12,0	✓	✓	✓			✓	Frese toroidali	B356
PM-4H		4	3,0-12,0	✓	✓	✓			✓	Frese ad alto avanzamento	B357
PM-4HL		4	4,0-12,0	✓	✓	✓			✓	Frese ad alto avanzamento	B358
PM-4R		4	3,0-12,0	✓	✓	✓			✓	Frese toroidali	B359
PM-4RL		4	6,0-16,0	✓	✓	✓			✓	Frese toroidali	B360
PM-2EP		2	0,5-5,0	✓	✓	✓			✓	Frese a candela	B362

✓ Molto adatto ✓ Adatto

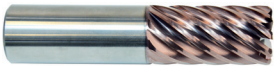
Fresatura ad alte prestazioni

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
PM-2ES		2	0,3-3,0	✓	✓	✓			✓	Frese a candela	B361
PM-2BS		2	0,3-3,0	✓	✓	✓			✓	Frese a testa semisferica	B364
PM-2BP		2	0,5-5,0	✓	✓	✓			✓	Frese a testa semisferica	B365
PM-2RP		2	0,5-5,0	✓	✓	✓			✓	Frese toroidali	B367
EPM-2E		2	3,0-20,0	✓	✓	✓			✓	Frese a candela	B371
EPM-2E-W		2	3,0-20,0	✓	✓	✓			✓	Frese a candela	B372
EPM-2EL		2	3,0-20,0	✓	✓	✓			✓	Frese a candela	B373
EPM-2EL-W		2	3,0-20,0	✓	✓	✓			✓	Frese a candela	B374
EPM-4E		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B375
EPM-4E-W		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B376
EPM-4EL		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B377
EPM-4EL-W		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B378
EPM-2B		2	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B379
EPM-2B-W		2	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B380
EPM-2BL		2	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B381
EPM-2BL-W		2	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B382
EPM-4B		4	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B383
EPM-4B-W		4	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B384
EPM-4BL		4	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B385
EPM-4BL-W		4	3,0-20,0	✓	✓	✓			✓	Frese a testa semisferica	B386
VPM-4E		4	3,0-20,0	✓	✓	✓			✓	Frese a candela	B387

✓ Molto adatto ✓ Adatto

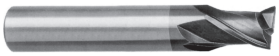
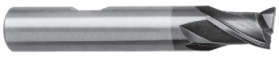
Frese in metallo duro integrale Panoramica prodotti

Fresatura ad alte prestazioni

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
TM-4B		2	6,0-20,0		✔			✔		Frese a testa semisferica	B439
TM-4BL		2	6,0-20,0		✔			✔		Frese a testa semisferica	B440
TM-4BP		2	6,0-20,0		✔			✔		Frese a testa semisferica	B441
TM-5B		2	6,0-20,0		✔			✔		Frese a testa semisferica	B442
TM-5BL		2	6,0-20,0		✔			✔		Frese a testa semisferica	B443
TM-5BP		2	6,0-20,0		✔			✔		Frese a testa semisferica	B444
TM-4R		2	6,0-25,0		✔			✔		Frese toroidali	B445
TM-4RP		2	8,0-25,0		✔			✔		Frese toroidali	B447
TM-5R		2	6,0-10,0		✔			✔		Frese toroidali	B449
TM-7R		2	12,0-21,0		✔			✔		Frese toroidali	B450
TM-9R		2	25,0		✔			✔		Frese toroidali	B451
TM-5RP		2	8,0-10,0		✔			✔		Frese toroidali	B452
TM-7RP		2	12,0-20,0		✔			✔		Frese toroidali	B453
TM-9RP		2	25,0		✔			✔		Frese toroidali	B454

✔ Molto adatto ✔ Adatto

Lavorazione generica

5501R302GM		2	3,0-20,0	✔	✔	✔				Frese a candela	B283
5601R302GM		2	3,0-20,0	✔	✔	✔				Frese a candela	B284
5502R302GM		2	1,0-20,0	✔	✔	✔				Frese a candela	B285
5602R302GM		2	2,0-20,0	✔	✔	✔				Frese a candela	B286
GM-2E		2	1,0-20,0	✔	✔	✔				Frese a candela	B287
GM-2EL		2	3,0-20,0	✔	✔	✔				Frese a candela	B288

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale

Lavorazione generica

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
GM-2EX		2	3,0-20,0	✔	✔	✔				Frese a candela	B289
GM-2EFP		2	6,0-16,0	✔	✔	✔				Frese a candela	B290
GM-2F		2	1,0-20,0	✔	✔	✔				Frese a candela	B291
GM-2FL		2	3,0-20,0	✔	✔	✔				Frese a candela	B292
GM-2EP		2	0,5-5,0	✔	✔	✔				Mini frese frontali	B293
GM-2ES		2	0,3-3,0	✔	✔	✔				Mini frese frontali	B295
GM-3E		3	1,0-20,0	✔	✔	✔				Frese a candela	B296
GM-3EL		3	3,0-20,0	✔	✔	✔				Frese a candela	B297
5501R303GM		3	3,0-20,0	✔	✔	✔				Frese a candela	B298
5601R303GM		3	3,0-20,0	✔	✔	✔				Frese a candela	B299
5502R303GM		3	3,0-20,0	✔	✔	✔				Frese a candela	B300
5602R303GM		3	3,0-20,0	✔	✔	✔				Frese a candela	B301
5502R453GM		3	3,0-20,0	✔	✔	✔				Frese a candela	B302
5602R453GM		3	3,0-20,0	✔	✔	✔				Frese a candela	B303
GM-4F-G		4	1,0-20,0	✔	✔	✔				Frese a candela	B304
GM-4EL-G		4	3,0-20,0	✔	✔	✔				Frese a candela	B305
GM-4FL-G		4	3,0-16,0	✔	✔	✔				Frese a candela	B306
GM-4EX-G		4	3,0-20,0	✔	✔	✔				Frese a candela	B307
GM-4E		4	1,0-20,0	✔	✔	✔				Frese a candela	B308
GM-4E-G		4	1,0-20,0	✔	✔	✔				Frese a candela	B309
GM-4EL		4	3,0-20,0	✔	✔	✔				Frese a candela	B310

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale Panoramica prodotti

Lavorazione generica

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
GM-4EFP		4	6,0-20,0	✓	✓	✓				Frese a candela	B311
5501R304GF		4	3,0-20,0	✓	✓	✓				Frese a candela	B312
5601R304GF		4	3,0-20,0	✓	✓	✓				Frese a candela	B313
5502R304GF		4	3,0-20,0	✓	✓	✓				Frese a candela	B314
5602R304GF		4	3,0-20,0	✓	✓	✓				Frese a candela	B315
5508R454GM		4	3,0-20,0	✓	✓	✓				Frese a candela	B316
5602R454GM		4	3,0-20,0	✓	✓	✓				Frese a candela	B317
5589R45MGFR		6-10	6,0-12,0	✓	✓	✓				Frese a candela	B318
GM-6E		6	6,0-20,0	✓	✓	✓				Frese a candela	B319
GM-6EL		6	6,0-20,0	✓	✓	✓				Frese a candela	B320
5565R302GF		2	3,0-20,0	✓	✓	✓				Frese a testa semisferica	B321
5665R202GM		2	3,0-20,0	✓	✓	✓				Frese a testa semisferica	B322
5566R302GF		2	3,0-12,0	✓	✓	✓				Frese a testa semisferica	B323
GM-2B		2	1,0-20,0	✓	✓	✓				Frese a testa semisferica	B324
GM-2BL		2	2,0-20,0	✓	✓	✓				Frese a testa semisferica	B325
GM-2BFP		2	1,0-20,0	✓	✓	✓				Frese a testa semisferica	B326
GM-2BS		2	0,3-3,0	✓	✓	✓				Mini frese a testa semi-sferica	B327
GM-2BP		2	0,5-5,0	✓	✓	✓				Mini frese a testa semi-sferica	B328
GM-4B		4	3,0-20,0	✓	✓	✓				Frese a testa semisferica	B330
GM-4BL		4	3,0-20,0	✓	✓	✓				Frese a testa semisferica	B331
GM-2R		2	1,0-12,0	✓	✓	✓				Frese toroidali	B332

✓ Molto adatto ✓ Adatto

Frese in metallo duro integrale

Lavorazione generica

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
GM-4R		4	3,0-12,0	✔	✔	✔				Frese toroidali	B333
GM-4RL		4	6,0-16,0	✔	✔	✔				Frese toroidali	B334
5602R303GR		3	6,0-8,0	✔	✔	✔				Frese a sgrossare	B335
5602R304GR		4	10,0-20,0	✔	✔	✔				Frese a sgrossare	B336
5602R305GR		5	25,0	✔	✔	✔				Frese a sgrossare	B337
GM-4W		4	6,0-20,0	✔	✔	✔				Frese a sgrossare	B338

✔ Molto adatto ✔ Adatto

Lavorazioni di acciai temprati

HM-2E		2	1,0-20,0						✔	Frese a candela	B389
HM-2EFP		2	6,0-20,0						✔	Frese a candela	B390
HM-2EP		2	0,5-5,0						✔	Mini frese frontali	B391
HM-2ES		2	0,3-3,0						✔	Mini frese frontali	B393
HM-4E		4	1,0-20,0						✔	Frese a candela	B394
HM-4EL		4	3,0-20,0						✔	Frese a candela	B395
HM-4EFP		4	6,0-20,0						✔	Frese a candela	B396
5502R55MHH		4-8	3,0-20,0						✔	Frese a candela	B397
HM-6E		6	6,0-20,0						✔	Frese a candela	B398
HM-6EL		6	6,0-20,0						✔	Frese a candela	B399
HM-2B		2	1,0-20,0						✔	Frese a testa semisferica	B400
HM-2BL		2	2,0-20,0						✔	Frese a testa semisferica	B401
HM-2BFP		2	1,0-20,0						✔	Frese a testa semisferica	B402
HM-2BS		2	0,3-3,0						✔	Mini frese a testa semi-sferica	B403

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale Panoramica prodotti

Lavorazioni di acciai temprati

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
HM-2BP		2	0,5-5,0						✔	Mini frese a testa semi-sferica	B404
HM-4B		4	3,0-20,0						✔	Frese a testa semisferica	B406
HM-4BL		4	3,0-20,0						✔	Frese a testa semisferica	B407
HM-4R		4	3,0-12,0						✔	Frese toroidali	B408
HM-4RF		4	6,0-12,0						✔	Frese toroidali	B409
HM-4RP		4	6,0-16,0						✔	Frese toroidali	B410

✔ Molto adatto ✔ Adatto

Rame e leghe di rame

5502R402NM		2	3,0-20,0				✔			Frese a candela	B411
NM-2E		2	1,0-12,0				✔			Frese a candela	B412
NM-2EP		2	0,5-5,0				✔			Mini frese frontali	B413
NM-4E		4	3,0-12,0				✔			Frese a candela	B414
NM-2B		2	1,0-12,0				✔			Frese a testa semisferica	B415
NM-2BP		2	0,5-5,0				✔			Mini frese a testa semi-sferica	B416

✔ Molto adatto ✔ Adatto

Alluminio e leghe di alluminio

AL-2E		2	1,0-20,0				✔			Frese a candela	B417
AL-2EL		2	3,0-20,0				✔			Frese a candela	B418
AL-3E		3	1,0-20,0				✔			Frese a candela	B419
AL-3EL		3	3,0-20,0				✔			Frese a candela	B420
AL-3W		3	6,0-20,0				✔			Frese a sgrossare	B421
5565R302NH		2	3,0-16,0				✔			Frese a testa semisferica	B422
5566R302NH		2	3,0-16,0				✔			Frese a testa semisferica	B423

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale

Alluminio e leghe di alluminio

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
AL-2B		2	2,0-12,0				✔			Frese a testa semisferica	B424
AL-2R-AIR		2	6,0-20,0				✔			Frese toroidali ad alte prestazioni	B425
AL-2RL-AIR		2	6,0-20,0				✔			Frese toroidali ad alte prestazioni	B426
AL-3R-AIR		3	12,0-20,0				✔			Frese toroidali ad alte prestazioni	B427
AL-3RL-AIR		3	12,0-20,0				✔			Frese toroidali ad alte prestazioni	B428
ALG-2E		2	1,0-20,0				✔			Frese a candela	B429
ALG-3E		3	1,0-20,0				✔			Frese a candela	B430
ALG-3E-W		3	3,0-20,0				✔			Frese a candela	B431
ALP-3E		3	1,0-20,0				✔			Frese a candela	B432
ALP-3E-W		3	3,0-20,0				✔			Frese a candela	B433
ALP-4E		4	3,0-20,0				✔			Frese a candela	B434
ALP-4E-W		4	3,0-20,0				✔			Frese a candela	B435
ALG-2R		2	6,0-25,0				✔			Frese toroidali	B436
ALG-2R-W		2	6,0-25,0				✔			Frese toroidali	B437

✔ Molto adatto ✔ Adatto

HPC - con angolo elicoidale disuguale

5501R38414GM		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B455
5502R38414GM		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B456
5601R38414GM		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B457
5602R38414GM		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B458
5502R38414GM-R		4	4,0-20,0	✔	✔	✔			✔	Frese toroidali	B459
5602R38414GM-R		4	4,0-20,0	✔	✔	✔			✔	Frese toroidali	B460

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale Panoramica prodotti

HPC - con angolo elicoidale disuguale

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
UM-4E		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B461
UM-4E-W		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B462
UM-4EL		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B463
UM-4EL-W		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B464
UM-4ELP-W		4	4,0-20,0	✔	✔	✔			✔	Frese a candela	B465
UM-4EFP		4	6,0-20,0	✔	✔	✔			✔	Frese a candela	B466
UM-4R		4	4,0-20,0	✔	✔	✔			✔	Frese toroidali	B467
UM-4RL		4	6,0-16,0	✔	✔	✔			✔	Frese toroidali	B468
UM-4RFP		4	6,0-16,0	✔	✔	✔			✔	Frese toroidali	B469
UM-5EP-W		5	6,0-25,0	✔	✔	✔			✔	Frese a candela	B470
UMC-4E		4	6,0-20,0	✔	✔	✔			✔	Frese a candela	B471
UMC-4E-W		4	6,0-20,0	✔	✔	✔			✔	Frese a candela	B472
VSM-4E		4	4,0-20,0	✔	✔			✔		Frese a candela	B473
VSM-4E-C		4	10,0-20,0	✔	✔			✔		Frese a candela	B474
VSM-4R		4	4,0-20,0	✔	✔			✔		Frese toroidali	B475

✔ Molto adatto ✔ Adatto

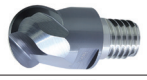
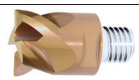
Frese a sbavare

5501/5601		3-4	0,2-0,7	✔	✔	✔	✔			Frese a sbavare	B477
5501/5601		3-4	0,2-0,7	✔	✔	✔	✔			Frese a sbavare	B478
5501/5601		3-4	0,2-0,7	✔	✔	✔	✔			Frese a sbavare	B479
5601		4	5,2-10,0	✔	✔	✔	✔			Frese a sbavare	B480

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale

Serie QCH

Prodotti	Frese in metallo duro integrale	Denti	Ø	Applicazione						Versione	Pagina
				P	M	K	N	S	H		
PM-2B		2	12,0-32,0	✔	✔	✔			✔	Frese a testa semisferica	B481
PM-4B		4	12,0-32,0	✔	✔	✔			✔	Frese a testa semisferica	B482
PM-4E		4	12,0-32,0	✔	✔	✔			✔	Frese a candela	B483
PM-4R		4	12,0-32,0	✔	✔	✔			✔	Frese toroidali	B484
HMX-2B		2	12,0-32,0						✔	Frese a testa semisferica	B486
HMX-4B		4	12,0-32,0						✔	Frese a testa semisferica	B487
HMX-4E		4	12,0-32,0						✔	Frese a candela	B488
HMX-4R		4	12,0-32,0						✔	Frese toroidali	B489
VPM-4E		4	12,0-25,0	✔	✔	✔			✔	Frese a candela	B485

✔ Molto adatto ✔ Adatto

Frese in metallo duro integrale Panoramica gradi

Metallo duro rivestito PVD

Grado	Descrizione gradi
KMD401	Substrato in metallo duro rivestito in PVD adatto per la lavorazione di metalli non ferrosi, CFK e GFK e materiali organici. Il rivestimento in DLC ha un'eccezionale protezione contro l'usura e un'elevata stabilità termica.
KMG303	Substrato in metallo duro rivestito in PVD per lavorazioni universali di fresatura di acciaio (fino a HRC<=48), acciaio inossidabile e ghise.
KMG405	Substrato in metallo duro rivestito in PVD per la fresatura ad alte prestazioni di acciaio (fino a HRC<=55), acciaio inossidabile, materiali a difficile asportazione e ghise. Resistenza all'usura e tenacità ottimizzate per un ampio spettro di applicazioni
KMG406	Substrato di metallo duro rivestito in PVD per l'ingresso nella lavorazione ad alte prestazioni. Applicazione universale per acciaio e materiali fusi fino a 55 HRC e acciaio inossidabile.
KMG555	Substrato in metallo duro rivestito in PVD per la lavorazione pesante di acciaio (fino a HRC 55-68). Resistenza all'usura e tenacità massime per risultati di lavorazione ottimali.
KMG309	Substrato in metallo duro rivestito in PVD per la fresatura di metalli non ferrosi. Elevata resistenza all'usura anche con materiali abrasivi.

Metallo duro non rivestito

Grado	Descrizione gradi
YK30F	Substrato in metallo duro non rivestito K30 per la lavorazione di acciaio, acciaio inossidabile, materiali in ghisa e metalli non ferrosi.

Metallo duro non rivestito

Grado	Descrizione gradi
YK40F	Substrato in metallo duro non rivestito K20-K30 / N20-N30 per l´asportazione di materiali in ghisa e metalli non ferrosi.

Frese in metallo duro integrale Codice sistema – DIN-ISO

5	5	0	1	R	30	2	GM	R05	0800
1	2	3	4	5	6	7	8	9	10

Versione	
Code	Descrizione
5	Frese

1

Versione del codolo	
Code	Descrizione
1	Codolo
5	DIN 6535 HA
6	Stelo Weldon DIN 6535 HB
7	Whistle-Notch DIN 6535 HE
9	Stelo a conicità Morse

2

Versione del tagliente	
Code	Descrizione
0	Fresa per spallamento
6	Frese a testa sferica
8	Frese toroidali

3

Lunghezza utensile	
Code	Descrizione
1	DIN 6527 K
2	DIN 6527 L
5	Secondo la norma del costruttore ZCC-A
6	Secondo la norma del costruttore ZCC-B
8	DIN 6528
9	Secondo la norma del costruttore ZCC-D

4

Direzione di taglio	
Code	Descrizione
R	Destra
L	Sinistra

5

Angolo di inclinazione dell'elica	
Code	Descrizione
20	20°
30	30°
3841	38°/41°
45	45°
55	55°
60	60°

6

Numero taglienti	
Code	Descrizione
2	Due
...	
M	Diametri differenti con numero di taglienti differenti

7

Applicazione	
Code	Descrizione
GM	Asportazione media/HPC
GF	Finitura
HM	Lavorazioni di acciai temprati
MHH	Lavorazioni ad alta velocità ad elevata durezza
NH	Lavorazione ad alte prestazioni di materiali non ferrosi

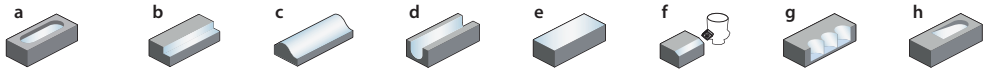
8

Raggio [mm]	
Code	Descrizione
R03	0,3
R15	1,5
R30	3,0
...	

9

Diametro [mm]	
Code	Descrizione
0100	1,0
0800	8,0
2000	20,0
...	

10



a Fresatura di cave **b** Fresatura ad angolo **c** Profilatura **d** Fresatura di fessure **e** Fresatura a spianare **f** Fresatura a smusso
g Fresatura a tuffo **h** Fresatura circolare/a rampe

Frese in metallo duro integrale

GM – 2 E L P – D12 R0.5 – M08

1	2	3	4	5	6	7	8

Applicazione	
Code	Descrizione
GR	Sgrossatura generica
GM	Asportazione media
GF	Finitura
PM	Lavorazione ad alte prestazioni
EPM	«Ecoline» – Lavorazione ad alte prestazioni
VPM	Applicazioni di scanalature piane
HM	Lavorazioni ad alta velocità ad elevata durezza
NM	Lavorazione generica di materiali non ferrosi
AL	Lavorazione generica di alluminio e leghe di alluminio
ALP	Lavorazione ad alte prestazioni di alluminio e leghe di alluminio
ALG	Lavorazione generica di alluminio e leghe di alluminio
UM	Lavorazione HSC/HPC
UMC	Lavorazione HSC con geometria rompitruciolo
VSM	Lavorazione generica di materiali a difficile asportazione
TM	Lavorazione generica di materiali a difficile asportazione

1

Numero taglienti

2

Versione del tagliente	
Code	Descrizione
E	Frese a spallamento con smusso di protezione
F	Frese ad angolo con taglienti affilati
B	Frese a testa sferica
R	Frese toroidali
W	Frese a sgrossare
H	Frese ad alto avanzamento

3

Lunghezza tagliente	
Code	Descrizione
L	Lungo
X	Extra lungo
F	Corto

4

Tipo	
Code	Descrizione
S	Diametro min.
P	Collo ridotto
C	Collo conico

5

Diametro [mm]	
Code	Descrizione
D3.0	3,0
D20.0	20,0
...	

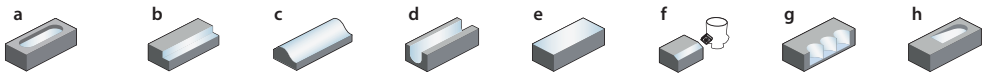
6

Raggio [mm]	
Code	Descrizione
R0.5	0,5
R3.0	3,0
...	

7

Particolarità	
Code	Descrizione
G	Angolo di inclinazione dell'elica 30°
M	Lunghezza collo [mm]
S	Stelo sottile
AIR	Per l'industria aerospaziale

8



a Fresatura di cave **b** Fresatura ad angolo **c** Profilatura **d** Fresatura di fessure **e** Fresatura a spianare **f** Fresatura a smusso **g** Fresatura a tuffo **h** Fresatura circolare/a rampe

Frese in metallo duro integrale Codice sistema – serie QCH

Q	08	–	PM	–	2	B	–	D12	R0.5
1	2		3		4	5		6	7

Tipo de filettatura

1

Dimensione del filetto [mm]	
Code	Descrizione
08	8,0
10	10,0
12	12,0
14	14,0
18	18,0

2

Applicazione	
Code	Descrizione
PM	Lavorazione ad alte prestazioni
HMX	Lavorazioni di acciai temprati

3

Numero taglienti

4

Versione del tagliente	
Code	Descrizione
E	Frese a spallamento con smusso di protezione
B	Frese a testa sferica
R	Frese toroidali

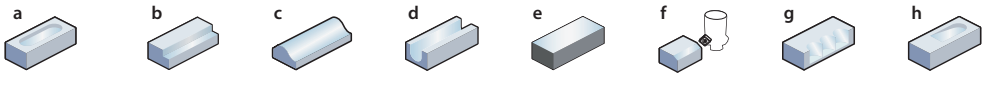
5

Diametro [mm]	
Code	Descrizione
D3.0	3,0
D8.0	8,0
D20.0	20,0

6

Raggio [mm]	
Code	Descrizione
R0.5	0,5
R1.0	1,5
R3.0	3,0
...	

7



a Fresatura di cave **b** Fresatura ad angolo **c** Profilatura **d** Fresatura di fessure **e** Fresatura a spianare **f** Fresatura a smusso
g Fresatura a tuffo **h** Fresatura circolare/a rampe

Frese in metallo duro integrale

G	25	–	QCH	–	Q	12	–	250	C	–	(ZJ)	(115)
1	2		3		4	5		6	7		8	9

Forma di serraggio

Code	Descrizione
G	Cilindrico
XP	Weldon

1

Diametro di serraggio [mm]

Code	Descrizione
12	12
16	16
20	20
25	25
32	32

2

Serie

Code	Descrizione
QCH	Sistema di testine intercambiabili

3

Tipo filettatura

Code	Descrizione
M	Metrico
Q	Filettatura Q

4

Dimensioni filettatura [mm]

Code	Descrizione
8	8
10	10
12	12
14	14
...	

5

Lunghezza totale [mm]

Code	Descrizione
85	85
150	150
200	200
...	

6

Materiale

Code	Descrizione
C	Metallo duro integrale
S	Acciaio

7

Attacco

Code	Descrizione
ZJ	Conico
–	Cilindrico a gradini

8

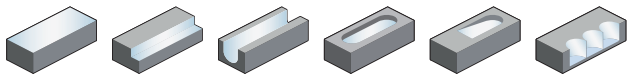
Lunghezza cono [mm]

Code	Descrizione
90	90
115	115
...	

9

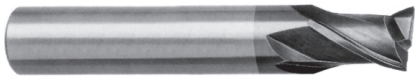
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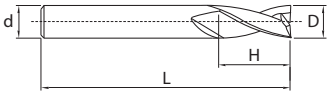
Frese a candela — Asportazione media

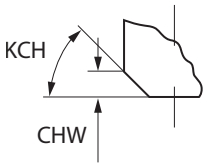


5501R302GM

– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm]						Denti	Grado	
		D	d (h6)	H	L	KCH	CHW		KMG303	YK30F
5501R302GM-0300		3	6	4	50	0	0	2	●	○
5501R302GM-0400		4	6	5	54	0	0	2	●	○
5501R302GM-0500		5	6	6	54	0	0	2	●	○
5501R302GM-0600		6	6	7	54	45	0,1	2	●	○
5501R302GM-0800		8	8	9	58	45	0,1	2	●	○
5501R302GM-1000		10	10	11	66	45	0,1	2	●	○
5501R302GM-1200		12	12	12	73	45	0,1	2	●	○
5501R302GM-1400		14	14	14	75	45	0,15	2	●	○
5501R302GM-1600		16	16	16	82	45	0,15	2	●	○
5501R302GM-1800		18	18	18	84	45	0,15	2	●	○
5501R302GM-2000		20	20	20	92	45	0,15	2	●	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

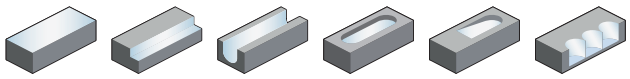
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie GM

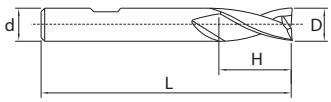
Frese a candela — Asportazione media

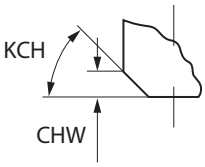
5601R302GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5601R302GM-0300		3	6	4	50	0	0	2	●
5601R302GM-0400		4	6	5	54	0	0	2	●
5601R302GM-0500		5	6	6	54	0	0	2	●
5601R302GM-0600		6	6	7	54	45	0,1	2	●
5601R302GM-0800		8	8	9	58	45	0,1	2	●
5601R302GM-1000		10	10	11	66	45	0,1	2	●
5601R302GM-1200		12	12	12	73	45	0,1	2	●
5601R302GM-1400		14	14	14	75	45	0,15	2	●
5601R302GM-1600		16	16	16	82	45	0,15	2	●
5601R302GM-1800		18	18	18	84	45	0,15	2	●
5601R302GM-2000		20	20	20	92	45	0,15	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

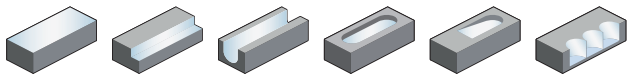
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

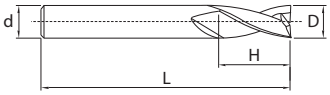
Frese a candela tagliente lungo — Asportazione media

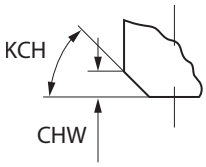
5502R302GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm]						Denti	Grado	
		D	d (h6)	H	L	KCH	CHW		KMG303	YK30F
5502R302GM-0100		1	3	2	38	0	0	2	●	○
5502R302GM-0150		1,5	3	3	38	0	0	2	●	○
5502R302GM-0200		2	6	6	57	0	0	2	●	○
5502R302GM-0250		2,5	6	7	57	0	0	2	●	○
5502R302GM-0280		2,8	6	7	57	0	0	2	●	○
5502R302GM-0300		3	6	7	57	0	0	2	●	○
5502R302GM-0350		3,5	6	7	57	0	0	2	●	○
5502R302GM-0380		3,8	6	8	57	0	0	2	●	○
5502R302GM-0400		4	6	8	57	0	0	2	●	○
5502R302GM-0450		4,5	6	8	57	0	0	2	●	○
5502R302GM-0480		4,8	6	8	57	0	0	2	●	○
5502R302GM-0500		5	6	10	57	0	0	2	●	○
5502R302GM-0550		5,5	6	10	57	0	0	2	●	○
5502R302GM-0575		5,75	6	10	57	0	0	2	●	○
5502R302GM-0600		6	6	10	57	45	0,1	2	●	○
5502R302GM-0675		6,75	8	13	63	45	0,1	2	○	○
5502R302GM-0700		7	8	13	63	45	0,1	2	●	○
5502R302GM-0750		7,5	8	16	63	45	0,1	2	●	○
5502R302GM-0775		7,75	8	16	63	45	0,1	2	●	○
5502R302GM-0800		8	8	16	63	45	0,1	2	●	○
5502R302GM-0870		8,7	10	16	72	45	0,1	2	●	○
5502R302GM-0900		9	10	16	72	45	0,1	2	●	○
5502R302GM-0950		9,5	10	16	72	45	0,1	2	○	○
5502R302GM-1000		10	10	19	72	45	0,1	2	●	○
5502R302GM-1100		11	12	22	83	45	0,1	2	●	○
5502R302GM-1170		11,7	12	22	83	45	0,1	2	●	○
5502R302GM-1200		12	12	22	83	45	0,1	2	●	○
5502R302GM-1370		13,7	14	22	83	45	0,1	2	●	○
5502R302GM-1400		14	14	22	83	45	0,15	2	●	○
5502R302GM-1500		15	16	26	92	45	0,15	2	●	○
5502R302GM-1570		15,7	16	26	92	45	0,15	2	●	○
5502R302GM-1600		16	16	26	92	45	0,15	2	●	○
5502R302GM-1700		17	18	26	92	45	0,15	2	○	○
5502R302GM-1800		18	18	26	92	45	0,15	2	●	○
5502R302GM-2000		20	20	32	104	45	0,15	2	●	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

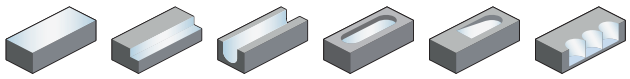
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

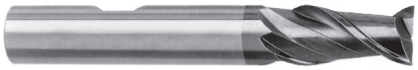
Frese in metallo duro integrale Serie GM

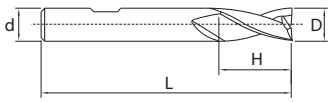
Frese a candela tagliente lungo — Asportazione media

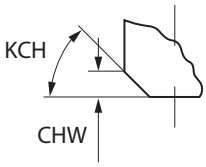


5602R302GM

– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5602R302GM-0200		2	6	6	57	0	0	2	●
5602R302GM-0250		2,5	6	7	57	0	0	2	●
5602R302GM-0280		2,8	6	7	57	0	0	2	●
5602R302GM-0300		3	6	7	57	0	0	2	●
5602R302GM-0350		3,5	6	7	57	0	0	2	●
5602R302GM-0380		3,8	6	8	57	0	0	2	●
5602R302GM-0400		4	6	8	57	0	0	2	●
5602R302GM-0450		4,5	6	8	57	0	0	2	●
5602R302GM-0480		4,8	6	8	57	0	0	2	●
5602R302GM-0500		5	6	10	57	0	0	2	●
5602R302GM-0550		5,5	6	10	57	0	0	2	●
5602R302GM-0575		5,75	6	10	57	0	0	2	●
5602R302GM-0600		6	6	10	57	45	0,1	2	●
5602R302GM-0675		6,75	8	13	63	45	0,1	2	○
5602R302GM-0700		7	8	13	63	45	0,1	2	●
5602R302GM-0750		7,5	8	16	63	45	0,1	2	●
5602R302GM-0775		7,75	8	16	63	45	0,1	2	○
5602R302GM-0800		8	8	16	63	45	0,1	2	●
5602R302GM-0870		8,7	10	16	72	45	0,1	2	●
5602R302GM-0900		9	10	16	72	45	0,1	2	●
5602R302GM-1000		10	10	19	72	45	0,1	2	●
5602R302GM-1170		11,7	12	22	83	45	0,1	2	●
5602R302GM-1200		12	12	22	83	45	0,1	2	●
5602R302GM-1370		13,7	14	22	83	45	0,1	2	●
5602R302GM-1400		14	14	22	83	45	0,15	2	●
5602R302GM-1570		15,7	16	26	92	45	0,15	2	●
5602R302GM-1600		16	16	26	92	45	0,15	2	●
5602R302GM-1800		18	18	26	92	45	0,15	2	●
5602R302GM-2000		20	20	32	104	45	0,15	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

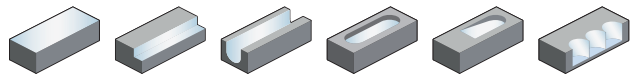
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

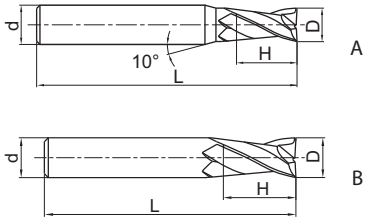
Frese a candela — Asportazione media

GM-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2E-D1.0S		1	4	3	50	2	A	●
GM-2E-D1.5S		1,5	4	4	50	2	A	●
GM-2E-D2.0S		2	4	6	50	2	A	●
GM-2E-D2.5S		2,5	4	8	50	2	A	●
GM-2E-D3.0S		3	4	8	50	2	A	●
GM-2E-D4.0S		4	4	11	50	2	B	●
GM-2E-D1.0		1	6	3	50	2	A	●
GM-2E-D1.5		1,5	6	4	50	2	A	●
GM-2E-D2.0		2	6	6	50	2	A	●
GM-2E-D2.5		2,5	6	8	50	2	A	●
GM-2E-D3.0		3	6	8	50	2	A	●
GM-2E-D3.5		3,5	6	10	50	2	A	●
GM-2E-D4.0		4	6	11	50	2	A	●
GM-2E-D4.5		4,5	6	11	50	2	A	●
GM-2E-D5.0		5	6	13	50	2	A	●
GM-2E-D5.5		5,5	6	16	50	2	A	●
GM-2E-D6.0		6	6	16	50	2	B	●
GM-2E-D7.0		7	8	20	60	2	A	●
GM-2E-D8.0		8	8	20	60	2	B	●
GM-2E-D9.0		9	10	22	75	2	A	●
GM-2E-D10.0		10	10	25	75	2	B	●
GM-2E-D11.0		11	12	26	75	2	A	●
GM-2E-D12.0		12	12	30	75	2	B	●
GM-2E-D14.0		14	14	32	75	2	B	●
GM-2E-D16.0		16	16	45	100	2	B	●
GM-2E-D18.0		18	18	45	100	2	B	●
GM-2E-D20.0		20	20	45	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

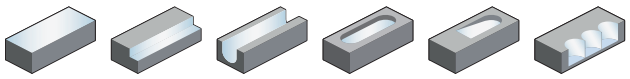
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

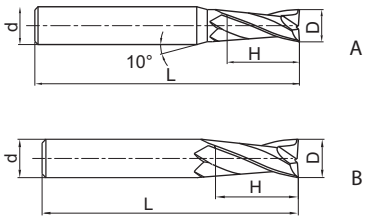
Frese a candela tagliente lungo — Asportazione media

GM-2EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2EL-D3.0		3	6	12	75	2	A	●
GM-2EL-D4.0		4	6	15	75	2	A	●
GM-2EL-D5.0		5	6	20	75	2	A	●
GM-2EL-D6.0		6	6	20	75	2	B	●
GM-2EL-D8.0		8	8	25	100	2	B	●
GM-2EL-D10.0		10	10	30	100	2	B	●
GM-2EL-D12.0		12	12	35	100	2	B	●
GM-2EL-D14.0		14	14	40	100	2	B	●
GM-2EL-D16.0		16	16	50	150	2	B	●
GM-2EL-D20.0		20	20	55	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

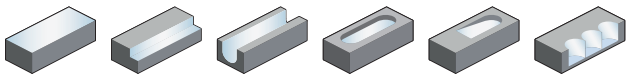
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

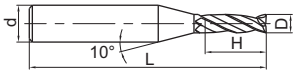
Frese a candela tagliente lungo — Asportazione media

GM-2EX

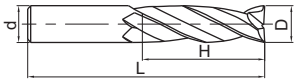


– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





A



B

Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2EX-D3.0		3	6	20	75	2	A	●
GM-2EX-D4.0		4	6	25	75	2	A	●
GM-2EX-D5.0		5	6	30	75	2	A	●
GM-2EX-D6.0		6	6	30	75	2	B	○
GM-2EX-D8.0		8	8	40	100	2	B	○
GM-2EX-D10.0		10	10	50	110	2	B	○
GM-2EX-D12.0		12	12	50	110	2	B	○
GM-2EX-D16.0		16	16	70	150	2	B	○
GM-2EX-D20.0		20	20	75	150	2	B	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

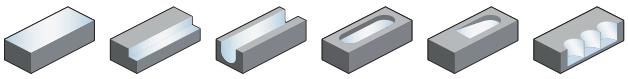
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie GM

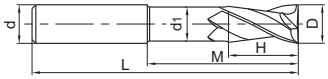
Frese a candela tagliente corto — Asportazione media

GM-2EFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG303
GM-2EFP-D6.0		6	6	5,8	9	30	75	2	○
GM-2EFP-D8.0		8	8	7,8	12	40	100	2	○
GM-2EFP-D10.0		10	10	9,6	15	50	100	2	○
GM-2EFP-D12.0		12	12	11,5	18	50	100	2	○
GM-2EFP-D16.0		16	16	15,5	24	50	150	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

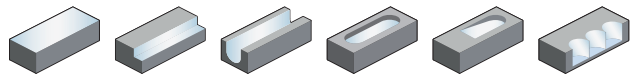
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

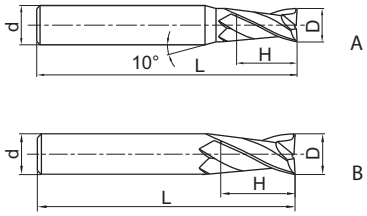
Frese a candela — Asportazione media

GM-2F



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2F-D1.0		1	6	3	50	2	A	○
GM-2F-D1.5		1,5	6	4	50	2	A	○
GM-2F-D2.0		2	6	6	50	2	A	○
GM-2F-D2.5		2,5	6	8	50	2	A	○
GM-2F-D3.0		3	6	8	50	2	A	●
GM-2F-D3.5		3,5	6	10	50	2	A	○
GM-2F-D4.0		4	6	11	50	2	A	●
GM-2F-D4.5		4,5	6	11	50	2	A	●
GM-2F-D5.0		5	6	13	50	2	A	●
GM-2F-D5.5		5,5	6	16	50	2	A	○
GM-2F-D6.0		6	6	16	50	2	B	●
GM-2F-D7.0		7	8	20	60	2	A	●
GM-2F-D8.0		8	8	20	60	2	B	●
GM-2F-D9.0		9	10	22	75	2	A	○
GM-2F-D10.0		10	10	25	75	2	B	○
GM-2F-D11.0		11	12	26	75	2	A	○
GM-2F-D12.0		12	12	30	75	2	B	●
GM-2F-D14.0		14	14	32	75	2	B	○
GM-2F-D16.0		16	16	45	100	2	B	○
GM-2F-D18.0		18	18	45	100	2	B	○
GM-2F-D20.0		20	20	45	100	2	B	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

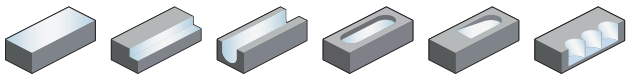
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

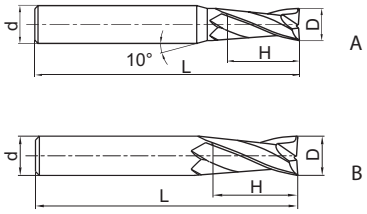
Frese a candela tagliente lungo — Asportazione media

GM-2FL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2FL-D3.0		3	6	12	75	2	A	○
GM-2FL-D4.0		4	6	15	75	2	A	○
GM-2FL-D5.0		5	6	20	75	2	A	○
GM-2FL-D6.0		6	6	20	75	2	B	○
GM-2FL-D8.0		8	8	25	100	2	B	○
GM-2FL-D10.0		10	10	30	100	2	B	○
GM-2FL-D12.0		12	12	35	100	2	B	○
GM-2FL-D14.0		14	14	40	100	2	B	○
GM-2FL-D16.0		16	16	50	150	2	B	○
GM-2FL-D20.0		20	20	55	150	2	B	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

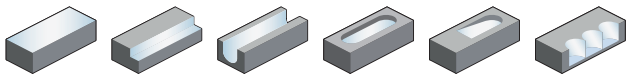
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

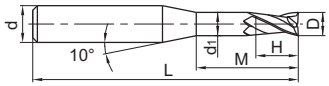
Frese a candela — Asportazione media

GM-2EP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG303
GM-2EP-D0.5-M04		0,5	4	0,45	0,7	4	50	2	●
GM-2EP-D0.5-M06		0,5	4	0,45	0,7	6	50	2	●
GM-2EP-D0.5-M08		0,5	4	0,45	0,7	8	50	2	●
GM-2EP-D0.8-M04		0,8	4	0,75	1,2	4	50	2	●
GM-2EP-D0.8-M06		0,8	4	0,75	1,2	6	50	2	●
GM-2EP-D0.8-M08		0,8	4	0,75	1,2	8	50	2	●
GM-2EP-D0.8-M10		0,8	4	0,75	1,2	10	50	2	●
GM-2EP-D1.0-M04		1	4	0,95	1,5	4	50	2	●
GM-2EP-D1.0-M06		1	4	0,95	1,5	6	50	2	●
GM-2EP-D1.0-M08		1	4	0,95	1,5	8	50	2	●
GM-2EP-D1.0-M10		1	4	0,95	1,5	10	50	2	●
GM-2EP-D1.0-M12		1	4	0,95	1,5	12	50	2	●
GM-2EP-D1.0-M14		1	4	0,95	1,5	14	50	2	●
GM-2EP-D1.2-M06		1,2	4	1,15	1,8	6	50	2	●
GM-2EP-D1.2-M08		1,2	4	1,15	1,8	8	50	2	●
GM-2EP-D1.2-M10		1,2	4	1,15	1,8	10	50	2	●
GM-2EP-D1.2-M12		1,2	4	1,15	1,8	12	50	2	○
GM-2EP-D1.5-M06		1,5	4	1,45	2,3	6	50	2	●
GM-2EP-D1.5-M08		1,5	4	1,45	2,3	8	50	2	●
GM-2EP-D1.5-M10		1,5	4	1,45	2,3	10	50	2	●
GM-2EP-D1.5-M12		1,5	4	1,45	2,3	12	50	2	●
GM-2EP-D1.5-M14		1,5	4	1,45	2,3	14	50	2	●
GM-2EP-D2.0-M06		2	4	1,95	3	6	50	2	●
GM-2EP-D2.0-M08		2	4	1,95	3	8	50	2	●
GM-2EP-D2.0-M10		2	4	1,95	3	10	50	2	●
GM-2EP-D2.0-M12		2	4	1,95	3	12	50	2	●
GM-2EP-D2.0-M14		2	4	1,95	3	14	50	2	●
GM-2EP-D2.0-M16		2	4	1,95	3	16	50	2	●
GM-2EP-D2.5-M08		2,5	4	2,4	3,7	8	50	2	●
GM-2EP-D2.5-M10		2,5	4	2,4	3,7	10	50	2	●
GM-2EP-D2.5-M12		2,5	4	2,4	3,7	12	50	2	●
GM-2EP-D2.5-M14		2,5	4	2,4	3,7	14	50	2	●
GM-2EP-D2.5-M16		2,5	4	2,4	3,7	16	60	2	●
GM-2EP-D2.5-M18		2,5	4	2,4	3,7	18	60	2	●
GM-2EP-D2.5-M20		2,5	4	2,4	3,7	20	60	2	●
GM-2EP-D3.0-M06		3	6	2,85	4,5	6	50	2	●
GM-2EP-D3.0-M08		3	6	2,85	4,5	8	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

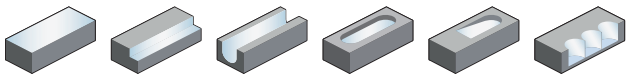
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

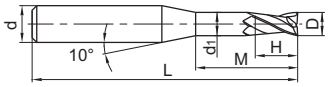
Frese a candela — Asportazione media

GM-2EP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG303
GM-2EP-D3.0-M10		3	6	2,85	4,5	10	50	2	●
GM-2EP-D3.0-M12		3	6	2,85	4,5	12	50	2	●
GM-2EP-D3.0-M14		3	6	2,85	4,5	14	60	2	●
GM-2EP-D3.0-M16		3	6	2,85	4,5	16	60	2	●
GM-2EP-D3.0-M18		3	6	2,85	4,5	18	60	2	●
GM-2EP-D3.0-M20		3	6	2,85	4,5	20	60	2	●
GM-2EP-D4.0-M12		4	6	3,85	6	12	50	2	●
GM-2EP-D4.0-M14		4	6	3,85	6	14	60	2	●
GM-2EP-D4.0-M16		4	6	3,85	6	16	60	2	●
GM-2EP-D4.0-M20		4	6	3,85	6	20	60	2	●
GM-2EP-D4.0-M25		4	6	3,85	6	25	60	2	●
GM-2EP-D5.0-M16		5	6	4,85	7,5	16	60	2	●
GM-2EP-D5.0-M25		5	6	4,85	7,5	25	70	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

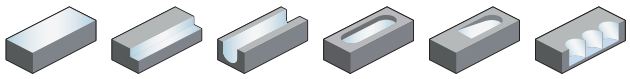
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

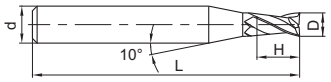
Frese a candela — Asportazione media

GM-2ES



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG303
GM-2ES-D0.3		0,3	4	0,6	50	2	●
GM-2ES-D0.4		0,4	4	0,8	50	2	●
GM-2ES-D0.5		0,5	4	1	50	2	●
GM-2ES-D0.6		0,6	4	1,2	50	2	●
GM-2ES-D0.7		0,7	4	1,4	50	2	●
GM-2ES-D0.8		0,8	4	1,6	50	2	●
GM-2ES-D0.9		0,9	4	1,8	50	2	●
GM-2ES-D1.0		1	4	2	50	2	●
GM-2ES-D1.1		1,1	4	2	50	2	●
GM-2ES-D1.2		1,2	4	2,5	50	2	●
GM-2ES-D1.3		1,3	4	2,5	50	2	●
GM-2ES-D1.4		1,4	4	3	50	2	●
GM-2ES-D1.5		1,5	4	3	50	2	●
GM-2ES-D1.6		1,6	4	3,5	50	2	●
GM-2ES-D1.7		1,7	4	3,5	50	2	●
GM-2ES-D1.8		1,8	4	4	50	2	●
GM-2ES-D1.9		1,9	4	4	50	2	●
GM-2ES-D2.0		2	4	4	50	2	●
GM-2ES-D2.1		2,1	4	4	50	2	●
GM-2ES-D2.2		2,2	4	4,5	50	2	●
GM-2ES-D2.3		2,3	4	4,5	50	2	●
GM-2ES-D2.4		2,4	4	5	50	2	●
GM-2ES-D2.5		2,5	4	5	50	2	●
GM-2ES-D2.6		2,6	4	5	50	2	●
GM-2ES-D2.7		2,7	4	5,5	50	2	●
GM-2ES-D2.8		2,8	4	5,5	50	2	●
GM-2ES-D2.9		2,9	4	6	50	2	●
GM-2ES-D3.0		3	4	6	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

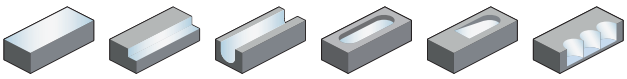
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

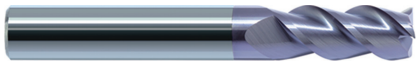
Frese in metallo duro integrale Serie GM

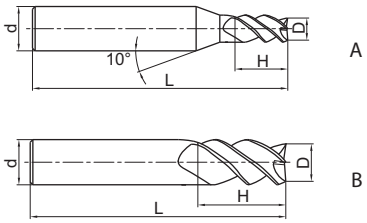
Frese a candela Asportazione media

GM-3E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-3E-D1.0S		1	4	3	50	3	A	○
GM-3E-D1.5S		1,5	4	4	50	3	A	○
GM-3E-D2.0S		2	4	6	50	3	A	○
GM-3E-D2.5S		2,5	4	8	50	3	A	○
GM-3E-D3.0S		3	4	8	50	3	A	○
GM-3E-D4.0S		4	4	11	50	3	B	○
GM-3E-D1.0		1	6	3	50	3	A	○
GM-3E-D1.5		1,5	6	4	50	3	A	○
GM-3E-D2.0		2	6	6	50	3	A	○
GM-3E-D2.5		2,5	6	8	50	3	A	○
GM-3E-D3.0		3	6	8	50	3	A	○
GM-3E-D3.5		3,5	6	10	50	3	A	○
GM-3E-D4.0		4	6	11	50	3	A	○
GM-3E-D4.5		4,5	6	11	50	3	A	○
GM-3E-D5.0		5	6	13	50	3	A	○
GM-3E-D5.5		5,5	6	16	50	3	A	○
GM-3E-D6.0		6	6	16	50	3	B	○
GM-3E-D7.0		7	8	20	60	3	A	○
GM-3E-D8.0		8	8	20	60	3	B	○
GM-3E-D9.0		9	10	22	75	3	A	○
GM-3E-D10.0		10	10	25	75	3	B	○
GM-3E-D11.0		11	12	26	75	3	A	○
GM-3E-D12.0		12	12	30	75	3	B	○
GM-3E-D14.0		14	14	32	75	3	B	○
GM-3E-D16.0		16	16	45	100	3	B	○
GM-3E-D18.0		18	18	45	100	3	B	○
GM-3E-D20.0		20	20	45	100	3	B	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

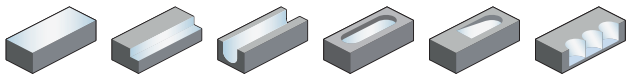
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

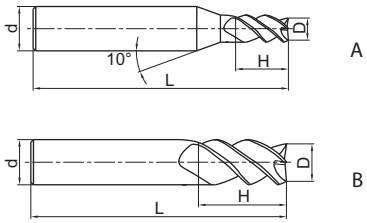
Frese a candela tagliente lungo — Asportazione media

GM-3EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-3EL-D3.0		3	6	12	75	3	A	●
GM-3EL-D4.0		4	6	15	75	3	A	●
GM-3EL-D5.0		5	6	20	75	3	A	●
GM-3EL-D6.0		6	6	20	75	3	B	●
GM-3EL-D8.0		8	8	25	100	3	B	●
GM-3EL-D10.0		10	10	30	100	3	B	●
GM-3EL-D12.0		12	12	35	100	3	B	●
GM-3EL-D14.0		14	14	40	100	3	B	●
GM-3EL-D16.0		16	16	50	150	3	B	●
GM-3EL-D20.0		20	20	55	150	3	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

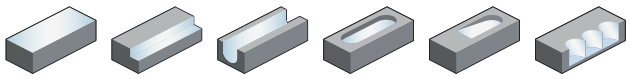
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

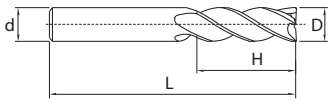
Frese a candela — Asportazione media

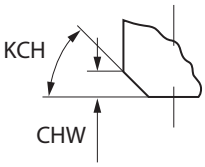
5501R303GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303	YK30F
5501R303GM-0300		3	6	4	50	0	0	3	●	○
5501R303GM-0400		4	6	5	54	0	0	3	●	○
5501R303GM-0500		5	6	6	54	0	0	3	●	○
5501R303GM-0600		6	6	7	54	45	0,1	3	●	○
5501R303GM-0800		8	8	9	58	45	0,1	3	●	○
5501R303GM-1000		10	10	11	66	45	0,1	3	●	○
5501R303GM-1200		12	12	12	73	45	0,1	3	●	○
5501R303GM-1400		14	14	14	75	45	0,15	3	●	○
5501R303GM-1600		16	16	16	82	45	0,15	3	●	○
5501R303GM-1800		18	18	18	84	45	0,15	3	●	○
5501R303GM-2000		20	20	20	92	45	0,15	3	●	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

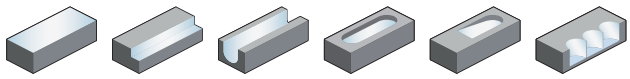
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

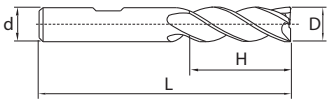
Frese a candela — Asportazione media

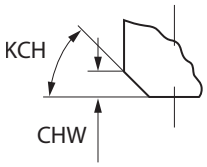
5601R303GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5601R303GM-0300		3	6	4	50	0	0	3	●
5601R303GM-0400		4	6	5	54	0	0	3	●
5601R303GM-0500		5	6	6	54	0	0	3	●
5601R303GM-0600		6	6	7	54	45	0,1	3	●
5601R303GM-0800		8	8	9	58	45	0,1	3	●
5601R303GM-1000		10	10	11	66	45	0,1	3	●
5601R303GM-1200		12	12	12	73	45	0,1	3	●
5601R303GM-1400		14	14	14	75	45	0,15	3	●
5601R303GM-1600		16	16	16	82	45	0,15	3	●
5601R303GM-1800		18	18	18	84	45	0,15	3	●
5601R303GM-2000		20	20	20	92	45	0,15	3	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

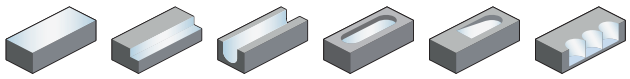
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

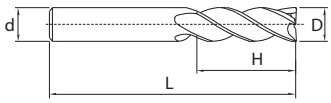
Frese a candela tagliente lungo — Asportazione media

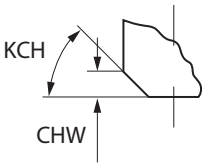
5502R303GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303	YK30F
5502R303GM-0300		3	6	7	57	0	0	3	●	○
5502R303GM-0400		4	6	8	57	0	0	3	●	○
5502R303GM-0500		5	6	10	57	0	0	3	●	○
5502R303GM-0600		6	6	10	57	45	0,1	3	●	○
5502R303GM-0800		8	8	16	63	45	0,1	3	●	○
5502R303GM-1000		10	10	19	72	45	0,1	3	●	○
5502R303GM-1200		12	12	22	83	45	0,1	3	●	○
5502R303GM-1300		13	14	22	83	45	0,1	3	○	
5502R303GM-1400		14	14	22	83	45	0,15	3	●	○
5502R303GM-1600		16	16	26	92	45	0,15	3	●	○
5502R303GM-1800		18	18	26	92	45	0,15	3	●	○
5502R303GM-2000		20	20	32	104	45	0,15	3	●	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

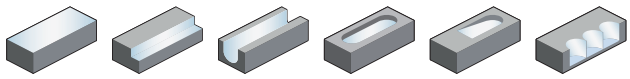
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

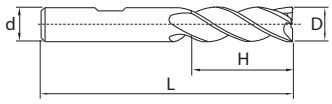
Frese a candela tagliente lungo — Asportazione media

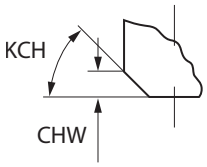
5602R303GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5602R303GM-0300		3	6	7	57	0	0	3	●
5602R303GM-0400		4	6	8	57	0	0	3	●
5602R303GM-0500		5	6	10	57	0	0	3	●
5602R303GM-0600		6	6	10	57	45	0,1	3	●
5602R303GM-0800		8	8	16	63	45	0,1	3	●
5602R303GM-1000		10	10	19	72	45	0,1	3	●
5602R303GM-1200		12	12	22	83	45	0,1	3	●
5602R303GM-1400		14	14	22	83	45	0,15	3	●
5602R303GM-1600		16	16	26	92	45	0,15	3	●
5602R303GM-1800		18	18	26	92	45	0,15	3	●
5602R303GM-2000		20	20	32	104	45	0,15	3	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

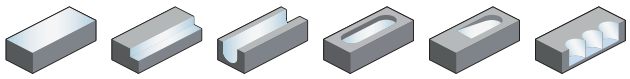
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

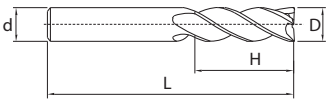
Frese a candela tagliente lungo — Asportazione media

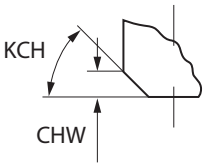
5502R453GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 45°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG405
5502R453GM-0300		3	6	7	57	0	0	3	●
5502R453GM-0400		4	6	8	57	0	0	3	●
5502R453GM-0500		5	6	10	57	0	0	3	●
5502R453GM-0600		6	6	10	57	45	0,1	3	●
5502R453GM-0800		8	8	16	63	45	0,1	3	●
5502R453GM-1000		10	10	19	72	45	0,1	3	●
5502R453GM-1200		12	12	22	83	45	0,1	3	●
5502R453GM-1400		14	14	22	83	45	0,15	3	●
5502R453GM-1600		16	16	26	92	45	0,15	3	●
5502R453GM-1800		18	18	26	92	45	0,15	3	●
5502R453GM-2000		20	20	32	104	45	0,15	3	●

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

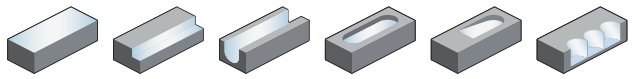
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

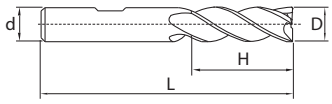
Frese a candela tagliente lungo — Asportazione media

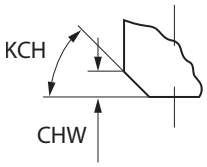
5602R453GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 45°







Articolo	✻	Dimensioni [mm]						Denti	Grado	
		D	d (h6)	H	L	KCH	CHW		KMG303	KMG405
5602R453GM-0300		3	6	7	57	0	0	3	○	●
5602R453GM-0400		4	6	8	57	0	0	3	○	●
5602R453GM-0500		5	6	10	57	0	0	3	○	●
5602R453GM-0600		6	6	10	57	45	0,1	3	○	●
5602R453GM-0800		8	8	16	63	45	0,1	3	○	●
5602R453GM-1000		10	10	19	72	45	0,1	3	○	●
5602R453GM-1200		12	12	22	83	45	0,1	3	○	●
5602R453GM-1400		14	14	22	83	45	0,15	3	○	●
5602R453GM-1600		16	16	26	92	45	0,15	3	○	●
5602R453GM-1800		18	18	26	92	45	0,15	3	○	●
5602R453GM-2000		20	20	32	104	45	0,15	3	○	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

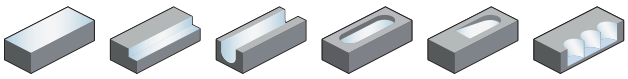
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie GM

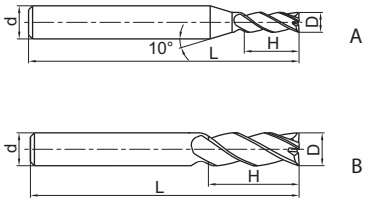
Frese a candela Asportazione media

GM-4F-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4F-D2.0S-G		2	4	6	50	4	A	○
GM-4F-D2.5S-G		2,5	4	8	50	4	A	○
GM-4F-D4.0S-G		4	4	11	50	4	B	○
GM-4F-D1.0-G		1	6	3	50	4	A	○
GM-4F-D1.5-G		1,5	6	4	50	4	A	○
GM-4F-D2.0-G		2	6	6	50	4	A	○
GM-4F-D2.5-G		2,5	6	8	50	4	A	○
GM-4F-D3.0-G		3	6	8	50	4	A	○
GM-4F-D3.5-G		3,5	6	10	50	4	A	○
GM-4F-D4.0-G		4	6	11	50	4	A	○
GM-4F-D4.5-G		4,5	6	11	50	4	A	○
GM-4F-D5.0-G		5	6	13	50	4	A	○
GM-4F-D5.5-G		5,5	6	16	50	4	A	○
GM-4F-D6.0-G		6	6	16	50	4	B	○
GM-4F-D7.0-G		7	8	20	60	4	A	○
GM-4F-D8.0-G		8	8	20	60	4	B	○
GM-4F-D9.0-G		9	10	22	75	4	A	○
GM-4F-D10.0-G		10	10	25	75	4	B	○
GM-4F-D11.0-G		11	12	26	75	4	A	○
GM-4F-D12.0-G		12	12	30	75	4	B	○
GM-4F-D14.0-G		14	14	32	75	4	B	○
GM-4F-D16.0-G		16	16	45	100	4	B	○
GM-4F-D18.0-G		18	18	45	100	4	B	○
GM-4F-D20.0-G		20	20	45	100	4	B	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

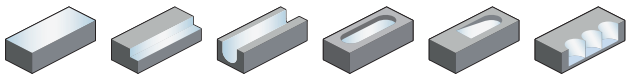
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

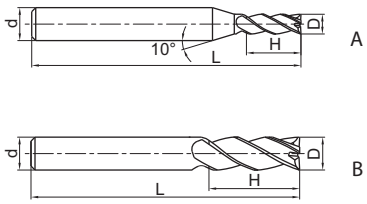
Frese a candela tagliente lungo — Asportazione media

GM-4EL-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4EL-D3.0-G		3	6	12	75	4	A	○
GM-4EL-D4.0-G		4	6	15	75	4	A	○
GM-4EL-D5.0-G		5	6	20	75	4	A	○
GM-4EL-D6.0-G		6	6	20	75	4	B	○
GM-4EL-D8.0-G		8	8	25	100	4	B	○
GM-4EL-D10.0-G		10	10	30	100	4	B	○
GM-4EL-D12.0-G		12	12	35	100	4	B	○
GM-4EL-D14.0-G		14	14	40	100	4	B	○
GM-4EL-D16.0-G		16	16	50	150	4	B	○
GM-4EL-D20.0-G		20	20	55	150	4	B	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

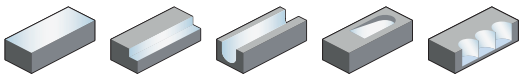
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

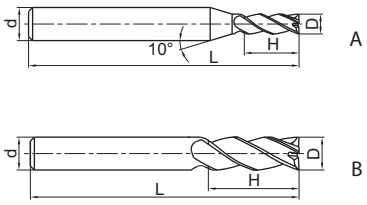
Frese a candela tagliente lungo — Asportazione media

GM-4FL-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4FL-D3.0-G		3	6	12	75	4	A	○
GM-4FL-D4.0-G		4	6	15	75	4	A	○
GM-4FL-D5.0-G		5	6	20	75	4	A	●
GM-4FL-D6.0-G		6	6	20	75	4	B	●
GM-4FL-D8.0-G		8	8	25	100	4	B	●
GM-4FL-D10.0-G		10	10	30	100	4	B	●
GM-4FL-D12.0-G		12	12	35	100	4	B	●
GM-4FL-D14.0-G		14	14	40	100	4	B	○
GM-4FL-D16.0-G		16	16	50	150	4	B	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

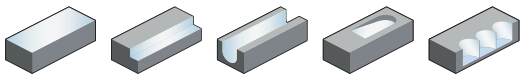
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

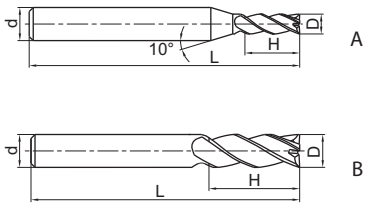
Frese a candela tagliente lungo — Asportazione media

GM-4EX-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4EX-D3.0-G		3	6	20	75	4	A	●
GM-4EX-D4.0-G		4	6	25	75	4	A	●
GM-4EX-D5.0-G		5	6	30	75	4	A	●
GM-4EX-D6.0-G		6	6	30	75	4	B	●
GM-4EX-D8.0-G		8	8	40	100	4	B	●
GM-4EX-D10.0-G		10	10	50	110	4	B	●
GM-4EX-D12.0-G		12	12	50	110	4	B	●
GM-4EX-D16.0-G		16	16	70	150	4	B	●
GM-4EX-D20.0-G		20	20	75	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

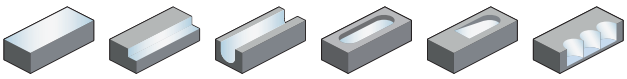
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

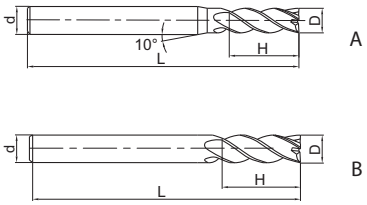
Frese a candela Asportazione media

GM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4E-D1.0S		1	4	3	50	4	A	●
GM-4E-D1.5S		1,5	4	4	50	4	A	●
GM-4E-D2.0S		2	4	6	50	4	A	●
GM-4E-D2.5S		2,5	4	8	50	4	A	●
GM-4E-D3.0S		3	4	8	50	4	A	●
GM-4E-D4.0S		4	4	11	50	4	B	●
GM-4E-D1.0		1	6	3	50	4	A	●
GM-4E-D1.5		1,5	6	4	50	4	A	●
GM-4E-D2.0		2	6	6	50	4	A	●
GM-4E-D2.5		2,5	6	8	50	4	A	●
GM-4E-D3.0		3	6	8	50	4	A	●
GM-4E-D3.5		3,5	6	10	50	4	A	●
GM-4E-D4.0		4	6	11	50	4	A	●
GM-4E-D4.5		4,5	6	11	50	4	A	●
GM-4E-D5.0		5	6	13	50	4	A	●
GM-4E-D5.5		5,5	6	16	50	4	A	●
GM-4E-D6.0		6	6	16	50	4	B	●
GM-4E-D7.0		7	8	20	60	4	A	●
GM-4E-D8.0		8	8	20	60	4	B	●
GM-4E-D9.0		9	10	22	75	4	A	●
GM-4E-D10.0		10	10	25	75	4	B	●
GM-4E-D11.0		11	12	26	75	4	A	●
GM-4E-D12.0		12	12	30	75	4	B	●
GM-4E-D14.0		14	14	32	75	4	B	●
GM-4E-D16.0		16	16	45	100	4	B	●
GM-4E-D18.0		18	18	45	100	4	B	●
GM-4E-D20.0		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

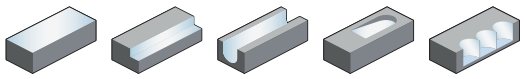
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

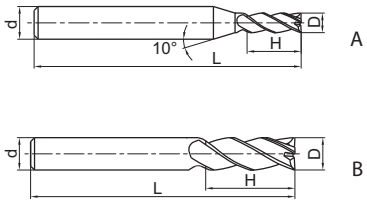
Frese a candela — Asportazione media

GM-4E-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4E-D1.0S-G		1	4	3	50	4	A	●
GM-4E-D1.5S-G		1,5	4	4	50	4	A	●
GM-4E-D2.0S-G		2	4	6	50	4	A	●
GM-4E-D2.5S-G		2,5	4	8	50	4	A	●
GM-4E-D3.0S-G		3	4	8	50	4	A	●
GM-4E-D4.0S-G		4	4	11	50	4	B	●
GM-4E-D1.0-G		1	6	3	50	4	A	●
GM-4E-D1.5-G		1,5	6	4	50	4	A	●
GM-4E-D2.0-G		2	6	6	50	4	A	●
GM-4E-D2.5-G		2,5	6	8	50	4	A	●
GM-4E-D3.0-G		3	6	8	50	4	A	●
GM-4E-D3.5-G		3,5	6	10	50	4	A	●
GM-4E-D4.0-G		4	6	11	50	4	A	●
GM-4E-D4.5-G		4,5	6	11	50	4	A	○
GM-4E-D5.0-G		5	6	13	50	4	A	●
GM-4E-D5.5-G		5,5	6	16	50	4	A	●
GM-4E-D6.0-G		6	6	16	50	4	B	●
GM-4E-D7.0-G		7	8	20	60	4	A	●
GM-4E-D8.0-G		8	8	20	60	4	B	●
GM-4E-D9.0-G		9	10	22	75	4	A	●
GM-4E-D10.0-G		10	10	25	75	4	B	●
GM-4E-D11.0-G		11	12	26	75	4	A	●
GM-4E-D12.0-G		12	12	30	75	4	B	●
GM-4E-D14.0-G		14	14	32	75	4	B	●
GM-4E-D16.0-G		16	16	45	100	4	B	●
GM-4E-D18.0-G		18	18	45	100	4	B	●
GM-4E-D20.0-G		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

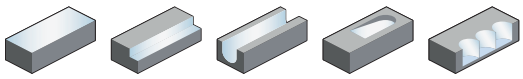
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

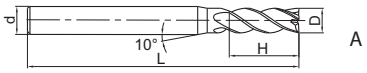
Frese a candela tagliente lungo — Asportazione media

GM-4EL

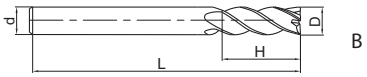


– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





A



B

Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4EL-D3.0		3	6	12	75	4	A	●
GM-4EL-D4.0		4	6	15	75	4	A	●
GM-4EL-D5.0		5	6	20	75	4	A	●
GM-4EL-D6.0		6	6	20	75	4	B	●
GM-4EL-D8.0		8	8	25	100	4	B	●
GM-4EL-D10.0		10	10	30	100	4	B	●
GM-4EL-D12.0		12	12	35	100	4	B	●
GM-4EL-D14.0		14	14	40	100	4	B	●
GM-4EL-D16.0		16	16	50	150	4	B	●
GM-4EL-D20.0		20	20	55	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

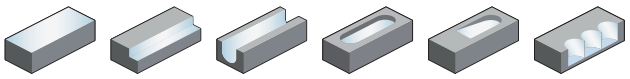
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

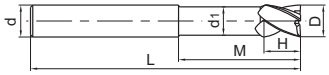
Frese a candela tagliente corto — Asportazione media

GM-4EFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG303
GM-4EFP-D6.0		6	6	5,8	9	30	75	4	○
GM-4EFP-D8.0		8	8	7,8	12	40	100	4	○
GM-4EFP-D10.0		10	10	9,6	15	50	100	4	○
GM-4EFP-D12.0		12	12	11,5	18	50	100	4	○
GM-4EFP-D16.0		16	16	15,5	24	50	150	4	○
GM-4EFP-D20.0		20	20	19,5	30	60	150	4	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

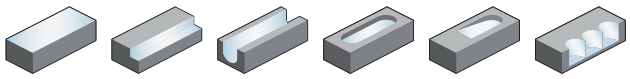
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

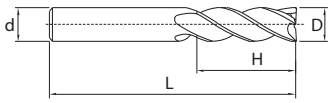
Frese a candela Finitura

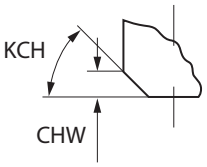
5501R304GF



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303	YK30F
5501R304GF-0300		3	6	5	50	0	0	4	●	○
5501R304GF-0400		4	6	8	54	0	0	4	●	○
5501R304GF-0500		5	6	9	54	0	0	4	●	○
5501R304GF-0600		6	6	10	54	45	0,1	4	●	○
5501R304GF-0800		8	8	12	58	45	0,1	4	●	○
5501R304GF-1000		10	10	14	66	45	0,1	4	●	○
5501R304GF-1200		12	12	16	73	45	0,1	4	●	○
5501R304GF-1400		14	14	18	75	45	0,15	4	●	○
5501R304GF-1600		16	16	22	82	45	0,15	4	●	○
5501R304GF-1800		18	18	24	84	45	0,15	4	●	○
5501R304GF-2000		20	20	26	92	45	0,15	4	●	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

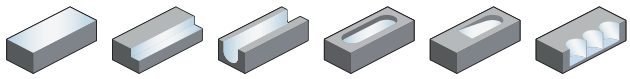
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

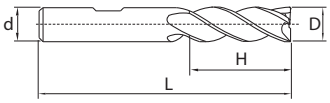
Frese a candela — Finitura

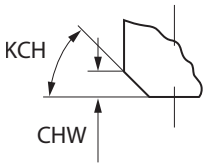
5601R304GF



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5601R304GF-0300		3	6	5	50	0	0	4	●
5601R304GF-0400		4	6	8	54	0	0	4	●
5601R304GF-0500		5	6	9	54	0	0	4	●
5601R304GF-0600		6	6	10	54	45	0,1	4	●
5601R304GF-0800		8	8	12	58	45	0,1	4	●
5601R304GF-1000		10	10	14	66	45	0,1	4	●
5601R304GF-1200		12	12	16	73	45	0,1	4	●
5601R304GF-1400		14	14	18	75	45	0,15	4	●
5601R304GF-1600		16	16	22	82	45	0,15	4	●
5601R304GF-1800		18	18	24	84	45	0,15	4	●
5601R304GF-2000		20	20	26	92	45	0,15	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

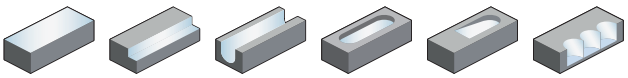
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

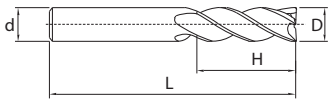
Frese a candela tagliente lungo **Finitura**

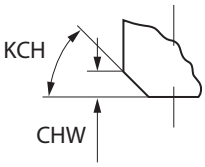
5502R304GF



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303	YK30F
5502R304GF-0300		3	6	8	57	0	0	4	●	○
5502R304GF-0400		4	6	11	57	0	0	4	●	○
5502R304GF-0500		5	6	13	57	0	0	4	●	○
5502R304GF-0600		6	6	13	57	45	0,1	4	●	○
5502R304GF-0800		8	8	19	63	45	0,1	4	●	○
5502R304GF-1000		10	10	22	72	45	0,1	4	●	○
5502R304GF-1200		12	12	26	83	45	0,1	4	●	○
5502R304GF-1400		14	14	26	83	45	0,15	4	●	○
5502R304GF-1600		16	16	32	92	45	0,15	4	●	○
5502R304GF-1800		18	18	32	92	45	0,15	4	●	○
5502R304GF-2000		20	20	38	104	45	0,15	4	●	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

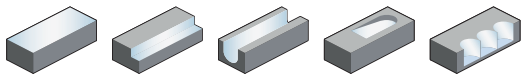
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

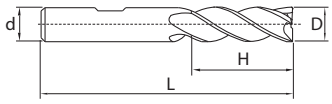
Frese a candela tagliente lungo — Finitura

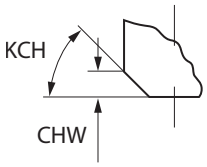
5602R304GF



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm]						Denti	Grado	
		D	d (h6)	H	L	KCH	CHW		KMG303	YK30F
5602R304GF-0300		3	6	8	57	0	0	4	●	○
5602R304GF-0400		4	6	11	57	0	0	4	●	○
5602R304GF-0500		5	6	13	57	0	0	4	●	○
5602R304GF-0600		6	6	13	57	45	0,1	4	●	○
5602R304GF-0800		8	8	19	63	45	0,1	4	●	○
5602R304GF-1000		10	10	22	72	45	0,1	4	●	○
5602R304GF-1200		12	12	26	83	45	0,1	4	●	○
5602R304GF-1400		14	14	26	83	45	0,15	4	●	○
5602R304GF-1600		16	16	32	92	45	0,15	4	●	○
5602R304GF-1800		18	18	32	92	45	0,15	4	●	
5602R304GF-2000		20	20	38	104	45	0,15	4	●	

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

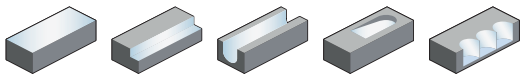
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie GM

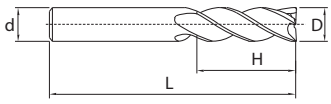
Frese a candela tagliente lungo — Asportazione media

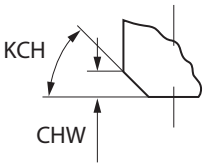
5508R454GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 45°







Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303	YK30F
5508R454GM-0300		3	3	8	45	0	0	4	●	○
5508R454GM-0400		4	4	11	50	0	0	4	●	○
5508R454GM-0500		5	5	13	50	0	0	4	●	○
5508R454GM-0600		6	6	13	57	45	0,1	4	●	○
5508R454GM-0800		8	8	19	63	45	0,1	4	●	○
5508R454GM-1000		10	10	22	72	45	0,1	4	●	○
5508R454GM-1200		12	12	26	83	45	0,1	4	●	○
5508R454GM-1400		14	14	26	83	45	0,15	4	●	○
5508R454GM-1500		15	16	32	92	0	0	4	○	
5508R454GM-1600		16	16	32	92	45	0,15	4	●	○
5508R454GM-1800		18	18	32	92	45	0,15	4	●	○
5508R454GM-2000		20	20	38	104	45	0,15	4	●	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

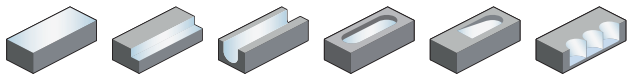
Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

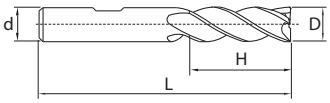
Frese a candela tagliente lungo — Asportazione media

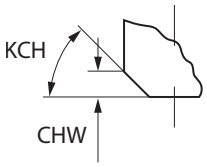


5602R454GM

– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 45°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5602R454GM-0300		3	6	8	57	0	0	4	●
5602R454GM-0400		4	6	11	57	0	0	4	●
5602R454GM-0500		5	6	13	57	0	0	4	●
5602R454GM-0600		6	6	13	57	45	0,1	4	●
5602R454GM-0800		8	8	19	63	45	0,1	4	●
5602R454GM-1000		10	10	22	72	45	0,1	4	●
5602R454GM-1200		12	12	26	83	45	0,1	4	●
5602R454GM-1400		14	14	26	83	45	0,15	4	●
5602R454GM-1600		16	16	32	92	45	0,15	4	●
5602R454GM-1800		18	18	32	92	45	0,15	4	●
5602R454GM-2000		20	20	38	104	45	0,15	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

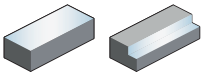
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

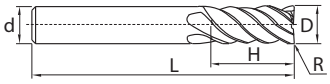
Frese toroidali con tagliente lungo **Finitura**

5589R45MGFR



– Versione del codolo DIN 6535HA
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	R	d (h6)	H	L	Denti	Grado KMG405
5589R45MGFR02-0600		6	0,2	6	19	63	6	●
5589R45MGFR02-0800		8	0,2	8	28	72	6	●
5589R45MGFR02-1000		10	0,2	10	34	84	6	●
5589R45MGFR02-1200		12	0,2	12	40	97	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

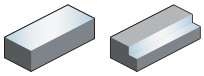
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

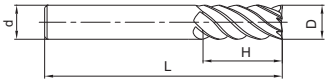
Frese a candela — Asportazione media

GM-6E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG303
GM-6E-D6.0		6	6	18	60	6	●
GM-6E-D8.0		8	8	20	60	6	●
GM-6E-D10.0		10	10	30	75	6	●
GM-6E-D12.0		12	12	32	75	6	●
GM-6E-D16.0		16	16	40	100	6	●
GM-6E-D20.0		20	20	45	100	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

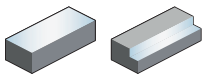
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

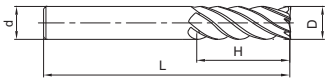
Frese a candela tagliente lungo — Asportazione media

GM-6EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG303
GM-6EL-D6.0		6	6	24	75	6	●
GM-6EL-D8.0		8	8	32	75	6	●
GM-6EL-D10.0		10	10	40	100	6	●
GM-6EL-D12.0		12	12	45	100	6	●
GM-6EL-D16.0		16	16	64	150	6	●
GM-6EL-D20.0		20	20	75	150	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

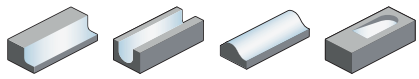
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

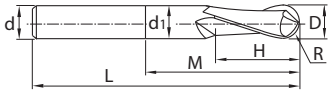
Frese a testa sferica — Finitura

5565R302GF



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	R	d (h6)	d_1	H	M	L	Denti	Grado KMG303
5565R302GF-0300		3	1,5	6	2,8	4	9	57	2	●
5565R302GF-0400		4	2	6	3,7	5	12	57	2	●
5565R302GF-0500		5	2,5	6	4,6	6	15	57	2	●
5565R302GF-0600		6	3	6	5,5	7	20	57	2	●
5565R302GF-0800		8	4	8	7,4	9	26	63	2	●
5565R302GF-1000		10	5	10	9,2	11	31	72	2	●
5565R302GF-1200		12	6	12	11	12	37	83	2	●
5565R302GF-1600		16	8	16	15	16	43	92	2	●
5565R302GF-2000		20	10	20	19	20	50	104	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

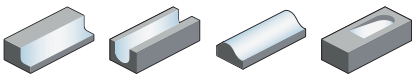
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie GM

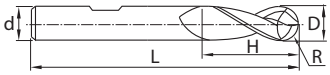
Frese a testa sferica — Asportazione media

5665R202GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 20°





Articolo	✻	Dimensioni [mm] D	R	d (h6)	d_1	H	L	Denti	Grado KMG303
5665R202GM-0300		3	1,5	6	2,8	4	57	2	●
5665R202GM-0400		4	2	6	3,7	5	57	2	●
5665R202GM-0500		5	2,5	6	4,6	6	57	2	●
5665R202GM-0600		6	3	6	5,5	7	57	2	●
5665R202GM-0800		8	4	8	7,4	9	63	2	●
5665R202GM-1000		10	5	10	9,2	11	72	2	●
5665R202GM-1200		12	6	12	11	12	83	2	●
5665R202GM-1600		16	8	16	15	16	92	2	●
5665R202GM-2000		20	10	20	19	20	104	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

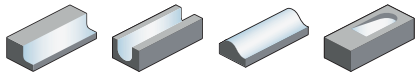
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

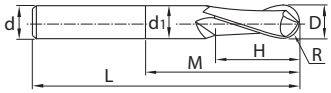
Frese a testa sferica codolo lungo — Finitura

5566R302GF



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	R	d (h6)	d_1	H	M	L	Denti	Grado KMG303
5566R302GF-0300		3	1,5	6	2,8	4	15	75	2	●
5566R302GF-0400		4	2	6	3,7	5	20	75	2	●
5566R302GF-0500		5	2,5	6	4,6	6	25	80	2	●
5566R302GF-0600		6	3	6	5,5	7	60	80	2	●
5566R302GF-0800		8	4	8	7,4	9	65	90	2	●
5566R302GF-1000		10	5	10	9,2	11	40	100	2	●
5566R302GF-1200		12	6	12	11	12	50	120	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

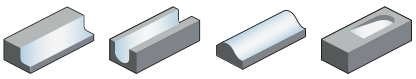
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

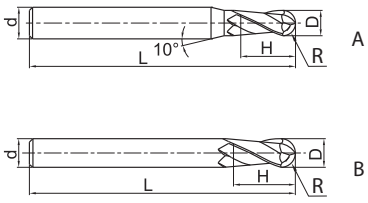
Frese a testa sferica Asportazione media

GM-2B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2B-R0.5S		0,5	1	4	2	50	2	A	●
GM-2B-R0.75S		0,75	1,5	4	3	50	2	A	●
GM-2B-R1.0S		1	2	4	4	50	2	A	●
GM-2B-R1.25S		1,25	2,5	4	5	50	2	A	●
GM-2B-R1.5S		1,5	3	4	6	50	2	A	●
GM-2B-R2.0S		2	4	4	8	50	2	B	●
GM-2B-R0.5		0,5	1	6	2	50	2	A	○
GM-2B-R0.75		0,75	1,5	6	3	50	2	A	○
GM-2B-R1.0		1	2	6	4	50	2	A	●
GM-2B-R1.25		1,25	2,5	6	5	50	2	A	○
GM-2B-R1.5		1,5	3	6	6	50	2	A	●
GM-2B-R1.75		1,75	3,5	6	8	50	2	A	○
GM-2B-R2.0		2	4	6	8	50	2	A	●
GM-2B-R2.5		2,5	5	6	10	50	2	A	●
GM-2B-R2.75		2,75	5,5	6	12	50	2	A	○
GM-2B-R3.0		3	6	6	12	50	2	B	●
GM-2B-R3.5		3,5	7	8	14	60	2	A	○
GM-2B-R4.0		4	8	8	16	60	2	B	●
GM-2B-R4.5		4,5	9	10	18	75	2	A	○
GM-2B-R5.0		5	10	10	20	75	2	B	●
GM-2B-R6.0		6	12	12	24	75	2	B	●
GM-2B-R7.0		7	14	14	28	75	2	B	●
GM-2B-R8.0		8	16	16	32	100	2	B	●
GM-2B-R10.0		10	20	20	40	100	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

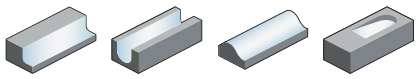
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

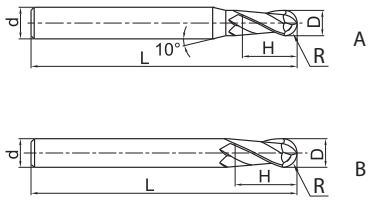
Frese a testa sferica codolo lungo — Asportazione media

GM-2BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-2BL-R1.0		1	2	6	4	75	2	A	●
GM-2BL-R1.25		1,25	2,5	6	5	75	2	A	●
GM-2BL-R1.5		1,5	3	6	6	75	2	A	●
GM-2BL-R1.75		1,75	3,5	6	8	75	2	A	●
GM-2BL-R2.0		2	4	6	8	75	2	A	●
GM-2BL-R2.5		2,5	5	6	10	75	2	A	●
GM-2BL-R2.75		2,75	5,5	6	12	75	2	A	●
GM-2BL-R3.0		3	6	6	12	75	2	B	●
GM-2BL-R3.5		3,5	7	8	14	75	2	A	●
GM-2BL-R4.0		4	8	8	16	100	2	B	●
GM-2BL-R4.5		4,5	9	10	18	100	2	A	●
GM-2BL-R5.0		5	10	10	20	100	2	B	●
GM-2BL-R6.0		6	12	12	24	100	2	B	●
GM-2BL-R7.0		7	14	14	28	100	2	B	●
GM-2BL-R8.0		8	16	16	32	150	2	B	●
GM-2BL-R10.0		10	20	20	40	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

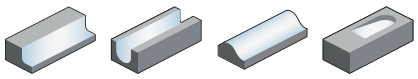
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

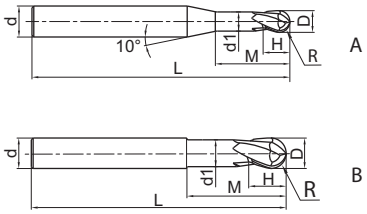
Frese a testa sferica tagliente corto — Asportazione media

GM-2BFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Geometria	Grado KMG303
GM-2BFP-R0.5		0,5	1	6	0,95	1	2,5	75	2	A	○
GM-2BFP-R0.75		0,75	1,5	6	1,45	1	3	75	2	A	○
GM-2BFP-R1.0		1	2	6	1,95	2	4	75	2	A	●
GM-2BFP-R1.5		1,5	3	6	2,85	3	6	75	2	A	○
GM-2BFP-R2.0		2	4	6	3,85	4	8	75	2	A	○
GM-2BFP-R2.5		2,5	5	6	4,85	5	10	75	2	A	○
GM-2BFP-R3.0		3	6	6	5,8	6	12	75	2	B	○
GM-2BFP-R4.0		4	8	8	7,8	8	16	100	2	B	○
GM-2BFP-R5.0		5	10	10	9,6	10	20	100	2	B	○
GM-2BFP-R6.0		6	12	12	11,5	12	24	100	2	B	○
GM-2BFP-R8.0		8	16	16	15,5	16	32	150	2	B	○
GM-2BFP-R10.0		10	20	20	19,5	20	40	150	2	B	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

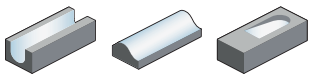
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

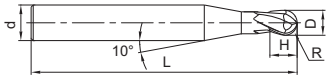
Frese a testa sferica — Asportazione media

GM-2BS



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMG303
GM-2BS-R0.15		0,15	0,3	4	0,5	50	2	●
GM-2BS-R0.20		0,2	0,4	4	0,6	50	2	●
GM-2BS-R0.25		0,25	0,5	4	0,8	50	2	●
GM-2BS-R0.30		0,3	0,6	4	0,9	50	2	●
GM-2BS-R0.35		0,35	0,7	4	1	50	2	●
GM-2BS-R0.40		0,4	0,8	4	1,2	50	2	●
GM-2BS-R0.45		0,45	0,9	4	1,3	50	2	●
GM-2BS-R0.50		0,5	1	4	1,5	50	2	●
GM-2BS-R0.60		0,6	1,2	4	1,8	50	2	●
GM-2BS-R0.70		0,7	1,4	4	2	50	2	●
GM-2BS-R0.75		0,75	1,5	4	2,3	50	2	●
GM-2BS-R0.80		0,8	1,6	4	2,5	50	2	●
GM-2BS-R0.90		0,9	1,8	4	2,7	50	2	●
GM-2BS-R1.00		1	2	4	3	50	2	●
GM-2BS-R1.25		1,25	2,5	4	3,7	50	2	●
GM-2BS-R1.50		1,5	3	4	4,5	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

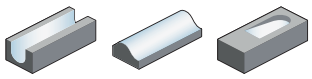
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie GM

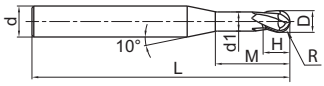
Frese a testa sferica — Asportazione media

GM-2BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMG303
GM-2BP-R0.25-M04		0,25	0,5	4	0,45	0,7	4	50	2	●
GM-2BP-R0.25-M06		0,25	0,5	4	0,45	0,7	6	50	2	●
GM-2BP-R0.3-M04		0,3	0,6	4	0,55	0,9	4	50	2	●
GM-2BP-R0.3-M06		0,3	0,6	4	0,55	0,9	6	50	2	●
GM-2BP-R0.3-M08		0,3	0,6	4	0,55	0,9	8	50	2	●
GM-2BP-R0.4-M04		0,4	0,8	4	0,75	1,2	4	50	2	●
GM-2BP-R0.4-M06		0,4	0,8	4	0,75	1,2	6	50	2	●
GM-2BP-R0.4-M08		0,4	0,8	4	0,75	1,2	8	50	2	●
GM-2BP-R0.4-M10		0,4	0,8	4	0,75	1,2	10	50	2	●
GM-2BP-R0.5-M04		0,5	1	4	0,95	1,5	4	50	2	●
GM-2BP-R0.5-M06		0,5	1	4	0,95	1,5	6	50	2	●
GM-2BP-R0.5-M08		0,5	1	4	0,95	1,5	8	50	2	●
GM-2BP-R0.5-M10		0,5	1	4	0,95	1,5	10	50	2	●
GM-2BP-R0.5-M12		0,5	1	4	0,95	1,5	12	50	2	●
GM-2BP-R0.6-M06		0,6	1,2	4	1,15	1,8	6	50	2	●
GM-2BP-R0.6-M08		0,6	1,2	4	1,15	1,8	8	50	2	●
GM-2BP-R0.6-M12		0,6	1,2	4	1,15	1,8	12	50	2	●
GM-2BP-R0.6-M16		0,6	1,2	4	1,15	1,8	16	50	2	●
GM-2BP-R0.75-M08		0,75	1,5	4	1,45	2,3	8	50	2	●
GM-2BP-R0.75-M12		0,75	1,5	4	1,45	2,3	12	50	2	●
GM-2BP-R0.75-M16		0,75	1,5	4	1,45	2,3	16	50	2	●
GM-2BP-R1.0-M06		1	2	4	1,95	3	6	50	2	●
GM-2BP-R1.0-M08		1	2	4	1,95	3	8	50	2	●
GM-2BP-R1.0-M10		1	2	4	1,95	3	10	50	2	●
GM-2BP-R1.0-M12		1	2	4	1,95	3	12	50	2	●
GM-2BP-R1.0-M16		1	2	4	1,95	3	16	50	2	●
GM-2BP-R1.0-M20		1	2	4	1,95	3	20	50	2	●
GM-2BP-R1.25-M08		1,25	2,5	4	2,4	3,7	8	50	2	●
GM-2BP-R1.25-M12		1,25	2,5	4	2,4	3,7	12	50	2	●
GM-2BP-R1.25-M16		1,25	2,5	4	2,4	3,7	16	60	2	●
GM-2BP-R1.25-M20		1,25	2,5	4	2,4	3,7	20	60	2	●
GM-2BP-R1.5-M08		1,5	3	6	2,85	4,5	8	50	2	●
GM-2BP-R1.5-M10		1,5	3	6	2,85	4,5	10	50	2	●
GM-2BP-R1.5-M12		1,5	3	6	2,85	4,5	12	50	2	●
GM-2BP-R1.5-M16		1,5	3	6	2,85	4,5	16	60	2	●
GM-2BP-R1.5-M20		1,5	3	6	2,85	4,5	20	60	2	●
GM-2BP-R2.0-M10		2	4	6	3,85	6	10	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

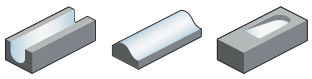
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

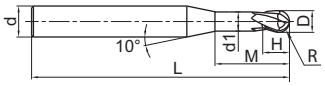
Frese a testa sferica — Asportazione media

GM-2BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMG303
GM-2BP-R2.0-M16		2	4	6	3,85	6	16	60	2	●
GM-2BP-R2.0-M20		2	4	6	3,85	6	20	60	2	●
GM-2BP-R2.0-M25		2	4	6	3,85	6	25	60	2	●
GM-2BP-R2.5-M16		2,5	5	6	4,85	7,5	16	60	2	●
GM-2BP-R2.5-M25		2,5	5	6	4,85	7,5	25	70	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

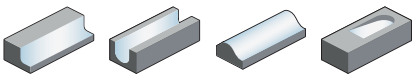
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

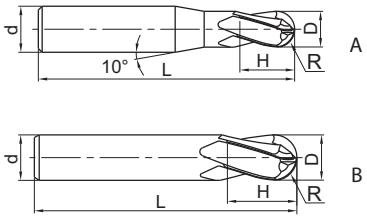
Frese a testa sferica — Asportazione media

GM-4B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4B-R1.5		1,5	3	6	6	50	4	A	●
GM-4B-R2.0		2	4	6	8	50	4	A	●
GM-4B-R2.5		2,5	5	6	10	50	4	A	●
GM-4B-R3.0		3	6	6	12	50	4	B	●
GM-4B-R4.0		4	8	8	16	60	4	B	●
GM-4B-R5.0		5	10	10	20	75	4	B	●
GM-4B-R6.0		6	12	12	24	75	4	B	●
GM-4B-R7.0		7	14	14	28	75	4	B	●
GM-4B-R8.0		8	16	16	32	100	4	B	●
GM-4B-R9.0		9	18	18	36	100	4	B	●
GM-4B-R10.0		10	20	20	40	100	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

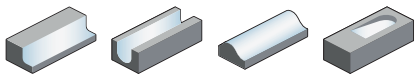
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

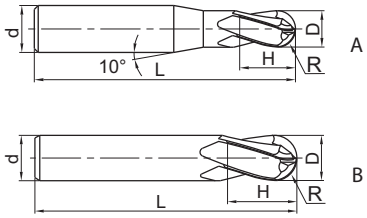
Frese a testa sferica codolo lungo — Asportazione media

GM-4BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4BL-R1.5		1,5	3	6	6	75	4	A	○
GM-4BL-R2.0		2	4	6	8	75	4	A	○
GM-4BL-R2.5		2,5	5	6	10	75	4	A	○
GM-4BL-R3.0		3	6	6	12	75	4	B	○
GM-4BL-R4.0		4	8	8	16	100	4	B	○
GM-4BL-R5.0		5	10	10	20	100	4	B	○
GM-4BL-R6.0		6	12	12	24	100	4	B	○
GM-4BL-R7.0		7	14	14	28	100	4	B	○
GM-4BL-R8.0		8	16	16	32	150	4	B	○
GM-4BL-R10.0		10	20	20	40	150	4	B	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

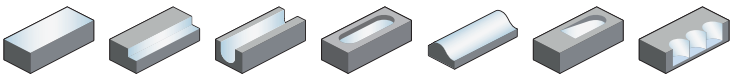
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

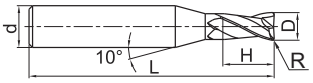
Frese toroidali Asportazione media

GM-2R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMG303
GM-2R-D1.0R0.2		0,2	1	4	3	50	2	○
GM-2R-D1.5R0.2		0,2	1,5	4	4	50	2	○
GM-2R-D2.0R0.2		0,2	2	4	6	50	2	○
GM-2R-D2.0R0.5		0,5	2	4	6	50	2	○
GM-2R-D2.5R0.2		0,2	2,5	4	8	50	2	○
GM-2R-D2.5R0.5		0,5	2,5	4	8	50	2	○
GM-2R-D3.0R0.2		0,2	3	4	8	50	2	○
GM-2R-D3.0R0.3		0,3	3	4	8	50	2	○
GM-2R-D3.0R0.5		0,5	3	4	8	50	2	○
GM-2R-D4.0R0.2		0,2	4	4	11	50	2	○
GM-2R-D4.0R0.3		0,3	4	4	11	50	2	○
GM-2R-D4.0R0.5		0,5	4	4	11	50	2	○
GM-2R-D4.0R1.0		1	4	4	11	50	2	○
GM-2R-D5.0R0.3		0,3	5	6	13	50	2	○
GM-2R-D5.0R0.5		0,5	5	6	13	50	2	○
GM-2R-D5.0R1.0		1	5	6	13	50	2	○
GM-2R-D6.0R0.3		0,3	6	6	16	50	2	○
GM-2R-D6.0R0.5		0,5	6	6	16	50	2	○
GM-2R-D6.0R1.0		1	6	6	16	50	2	○
GM-2R-D8.0R0.3		0,3	8	8	20	60	2	○
GM-2R-D8.0R0.5		0,5	8	8	20	60	2	○
GM-2R-D8.0R1.0		1	8	8	20	60	2	○
GM-2R-D10.0R0.5		0,5	10	10	25	75	2	○
GM-2R-D10.0R1.0		1	10	10	25	75	2	○
GM-2R-D10.0R1.5		1,5	10	10	25	75	2	●
GM-2R-D10.0R2.0		2	10	10	25	75	2	○
GM-2R-D12.0R0.5		0,5	12	12	30	75	2	○
GM-2R-D12.0R1.0		1	12	12	30	75	2	○
GM-2R-D12.0R1.5		1,5	12	12	30	75	2	○
GM-2R-D12.0R2.0		2	12	12	30	75	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

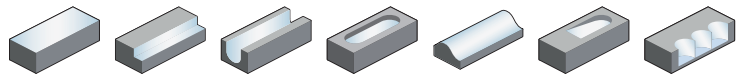
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

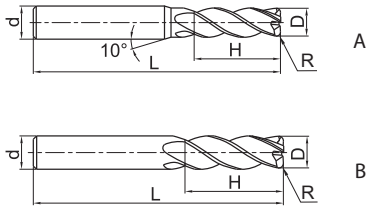
Frese toroidali — Asportazione media

GM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG303
GM-4R-D3.0R0.2		0,2	3	4	8	50	4	A	●
GM-4R-D4.0R0.3		0,3	4	4	10	50	4	B	○
GM-4R-D4.0R0.5		0,5	4	4	10	50	4	B	●
GM-4R-D5.0R0.5		0,5	5	6	13	50	4	A	●
GM-4R-D5.0R1.0		1	5	6	13	50	4	A	●
GM-4R-D6.0R0.5		0,5	6	6	16	50	4	B	●
GM-4R-D6.0R1.0		1	6	6	16	50	4	B	●
GM-4R-D8.0R0.5		0,5	8	8	20	60	4	B	●
GM-4R-D8.0R1.0		1	8	8	20	60	4	B	●
GM-4R-D10.0R0.5		0,5	10	10	25	75	4	B	●
GM-4R-D10.0R1.0		1	10	10	25	75	4	B	●
GM-4R-D10.0R2.0		2	10	10	25	75	4	B	●
GM-4R-D10.0R3.0		3	10	10	25	75	4	B	●
GM-4R-D12.0R0.5		0,5	12	12	30	75	4	B	●
GM-4R-D12.0R1.0		1	12	12	30	75	4	B	●
GM-4R-D12.0R2.0		2	12	12	30	75	4	B	●
GM-4R-D12.0R3.0		3	12	12	30	75	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

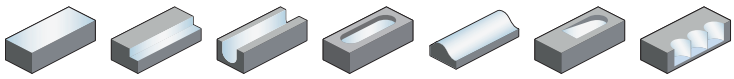
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

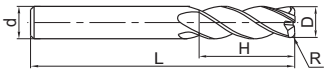
Frese toroidali codolo lungo — Asportazione media

GM-4RL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMG303
GM-4RL-D6.0R0.5		0,5	6	6	16	75	4	●
GM-4RL-D6.0R1.0		1	6	6	16	75	4	●
GM-4RL-D8.0R0.5		0,5	8	8	20	100	4	●
GM-4RL-D8.0R1.0		1	8	8	20	100	4	●
GM-4RL-D10.0R0.5		0,5	10	10	25	100	4	●
GM-4RL-D10.0R1.0		1	10	10	25	100	4	●
GM-4RL-D10.0R2.0		2	10	10	25	100	4	●
GM-4RL-D12.0R0.5		0,5	12	12	30	100	4	○
GM-4RL-D12.0R1.0		1	12	12	30	100	4	●
GM-4RL-D12.0R2.0		2	12	12	30	100	4	●
GM-4RL-D16.0R1.0		1	16	16	45	150	4	●
GM-4RL-D16.0R2.0		2	16	16	45	150	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

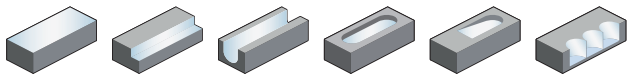
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

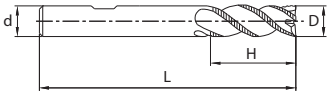
Frese a candela tagliente lungo — Sgrossatura generica

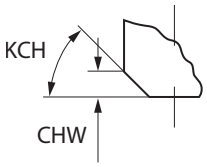
5602R303GR



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5602R303GR-0600		6	6	13	57	45	0,25	3	●
5602R303GR-0800		8	8	19	63	45	0,25	3	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

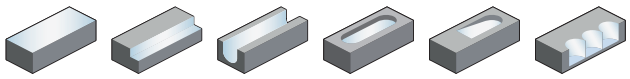
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

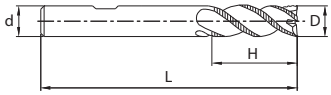
Frese a candela tagliente lungo — Sgrossatura generica

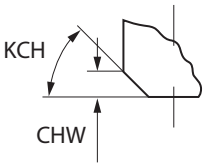
5602R304GR



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5602R304GR-1000		10	10	22	72	45	0,5	4	●
5602R304GR-1200		12	12	26	83	45	0,5	4	●
5602R304GR-1400		14	14	30	90	45	0,5	4	○
5602R304GR-1600		16	16	32	92	45	0,5	4	●
5602R304GR-2000		20	20	38	104	45	0,5	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

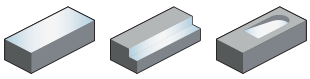
P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

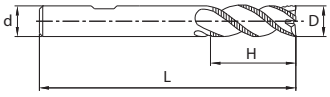
Frese a candela tagliente lungo — Sgrossatura generica

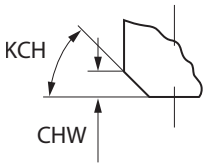
5602R305GR



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°







Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	KCH	CHW	Denti	Grado KMG303
5602R305GR-2500		25	25	45	121	45	0,5	5	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

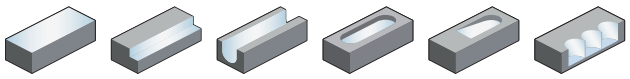
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie GM

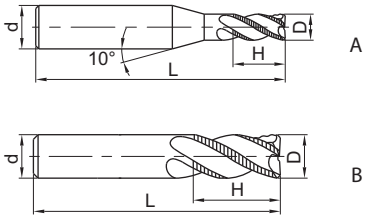
Frese a candela per sgrossatura — Asportazione media

GM-4W



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
GM-4W-D6.0		6	6	16	50	4	B	●
GM-4W-D7.0		7	8	20	60	4	A	●
GM-4W-D8.0		8	8	20	60	4	B	●
GM-4W-D9.0		9	10	22	75	4	A	●
GM-4W-D10.0		10	10	25	75	4	B	●
GM-4W-D11.0		11	12	26	75	4	A	●
GM-4W-D12.0		12	12	30	75	4	B	●
GM-4W-D16.0		16	16	45	100	4	B	●
GM-4W-D20.0		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

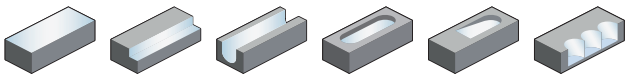
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

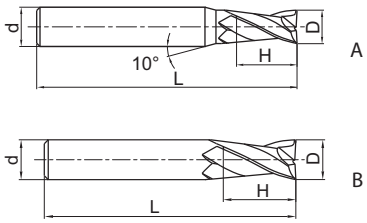
Lavorazione ad alte prestazioni

PM-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-2E-D1.0S		1	4	3	50	2	A	●
PM-2E-D1.5S		1,5	4	4	50	2	A	●
PM-2E-D2.0S		2	4	6	50	2	A	●
PM-2E-D2.5S		2,5	4	8	50	2	A	●
PM-2E-D3.0S		3	4	8	50	2	A	●
PM-2E-D4.0S		4	4	11	50	2	B	●
PM-2E-D1.0		1	6	3	50	2	A	●
PM-2E-D1.5		1,5	6	4	50	2	A	●
PM-2E-D2.0		2	6	6	50	2	A	●
PM-2E-D2.5		2,5	6	8	50	2	A	●
PM-2E-D3.0		3	6	8	50	2	A	●
PM-2E-D3.5		3,5	6	10	50	2	A	●
PM-2E-D4.0		4	6	11	50	2	A	●
PM-2E-D4.5		4,5	6	11	50	2	A	●
PM-2E-D5.0		5	6	13	50	2	A	●
PM-2E-D5.5		5,5	6	16	50	2	A	●
PM-2E-D6.0		6	6	16	50	2	B	●
PM-2E-D7.0		7	8	20	60	2	A	●
PM-2E-D8.0		8	8	20	60	2	B	●
PM-2E-D9.0		9	10	22	75	2	A	●
PM-2E-D10.0		10	10	25	75	2	B	●
PM-2E-D11.0		11	12	26	75	2	A	○
PM-2E-D12.0		12	12	30	75	2	B	●
PM-2E-D14.0		14	14	32	75	2	B	●
PM-2E-D16.0		16	16	45	100	2	B	●
PM-2E-D18.0		18	18	45	100	2	B	○
PM-2E-D20.0		20	20	45	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

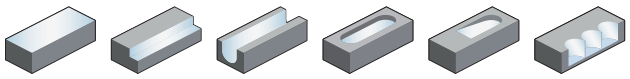
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie PM

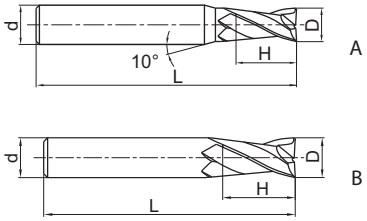
Frese a candela tagliente lungo | Lavorazione ad alte prestazioni

PM-2EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-2EL-D3.0		3	6	12	75	2	A	●
PM-2EL-D4.0		4	6	15	75	2	A	●
PM-2EL-D5.0		5	6	20	75	2	A	●
PM-2EL-D6.0		6	6	20	75	2	B	●
PM-2EL-D8.0		8	8	25	100	2	B	●
PM-2EL-D10.0		10	10	30	100	2	B	●
PM-2EL-D12.0		12	12	35	100	2	B	●
PM-2EL-D14.0		14	14	40	100	2	B	○
PM-2EL-D16.0		16	16	50	150	2	B	●
PM-2EL-D20.0		20	20	55	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

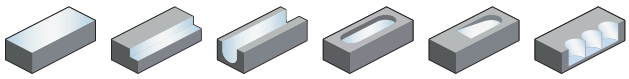
✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

Frese a candela

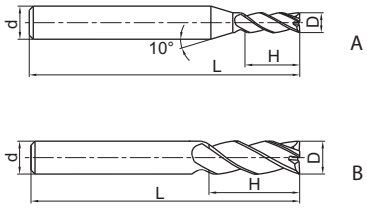
Lavorazione ad alte prestazioni

PM-4E-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4E-D1.0S-G		1	4	3	50	4	A	●
PM-4E-D1.5S-G		1,5	4	4	50	4	A	●
PM-4E-D2.0S-G		2	4	6	50	4	A	●
PM-4E-D2.5S-G		2,5	4	8	50	4	A	●
PM-4E-D3.0S-G		3	4	8	50	4	A	●
PM-4E-D4.0S-G		4	4	11	50	4	B	●
PM-4E-D1.0-G		1	6	3	50	4	A	●
PM-4E-D1.5-G		1,5	6	4	50	4	A	●
PM-4E-D2.0-G		2	6	6	50	4	A	●
PM-4E-D2.5-G		2,5	6	8	50	4	A	●
PM-4E-D3.0-G		3	6	8	50	4	A	●
PM-4E-D3.5-G		3,5	6	10	50	4	A	●
PM-4E-D4.0-G		4	6	11	50	4	A	●
PM-4E-D4.5-G		4,5	6	11	50	4	A	●
PM-4E-D5.0-G		5	6	13	50	4	A	●
PM-4E-D5.5-G		5,5	6	16	50	4	A	●
PM-4E-D6.0-G		6	6	16	50	4	B	●
PM-4E-D7.0-G		7	8	20	60	4	A	●
PM-4E-D8.0-G		8	8	20	60	4	B	●
PM-4E-D9.0-G		9	10	22	75	4	A	●
PM-4E-D10.0-G		10	10	25	75	4	B	●
PM-4E-D11.0-G		11	12	26	75	4	A	●
PM-4E-D12.0-G		12	12	30	75	4	B	●
PM-4E-D14.0-G		14	14	32	75	4	B	●
PM-4E-D16.0-G		16	16	45	100	4	B	●
PM-4E-D18.0-G		18	18	45	100	4	B	●
PM-4E-D20.0-G		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

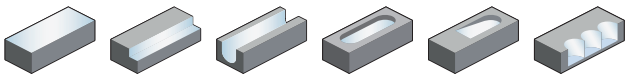
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

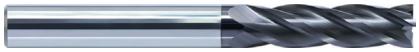
Frese in metallo duro integrale Serie PM

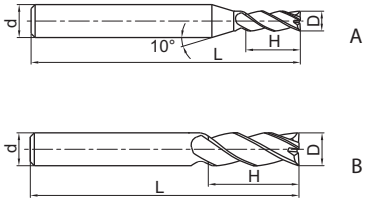
Frese a candela tagliente lungo | Lavorazione ad alte prestazioni

PM-4EL-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4EL-D3.0-G		3	6	12	75	4	A	○
PM-4EL-D4.0-G		4	6	15	75	4	A	○
PM-4EL-D5.0-G		5	6	20	75	4	A	○
PM-4EL-D6.0-G		6	6	20	75	4	B	○
PM-4EL-D8.0-G		8	8	25	100	4	B	○
PM-4EL-D10.0-G		10	10	30	100	4	B	○
PM-4EL-D12.0-G		12	12	35	100	4	B	○
PM-4EL-D14.0-G		14	14	40	100	4	B	○
PM-4EL-D16.0-G		16	16	50	150	4	B	○
PM-4EL-D20.0-G		20	20	55	150	4	B	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

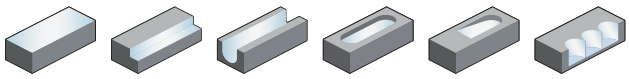
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

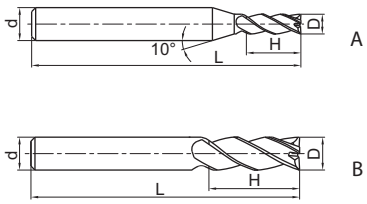
Frese a candela tagliente lungo — Lavorazione ad alte prestazioni

PM-4EX-G



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4EX-D3.0-G		3	6	20	75	4	A	●
PM-4EX-D4.0-G		4	6	25	75	4	A	●
PM-4EX-D5.0-G		5	6	30	75	4	A	●
PM-4EX-D6.0-G		6	6	30	75	4	B	●
PM-4EX-D8.0-G		8	8	40	100	4	B	●
PM-4EX-D10.0-G		10	10	50	110	4	B	●
PM-4EX-D12.0-G		12	12	50	110	4	B	●
PM-4EX-D16.0-G		16	16	70	150	4	B	●
PM-4EX-D20.0-G		20	20	75	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

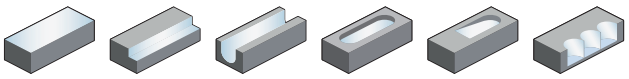
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie PM

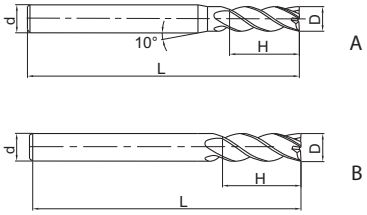
Frese a candela Lavorazione ad alte prestazioni

PM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4E-D1.0S		1	4	3	50	4	A	●
PM-4E-D1.5S		1,5	4	4	50	4	A	●
PM-4E-D2.0S		2	4	6	50	4	A	●
PM-4E-D2.5S		2,5	4	8	50	4	A	●
PM-4E-D3.0S		3	4	8	50	4	A	●
PM-4E-D4.0S		4	4	11	50	4	B	●
PM-4E-D1.0		1	6	3	50	4	A	●
PM-4E-D1.5		1,5	6	4	50	4	A	●
PM-4E-D2.0		2	6	6	50	4	A	●
PM-4E-D2.5		2,5	6	8	50	4	A	●
PM-4E-D3.0		3	6	8	50	4	A	●
PM-4E-D3.5		3,5	6	10	50	4	A	●
PM-4E-D4.0		4	6	11	50	4	A	●
PM-4E-D4.5		4,5	6	11	50	4	A	●
PM-4E-D5.0		5	6	13	50	4	A	●
PM-4E-D5.5		5,5	6	16	50	4	A	●
PM-4E-D6.0		6	6	16	50	4	B	●
PM-4E-D7.0		7	8	20	60	4	A	●
PM-4E-D8.0		8	8	20	60	4	B	●
PM-4E-D9.0		9	10	22	75	4	A	●
PM-4E-D10.0		10	10	25	75	4	B	●
PM-4E-D11.0		11	12	26	75	4	A	●
PM-4E-D12.0		12	12	30	75	4	B	●
PM-4E-D14.0		14	14	32	75	4	B	●
PM-4E-D16.0		16	16	45	100	4	B	●
PM-4E-D18.0		18	18	45	100	4	B	●
PM-4E-D20.0		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

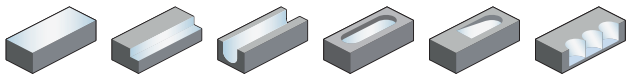
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela tagliente lungo

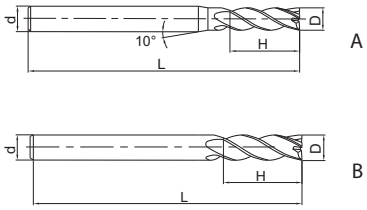
Lavorazione ad alte prestazioni

PM-4EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4EL-D3.0		3	6	12	75	4	A	●
PM-4EL-D4.0		4	6	15	75	4	A	●
PM-4EL-D5.0		5	6	20	75	4	A	●
PM-4EL-D6.0		6	6	20	75	4	B	●
PM-4EL-D8.0		8	8	25	100	4	B	●
PM-4EL-D10.0		10	10	30	100	4	B	●
PM-4EL-D12.0		12	12	35	100	4	B	●
PM-4EL-D14.0		14	14	40	100	4	B	●
PM-4EL-D16.0		16	16	50	150	4	B	●
PM-4EL-D20.0		20	20	55	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

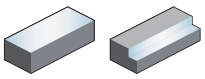
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

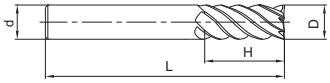
Lavorazione ad alte prestazioni

PM-6E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG405
PM-6E-D6.0		6	6	18	60	6	●
PM-6E-D8.0		8	8	20	60	6	●
PM-6E-D10.0		10	10	30	75	6	●
PM-6E-D12.0		12	12	32	75	6	●
PM-6E-D16.0		16	16	40	100	6	●
PM-6E-D20.0		20	20	45	100	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

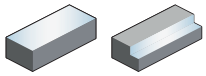
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

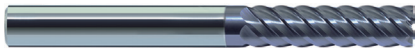
Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

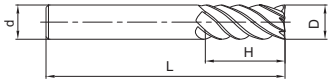
Frese a candela tagliente lungo — Lavorazione ad alte prestazioni

PM-6EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG405
PM-6EL-D6.0		6	6	24	75	6	●
PM-6EL-D8.0		8	8	32	75	6	●
PM-6EL-D10.0		10	10	40	100	6	●
PM-6EL-D12.0		12	12	45	100	6	●
PM-6EL-D16.0		16	16	64	150	6	●
PM-6EL-D20.0		20	20	75	150	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

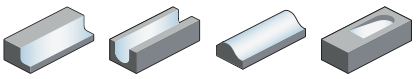
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie PM

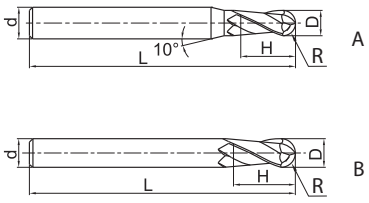
Frese a testa sferica Lavorazione ad alte prestazioni

PM-2B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-2B-R0.5S		0,5	1	4	2	50	2	A	●
PM-2B-R0.75S		0,75	1,5	4	3	50	2	A	●
PM-2B-R1.0S		1	2	4	4	50	2	A	●
PM-2B-R1.25S		1,25	2,5	4	5	50	2	A	●
PM-2B-R1.5S		1,5	3	4	6	50	2	A	●
PM-2B-R2.0S		2	4	4	8	50	2	B	●
PM-2B-R0.5		0,5	1	6	2	50	2	A	●
PM-2B-R0.75		0,75	1,5	6	3	50	2	A	●
PM-2B-R1.0		1	2	6	4	50	2	A	●
PM-2B-R1.25		1,25	2,5	6	5	50	2	A	●
PM-2B-R1.5		1,5	3	6	6	50	2	A	●
PM-2B-R1.75		1,75	3,5	6	8	50	2	A	●
PM-2B-R2.0		2	4	6	8	50	2	A	●
PM-2B-R2.5		2,5	5	6	10	50	2	A	●
PM-2B-R2.75		2,75	5,5	6	12	50	2	A	●
PM-2B-R3.0		3	6	6	12	50	2	B	●
PM-2B-R3.5		3,5	7	8	14	60	2	A	●
PM-2B-R4.0		4	8	8	16	60	2	B	●
PM-2B-R4.5		4,5	9	10	18	75	2	A	●
PM-2B-R5.0		5	10	10	20	75	2	B	●
PM-2B-R6.0		6	12	12	24	75	2	B	●
PM-2B-R7.0		7	14	14	28	75	2	B	●
PM-2B-R8.0		8	16	16	32	100	2	B	●
PM-2B-R10.0		10	20	20	40	100	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

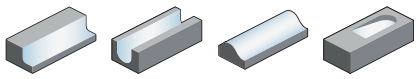
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

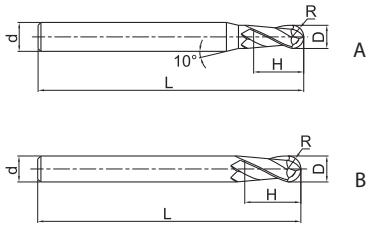
Frese a testa sferica codolo lungo | Lavorazione ad alte prestazioni

PM-2BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-2BL-R1.0		1	2	6	4	75	2	A	●
PM-2BL-R1.25		1,25	2,5	6	5	75	2	A	●
PM-2BL-R1.5		1,5	3	6	6	75	2	A	●
PM-2BL-R1.75		1,75	3,5	6	8	75	2	A	●
PM-2BL-R2.0		2	4	6	8	75	2	A	●
PM-2BL-R2.5		2,5	5	6	10	75	2	A	●
PM-2BL-R2.75		2,75	5,5	6	12	75	2	A	●
PM-2BL-R3.0		3	6	6	12	75	2	B	●
PM-2BL-R3.5		3,5	7	8	14	75	2	A	●
PM-2BL-R4.0		4	8	8	16	100	2	B	●
PM-2BL-R4.5		4,5	9	10	18	100	2	A	●
PM-2BL-R5.0		5	10	10	20	100	2	B	●
PM-2BL-R6.0		6	12	12	24	100	2	B	●
PM-2BL-R7.0		7	14	14	28	100	2	B	●
PM-2BL-R8.0		8	16	16	32	150	2	B	●
PM-2BL-R10.0		10	20	20	40	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

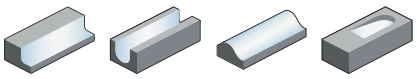
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

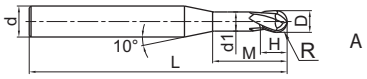
Frese a testa sferica tagliente corto | Lavorazione ad alte prestazioni

PM-2BFP

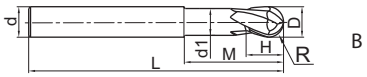


– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





A



B

Articolo	✲	Dimensioni [mm]							Denti	Geometria	Grado
		R	D	d (h6)	d_1	H	M	L			KMG405
PM-2BFP-R0.5		0,5	1	6	0,95	1	2,5	75	2	A	●
PM-2BFP-R0.75		0,75	1,5	6	1,45	1,5	3	75	2	A	●
PM-2BFP-R1.0		1	2	6	1,95	2	4	75	2	A	●
PM-2BFP-R1.5		1,5	3	6	2,85	3	6	75	2	A	●
PM-2BFP-R2.0		2	4	6	3,85	4	8	75	2	A	●
PM-2BFP-R2.5		2,5	5	6	4,85	5	10	75	2	A	●
PM-2BFP-R3.0		3	6	6	5,8	6	12	75	2	B	●
PM-2BFP-R4.0		4	8	8	7,8	8	16	100	2	B	●
PM-2BFP-R5.0		5	10	10	9,6	10	20	100	2	B	●
PM-2BFP-R6.0		6	12	12	11,5	12	24	100	2	B	●
PM-2BFP-R8.0		8	16	16	15,5	16	32	150	2	B	●
PM-2BFP-R10.0		10	20	20	19,5	20	40	150	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

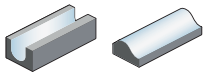
✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

Frese a testa sferica collo conico

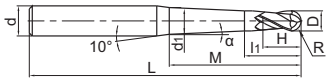
Lavorazione ad alte prestazioni

PM-2BC



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]									Denti	Grado
		R	D	d (h6)	d_1	M	H	L	α	l_1		KMG405
PM-2BC05-R0.25-M03		0,25	0,5	4	0,49	3	0,5	50	0,5	1,5	2	○
PM-2BC05-R0.25-M05		0,25	0,5	4	0,53	5	0,5	50	0,5	1,5	2	○
PM-2BC10-R0.25-M03		0,25	0,5	4	0,52	3	0,5	50	1	1,5	2	○
PM-2BC10-R0.25-M05		0,25	0,5	4	0,59	5	0,5	50	1	1,5	2	○
PM-2BC15-R0.25-M03		0,25	0,5	4	0,54	3	0,5	50	1,5	1,5	2	○
PM-2BC15-R0.25-M05		0,25	0,5	4	0,65	5	0,5	50	1,5	1,5	2	○
PM-2BC05-R0.30-M05		0,3	0,6	4	0,62	5	0,6	50	0,5	1,6	2	○
PM-2BC05-R0.30-M08		0,3	0,6	4	0,68	8	0,6	50	0,5	1,6	2	○
PM-2BC10-R0.30-M05		0,3	0,6	4	0,68	5	0,6	50	1	1,6	2	○
PM-2BC10-R0.30-M08		0,3	0,6	4	0,79	8	0,6	50	1	1,6	2	○
PM-2BC10-R0.30-M10		0,3	0,6	4	0,86	10	0,6	50	1	1,6	2	○
PM-2BC10-R0.30-M12		0,3	0,6	4	0,93	12	0,6	50	1	1,6	2	○
PM-2BC10-R0.30-M15		0,3	0,6	4	1,03	15	0,6	50	1	1,6	2	○
PM-2BC15-R0.30-M05		0,3	0,6	4	0,74	5	0,6	50	1,5	1,6	2	○
PM-2BC15-R0.30-M08		0,3	0,6	4	0,9	8	0,6	50	1,5	1,6	2	○
PM-2BC05-R0.40-M08		0,4	0,8	4	0,87	8	0,8	50	0,5	1,8	2	○
PM-2BC10-R0.40-M08		0,4	0,8	4	0,98	8	0,8	50	1	1,8	2	○
PM-2BC15-R0.40-M08		0,4	0,8	4	1,09	8	0,8	50	1,5	1,8	2	○
PM-2BC05-R0.40-M12		0,4	0,8	4	0,94	12	0,8	60	0,5	1,8	2	○
PM-2BC10-R0.40-M12		0,4	0,8	4	1,12	12	0,8	60	1	1,8	2	○
PM-2BC15-R0.40-M12		0,4	0,8	4	1,3	12	0,8	60	1,5	1,8	2	○
PM-2BC05-R0.50-M10		0,5	1	6	1,08	10	1	60	0,5	2,5	2	○
PM-2BC05-R0.50-M15		0,5	1	6	1,16	15	1	60	0,5	2,5	2	○
PM-2BC10-R0.50-M10		0,5	1	6	1,21	10	1	60	1	2,5	2	○
PM-2BC10-R0.50-M15		0,5	1	6	1,38	15	1	60	1	2,5	2	○
PM-2BC15-R0.50-M10		0,5	1	6	1,34	10	1	60	1,5	2,5	2	○
PM-2BC15-R0.50-M15		0,5	1	6	1,6	15	1	60	1,5	2,5	2	○
PM-2BC20-R0.50-M15		0,5	1	6	1,82	15	1	60	2	2,5	2	○
PM-2BC05-R0.50-M20		0,5	1	6	1,25	20	1	70	0,5	2,5	2	○
PM-2BC05-R0.50-M25		0,5	1	6	1,34	25	1	70	0,5	2,5	2	○
PM-2BC05-R0.50-M30		0,5	1	6	1,42	30	1	70	0,5	2,5	2	○
PM-2BC10-R0.50-M20		0,5	1	6	1,56	20	1	70	1	2,5	2	○
PM-2BC10-R0.50-M25		0,5	1	6	1,73	25	1	70	1	2,5	2	○
PM-2BC10-R0.50-M30		0,5	1	6	1,91	30	1	70	1	2,5	2	○
PM-2BC15-R0.50-M20		0,5	1	6	1,86	20	1	70	1,5	2,5	2	○
PM-2BC20-R0.50-M20		0,5	1	6	2,17	20	1	70	2	2,5	2	○
PM-2BC30-R0.50-M20		0,5	1	6	2,78	20	1	70	3	2,5	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

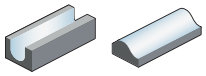
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a testa sferica collo conico

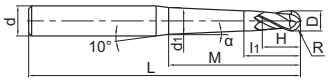
Lavorazione ad alte prestazioni

PM-2BC



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]									Denti	Grado KMG405
		R	D	d (h6)	d_1	M	H	L	α	l_1		
PM-2BC50-R0.50-M20		0,5	1	6	4,01	20	1	70	5	2,5	2	○
PM-2BC10-R0.50-M35		0,5	1	6	2,08	35	1	80	1	2,5	2	○
PM-2BC05-R0.60-M12		0,6	1,2	6	1,31	12	1,2	60	0,5	2,7	2	○
PM-2BC10-R0.60-M12		0,6	1,2	6	1,47	12	1,2	60	1	2,7	2	○
PM-2BC15-R0.60-M12		0,6	1,2	6	1,63	12	1,2	60	1,5	2,7	2	○
PM-2BC05-R0.60-M24		0,6	1,2	6	1,52	24	1,2	70	0,5	2,7	2	○
PM-2BC10-R0.60-M24		0,6	1,2	6	1,89	24	1,2	70	1	2,7	2	○
PM-2BC15-R0.60-M24		0,6	1,2	6	2,26	24	1,2	70	1,5	2,7	2	○
PM-2BC05-R0.75-M10		0,75	1,5	6	1,57	10	1,5	60	0,5	3	2	○
PM-2BC05-R0.75-M15		0,75	1,5	6	1,65	15	1,5	60	0,5	3	2	○
PM-2BC10-R0.75-M10		0,75	1,5	6	1,69	10	1,5	60	1	3	2	○
PM-2BC10-R0.75-M15		0,75	1,5	6	1,86	15	1,5	60	1	3	2	○
PM-2BC15-R0.75-M10		0,75	1,5	6	1,81	10	1,5	60	1,5	3	2	○
PM-2BC15-R0.75-M15		0,75	1,5	6	2,07	15	1,5	60	1,5	3	2	○
PM-2BC05-R0.75-M30		0,75	1,5	6	1,92	30	1,5	70	0,5	3	2	○
PM-2BC10-R0.75-M20		0,75	1,5	6	2,04	20	1,5	70	1	3	2	○
PM-2BC10-R0.75-M30		0,75	1,5	6	2,39	30	1,5	70	1	3	2	○
PM-2BC15-R0.75-M30		0,75	1,5	6	2,86	30	1,5	70	1,5	3	2	○
PM-2BC05-R1.0-M20		1	2	6	2,18	20	2	60	0,5	4	2	○
PM-2BC10-R1.0-M20		1	2	6	2,46	20	2	60	1	4	2	○
PM-2BC10-R1.0-M25		1	2	6	2,64	25	2	60	1	4	2	○
PM-2BC15-R1.0-M20		1	2	6	2,74	20	2	60	1,5	4	2	○
PM-2BC05-R1.0-M30		1	2	6	2,36	30	2	70	0,5	4	2	○
PM-2BC10-R1.0-M30		1	2	6	2,81	30	2	70	1	4	2	○
PM-2BC15-R1.0-M30		1	2	6	3,27	30	2	70	1,5	4	2	○
PM-2BC20-R1.0-M30		1	2	6	3,72	30	2	70	2	4	2	○
PM-2BC30-R1.0-M30		1	2	6	4,63	30	2	70	3	4	2	○
PM-2BC05-R1.0-M40		1	2	6	2,53	40	2	80	0,5	4	2	○
PM-2BC10-R1.0-M35		1	2	6	2,99	35	2	80	1	4	2	○
PM-2BC10-R1.0-M40		1	2	6	3,16	40	2	80	1	4	2	○
PM-2BC15-R1.0-M40		1	2	6	3,79	40	2	80	1,5	4	2	○
PM-2BC20-R1.0-M40		1	2	6	4,42	40	2	80	2	4	2	○
PM-2BC30-R1.0-M40		1	2	6	5,68	40	2	80	3	4	2	○
PM-2BC10-R1.0-M50		1	2	6	3,51	50	2	90	1	4	2	○
PM-2BC05-R1.5-M30		1,5	3	6	3,32	30	3	70	0,5	6	2	○
PM-2BC10-R1.5-M30		1,5	3	6	3,74	30	3	70	1	6	2	○
PM-2BC15-R1.5-M30		1,5	3	6	4,16	30	3	70	1,5	6	2	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

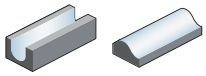
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

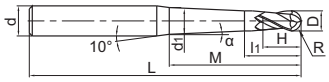
Frese a testa sferica collo conico — Lavorazione ad alte prestazioni

PM-2BC



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]									Denti	Grado
		R	D	d (h6)	d_1	M	H	L	α	l_1		KMG405
PM-2BC05-R1.5-M40		1,5	3	6	3,5	40	3	80	0,5	6	2	○
PM-2BC10-R1.5-M40		1,5	3	6	4,09	40	3	80	1	6	2	○
PM-2BC15-R1.5-M40		1,5	3	6	4,69	40	3	80	1,5	6	2	○
PM-2BC05-R1.5-M50		1,5	3	6	3,67	50	3	90	0,5	6	2	○
PM-2BC10-R1.5-M50		1,5	3	6	4,44	50	3	90	1	6	2	○
PM-2BC15-R1.5-M50		1,5	3	6	5,21	50	3	90	1,5	6	2	○
PM-2BC05-R2.0-M60		2	4	6	4,83	60	4	110	0,5	7	2	○
PM-2BC10-R2.0-M60		2	4	6	5,76	60	4	110	1	7	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

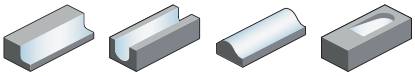
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

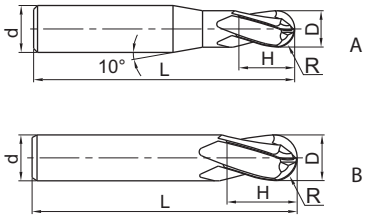
Frese a testa sferica | Lavorazione ad alte prestazioni

PM-4B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4B-R1.5		1,5	3	6	6	50	4	A	●
PM-4B-R2.0		2	4	6	8	50	4	A	●
PM-4B-R2.5		2,5	5	6	10	50	4	A	●
PM-4B-R3.0		3	6	6	12	50	4	B	●
PM-4B-R4.0		4	8	8	16	60	4	B	●
PM-4B-R5.0		5	10	10	20	75	4	B	●
PM-4B-R6.0		6	12	12	24	75	4	B	●
PM-4B-R7.0		7	14	14	28	75	4	B	●
PM-4B-R8.0		8	16	16	32	100	4	B	●
PM-4B-R9.0		9	18	18	36	100	4	B	●
PM-4B-R10.0		10	20	20	40	100	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

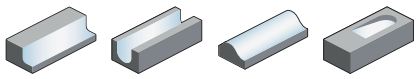
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

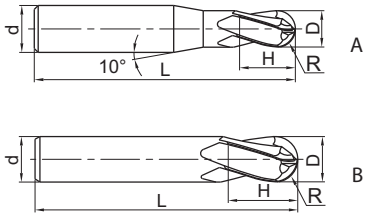
Frese a testa sferica codolo lungo | Lavorazione ad alte prestazioni

PM-4BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4BL-R1.5		1,5	3	6	6	75	4	A	●
PM-4BL-R2.0		2	4	6	8	75	4	A	●
PM-4BL-R2.5		2,5	5	6	10	75	4	A	●
PM-4BL-R3.0		3	6	6	12	75	4	B	●
PM-4BL-R4.0		4	8	8	16	100	4	B	●
PM-4BL-R5.0		5	10	10	20	100	4	B	●
PM-4BL-R6.0		6	12	12	24	100	4	B	●
PM-4BL-R7.0		7	14	14	28	100	4	B	●
PM-4BL-R8.0		8	16	16	32	150	4	B	●
PM-4BL-R9.0		9	18	18	36	150	4	B	●
PM-4BL-R10.0		10	20	20	40	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

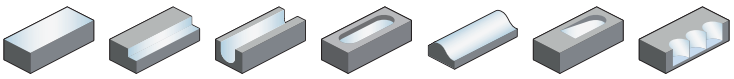
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie PM

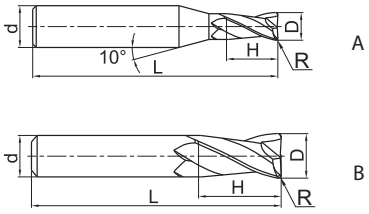
Frese toroidali Lavorazione ad alte prestazioni

PM-2R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-2R-D1.0R0.2		0,2	1	4	3	50	2	A	●
PM-2R-D1.5R0.2		0,2	1,5	4	4	50	2	A	●
PM-2R-D2.0R0.2		0,2	2	4	6	50	2	A	●
PM-2R-D2.0R0.5		0,5	2	4	6	50	2	A	●
PM-2R-D2.5R0.2		0,2	2,5	4	8	50	2	A	●
PM-2R-D2.5R0.5		0,5	2,5	4	8	50	2	A	●
PM-2R-D3.0R0.2		0,2	3	4	8	50	2	A	●
PM-2R-D3.0R0.3		0,3	3	4	8	50	2	A	○
PM-2R-D3.0R0.5		0,5	3	4	8	50	2	A	●
PM-2R-D4.0R0.2		0,2	4	4	11	50	2	B	●
PM-2R-D4.0R0.3		0,3	4	4	11	50	2	B	●
PM-2R-D4.0R0.5		0,5	4	4	11	50	2	B	●
PM-2R-D4.0R1.0		1	4	4	11	50	2	B	●
PM-2R-D5.0R0.3		0,3	5	6	13	50	2	A	○
PM-2R-D5.0R0.5		0,5	5	6	13	50	2	A	●
PM-2R-D5.0R1.0		1	5	6	13	50	2	A	●
PM-2R-D6.0R0.3		0,3	6	6	16	50	2	B	●
PM-2R-D6.0R0.5		0,5	6	6	16	50	2	B	●
PM-2R-D6.0R1.0		1	6	6	16	50	2	B	●
PM-2R-D8.0R0.3		0,3	8	8	20	60	2	B	○
PM-2R-D8.0R0.5		0,5	8	8	20	60	2	B	●
PM-2R-D8.0R1.0		1	8	8	20	60	2	B	●
PM-2R-D10.0R0.5		0,5	10	10	25	75	2	B	●
PM-2R-D10.0R1.0		1	10	10	25	75	2	B	●
PM-2R-D10.0R1.5		1,5	10	10	25	75	2	B	●
PM-2R-D10.0R2.0		2	10	10	25	75	2	B	●
PM-2R-D12.0R0.5		0,5	12	12	30	75	2	B	●
PM-2R-D12.0R1.0		1	12	12	30	75	2	B	●
PM-2R-D12.0R1.5		1,5	12	12	30	75	2	B	●
PM-2R-D12.0R2.0		2	12	12	30	75	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

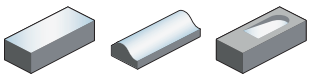
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

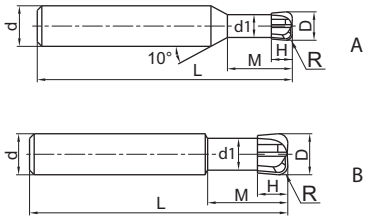
Frese a candela — Lavorazione ad alte prestazioni

PM-4H



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 0°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Geometria	Grado KMG405
PM-4H-D3.0R0.8		0,8	3	6	2,7	1,2	8	50	4	A	●
PM-4H-D4.0R1.0		1	4	6	3,6	1,6	10	50	4	A	●
PM-4H-D5.0R1.2		1,2	5	6	4,5	2	12,5	50	4	A	●
PM-4H-D6.0R1.0		1	6	6	5,4	2,5	12	50	4	B	●
PM-4H-D6.0R1.5		1,5	6	6	5,4	2,5	12	50	4	B	●
PM-4H-D6.0R2.0		2	6	6	5,4	2,5	12	50	4	B	●
PM-4H-D8.0R1.0		1	8	8	7	3,5	16	60	4	B	●
PM-4H-D8.0R2.0		2	8	8	7	3,5	16	60	4	B	●
PM-4H-D10.0R1.0		1	10	10	9	4	20	75	4	B	●
PM-4H-D10.0R2.0		2	10	10	9	4	20	75	4	B	●
PM-4H-D10.0R3.0		3	10	10	9	4	20	75	4	B	●
PM-4H-D12.0R2.0		2	12	12	11	5	24	75	4	B	●
PM-4H-D12.0R3.0		3	12	12	11	5	24	75	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

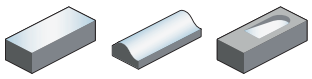
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

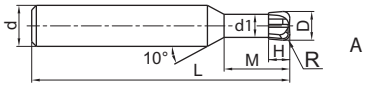
Frese a candela codolo lungo | Lavorazione ad alte prestazioni

PM-4HL

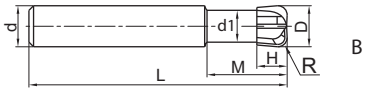


– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 0°





A



B

Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Geometria	Grado KMG405
PM-4HL-D4.0R1.0		1	4	6	3,6	1,6	10	75	4	A	●
PM-4HL-D5.0R1.2		1,2	5	6	4,5	2	12,5	75	4	A	●
PM-4HL-D6.0R1.0		1	6	6	5,4	2,5	12	75	4	B	●
PM-4HL-D6.0R1.5		1,5	6	6	5,4	2,5	12	75	4	B	●
PM-4HL-D6.0R2.0		2	6	6	5,4	2,5	12	75	4	B	●
PM-4HL-D8.0R1.0		1	8	8	7	3,5	16	100	4	B	●
PM-4HL-D8.0R2.0		2	8	8	7	3,5	16	100	4	B	●
PM-4HL-D10.0R1.0		1	10	10	9	4	20	100	4	B	●
PM-4HL-D10.0R2.0		2	10	10	9	4	20	100	4	B	●
PM-4HL-D10.0R3.0		3	10	10	9	4	20	100	4	B	●
PM-4HL-D12.0R2.0		2	12	12	11	5	24	100	4	B	●
PM-4HL-D12.0R3.0		3	12	12	11	5	24	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

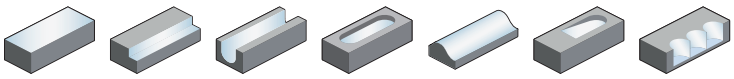
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

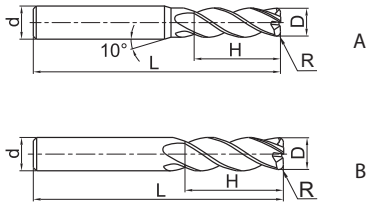
Frese toroidali — Lavorazione ad alte prestazioni

PM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG405
PM-4R-D3.0R0.2		0,2	3	6	8	50	4	A	●
PM-4R-D4.0R0.3		0,3	4	6	10	50	4	A	●
PM-4R-D4.0R0.5		0,5	4	6	10	50	4	A	●
PM-4R-D5.0R0.5		0,5	5	6	13	50	4	A	●
PM-4R-D5.0R1.0		1	5	6	13	50	4	A	●
PM-4R-D6.0R0.5		0,5	6	6	16	50	4	B	●
PM-4R-D6.0R1.0		1	6	6	16	50	4	B	●
PM-4R-D8.0R0.5		0,5	8	8	20	60	4	B	●
PM-4R-D8.0R1.0		1	8	8	20	60	4	B	●
PM-4R-D10.0R0.5		0,5	10	10	25	75	4	B	●
PM-4R-D10.0R1.0		1	10	10	25	75	4	B	●
PM-4R-D10.0R2.0		2	10	10	25	75	4	B	●
PM-4R-D10.0R3.0		3	10	10	25	75	4	B	●
PM-4R-D12.0R0.5		0,5	12	12	30	75	4	B	●
PM-4R-D12.0R1.0		1	12	12	30	75	4	B	●
PM-4R-D12.0R2.0		2	12	12	30	75	4	B	●
PM-4R-D12.0R3.0		3	12	12	30	75	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

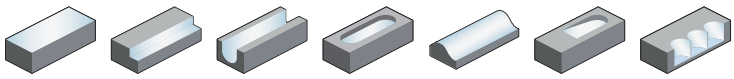
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie PM

Frese toroidali codolo lungo

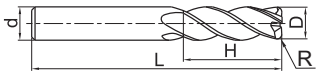
Lavorazione ad alte prestazioni

PM-4RL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMG405
PM-4RL-D6.0R0.5		0,5	6	6	16	75	4	●
PM-4RL-D6.0R1.0		1	6	6	16	75	4	●
PM-4RL-D8.0R0.5		0,5	8	8	20	100	4	●
PM-4RL-D8.0R1.0		1	8	8	20	100	4	○
PM-4RL-D10.0R0.5		0,5	10	10	25	100	4	○
PM-4RL-D10.0R1.0		1	10	10	25	100	4	●
PM-4RL-D10.0R2.0		2	10	10	25	100	4	●
PM-4RL-D12.0R0.5		0,5	12	12	30	100	4	●
PM-4RL-D12.0R1.0		1	12	12	30	100	4	●
PM-4RL-D12.0R2.0		2	12	12	30	100	4	●
PM-4RL-D16.0R1.0		1	16	16	45	150	4	●
PM-4RL-D16.0R2.0		2	16	16	45	150	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

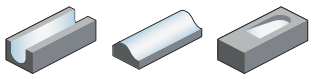
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

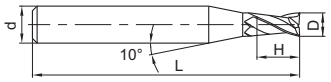
Lavorazione ad alte prestazioni

PM-2ES



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG405
PM-2ES-D0.3		0,3	4	0,6	50	2	●
PM-2ES-D0.4		0,4	4	0,8	50	2	●
PM-2ES-D0.5		0,5	4	1	50	2	●
PM-2ES-D0.6		0,6	4	1,2	50	2	●
PM-2ES-D0.7		0,7	4	1,4	50	2	●
PM-2ES-D0.8		0,8	4	1,6	50	2	●
PM-2ES-D0.9		0,9	4	1,8	50	2	○
PM-2ES-D1.0		1	4	2	50	2	●
PM-2ES-D1.1		1,1	4	2	50	2	○
PM-2ES-D1.2		1,2	4	2,5	50	2	●
PM-2ES-D1.3		1,3	4	2,5	50	2	●
PM-2ES-D1.4		1,4	4	3	50	2	●
PM-2ES-D1.5		1,5	4	3	50	2	●
PM-2ES-D1.6		1,6	4	3,5	50	2	●
PM-2ES-D1.7		1,7	4	3,5	50	2	●
PM-2ES-D1.8		1,8	4	4	50	2	●
PM-2ES-D1.9		1,9	4	4	50	2	○
PM-2ES-D2.0		2	4	4	50	2	●
PM-2ES-D2.1		2,1	4	4	50	2	●
PM-2ES-D2.2		2,2	4	4,5	50	2	●
PM-2ES-D2.3		2,3	4	4,5	50	2	●
PM-2ES-D2.4		2,4	4	5	50	2	●
PM-2ES-D2.5		2,5	4	5	50	2	●
PM-2ES-D2.6		2,6	4	5	50	2	○
PM-2ES-D2.7		2,7	4	5,5	50	2	○
PM-2ES-D2.8		2,8	4	5,5	50	2	○
PM-2ES-D2.9		2,9	4	6	50	2	○
PM-2ES-D3.0		3	4	6	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

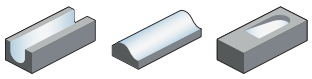
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie PM Micro

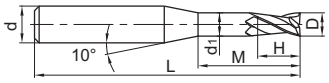
Frese a candela Lavorazione ad alte prestazioni

PM-2EP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
PM-2EP-D0.5-M08		0,5	4	0,45	0,7	8	50	2	○
PM-2EP-D0.5-M04		0,5	4	0,45	0,6	4	50	2	●
PM-2EP-D0.5-M06		0,5	4	0,45	0,7	6	50	2	●
PM-2EP-D0.8-M08		0,8	4	0,75	1,2	8	50	2	○
PM-2EP-D0.8-M10		0,8	4	0,75	1,2	10	50	2	○
PM-2EP-D0.8-M06		0,8	4	0,75	1,2	6	50	2	○
PM-2EP-D0.8-M04		0,8	4	0,75	1,2	4	50	2	●
PM-2EP-D1.0-M14		1	4	0,95	1,5	14	50	2	●
PM-2EP-D1.0-M12		1	4	0,95	1,5	12	50	2	●
PM-2EP-D1.0-M08		1	4	0,95	1,5	8	50	2	●
PM-2EP-D1.0-M16		1	4	0,95	1,5	16	50	2	●
PM-2EP-D1.0-M10		1	4	0,95	1,5	10	50	2	●
PM-2EP-D1.0-M06		1	4	0,95	1,5	6	50	2	●
PM-2EP-D1.0-M20		1	4	0,95	1,5	20	50	2	●
PM-2EP-D1.0-M04		1	4	0,95	1,5	4	50	2	●
PM-2EP-D1.2-M10		1,2	4	1,15	1,8	10	50	2	○
PM-2EP-D1.2-M12		1,2	4	1,15	1,8	12	50	2	○
PM-2EP-D1.2-M08		1,2	4	1,15	1,8	8	50	2	○
PM-2EP-D1.2-M16		1,2	4	1,15	1,8	16	50	2	○
PM-2EP-D1.2-M06		1,2	4	1,15	1,8	6	50	2	●
PM-2EP-D1.5-M14		1,5	4	1,45	2,3	14	50	2	●
PM-2EP-D1.5-M16		1,5	4	1,45	2,3	16	50	2	●
PM-2EP-D1.5-M06		1,5	4	1,45	2,3	6	50	2	●
PM-2EP-D1.5-M18		1,5	4	1,45	2,3	18	50	2	●
PM-2EP-D1.5-M08		1,5	4	1,45	2,3	8	50	2	●
PM-2EP-D1.5-M10		1,5	4	1,45	2,3	10	50	2	●
PM-2EP-D1.5-M20		1,5	4	1,45	2,3	20	50	2	●
PM-2EP-D1.5-M12		1,5	4	1,45	2,3	12	50	2	●
PM-2EP-D2.0-M14		2	4	1,95	3	14	50	2	●
PM-2EP-D2.0-M18		2	4	1,95	3	18	50	2	●
PM-2EP-D2.0-M08		2	4	1,95	3	8	50	2	●
PM-2EP-D2.0-M16		2	4	1,95	3	16	50	2	●
PM-2EP-D2.0-M06		2	4	1,95	3	6	50	2	●
PM-2EP-D2.0-M12		2	4	1,95	3	12	50	2	●
PM-2EP-D2.0-M20		2	4	1,95	3	20	50	2	●
PM-2EP-D2.0-M10		2	4	1,95	3	10	50	2	●
PM-2EP-D2.5-M12		2,5	4	2,4	3,7	12	50	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

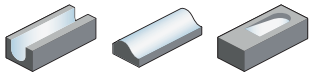
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

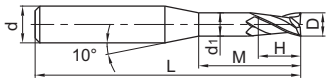
Frese a candela — Lavorazione ad alte prestazioni

PM-2EP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
PM-2EP-D2.5-M14		2,5	4	2,4	3,7	14	50	2	○
PM-2EP-D2.5-M10		2,5	4	2,4	3,7	10	50	2	○
PM-2EP-D2.5-M20		2,5	4	2,4	3,7	20	60	2	○
PM-2EP-D2.5-M16		2,5	4	2,4	3,7	16	60	2	○
PM-2EP-D2.5-M18		2,5	4	2,4	3,7	18	60	2	○
PM-2EP-D2.5-M08		2,5	4	2,4	3,7	8	50	2	●
PM-2EP-D3.0-M08		3	6	2,85	4,5	8	50	2	○
PM-2EP-D3.0-M12		3	6	2,85	4,5	12	50	2	●
PM-2EP-D3.0-M20		3	6	2,85	4,5	20	60	2	●
PM-2EP-D3.0-M14		3	6	2,85	4,5	14	60	2	○
PM-2EP-D3.0-M06		3	6	2,85	4,5	6	50	2	○
PM-2EP-D3.0-M18		3	6	2,85	4,5	18	60	2	○
PM-2EP-D3.0-M10		3	6	2,85	4,5	10	50	2	●
PM-2EP-D3.0-M16		3	6	2,85	4,5	16	60	2	●
PM-2EP-D4.0-M20		4	6	3,85	6	20	60	2	●
PM-2EP-D4.0-M12		4	6	3,85	6	12	50	2	●
PM-2EP-D4.0-M25		4	6	3,85	6	25	60	2	●
PM-2EP-D4.0-M16		4	6	3,85	6	16	60	2	○
PM-2EP-D4.0-M14		4	6	3,85	6	14	60	2	○
PM-2EP-D5.0-M25		5	6	4,85	7,5	25	70	2	●
PM-2EP-D5.0-M14		5	6	4,85	7,5	14	60	2	●
PM-2EP-D5.0-M12		5	6	4,85	7,5	12	60	2	●
PM-2EP-D5.0-M20		5	6	4,85	7,5	20	70	2	●
PM-2EP-D5.0-M16		5	6	4,85	7,5	16	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

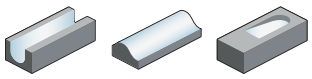
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie PM Micro

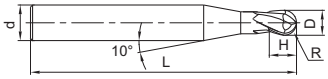
Frese a testa sferica Lavorazione ad alte prestazioni

PM-2BS



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMG405
PM-2BS-R0.15		0,15	0,3	4	0,5	50	2	●
PM-2BS-R0.20		0,2	0,4	4	0,6	50	2	●
PM-2BS-R0.25		0,25	0,5	4	0,8	50	2	●
PM-2BS-R0.30		0,3	0,6	4	0,9	50	2	●
PM-2BS-R0.35		0,35	0,7	4	1	50	2	○
PM-2BS-R0.40		0,4	0,8	4	1,2	50	2	●
PM-2BS-R0.45		0,45	0,9	4	1,3	50	2	○
PM-2BS-R0.50		0,5	1	4	1,5	50	2	●
PM-2BS-R0.60		0,6	1,2	4	1,8	50	2	●
PM-2BS-R0.70		0,7	1,4	4	2	50	2	○
PM-2BS-R0.75		0,75	1,5	4	2,3	50	2	●
PM-2BS-R0.80		0,8	1,6	4	2,5	50	2	○
PM-2BS-R0.90		0,9	1,8	4	2,7	50	2	○
PM-2BS-R1.00		1	2	4	3	50	2	●
PM-2BS-R1.25		1,25	2,5	4	3,7	50	2	○
PM-2BS-R1.50		1,5	3	4	4,5	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

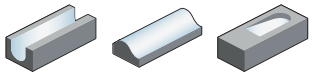
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

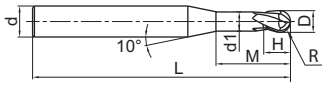
Frese a testa sferica — Lavorazione ad alte prestazioni

PM-2BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
PM-2BP-R0.25-M06		0,25	0,5	4	0,45	0,7	6	50	2	●
PM-2BP-R0.25-M04		0,25	0,5	4	0,45	0,7	4	50	2	●
PM-2BP-R0.3-M08		0,3	0,6	4	0,55	0,9	8	50	2	●
PM-2BP-R0.3-M04		0,3	0,6	4	0,55	0,9	4	50	2	●
PM-2BP-R0.3-M06		0,3	0,6	4	0,55	0,9	6	50	2	●
PM-2BP-R0.4-M10		0,4	0,8	4	0,75	1,2	10	50	2	●
PM-2BP-R0.4-M08		0,4	0,8	4	0,75	1,2	8	50	2	●
PM-2BP-R0.4-M06		0,4	0,8	4	0,75	1,2	6	50	2	●
PM-2BP-R0.4-M04		0,4	0,8	4	0,75	1,2	4	50	2	●
PM-2BP-R0.5-M15		0,5	1	4	0,95	1,5	15	50	2	○
PM-2BP-R0.5-M08		0,5	1	4	0,95	1,5	8	50	2	●
PM-2BP-R0.5-M12		0,5	1	4	0,95	1,5	12	50	2	●
PM-2BP-R0.5-M06		0,5	1	4	0,95	1,5	6	50	2	●
PM-2BP-R0.5-M10		0,5	1	4	0,95	1,5	10	50	2	●
PM-2BP-R0.5-M04		0,5	1	4	0,95	1,5	4	50	2	●
PM-2BP-R0.6-M12		0,6	1,2	4	1,15	1,8	12	50	2	○
PM-2BP-R0.6-M16		0,6	1,2	4	1,15	1,8	16	50	2	○
PM-2BP-R0.6-M08		0,6	1,2	4	1,15	1,8	8	50	2	○
PM-2BP-R0.6-M06		0,6	1,2	4	1,15	1,8	6	50	2	●
PM-2BP-R0.75-M16		0,75	1,5	4	1,45	2,3	16	50	2	●
PM-2BP-R0.75-M08		0,75	1,5	4	1,45	2,3	8	50	2	●
PM-2BP-R0.75-M12		0,75	1,5	4	1,45	2,3	12	50	2	●
PM-2BP-R0.75-M06		0,75	1,5	4	1,45	2,3	6	50	2	○
PM-2BP-R1.0-M06		1	2	4	1,95	3	6	50	2	●
PM-2BP-R1.0-M16		1	2	4	1,95	3	16	50	2	●
PM-2BP-R1.0-M12		1	2	4	1,95	3	12	50	2	●
PM-2BP-R1.0-M20		1	2	4	1,95	3	20	50	2	●
PM-2BP-R1.0-M10		1	2	4	1,95	3	10	50	2	●
PM-2BP-R1.0-M08		1	2	4	1,95	3	8	50	2	●
PM-2BP-R1.25-M08		1,25	2,5	4	2,4	3,7	8	50	2	○
PM-2BP-R1.25-M12		1,25	2,5	4	2,4	3,7	12	50	2	●
PM-2BP-R1.25-M16		1,25	2,5	4	2,4	3,7	16	60	2	○
PM-2BP-R1.25-M10		1,25	2,5	4	2,4	3,7	10	50	2	○
PM-2BP-R1.25-M20		1,25	2,5	4	2,4	3,7	20	60	2	○
PM-2BP-R1.5-M08		1,5	3	6	2,85	4,5	8	50	2	●
PM-2BP-R1.5-M12		1,5	3	6	2,85	4,5	12	50	2	●
PM-2BP-R1.5-M16		1,5	3	6	2,85	4,5	16	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

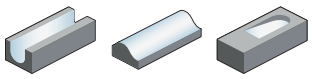
✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

Frese a testa sferica

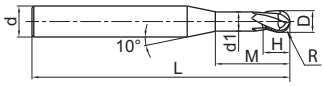
Lavorazione ad alte prestazioni

PM-2BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMG405
PM-2BP-R1.5-M20		1,5	3	6	2,85	4,5	20	60	2	●
PM-2BP-R1.5-M10		1,5	3	6	2,85	4,5	10	50	2	●
PM-2BP-R2.0-M20		2	4	6	3,85	6	20	60	2	●
PM-2BP-R2.0-M25		2	4	6	3,85	6		60	2	○
PM-2BP-R2.0-M16		2	4	6	3,85	6	16	60	2	●
PM-2BP-R2.0-M10		2	4	6	3,85	6	10	60	2	●
PM-2BP-R2.5-M25		2,5	5	6	4,85	7,5	25	70	2	●
PM-2BP-R2.5-M16		2,5	5	6	4,85	7,5	16	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

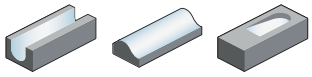
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

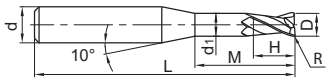
Frese toroidali | Lavorazione ad alte prestazioni

PM-2RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado KMG405
		R	D	d (h6)	d_1	H	M	L		
PM-2RP-D0.5-R0.05-M06		0,05	0,5	4	0,45	0,7	6	50	2	●
PM-2RP-D0.5-R0.05-M04		0,05	0,5	4	0,45	0,6	4	50	2	●
PM-2RP-D0.5-R0.1-M06		0,1	0,5	4	0,45	0,7	6	50	2	●
PM-2RP-D0.5-R0.1-M08		0,1	0,5	4	0,45	0,7	8	50	2	○
PM-2RP-D0.5-R0.1-M04		0,1	0,5	4	0,45	0,6	4	50	2	●
PM-2RP-D0.5-R0.05-M08		0,05	0,5	4	0,45	0,7	8	50	2	○
PM-2RP-D0.8-R0.1-M06		0,1	0,8	4	0,75	1,2	6	50	2	●
PM-2RP-D0.8-R0.1-M08		0,1	0,8	4	0,75	1,2	8	50	2	●
PM-2RP-D0.8-R0.1-M04		0,1	0,8	4	0,75	1,2	4	50	2	●
PM-2RP-D0.8-R0.2-M06		0,2	0,8	4	0,75	1,2	6	50	2	●
PM-2RP-D0.8-R0.1-M10		0,1	0,8	4	0,75	1,2	10	50	2	○
PM-2RP-D0.8-R0.2-M10		0,2	0,8	4	0,75	1,2	10	50	2	○
PM-2RP-D0.8-R0.2-M04		0,2	0,8	4	0,75	1,2	4	50	2	●
PM-2RP-D0.8-R0.2-M08		0,2	0,8	4	0,75	1,2	8	50	2	●
PM-2RP-D1.0-R0.2-M12		0,2	1	4	0,95	1,5	12	50	2	●
PM-2RP-D1.0-R0.2-M08		0,2	1	4	0,95	1,5	8	50	2	●
PM-2RP-D1.0-R0.3-M06		0,3	1	4	0,95	1,5	6	50	2	●
PM-2RP-D1.0-R0.1-M16		0,1	1	4	0,95	1,5	16	60	2	●
PM-2RP-D1.0-R0.2-M14		0,2	1	4	0,95	1,5	14	50	2	○
PM-2RP-D1.0-R0.3-M10		0,3	1	4	0,95	1,5	10	50	2	●
PM-2RP-D1.0-R0.2-M16		0,2	1	4	0,95	1,5	16	60	2	●
PM-2RP-D1.0-R0.3-M04		0,3	1	4	0,95	1,5	4	50	2	●
PM-2RP-D1.0-R0.1-M06		0,1	1	4	0,95	1,5	6	50	2	●
PM-2RP-D1.0-R0.2-M06		0,2	1	4	0,95	1,5	6	50	2	●
PM-2RP-D1.0-R0.3-M12		0,3	1	4	0,95	1,5	12	50	2	●
PM-2RP-D1.0-R0.1-M20		0,1	1	4	0,95	1,5	20	60	2	●
PM-2RP-D1.0-R0.2-M10		0,2	1	4	0,95	1,5	10	50	2	●
PM-2RP-D1.0-R0.1-M12		0,1	1	4	0,95	1,5	12	50	2	●
PM-2RP-D1.0-R0.1-M04		0,1	1	4	0,95	1,5	4	50	2	●
PM-2RP-D1.0-R0.1-M14		0,1	1	4	0,95	1,5	14	50	2	○
PM-2RP-D1.0-R0.2-M04		0,2	1	4	0,95	1,5	4	50	2	●
PM-2RP-D1.0-R0.1-M08		0,1	1	4	0,95	1,5	8	50	2	●
PM-2RP-D1.0-R0.1-M10		0,1	1	4	0,95	1,5	10	50	2	●
PM-2RP-D1.0-R0.3-M08		0,3	1	4	0,95	1,5	8	50	2	●
PM-2RP-D1.0-R0.2-M20		0,2	1	4	0,95	1,5	20	60	2	●
PM-2RP-D1.2-R0.1-M16		0,1	1,2	4	1,5	1,8	16	60	2	○
PM-2RP-D1.2-R0.2-M06		0,2	1,2	4	1,15	1,8	6	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

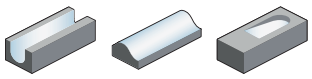
✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

Frese in metallo duro integrale Serie PM Micro

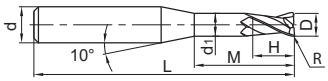
Frese toroidali Lavorazione ad alte prestazioni

PM-2RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMG405
PM-2RP-D1.2-R0.1-M06		0,1	1,2	4	1,15	1,8	6	50	2	●
PM-2RP-D1.2-R0.1-M12		0,1	1,2	4	1,15	1,8	12	50	2	●
PM-2RP-D1.2-R0.2-M10		0,2	1,2	4	1,15	1,8	10	50	2	●
PM-2RP-D1.2-R0.2-M12		0,2	1,2	4	1,15	1,8	12	50	2	●
PM-2RP-D1.2-R0.1-M08		0,1	1,2	4	1,15	1,8	8	50	2	●
PM-2RP-D1.2-R0.2-M08		0,2	1,2	4	1,15	1,8	8	50	2	●
PM-2RP-D1.2-R0.1-M10		0,1	1,2	4	1,15	1,8	10	50	2	●
PM-2RP-D1.2-R0.2-M16		0,2	1,2	4	1,5	1,8	16	60	2	○
PM-2RP-D1.5-R0.2-M10		0,2	1,5	4	1,45	2,3	10	50	2	●
PM-2RP-D1.5-R0.3-M14		0,3	1,5	4	1,45	2,3	14	50	2	○
PM-2RP-D1.5-R0.3-M12		0,3	1,5	4	1,45	2,3	12	50	2	●
PM-2RP-D1.5-R0.2-M06		0,2	1,5	4	1,45	2,3	6	50	2	●
PM-2RP-D1.5-R0.3-M06		0,3	1,5	4	1,45	2,3	6	50	2	●
PM-2RP-D1.5-R0.2-M08		0,2	1,5	4	1,45	2,3	8	50	2	●
PM-2RP-D1.5-R0.3-M08		0,3	1,5	4	1,45	2,3	8	50	2	●
PM-2RP-D1.5-R0.2-M12		0,2	1,5	4	1,45	2,3	12	50	2	●
PM-2RP-D1.5-R0.2-M16		0,2	1,5	4	1,45	2,3	16	50	2	●
PM-2RP-D1.5-R0.3-M18		0,3	1,5	4	1,45	2,3	18	50	2	○
PM-2RP-D1.5-R0.3-M10		0,3	1,5	4	1,45	2,3	10	50	2	●
PM-2RP-D1.5-R0.3-M16		0,3	1,5	4	1,45	2,3	16	50	2	●
PM-2RP-D1.5-R0.3-M20		0,3	1,5	4	1,45	2,3	20	50	2	○
PM-2RP-D1.5-R0.2-M20		0,2	1,5	4	1,45	2,3	20	50	2	○
PM-2RP-D1.5-R0.2-M18		0,2	1,5	4	1,45	2,3	18	50	2	○
PM-2RP-D1.5-R0.2-M14		0,2	1,5	4	1,45	2,3	14	50	2	○
PM-2RP-D2.0-R0.2-M20		0,2	2	4	1,97	3	20	50	2	●
PM-2RP-D2.0-R0.5-M14		0,5	2	4	1,95	3	14	50	2	○
PM-2RP-D2.0-R0.5-M16		0,5	2	4	1,95	3	16	50	2	●
PM-2RP-D2.0-R0.5-M18		0,5	2	4	1,96	3	18	50	2	○
PM-2RP-D2.0-R0.5-M10		0,5	2	4	1,95	3	10	50	2	●
PM-2RP-D2.0-R0.2-M12		0,2	2	4	1,95	3	12	50	2	●
PM-2RP-D2.0-R0.2-M06		0,2	2	4	1,95	3	6	50	2	●
PM-2RP-D2.0-R0.2-M14		0,2	2	4	1,95	3	14	50	2	○
PM-2RP-D2.0-R0.2-M18		0,2	2	4	1,96	3	18	50	2	○
PM-2RP-D2.0-R0.5-M12		0,5	2	4	1,95	3	12	50	2	●
PM-2RP-D2.0-R0.5-M06		0,5	2	4	1,95	3	6	50	2	●
PM-2RP-D2.0-R0.5-M08		0,5	2	4	1,95	3	8	50	2	●
PM-2RP-D2.0-R0.2-M16		0,2	2	4	1,95	3	16	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

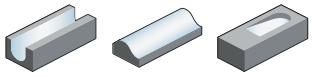
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

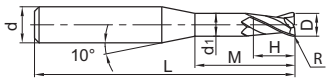
Frese toroidali — Lavorazione ad alte prestazioni

PM-2RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
PM-2RP-D2.0-R0.2-M10		0,2	2	4	1,95	3	10	50	2	●
PM-2RP-D2.0-R0.2-M08		0,2	2	4	1,95	3	8	50	2	●
PM-2RP-D2.0-R0.5-M20		0,5	2	4	1,97	3	20	50	2	●
PM-2RP-D2.5-R0.2-M08		0,2	2,5	4	2,4	3,7	8	50	2	●
PM-2RP-D2.5-R0.5-M18		0,5	2,5	4	2,4	3,7	18	60	2	○
PM-2RP-D2.5-R0.5-M10		0,5	2,5	4	2,4	3,7	10	50	2	●
PM-2RP-D2.5-R0.2-M14		0,2	2,5	4	2,4	3,7	14	50	2	○
PM-2RP-D2.5-R0.2-M18		0,2	2,5	4	2,4	3,7	18	60	2	○
PM-2RP-D2.5-R0.5-M14		0,5	2,5	4	2,4	3,7	14	50	2	○
PM-2RP-D2.5-R0.5-M16		0,5	2,5	4	2,4	3,7	16	60	2	○
PM-2RP-D2.5-R0.2-M20		0,2	2,5	4	2,4	3,7	20	60	2	●
PM-2RP-D2.5-R0.5-M20		0,5	2,5	4	2,4	3,7	20	60	2	●
PM-2RP-D2.5-R0.5-M08		0,5	2,5	4	2,4	3,7	8	50	2	●
PM-2RP-D2.5-R0.2-M10		0,2	2,5	4	2,4	3,7	10	50	2	●
PM-2RP-D2.5-R0.2-M16		0,2	2,5	4	2,4	3,7	16	60	2	○
PM-2RP-D2.5-R0.5-M12		0,5	2,5	4	2,4	3,7	12	50	2	○
PM-2RP-D2.5-R0.2-M12		0,2	2,5	4	2,4	3,7	12	50	2	○
PM-2RP-D3.0-R0.5-M12		0,5	3	6	2,85	4,5	12	50	2	●
PM-2RP-D3.0-R0.2-M10		0,2	3	6	2,85	4,5	10	50	2	●
PM-2RP-D3.0-R0.5-M18		0,5	3	6	2,85	4,5	18	60	2	○
PM-2RP-D3.0-R0.5-M16		0,5	3	6	2,85	4,5	16	60	2	●
PM-2RP-D3.0-R0.2-M14		0,2	3	6	2,85	4,5	14	60	2	○
PM-2RP-D3.0-R0.2-M20		0,2	3	6	2,85	4,5	20	60	2	●
PM-2RP-D3.0-R0.5-M14		0,5	3	6	2,85	4,5	14	60	2	○
PM-2RP-D3.0-R0.5-M10		0,5	3	6	2,85	4,5	10	50	2	●
PM-2RP-D3.0-R0.2-M08		0,2	3	6	2,85	4,5	8	50	2	●
PM-2RP-D3.0-R0.2-M12		0,2	3	6	2,85	4,5	12	50	2	●
PM-2RP-D3.0-R0.5-M20		0,5	3	6	2,85	4,5	20	60	2	●
PM-2RP-D3.0-R0.5-M06		0,5	3	6	2,85	4,5	6	50	2	○
PM-2RP-D3.0-R0.5-M08		0,5	3	6	2,85	4,5	8	50	2	●
PM-2RP-D3.0-R0.2-M16		0,2	3	6	2,85	4,5	16	60	2	●
PM-2RP-D3.0-R0.2-M18		0,2	3	6	2,85	4,5	18	60	2	○
PM-2RP-D3.0-R0.2-M06		0,2	3	6	2,85	4,5	6	50	2	○
PM-2RP-D4.0-R0.2-M12		0,2	4	6	3,85	6	12	50	2	●
PM-2RP-D4.0-R0.5-M25		0,5	4	6	3,85	6	25	60	2	●
PM-2RP-D4.0-R0.5-M16		0,5	4	6	3,85	6	16	60	2	●
PM-2RP-D4.0-R0.5-M20		0,5	4	6	3,85	6	20	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

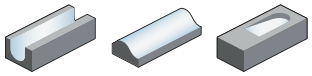
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

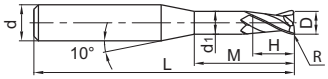
Frese toroidali Lavorazione ad alte prestazioni

PM-2RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMG405
PM-2RP-D4.0-R0.5-M14		0,5	4	6	3,85	6	14	60	2	○
PM-2RP-D4.0-R0.2-M25		0,2	4	6	3,85	6	25	60	2	●
PM-2RP-D4.0-R0.2-M20		0,2	4	6	3,85	6	20	60	2	●
PM-2RP-D4.0-R0.2-M14		0,2	4	6	3,85	6	14	60	2	○
PM-2RP-D4.0-R0.5-M12		0,5	4	6	3,85	6	12	50	2	●
PM-2RP-D4.0-R0.2-M16		0,2	4	6	3,85	6	16	60	2	●
PM-2RP-D5.0-R0.5-M20		0,5	5	6	4,85	7,5	20	70	2	●
PM-2RP-D5.0-R1.0-M12		1	5	6	4,85	7,5	12	60	2	●
PM-2RP-D5.0-R0.5-M14		0,5	5	6	4,85	7,5	14	60	2	○
PM-2RP-D5.0-R1.0-M20		1	5	6	4,85	7,5	20	70	2	●
PM-2RP-D5.0-R0.5-M25		0,5	5	6	4,85	7,5	25	70	2	●
PM-2RP-D5.0-R1.0-M16		1	5	6	4,85	7,5	16	60	2	●
PM-2RP-D5.0-R1.0-M14		1	5	6	4,85	7,5	14	60	2	○
PM-2RP-D5.0-R0.5-M12		0,5	5	6	4,85	7,5	12	60	2	●
PM-2RP-D5.0-R1.0-M25		1	5	6	4,85	7,5	25	70	2	●
PM-2RP-D5.0-R0.5-M16		0,5	5	6	4,85	7,5	16	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

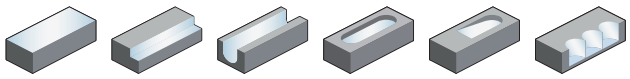
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

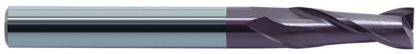
Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

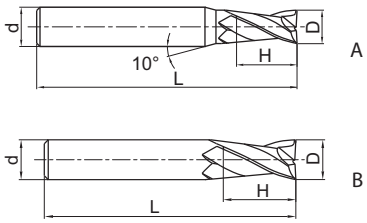
Frese a candela — Lavorazione ad alte prestazioni

EPM-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2E-D3.0		3	6	8	50	2	A	●
EPM-2E-D4.0		4	6	11	50	2	A	●
EPM-2E-D5.0		5	6	13	50	2	A	●
EPM-2E-D6.0		6	6	16	50	2	B	●
EPM-2E-D8.0		8	8	20	60	2	B	●
EPM-2E-D10.0		10	10	25	75	2	B	●
EPM-2E-D12.0		12	12	30	75	2	B	●
EPM-2E-D14.0		14	14	32	75	2	B	●
EPM-2E-D16.0		16	16	45	100	2	B	●
EPM-2E-D18.0		18	18	45	100	2	B	●
EPM-2E-D20.0		20	20	45	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

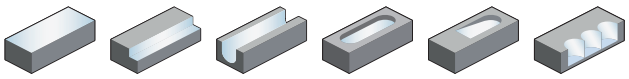
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

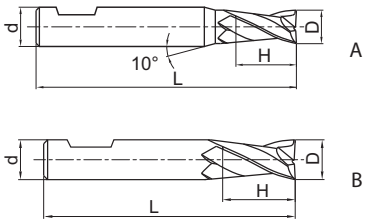
Frese a candela Lavorazione ad alte prestazioni

EPM-2E-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2E-D3.0-W		3	6	4	50	2	A	●
EPM-2E-D4.0-W		4	6	5	54	2	A	●
EPM-2E-D5.0-W		5	6	6	54	2	A	●
EPM-2E-D6.0-W		6	6	7	54	2	B	●
EPM-2E-D8.0-W		8	8	9	58	2	B	●
EPM-2E-D10.0-W		10	10	11	66	2	B	●
EPM-2E-D12.0-W		12	12	12	73	2	B	●
EPM-2E-D14.0-W		14	14	14	75	2	B	●
EPM-2E-D16.0-W		16	16	16	82	2	B	●
EPM-2E-D18.0-W		18	18	18	84	2	B	●
EPM-2E-D20.0-W		20	20	20	92	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

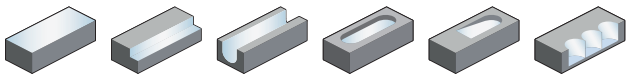
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela tagliente lungo

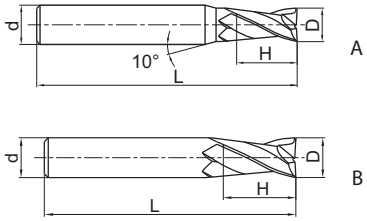
Lavorazione ad alte prestazioni

EPM-2EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2EL-D3.0		3	6	12	75	2	A	●
EPM-2EL-D4.0		4	6	15	75	2	A	●
EPM-2EL-D5.0		5	6	20	75	2	A	●
EPM-2EL-D6.0		6	6	20	75	2	B	●
EPM-2EL-D8.0		8	8	25	100	2	B	●
EPM-2EL-D10.0		10	10	30	100	2	B	●
EPM-2EL-D12.0		12	12	35	100	2	B	●
EPM-2EL-D14.0		14	14	40	100	2	B	●
EPM-2EL-D16.0		16	16	50	150	2	B	●
EPM-2EL-D20.0		20	20	55	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

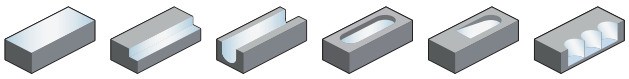
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

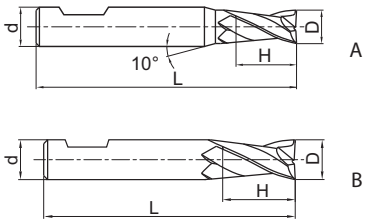
Frese a candela tagliente lungo | Lavorazione ad alte prestazioni

EPM-2EL-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2EL-D3.0-W		3	6	6	57	2	A	●
EPM-2EL-D4.0-W		4	6	8	57	2	A	●
EPM-2EL-D5.0-W		5	6	10	57	2	A	●
EPM-2EL-D6.0-W		6	6	10	57	2	B	●
EPM-2EL-D8.0-W		8	8	16	63	2	B	●
EPM-2EL-D10.0-W		10	10	19	72	2	B	●
EPM-2EL-D12.0-W		12	12	22	83	2	B	●
EPM-2EL-D14.0-W		14	14	22	83	2	B	●
EPM-2EL-D16.0-W		16	16	26	92	2	B	●
EPM-2EL-D18.0-W		18	18	26	92	2	B	●
EPM-2EL-D20.0-W		20	20	32	104	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

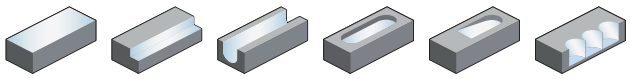
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

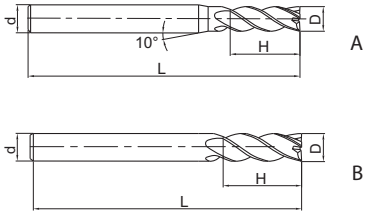
Frese a candela — Lavorazione ad alte prestazioni

EPM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4E-D3.0		3	6	8	50	4	A	●
EPM-4E-D4.0		4	6	11	50	4	A	●
EPM-4E-D5.0		5	6	13	50	4	A	●
EPM-4E-D6.0		6	6	16	50	4	B	●
EPM-4E-D8.0		8	8	20	60	4	B	●
EPM-4E-D10.0		10	10	25	75	4	B	●
EPM-4E-D12.0		12	12	30	75	4	B	●
EPM-4E-D14.0		14	14	32	75	4	B	●
EPM-4E-D16.0		16	16	45	100	4	B	●
EPM-4E-D18.0		18	18	45	100	4	B	●
EPM-4E-D20.0		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

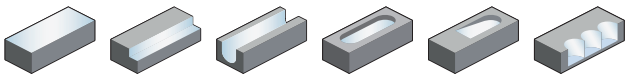
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie EPM

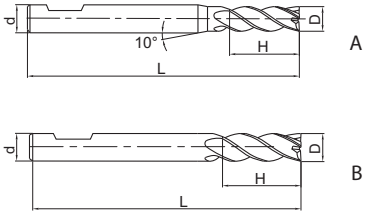
Frese a candela Lavorazione ad alte prestazioni

EPM-4E-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4E-D3.0-W		3	6	4	50	4	A	●
EPM-4E-D4.0-W		4	6	5	54	4	A	●
EPM-4E-D5.0-W		5	6	6	54	4	A	●
EPM-4E-D6.0-W		6	6	7	54	4	B	●
EPM-4E-D8.0-W		8	8	9	58	4	B	●
EPM-4E-D10.0-W		10	10	11	66	4	B	●
EPM-4E-D12.0-W		12	12	12	73	4	B	●
EPM-4E-D14.0-W		14	14	14	75	4	B	●
EPM-4E-D16.0-W		16	16	16	82	4	B	●
EPM-4E-D18.0-W		18	18	18	84	4	B	●
EPM-4E-D20.0-W		20	20	20	92	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

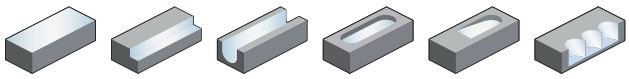
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

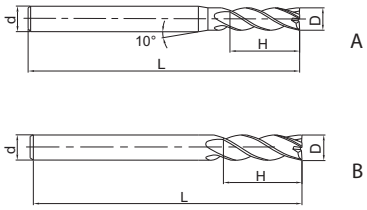
Frese a candela tagliente lungo — Lavorazione ad alte prestazioni

EPM-4EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4EL-D3.0		3	6	12	75	4	A	●
EPM-4EL-D4.0		4	6	15	75	4	A	●
EPM-4EL-D5.0		5	6	20	75	4	A	●
EPM-4EL-D6.0		6	6	20	75	4	B	●
EPM-4EL-D8.0		8	8	25	100	4	B	●
EPM-4EL-D10.0		10	10	30	100	4	B	●
EPM-4EL-D12.0		12	12	35	100	4	B	●
EPM-4EL-D14.0		14	14	40	100	4	B	●
EPM-4EL-D16.0		16	16	50	150	4	B	●
EPM-4EL-D20.0		20	20	55	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

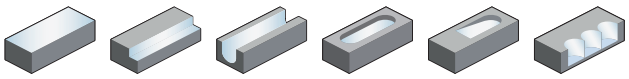
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela tagliente lungo

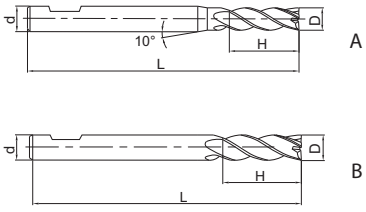
Lavorazione ad alte prestazioni

EPM-4EL-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4EL-D3.0-W		3	6	8	57	4	A	●
EPM-4EL-D4.0-W		4	6	11	57	4	A	●
EPM-4EL-D5.0-W		5	6	13	57	4	A	●
EPM-4EL-D6.0-W		6	6	13	57	4	B	●
EPM-4EL-D8.0-W		8	8	19	63	4	B	●
EPM-4EL-D10.0-W		10	10	22	72	4	B	●
EPM-4EL-D12.0-W		12	12	26	83	4	B	●
EPM-4EL-D14.0-W		14	14	26	83	4	B	●
EPM-4EL-D16.0-W		16	16	32	92	4	B	●
EPM-4EL-D18.0-W		18	18	32	92	4	B	●
EPM-4EL-D20.0-W		20	20	38	104	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

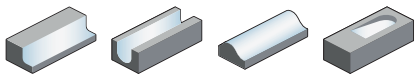
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

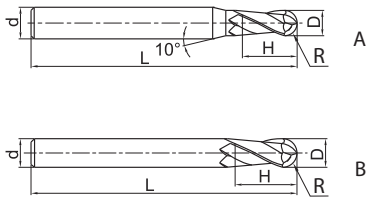
Frese a testa sferica — Lavorazione ad alte prestazioni

EPM-2B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2B-R1.5		1,5	3	6	6	50	2	A	●
EPM-2B-R2.0		2	4	6	8	50	2	A	●
EPM-2B-R2.5		2,5	5	6	10	50	2	A	●
EPM-2B-R3.0		3	6	6	12	50	2	B	●
EPM-2B-R4.0		4	8	8	16	60	2	B	●
EPM-2B-R5.0		5	10	10	20	75	2	B	●
EPM-2B-R6.0		6	12	12	24	75	2	B	●
EPM-2B-R7.0		7	14	14	28	75	2	B	●
EPM-2B-R8.0		8	16	16	32	100	2	B	●
EPM-2B-R10.0		10	20	20	40	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

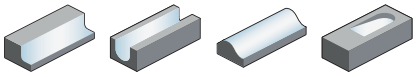
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

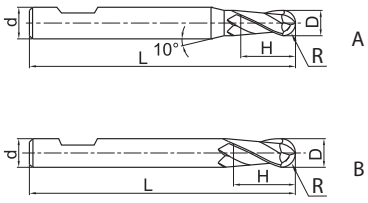
Frese a testa sferica | Lavorazione ad alte prestazioni

EPM-2B-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2B-R1.5-W		1,5	3	6	4	50	2	A	●
EPM-2B-R2.0-W		2	4	6	5	54	2	A	●
EPM-2B-R2.5-W		2,5	5	6	6	54	2	A	●
EPM-2B-R3.0-W		3	6	6	7	54	2	B	●
EPM-2B-R4.0-W		4	8	8	9	58	2	B	●
EPM-2B-R5.0-W		5	10	10	11	66	2	B	●
EPM-2B-R6.0-W		6	12	12	12	73	2	B	●
EPM-2B-R8.0-W		8	16	16	16	83	2	B	●
EPM-2B-R10.0-W		10	20	20	20	92	2	B	●

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

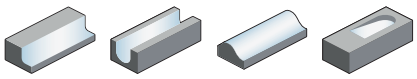
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

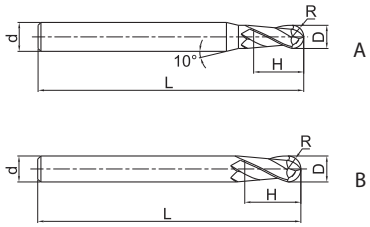
Frese a testa sferica codolo lungo | Lavorazione ad alte prestazioni

EPM-2BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2BL-R1.5		1,5	3	6	6	75	2	A	●
EPM-2BL-R2.0		2	4	6	8	75	2	A	●
EPM-2BL-R2.5		2,5	5	6	10	75	2	A	●
EPM-2BL-R3.0		3	6	6	12	75	2	B	●
EPM-2BL-R4.0		4	8	8	16	100	2	B	●
EPM-2BL-R5.0		5	10	10	20	100	2	B	●
EPM-2BL-R6.0		6	12	12	24	100	2	B	●
EPM-2BL-R7.0		7	14	14	28	100	2	B	●
EPM-2BL-R8.0		8	16	16	32	150	2	B	●
EPM-2BL-R10.0		10	20	20	40	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

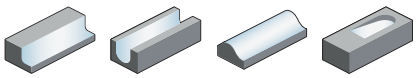
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

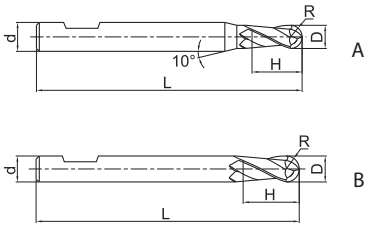
Frese a testa sferica codolo lungo | Lavorazione ad alte prestazioni

EPM-2BL-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-2BL-R1.5-W		1,5	3	6	4	57	2	A	●
EPM-2BL-R2.0-W		2	4	6	5	57	2	A	●
EPM-2BL-R2.5-W		2,5	5	6	6	57	2	A	●
EPM-2BL-R3.0-W		3	6	6	7	57	2	B	●
EPM-2BL-R4.0-W		4	8	8	9	63	2	B	●
EPM-2BL-R5.0-W		5	10	10	11	72	2	B	●
EPM-2BL-R6.0-W		6	12	12	12	83	2	B	●
EPM-2BL-R8.0-W		8	16	16	16	92	2	B	●
EPM-2BL-R10.0-W		10	20	20	20	104	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

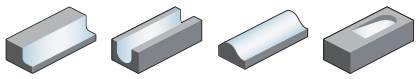
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

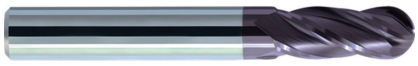
Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

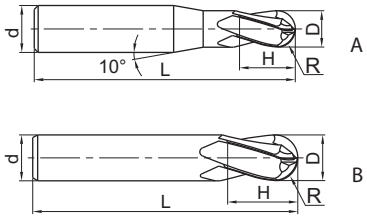
Frese a testa sferica — Lavorazione ad alte prestazioni

EPM-4B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4B-R1.5		1,5	3	6	6	50	4	A	●
EPM-4B-R2.0		2	4	6	8	50	4	A	●
EPM-4B-R2.5		2,5	5	6	10	50	4	A	●
EPM-4B-R3.0		3	6	6	12	50	4	B	●
EPM-4B-R4.0		4	8	8	16	60	4	B	●
EPM-4B-R5.0		5	10	10	20	75	4	B	●
EPM-4B-R6.0		6	12	12	24	75	4	B	●
EPM-4B-R7.0		7	14	14	28	75	4	B	●
EPM-4B-R8.0		8	16	16	32	100	4	B	●
EPM-4B-R9.0		9	18	18	36	100	4	B	●
EPM-4B-R10.0		10	20	20	40	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

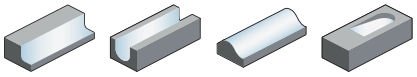
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

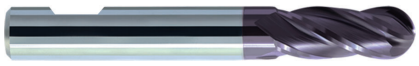
Frese a testa sferica

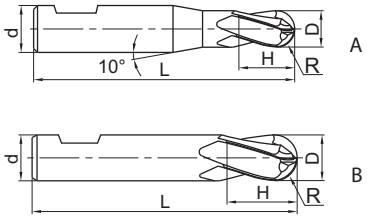
Lavorazione ad alte prestazioni

EPM-4B-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4B-R1.5-W		1,5	3	6	4	50	4	A	●
EPM-4B-R2.0-W		2	4	6	5	54	4	A	●
EPM-4B-R2.5-W		2,5	5	6	6	54	4	A	●
EPM-4B-R3.0-W		3	6	6	7	54	4	B	●
EPM-4B-R4.0-W		4	8	8	9	58	4	B	●
EPM-4B-R5.0-W		5	10	10	11	66	4	B	●
EPM-4B-R6.0-W		6	12	12	12	73	4	B	●
EPM-4B-R7.0-W		7	14	14	14	75	4	B	●
EPM-4B-R8.0-W		8	16	16	16	83	4	B	●
EPM-4B-R9.0-W		9	18	18	18	84	4	B	●
EPM-4B-R10.0-W		10	20	20	20	92	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

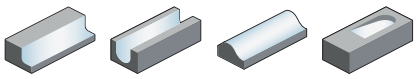
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

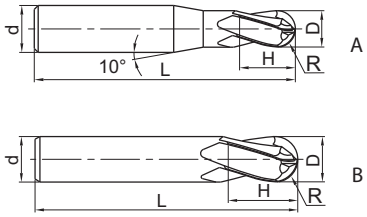
Frese a testa sferica codolo lungo | Lavorazione ad alte prestazioni

EPM-4BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4BL-R1.5		1,5	3	6	6	75	4	A	●
EPM-4BL-R2.0		2	4	6	8	75	4	A	●
EPM-4BL-R2.5		2,5	5	6	10	75	4	A	●
EPM-4BL-R3.0		3	6	6	12	75	4	B	●
EPM-4BL-R4.0		4	8	8	16	100	4	B	●
EPM-4BL-R5.0		5	10	10	20	100	4	B	●
EPM-4BL-R6.0		6	12	12	24	100	4	B	●
EPM-4BL-R7.0		7	14	14	28	100	4	B	●
EPM-4BL-R8.0		8	16	16	32	150	4	B	●
EPM-4BL-R10.0		10	20	20	40	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

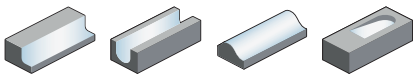
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a testa sferica codolo lungo

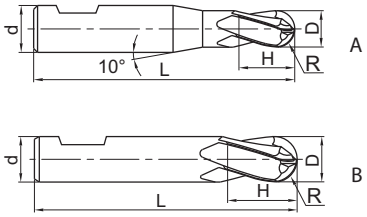
Lavorazione ad alte prestazioni

EPM-4BL-W



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG406
EPM-4BL-R1.5-W		1,5	3	6	4	57	4	A	●
EPM-4BL-R2.0-W		2	4	6	5	57	4	A	●
EPM-4BL-R2.5-W		2,5	5	6	6	57	4	A	●
EPM-4BL-R3.0-W		3	6	6	7	57	4	B	●
EPM-4BL-R4.0-W		4	8	8	9	63	4	B	●
EPM-4BL-R5.0-W		5	10	10	11	72	4	B	●
EPM-4BL-R6.0-W		6	12	12	12	83	4	B	●
EPM-4BL-R8.0-W		8	16	16	16	92	4	B	●
EPM-4BL-R10.0-W		10	20	20	20	104	4	B	●

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Campo di applicazione

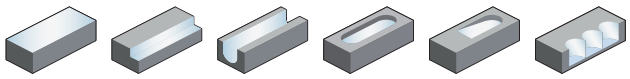
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

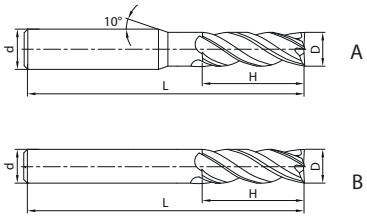
Lavorazione ad alte prestazioni

VPM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 36°/38°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG406
VPM-4E-D3.0		3	6	8	50	4	A	●
VPM-4E-D4.0		4	6	11	50	4	A	●
VPM-4E-D5.0		5	6	13	50	4	A	●
VPM-4E-D6.0		6	6	16	50	4	B	●
VPM-4E-D7.0		7	8	20	60	4	A	●
VPM-4E-D8.0		8	8	20	60	4	B	●
VPM-4E-D9.0		9	10	22	75	4	A	●
VPM-4E-D10.0		10	10	25	75	4	B	●
VPM-4E-D11.0		11	12	26	75	4	A	●
VPM-4E-D12.0		12	12	30	75	4	B	●
VPM-4E-D14.0		14	14	32	75	4	B	●
VPM-4E-D16.0		16	16	45	100	4	B	●
VPM-4E-D18.0		18	18	45	100	4	B	●
VPM-4E-D20.0		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

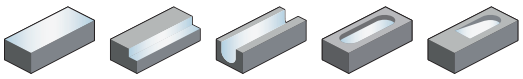
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Notes

Frese a candela

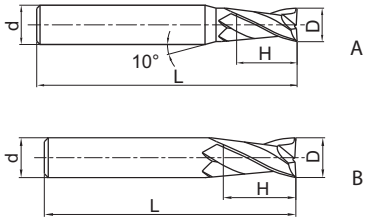
Lavorazioni di acciai temprati

HM-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-2E-D1.0S		1	4	3	50	2	A	●
HM-2E-D1.5S		1,5	4	4	50	2	A	●
HM-2E-D2.0S		2	4	6	50	2	A	●
HM-2E-D2.5S		2,5	4	8	50	2	A	●
HM-2E-D3.0S		3	4	8	50	2	A	●
HM-2E-D4.0S		4	4	11	50	2	B	●
HM-2E-D1.0		1	6	3	50	2	A	●
HM-2E-D1.5		1,5	6	4	50	2	A	●
HM-2E-D2.0		2	6	6	50	2	A	●
HM-2E-D2.5		2,5	6	8	50	2	A	●
HM-2E-D3.0		3	6	8	50	2	A	●
HM-2E-D3.5		3,5	6	10	50	2	A	●
HM-2E-D4.0		4	6	11	50	2	A	●
HM-2E-D4.5		4,5	6	11	50	2	A	●
HM-2E-D5.0		5	6	13	50	2	A	●
HM-2E-D5.5		5,5	6	16	50	2	A	●
HM-2E-D6.0		6	6	16	50	2	B	●
HM-2E-D7.0		7	8	20	60	2	A	●
HM-2E-D8.0		8	8	20	60	2	B	●
HM-2E-D9.0		9	10	22	75	2	A	●
HM-2E-D10.0		10	10	25	75	2	B	●
HM-2E-D11.0		11	12	26	75	2	A	○
HM-2E-D12.0		12	12	30	75	2	B	●
HM-2E-D14.0		14	14	32	100	2	B	●
HM-2E-D16.0		16	16	45	100	2	B	●
HM-2E-D18.0		18	18	45	100	2	B	○
HM-2E-D20.0		20	20	45	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

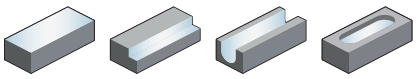
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela tagliente corto

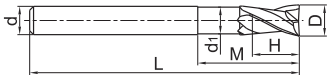
Lavorazioni di acciai temprati

HM-2EFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG555
HM-2EFP-D6.0		6	6	5,8	9	30	75	2	○
HM-2EFP-D8.0		8	8	7,8	12	40	100	2	○
HM-2EFP-D10.0		10	10	9,6	15	50	100	2	○
HM-2EFP-D12.0		12	12	11,5	18	50	100	2	○
HM-2EFP-D16.0		16	16	15,5	24	50	150	2	○
HM-2EFP-D20.0		20	20	19,5	30	60	150	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

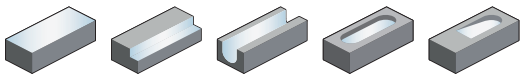
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

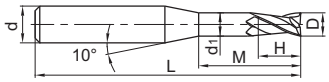
Lavorazioni di acciai temprati

HM-2EP



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG555
HM-2EP-D0.5-M04		0,5	4	0,45	0,7	4	50	2	●
HM-2EP-D0.5-M06		0,5	4	0,45	0,7	6	50	2	●
HM-2EP-D0.5-M08		0,5	4	0,45	0,7	8	50	2	●
HM-2EP-D0.8-M04		0,8	4	0,75	1,2	4	50	2	●
HM-2EP-D0.8-M06		0,8	4	0,75	1,2	6	50	2	●
HM-2EP-D0.8-M08		0,8	4	0,75	1,2	8	50	2	●
HM-2EP-D0.8-M10		0,8	4	0,75	1,2	10	50	2	●
HM-2EP-D1.0-M04		1	4	0,95	1,5	4	50	2	●
HM-2EP-D1.0-M06		1	4	0,95	1,5	6	50	2	●
HM-2EP-D1.0-M08		1	4	0,95	1,5	8	50	2	●
HM-2EP-D1.0-M10		1	4	0,95	1,5	10	50	2	●
HM-2EP-D1.0-M12		1	4	0,95	1,5	12	50	2	●
HM-2EP-D1.0-M14		1	4	0,95	1,5	14	50	2	●
HM-2EP-D1.2-M06		1,2	4	1,15	1,8	6	50	2	●
HM-2EP-D1.2-M08		1,2	4	1,15	1,8	8	50	2	●
HM-2EP-D1.2-M10		1,2	4	1,15	1,8	10	50	2	●
HM-2EP-D1.2-M12		1,2	4	1,15	1,8	12	50	2	●
HM-2EP-D1.5-M06		1,5	4	1,45	2,3	6	50	2	●
HM-2EP-D1.5-M08		1,5	4	1,45	2,3	8	50	2	●
HM-2EP-D1.5-M10		1,5	4	1,45	2,3	10	50	2	●
HM-2EP-D1.5-M12		1,5	4	1,45	2,3	12	50	2	●
HM-2EP-D1.5-M14		1,5	4	1,45	2,3	14	50	2	●
HM-2EP-D2.0-M06		2	4	1,95	3	6	50	2	●
HM-2EP-D2.0-M08		2	4	1,95	3	8	50	2	●
HM-2EP-D2.0-M10		2	4	1,95	3	10	50	2	●
HM-2EP-D2.0-M12		2	4	1,95	3	12	50	2	●
HM-2EP-D2.0-M14		2	4	1,95	3	14	50	2	●
HM-2EP-D2.0-M16		2	4	1,95	3	16	50	2	●
HM-2EP-D2.5-M08		2,5	4	2,4	3,7	8	50	2	●
HM-2EP-D2.5-M10		2,5	4	2,4	3,7	10	50	2	●
HM-2EP-D2.5-M12		2,5	4	2,4	3,7	12	50	2	●
HM-2EP-D2.5-M14		2,5	4	2,4	3,7	14	50	2	●
HM-2EP-D2.5-M16		2,5	4	2,4	3,7	16	60	2	●
HM-2EP-D2.5-M18		2,5	4	2,4	3,7	18	60	2	●
HM-2EP-D2.5-M20		2,5	4	2,4	3,7	20	60	2	●
HM-2EP-D3.0-M06		3	6	2,85	4,5	6	50	2	●
HM-2EP-D3.0-M08		3	6	2,85	4,5	8	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

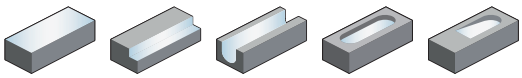
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

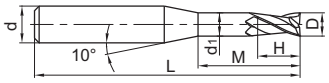
Lavorazioni di acciai temprati

HM-2EP



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]						Denti	Grado
		D	d (h6)	d_1	H	M	L		KMG555
HM-2EP-D3.0-M10		3	6	2,85	4,5	10	50	2	●
HM-2EP-D3.0-M12		3	6	2,85	4,5	12	50	2	●
HM-2EP-D3.0-M14		3	6	2,85	4,5	14	60	2	●
HM-2EP-D3.0-M16		3	6	2,85	4,5	16	60	2	●
HM-2EP-D3.0-M18		3	6	2,85	4,5	18	60	2	●
HM-2EP-D3.0-M20		3	6	2,85	4,5	20	60	2	●
HM-2EP-D4.0-M12		4	6	3,85	6	12	60	2	●
HM-2EP-D4.0-M16		4	6	3,85	6	16	60	2	●
HM-2EP-D4.0-M20		4	6	3,85	6	20	60	2	●
HM-2EP-D4.0-M25		4	6	3,85	6	25	60	2	●
HM-2EP-D5.0-M16		5	6	4,85	7,5	16	60	2	●
HM-2EP-D5.0-M25		5	6	4,85	7,5	25	70	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

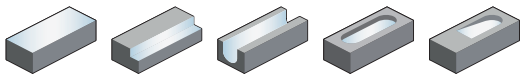
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela

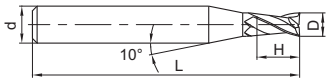
Lavorazioni di acciai temprati

HM-2ES



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG555
HM-2ES-D0.3		0,3	4	0,6	50	2	●
HM-2ES-D0.4		0,4	4	0,8	50	2	●
HM-2ES-D0.5		0,5	4	1	50	2	●
HM-2ES-D0.6		0,6	4	1,2	50	2	●
HM-2ES-D0.7		0,7	4	1,4	50	2	●
HM-2ES-D0.8		0,8	4	1,6	50	2	●
HM-2ES-D0.9		0,9	4	1,8	50	2	●
HM-2ES-D1.0		1	4	2	50	2	●
HM-2ES-D1.1		1,1	4	2	50	2	●
HM-2ES-D1.2		1,2	4	2,5	50	2	●
HM-2ES-D1.3		1,3	4	2,5	50	2	●
HM-2ES-D1.4		1,4	4	3	50	2	●
HM-2ES-D1.5		1,5	4	3	50	2	●
HM-2ES-D1.6		1,6	4	3,5	50	2	●
HM-2ES-D1.7		1,7	4	3,5	50	2	●
HM-2ES-D1.8		1,8	4	4	50	2	●
HM-2ES-D1.9		1,9	4	4	50	2	●
HM-2ES-D2.0		2	4	4	50	2	●
HM-2ES-D2.1		2,1	4	4	50	2	●
HM-2ES-D2.2		2,2	4	4,5	50	2	●
HM-2ES-D2.3		2,3	4	4,5	50	2	●
HM-2ES-D2.4		2,4	4	5	50	2	●
HM-2ES-D2.5		2,5	4	5	50	2	●
HM-2ES-D2.6		2,6	4	5	50	2	●
HM-2ES-D2.7		2,7	4	5,5	50	2	●
HM-2ES-D2.8		2,8	4	5,5	50	2	●
HM-2ES-D2.9		2,9	4	6	50	2	●
HM-2ES-D3.0		3	4	6	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

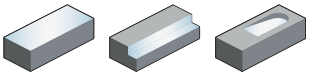
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

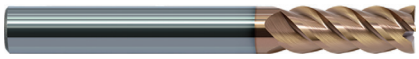
Frese in metallo duro integrale Serie HM

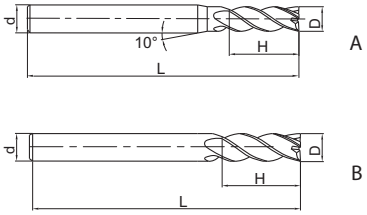
Frese a candela Lavorazioni di acciai temprati

HM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-4E-D1.0S		1	4	3	50	4	A	●
HM-4E-D1.5S		1,5	4	4	50	4	A	●
HM-4E-D2.0S		2	4	6	50	4	A	●
HM-4E-D2.5S		2,5	4	8	50	4	A	●
HM-4E-D3.0S		3	4	8	50	4	A	●
HM-4E-D4.0S		4	4	11	50	4	B	●
HM-4E-D1.0		1	6	3	50	4	A	●
HM-4E-D1.5		1,5	6	4	50	4	A	●
HM-4E-D2.0		2	6	6	50	4	A	●
HM-4E-D2.5		2,5	6	8	50	4	A	●
HM-4E-D3.0		3	6	8	50	4	A	●
HM-4E-D3.5		3,5	6	10	50	4	A	●
HM-4E-D4.0		4	6	11	50	4	A	●
HM-4E-D4.5		4,5	6	11	50	4	A	●
HM-4E-D5.0		5	6	13	50	4	A	●
HM-4E-D5.5		5,5	6	16	50	4	A	●
HM-4E-D6.0		6	6	16	50	4	B	●
HM-4E-D7.0		7	8	20	60	4	A	●
HM-4E-D8.0		8	8	20	60	4	B	●
HM-4E-D9.0		9	10	22	75	4	A	●
HM-4E-D10.0		10	10	25	75	4	B	●
HM-4E-D11.0		11	12	26	75	4	A	●
HM-4E-D12.0		12	12	30	75	4	B	●
HM-4E-D14.0		14	14	32	75	4	B	●
HM-4E-D16.0		16	16	45	100	4	B	●
HM-4E-D18.0		18	18	45	100	4	B	●
HM-4E-D20.0		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

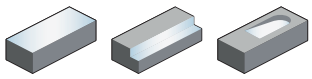
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela codolo lungo

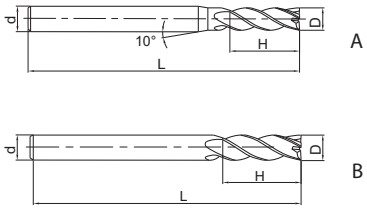
Lavorazioni di acciai temprati

HM-4EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-4EL-D3.0		3	6	12	75	4	A	●
HM-4EL-D4.0		4	6	15	75	4	A	●
HM-4EL-D5.0		5	6	20	75	4	A	●
HM-4EL-D6.0		6	6	20	75	4	B	●
HM-4EL-D8.0		8	8	25	100	4	B	●
HM-4EL-D10.0		10	10	30	100	4	B	●
HM-4EL-D12.0		12	12	35	100	4	B	●
HM-4EL-D14.0		14	14	40	100	4	B	●
HM-4EL-D16.0		16	16	50	150	4	B	●
HM-4EL-D20.0		20	20	55	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

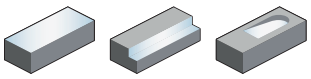
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela tagliente corto

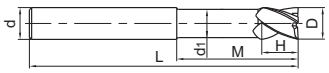
Lavorazioni di acciai temprati

HM-4EFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm]						Denti	Grado
		D	d (h6)	d_1	H	M	L		KMG555
HM-4EFP-D6.0		6	6	5,8	9	30	75	4	●
HM-4EFP-D8.0		8	8	7,8	12	40	100	4	●
HM-4EFP-D10.0		10	10	9,6	15	50	100	4	●
HM-4EFP-D12.0		12	12	11,5	18	50	100	4	●
HM-4EFP-D16.0		16	16	15,5	24	50	150	4	●
HM-4EFP-D20.0		20	20	19,5	30	60	150	4	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

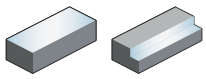
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela tagliente lungo

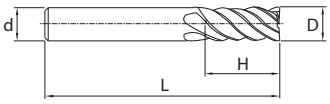
Lavorazioni ad alta velocità ad elevata durezza

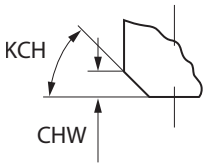
5502R55MHH



– Versione del codolo DIN 6535HA
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 55°







Articolo	✻	Dimensioni [mm]						Denti	Grado	
		D	d (h6)	H	L	KCH	CHW		KMG405	KMG555
5502R55MHH-0300		3	6	8	57	0	0	4	●	●
5502R55MHH-0400		4	6	11	57	0	0	4	●	●
5502R55MHH-0500		5	6	13	57	0	0	5	●	●
5502R55MHH-0600		6	6	13	57	45	0,1	6	●	●
5502R55MHH-0800		8	8	19	63	45	0,1	6	●	●
5502R55MHH-1000		10	10	22	72	45	0,1	6	●	●
5502R55MHH-1200		12	12	26	83	45	0,1	6	●	●
5502R55MHH-1600		16	16	32	92	45	0,1	6	●	●
5502R55MHH-2000		20	20	38	104	45	0,1	8	●	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

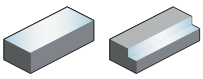
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela

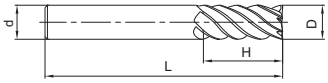
Lavorazioni di acciai temprati

HM-6E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG555
HM-6E-D6.0		6	6	18	60	6	○
HM-6E-D8.0		8	8	20	60	6	○
HM-6E-D10.0		10	10	30	75	6	○
HM-6E-D12.0		12	12	32	75	6	○
HM-6E-D16.0		16	16	40	100	6	○
HM-6E-D20.0		20	20	45	100	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

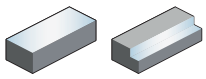
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela codolo lungo

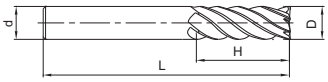
Lavorazioni di acciai temprati

HM-6EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm]				Denti	Grado
		D	d (h6)	H	L		KMG555
HM-6EL-D6.0		6	6	24	75	6	●
HM-6EL-D8.0		8	8	32	75	6	●
HM-6EL-D10.0		10	10	40	100	6	●
HM-6EL-D12.0		12	12	45	100	6	●
HM-6EL-D16.0		16	16	64	150	6	●
HM-6EL-D20.0		20	20	75	150	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

✔ Molto adatto
✔ Adatto

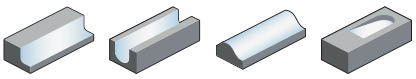
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie HM

Frese a testa sferica

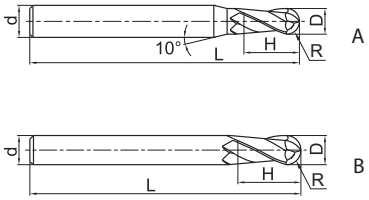
Lavorazioni di acciai temprati

HM-2B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-2B-R0.5S		0,5	1	4	2	50	2	A	●
HM-2B-R0.75S		0,75	1,5	4	3	50	2	A	●
HM-2B-R1.0S		1	2	4	4	50	2	A	●
HM-2B-R1.25S		1,25	2,5	4	5	50	2	A	●
HM-2B-R1.5S		1,5	3	4	6	50	2	A	●
HM-2B-R2.0S		2	4	4	8	50	2	B	●
HM-2B-R0.5		0,5	1	6	2	50	2	A	●
HM-2B-R0.75		0,75	1,5	6	3	50	2	A	●
HM-2B-R1.0		1	2	6	4	50	2	A	●
HM-2B-R1.25		1,25	2,5	6	5	50	2	A	●
HM-2B-R1.5		1,5	3	6	6	50	2	A	●
HM-2B-R1.75		1,75	3,5	6	8	50	2	A	●
HM-2B-R2.0		2	4	6	8	50	2	A	●
HM-2B-R2.5		2,5	5	6	10	50	2	A	●
HM-2B-R2.75		2,75	5,5	6	12	50	2	A	●
HM-2B-R3.0		3	6	6	12	50	2	B	●
HM-2B-R3.5		3,5	7	8	14	60	2	A	●
HM-2B-R4.0		4	8	8	16	60	2	B	●
HM-2B-R4.5		4,5	9	10	18	75	2	A	●
HM-2B-R5.0		5	10	10	20	75	2	B	●
HM-2B-R6.0		6	12	12	24	75	2	B	●
HM-2B-R7.0		7	14	14	28	75	2	B	●
HM-2B-R8.0		8	16	16	32	100	2	B	●
HM-2B-R10.0		10	20	20	40	100	2	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

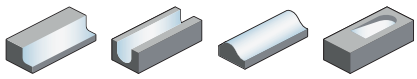
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a testa sferica codolo lungo

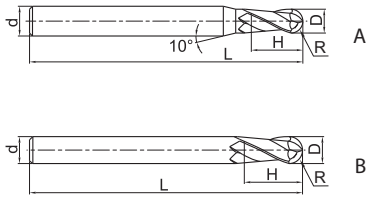
Lavorazioni di acciai temprati

HM-2BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-2BL-R1.0		1	2	6	4	75	2	A	●
HM-2BL-R1.25		1,25	2,5	6	6	75	2	A	●
HM-2BL-R1.5		1,5	3	6	6	75	2	A	●
HM-2BL-R1.75		1,75	3,5	6	8	75	2	A	●
HM-2BL-R2.0		2	4	6	8	75	2	A	●
HM-2BL-R2.5		2,5	5	6	10	75	2	A	●
HM-2BL-R2.75		2,75	5,5	6	12	75	2	A	●
HM-2BL-R3.0		3	6	6	12	75	2	B	●
HM-2BL-R3.5		3,5	7	8	14	75	2	A	●
HM-2BL-R4.0		4	8	8	16	100	2	B	●
HM-2BL-R4.5		4,5	9	10	18	100	2	A	●
HM-2BL-R5.0		5	10	10	20	100	2	B	●
HM-2BL-R6.0		6	12	12	24	100	2	B	●
HM-2BL-R7.0		7	14	14	28	100	2	B	●
HM-2BL-R8.0		8	16	16	32	150	2	B	●
HM-2BL-R10.0		10	20	20	40	150	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

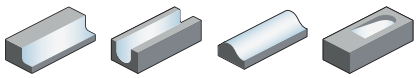
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a testa sferica tagliente corto

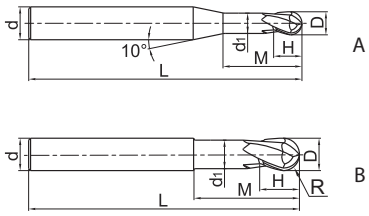
Lavorazioni di acciai temprati

HM-2BFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Geometria	Grado KMG555
HM-2BFP-R0.5		0,5	1	6	0,95	1	2,5	75	2	A	●
HM-2BFP-R0.75		0,75	1,5	6	1,45	1,5	3	75	2	A	●
HM-2BFP-R1.0		1	2	6	1,95	2	4	75	2	A	●
HM-2BFP-R1.5		1,5	3	6	2,85	3	6	75	2	A	●
HM-2BFP-R2.0		2	4	6	3,85	4	8	75	2	A	●
HM-2BFP-R2.5		2,5	5	6	4,85	5	10	75	2	A	●
HM-2BFP-R3.0		3	6	6	5,8	6	12	75	2	B	●
HM-2BFP-R4.0		4	8	8	7,8	8	16	100	2	B	●
HM-2BFP-R5.0		5	10	10	9,6	10	20	100	2	B	●
HM-2BFP-R6.0		6	12	12	11,5	12	24	100	2	B	●
HM-2BFP-R8.0		8	16	16	15,5	16	32	150	2	B	●
HM-2BFP-R10.0		10	20	20	19,5	20	40	150	2	B	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

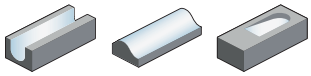
P	M	K	N	S	H
					✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

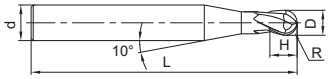
Frese a testa sferica — Lavorazioni di acciai temprati

HM-2BS



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMG555
HM-2BS-R0.15		0,15	0,3	4	0,5	50	2	●
HM-2BS-R0.20		0,2	0,4	4	0,6	50	2	●
HM-2BS-R0.25		0,25	0,5	4	0,8	50	2	●
HM-2BS-R0.30		0,3	0,6	4	0,9	50	2	●
HM-2BS-R0.35		0,35	0,7	4	1	50	2	●
HM-2BS-R0.40		0,4	0,8	4	1,2	50	2	●
HM-2BS-R0.45		0,45	0,9	4	1,3	50	2	●
HM-2BS-R0.50		0,5	1	4	1,5	50	2	●
HM-2BS-R0.60		0,6	1,2	4	1,8	50	2	●
HM-2BS-R0.70		0,7	1,4	4	2	50	2	●
HM-2BS-R0.75		0,75	1,5	4	2,3	50	2	●
HM-2BS-R0.80		0,8	1,6	4	2,5	50	2	●
HM-2BS-R0.90		0,9	1,8	4	2,7	50	2	●
HM-2BS-R1.00		1	2	4	3	50	2	●
HM-2BS-R1.25		1,25	2,5	4	3,7	50	2	●
HM-2BS-R1.50		1,5	3	4	4,5	50	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

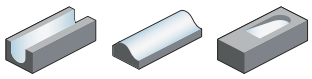
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie HM

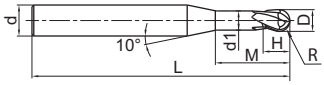
Frese a candela — Lavorazioni di acciai temprati

HM-2BP



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMG555
HM-2BP-R0.25-M04		0,25	0,5	4	0,45	0,7	4	50	2	●
HM-2BP-R0.25-M06		0,25	0,5	4	0,45	0,7	6	50	2	●
HM-2BP-R0.3-M04		0,3	0,6	4	0,55	0,9	4	50	2	●
HM-2BP-R0.3-M06		0,3	0,6	4	0,55	0,9	6	50	2	●
HM-2BP-R0.3-M08		0,3	0,6	4	0,55	0,9	8	50	2	●
HM-2BP-R0.4-M04		0,4	0,8	4	0,75	1,2	4	50	2	●
HM-2BP-R0.4-M06		0,4	0,8	4	0,75	1,2	6	50	2	●
HM-2BP-R0.4-M08		0,4	0,8	4	0,75	1,2	8	50	2	●
HM-2BP-R0.4-M10		0,4	0,8	4	0,75	1,2	10	50	2	●
HM-2BP-R0.5-M04		0,5	1	4	0,95	1,5	4	50	2	●
HM-2BP-R0.5-M06		0,5	1	4	0,95	1,5	6	50	2	●
HM-2BP-R0.5-M08		0,5	1	4	0,95	1,5	8	50	2	●
HM-2BP-R0.5-M10		0,5	1	4	0,95	1,5	10	50	2	●
HM-2BP-R0.5-M12		0,5	1	4	0,95	1,5	12	50	2	●
HM-2BP-R0.6-M06		0,6	1,2	4	1,15	1,8	6	50	2	●
HM-2BP-R0.6-M08		0,6	1,2	4	1,15	1,8	8	50	2	●
HM-2BP-R0.6-M12		0,6	1,2	4	1,15	1,8	12	50	2	●
HM-2BP-R0.6-M16		0,6	1,2	4	1,15	1,8	16	50	2	●
HM-2BP-R0.75-M08		0,75	1,5	4	1,45	2,3	8	50	2	●
HM-2BP-R0.75-M12		0,75	1,5	4	1,45	2,3	12	50	2	●
HM-2BP-R0.75-M16		0,75	1,5	4	1,45	2,3	16	50	2	●
HM-2BP-R1.0-M06		1	2	4	1,95	3	6	50	2	●
HM-2BP-R1.0-M08		1	2	4	1,95	3	8	50	2	●
HM-2BP-R1.0-M10		1	2	4	1,95	3	10	50	2	●
HM-2BP-R1.0-M12		1	2	4	1,95	3	12	50	2	●
HM-2BP-R1.0-M16		1	2	4	1,95	3	16	50	2	●
HM-2BP-R1.0-M20		1	2	4	1,95	3	20	50	2	●
HM-2BP-R1.25-M08		1,25	2,5	4	2,4	3,7	8	50	2	●
HM-2BP-R1.25-M12		1,25	2,5	4	2,4	3,7	12	50	2	●
HM-2BP-R1.25-M16		1,25	2,5	4	2,4	3,7	16	60	2	●
HM-2BP-R1.25-M20		1,25	2,5	4	2,4	3,7	20	60	2	●
HM-2BP-R1.5-M08		1,5	3	6	2,85	4,5	8	50	2	●
HM-2BP-R1.5-M10		1,5	3	6	2,85	4,5	10	50	2	●
HM-2BP-R1.5-M12		1,5	3	6	2,85	4,5	12	50	2	●
HM-2BP-R1.5-M16		1,5	3	6	2,85	4,5	16	60	2	●
HM-2BP-R1.5-M20		1,5	3	6	2,85	4,5	20	60	2	●
HM-2BP-R2.0-M10		2	4	6	3,85	6	10	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

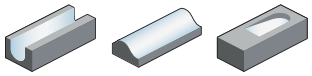
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

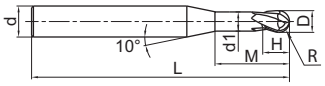
Lavorazioni di acciai temprati

HM-2BP



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMG555
HM-2BP-R2.0-M16		2	4	6	3,85	6	16	60	2	●
HM-2BP-R2.0-M20		2	4	6	3,85	6	20	60	2	●
HM-2BP-R2.0-M25		2	4	6	3,85	6	25	60	2	●
HM-2BP-R2.5-M16		2,5	5	6	4,85	7,5	16	60	2	●
HM-2BP-R2.5-M25		2,5	5	6	4,85	7,5	25	70	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

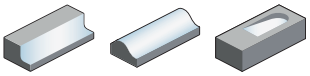
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a testa sferica

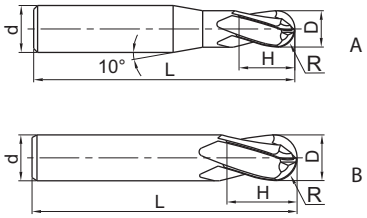
Lavorazioni di acciai temprati

HM-4B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-4B-R1.5		1,5	3	6	6	50	4	A	●
HM-4B-R2.0		2	4	6	8	50	4	A	●
HM-4B-R2.5		2,5	5	6	10	50	4	A	●
HM-4B-R3.0		3	6	6	12	50	4	B	●
HM-4B-R4.0		4	8	8	16	60	4	B	●
HM-4B-R5.0		5	10	10	20	75	4	B	●
HM-4B-R6.0		6	12	12	24	75	4	B	●
HM-4B-R7.0		7	14	14	28	75	4	B	●
HM-4B-R8.0		8	16	16	32	100	4	B	●
HM-4B-R9.0		9	18	18	36	100	4	B	●
HM-4B-R10.0		10	20	20	40	100	4	B	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

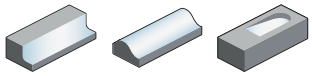
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a testa sferica codolo lungo

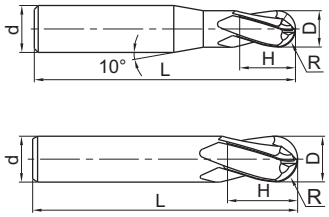
Lavorazioni di acciai temprati

HM-4BL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-4BL-R1.5		1,5	3	6	6	75	4	A	●
HM-4BL-R2.0		2	4	6	8	75	4	A	●
HM-4BL-R2.5		2,5	5	6	10	75	4	A	●
HM-4BL-R3.0		3	6	6	12	75	4	B	●
HM-4BL-R4.0		4	8	8	16	100	4	B	●
HM-4BL-R5.0		5	10	10	20	100	4	B	●
HM-4BL-R6.0		6	12	12	24	100	4	B	●
HM-4BL-R7.0		7	14	14	28	100	4	B	●
HM-4BL-R8.0		8	16	16	32	150	4	B	●
HM-4BL-R9.0		9	18	18	36	150	4	B	●
HM-4BL-R10.0		10	20	20	40	150	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

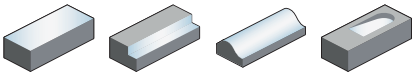
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie HM

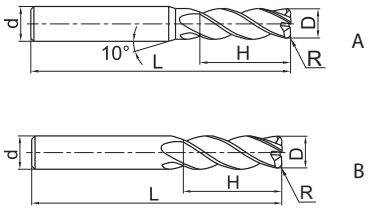
Frese toroidali Lavorazioni di acciai temprati

HM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG555
HM-4R-D3.0R0.2		0,2	3	4	8	50	4	A	●
HM-4R-D4.0R0.3		0,3	4	4	10	50	4	B	●
HM-4R-D4.0R0.5		0,5	4	4	10	50	4	B	●
HM-4R-D5.0R0.5		0,5	5	6	13	50	4	A	●
HM-4R-D5.0R1.0		1	5	6	13	50	4	A	●
HM-4R-D6.0R0.5		0,5	6	6	16	50	4	B	●
HM-4R-D6.0R1.0		1	6	6	16	50	4	B	●
HM-4R-D8.0R0.5		0,5	8	8	20	60	4	B	●
HM-4R-D8.0R1.0		1	8	8	20	60	4	B	●
HM-4R-D10.0R0.5		0,5	10	10	25	75	4	B	●
HM-4R-D10.0R1.0		1	10	10	25	75	4	B	●
HM-4R-D10.0R2.0		2	10	10	25	75	4	B	●
HM-4R-D10.0R3.0		3	10	10	25	75	4	B	●
HM-4R-D12.0R0.5		0,5	12	12	30	75	4	B	●
HM-4R-D12.0R1.0		1	12	12	30	75	4	B	●
HM-4R-D12.0R2.0		2	12	12	30	75	4	B	●
HM-4R-D12.0R3.0		3	12	12	30	75	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

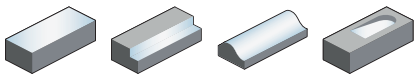
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese toroidali tagliente corto

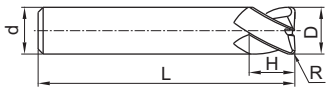
Lavorazioni di acciai temprati

HM-4RF



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]					Denti	Grado
		R	D	d (h6)	H	L		KMG555
HM-4RF-D6.0R0.5		0,5	6	6	6	50	4	○
HM-4RF-D6.0R1.0		1	6	6	6	50	4	○
HM-4RF-D8.0R0.5		0,5	8	8	8	60	4	○
HM-4RF-D8.0R1.0		1	8	8	8	60	4	○
HM-4RF-D10.0R1.0		1	10	10	10	75	4	○
HM-4RF-D10.0R2.0		2	10	10	10	75	4	○
HM-4RF-D12.0R0.5		0,5	12	12	12	75	4	○
HM-4RF-D12.0R1.0		1	12	12	12	75	4	○
HM-4RF-D12.0R2.0		2	12	12	12	75	4	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

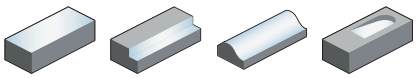
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese toroidali codolo lungo

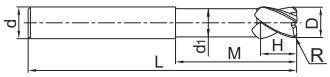
Lavorazioni di acciai temprati

HM-4RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMG555
HM-4RP-D6.0R0.5		0,5	6	6	5,8	6	18	75	4	○
HM-4RP-D6.0R1.0		1	6	6	5,8	6	18	75	4	○
HM-4RP-D8.0R0.5		0,5	8	8	7,8	8	24	100	4	○
HM-4RP-D8.0R1.0		1	8	8	7,8	8	24	100	4	○
HM-4RP-D10.0R0.5		0,5	10	10	9,6	10	30	100	4	○
HM-4RP-D10.0R1.0		1	10	10	9,6	10	30	100	4	○
HM-4RP-D10.0R2.0		2	10	10	9,6	10	30	100	4	○
HM-4RP-D12.0R0.5		0,5	12	12	11,5	12	36	100	4	○
HM-4RP-D12.0R1.0		1	12	12	11,5	12	36	100	4	○
HM-4RP-D12.0R2.0		2	12	12	11,5	12	36	100	4	○
HM-4RP-D16.0R1.0		1	16	16	15,5	16	40	150	4	●
HM-4RP-D16.0R2.0		2	16	16	15,5	16	40	150	4	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

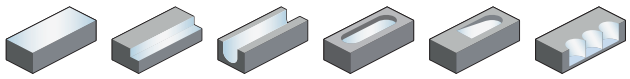
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

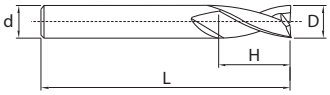
Lavorazione generica di materiali non ferrosi

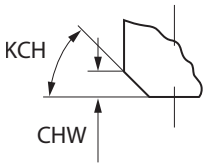
5502R402NM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 40°







Articolo	✻	Dimensioni [mm]						Denti	Grado
		D	d (h6)	H	L	KCH	CHW		YK30F
5502R402NM-0300		3	6	8	57	0	0	2	●
5502R402NM-0400		4	6	11	57	0	0	2	●
5502R402NM-0500		5	6	13	57	0	0	2	●
5502R402NM-0600		6	6	13	57	45	0,1	2	●
5502R402NM-0800		8	8	19	63	45	0,1	2	●
5502R402NM-1000		10	10	22	72	45	0,1	2	●
5502R402NM-1200		12	12	26	83	45	0,1	2	●
5502R402NM-1400		14	14	26	83	45	0,15	2	●
5502R402NM-1600		16	16	32	92	45	0,15	2	●
5502R402NM-1800		18	18	32	92	45	0,15	2	●
5502R402NM-2000		20	20	38	104	45	0,15	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

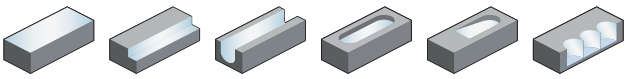
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie NM

Frese a candela

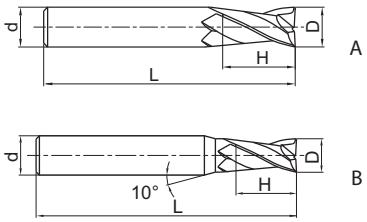
Lavorazione generica di materiali non ferrosi

NM-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG309
NM-2E-D1.0		1	4	3	50	2	A	●
NM-2E-D2.0		2	4	6	50	2	A	●
NM-2E-D3.0		3	6	8	50	2	A	●
NM-2E-D4.0		4	6	11	50	2	A	●
NM-2E-D5.0		5	6	13	50	2	A	●
NM-2E-D6.0		6	6	16	50	2	B	●
NM-2E-D8.0		8	8	20	60	2	B	●
NM-2E-D10.0		10	10	25	75	2	B	●
NM-2E-D12.0		12	12	30	75	2	B	●

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

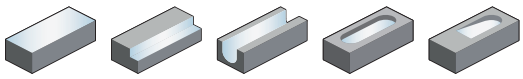
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela

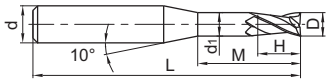
Lavorazione generica di materiali non ferrosi

NM-2EP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG309
NM-2EP-D0.5-M06		0,5	4	0,45	0,7	6	50	2	●
NM-2EP-D0.5-M08		0,5	4	0,45	0,7	8	50	2	●
NM-2EP-D0.5-M04		0,5	4	0,45	0,7	4	50	2	●
NM-2EP-D0.8-M04		0,8	4	0,75	1,2	4	50	2	●
NM-2EP-D0.8-M10		0,8	4	0,75	1,2	10	50	2	●
NM-2EP-D0.8-M06		0,8	4	0,75	1,2	6	50	2	●
NM-2EP-D0.8-M08		0,8	4	0,75	1,2	8	50	2	●
NM-2EP-D1.0-M14		1	4	0,95	1,5	14	50	2	●
NM-2EP-D1.0-M08		1	4	0,95	1,5	8	50	2	●
NM-2EP-D1.0-M06		1	4	0,95	1,5	6	50	2	●
NM-2EP-D1.0-M10		1	4	0,95	1,5	10	50	2	●
NM-2EP-D1.0-M04		1	4	0,95	1,5	4	50	2	●
NM-2EP-D1.0-M12		1	4	0,95	1,5	12	50	2	●
NM-2EP-D1.5-M08		1,5	4	1,45	2,3	8	50	2	●
NM-2EP-D1.5-M16		1,5	4	1,45	2,3	16	50	2	●
NM-2EP-D2.0-M12		2	4	1,95	3	12	50	2	●
NM-2EP-D2.0-M10		2	4	1,95	3	10	50	2	●
NM-2EP-D2.0-M06		2	4	1,95	3	6	50	2	●
NM-2EP-D2.0-M16		2	4	1,95	3	16	50	2	●
NM-2EP-D2.0-M14		2	4	1,95	3	14	50	2	●
NM-2EP-D2.0-M08		2	4	1,95	3	8	50	2	●
NM-2EP-D2.5-M10		2,5	4	2,4	3,7	10	50	2	●
NM-2EP-D2.5-M20		2,5	4	2,4	3,7	20	60	2	●
NM-2EP-D3.0-M20		3	6	2,85	4,5	20	60	2	●
NM-2EP-D3.0-M10		3	6	2,85	4,5	10	50	2	●
NM-2EP-D4.0-M16		4	6	3,85	6	16	60	2	●
NM-2EP-D4.0-M25		4	6	3,85	6	25	60	2	●
NM-2EP-D5.0-M25		5	6	4,85	7,5	25	70	2	●
NM-2EP-D5.0-M16		5	6	4,85	7,5	16	60	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

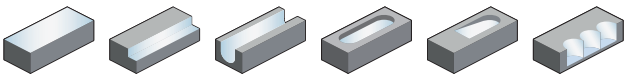
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela

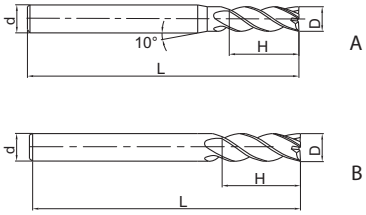
Lavorazione generica di materiali non ferrosi

NM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMG309
NM-4E-D3.0		3	6	8	50	4	A	●
NM-4E-D4.0		4	6	11	50	4	A	●
NM-4E-D5.0		5	6	13	50	4	A	●
NM-4E-D6.0		6	6	16	50	4	B	●
NM-4E-D8.0		8	8	20	60	4	B	●
NM-4E-D10.0		10	10	25	75	4	B	●
NM-4E-D12.0		12	12	30	75	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

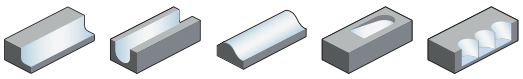
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a testa sferica

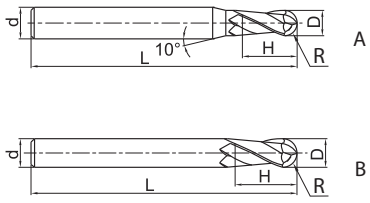
Lavorazione generica di materiali non ferrosi

NM-2B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado KMG309
NM-2B-R0.5		0,5	1	4	2	50	2	A	●
NM-2B-R0.75		0,75	1,5	4	3	50	2	A	●
NM-2B-R1.0		1	2	4	4	50	2	A	●
NM-2B-R1.25		1,25	2,5	4	5	50	2	A	●
NM-2B-R1.5		1,5	3	6	6	50	2	A	●
NM-2B-R1.75		1,75	3,5	6	8	50	2	A	●
NM-2B-R2.0		2	4	6	8	50	2	A	●
NM-2B-R2.5		2,5	5	6	10	50	2	A	●
NM-2B-R3.0		3	6	6	12	50	2	B	●
NM-2B-R4.0		4	8	8	16	60	2	B	●
NM-2B-R5.0		5	10	10	20	75	2	B	●
NM-2B-R6.0		6	12	12	24	75	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

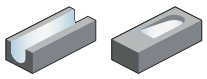
Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie NM

Frese a testa sferica

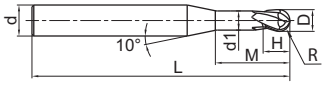
Lavorazione generica di materiali non ferrosi

NM-2BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm]							Denti	Grado KMG309
		R	D	d (h6)	d_1	H	M	L		
NM-2BP-R0.25-M04		0,25	0,5	4	0,45	0,7	4	50	2	●
NM-2BP-R0.25-M06		0,25	0,5	4	0,45	0,7	6	50	2	●
NM-2BP-R0.3-M04		0,3	0,6	4	0,55	0,9	4	50	2	●
NM-2BP-R0.3-M06		0,3	0,6	4	0,55	0,9	6	50	2	●
NM-2BP-R0.3-M08		0,3	0,6	4	0,55	0,9	8	50	2	●
NM-2BP-R0.4-M04		0,4	0,8	4	0,75	1,2	4	50	2	●
NM-2BP-R0.4-M06		0,4	0,8	4	0,75	1,2	6	50	2	●
NM-2BP-R0.4-M08		0,4	0,8	4	0,75	1,2	8	50	2	●
NM-2BP-R0.4-M10		0,4	0,8	4	0,75	1,2	10	50	2	●
NM-2BP-R0.5-M04		0,5	1	4	0,95	1,5	4	50	2	●
NM-2BP-R0.5-M06		0,5	1	4	0,95	1,5	6	50	2	●
NM-2BP-R0.5-M08		0,5	1	4	0,95	1,5	8	50	2	●
NM-2BP-R0.5-M10		0,5	1	4	0,95	1,5	10	50	2	●
NM-2BP-R0.5-M12		0,5	1	4	0,95	1,5	12	50	2	●
NM-2BP-R0.75-M08		0,75	1,5	4	1,45	2,3	8	50	2	●
NM-2BP-R0.75-M16		0,75	1,5	4	1,45	2,3	16	50	2	●
NM-2BP-R1.0-M06		1	2	4	1,95	3	6	50	2	●
NM-2BP-R1.0-M08		1	2	4	1,95	3	8	50	2	●
NM-2BP-R1.0-M10		1	2	4	1,95	3	10	50	2	●
NM-2BP-R1.0-M12		1	2	4	1,95	3	12	50	2	●
NM-2BP-R1.0-M16		1	2	4	1,95	3	16	50	2	●
NM-2BP-R1.0-M20		1	2	4	1,95	3	20	60	2	●
NM-2BP-R1.5-M10		1,5	3	6	2,85	4,5	10	50	2	●
NM-2BP-R1.5-M20		1,5	3	6	2,85	4,5	20	60	2	●
NM-2BP-R2.0-M10		2	4	6	3,85	6	10	60	2	●
NM-2BP-R2.0-M16		2	4	6	3,85	6	16	60	2	●
NM-2BP-R2.0-M20		2	4	6	3,85	6	20	60	2	●
NM-2BP-R2.0-M25		2	4	6	3,85	6	25	60	2	●
NM-2BP-R2.5-M16		2,5	5	6	4,85	7,5	16	60	2	●
NM-2BP-R2.5-M25		2,5	5	6	4,85	7,5	25	70	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

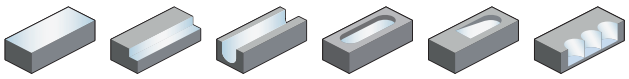
P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

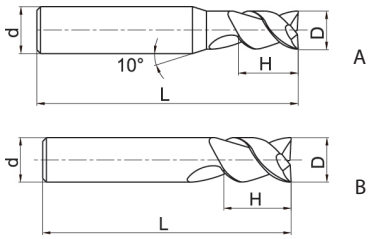
Frese a candela — Lavorazione generica di Al. e leghe di alluminio

AL-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 55°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado YK30F
AL-2E-D1.0		1	4	3	50	2	A	●
AL-2E-D1.5		1,5	4	4	50	2	A	●
AL-2E-D2.0		2	4	6	50	2	A	●
AL-2E-D2.5		2,5	4	7	50	2	A	●
AL-2E-D3.0		3	6	9	50	2	A	●
AL-2E-D4.0		4	6	12	50	2	A	●
AL-2E-D5.0		5	6	15	50	2	A	●
AL-2E-D6.0		6	6	18	60	2	B	●
AL-2E-D8.0		8	8	20	60	2	B	●
AL-2E-D10.0		10	10	30	75	2	B	●
AL-2E-D12.0		12	12	32	75	2	B	●
AL-2E-D16.0		16	16	45	100	2	B	●
AL-2E-D20.0		20	20	45	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

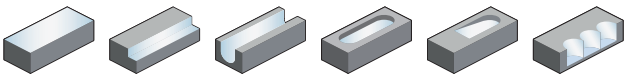
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie AL

Frese a candela tagliente lungo

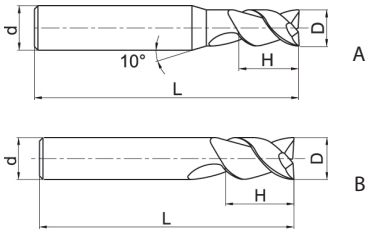
Lavorazione generica di Al. e leghe di alluminio

AL-2EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 55°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado YK30F
AL-2EL-D3.0		3	6	12	60	2	A	●
AL-2EL-D4.0		4	6	16	60	2	A	●
AL-2EL-D5.0		5	6	20	60	2	A	●
AL-2EL-D6.0		6	6	25	75	2	B	●
AL-2EL-D8.0		8	8	32	75	2	B	●
AL-2EL-D10.0		10	10	45	100	2	B	●
AL-2EL-D12.0		12	12	45	100	2	B	●
AL-2EL-D16.0		16	16	65	150	2	B	●
AL-2EL-D20.0		20	20	75	150	2	B	●

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Campo di applicazione

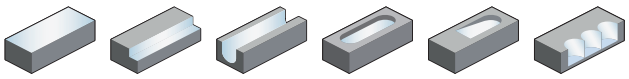
P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

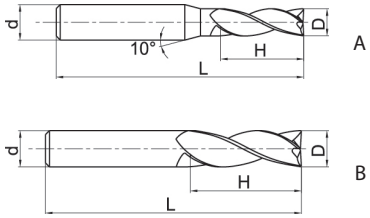
Frese a candela — Lavorazione generica di Al. e leghe di alluminio

AL-3E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado YK30F
AL-3E-D1.0		1	4	3	50	3	A	●
AL-3E-D1.5		1,5	4	4	50	3	A	●
AL-3E-D2.0		2	4	6	50	3	A	●
AL-3E-D2.5		2,5	4	7	50	3	A	●
AL-3E-D3.0		3	6	9	50	3	A	●
AL-3E-D4.0		4	6	12	50	3	A	●
AL-3E-D5.0		5	6	15	50	3	A	●
AL-3E-D6.0		6	6	18	60	3	B	●
AL-3E-D8.0		8	8	20	60	3	B	●
AL-3E-D10.0		10	10	30	75	3	B	●
AL-3E-D12.0		12	12	32	75	3	B	●
AL-3E-D16.0		16	16	45	100	3	B	●
AL-3E-D20.0		20	20	45	100	3	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

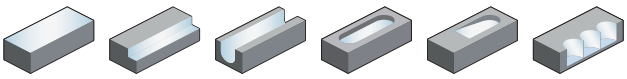
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie AL

Frese a candela tagliente lungo

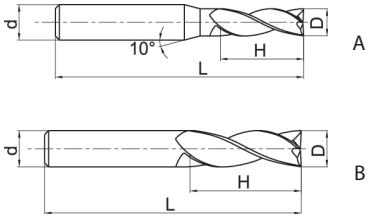
Lavorazione generica di Al. e leghe di alluminio

AL-3EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado YK30F
AL-3EL-D3.0		3	6	12	60	3	A	●
AL-3EL-D4.0		4	6	16	60	3	A	●
AL-3EL-D5.0		5	6	20	60	3	A	●
AL-3EL-D6.0		6	6	25	75	3	B	●
AL-3EL-D8.0		8	8	32	75	3	B	●
AL-3EL-D10.0		10	10	45	100	3	B	●
AL-3EL-D12.0		12	12	45	100	3	B	●
AL-3EL-D16.0		16	16	65	150	3	B	●
AL-3EL-D20.0		20	20	75	150	3	B	●

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

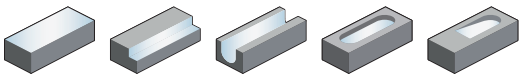
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela per sgrossatura

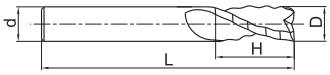
Lavorazione generica di Al. e leghe di alluminio

AL-3W



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado YK30F
AL-3W-D6.0		6	6	16	50	3	●
AL-3W-D8.0		8	8	20	60	3	●
AL-3W-D10.0		10	10	25	75	3	●
AL-3W-D12.0		12	12	30	75	3	●
AL-3W-D16.0		16	16	45	100	3	●
AL-3W-D18.0		18	18	45	100	3	○
AL-3W-D20.0		20	20	45	100	3	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

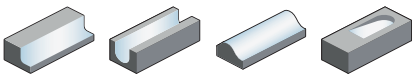
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie AL

Frese a testa sferica

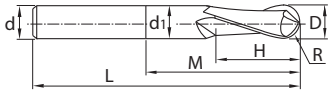
Lavorazione ad alte prestazioni di materiali non ferrosi

5565R302NH



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]							Denti	Grado YK40F
		D	R	d (h6)	d_1	H	M	L		
5565R302NH-0300		3	1,5	6	2,8	6	9	57	2	●
5565R302NH-0400		4	2	6	3,7	8	12	57	2	●
5565R302NH-0500		5	2,5	6	4,6	10	15	57	2	●
5565R302NH-0600		6	3	6	5,5	12	20	57	2	●
5565R302NH-0800		8	4	8	7,4	16	26	63	2	●
5565R302NH-1000		10	5	10	9,2	20	31	72	2	●
5565R302NH-1200		12	6	12	11	24	37	83	2	●
5565R302NH-1600		16	8	16	15	32	43	92	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

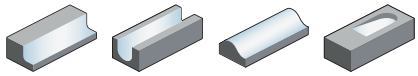
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a testa sferica codolo lungo

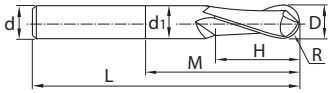
Lavorazione ad alte prestazioni di materiali non ferrosi

5566R302NH



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]							Denti	Grado YK40F
		D	R	d (h6)	d_1	H	M	L		
5566R302NH-0300		3	1,5	6	2,8	6	9	75	2	●
5566R302NH-0400		4	2	6	3,7	8	12	75	2	●
5566R302NH-0500		5	2,5	6	4,6	10	15	80	2	●
5566R302NH-0600		6	3	6	5,5	12	20	80	2	●
5566R302NH-0800		8	4	8	7,4	16	26	90	2	●
5566R302NH-1000		10	5	10	9,2	20	31	100	2	●
5566R302NH-1200		12	6	12	11	24	37	120	2	●
5566R302NH-1600		16	8	16	15	32	43	140	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

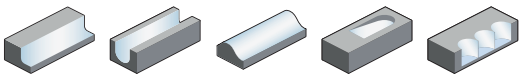
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a testa sferica

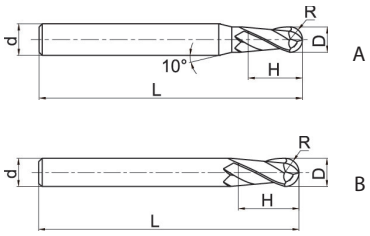
Lavorazione generica di Al. e leghe di alluminio

AL-2B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Geometria	Grado YK30F
AL-2B-R1.0		1	2	6	4	60	2	A	○
AL-2B-R1.5		1,5	3	6	6	60	2	A	○
AL-2B-R2.0		2	4	6	8	60	2	A	○
AL-2B-R2.5		2,5	5	6	10	60	2	A	○
AL-2B-R3.0		3	6	6	12	60	2	B	○
AL-2B-R4.0		4	8	8	16	75	2	B	○
AL-2B-R5.0		5	10	10	20	75	2	B	○
AL-2B-R6.0		6	12	12	24	75	2	B	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

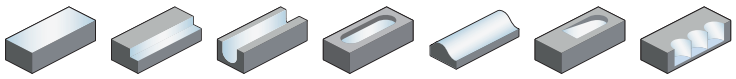
P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

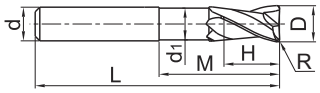
Frese toroidali — Lavorazione generica di Al. e leghe di alluminio

AL-2R-AIR



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		YK40F
AL-2R-D6.0R1.0-AIR		1	6	6	5,5	7	20	57	2	●
AL-2R-D8.0R1.0-AIR		1	8	8	7,4	9	26	63	2	●
AL-2R-D10.0R1.0-AIR		1	10	10	9,2	11	31	72	2	○
AL-2R-D10.0R2.0-AIR		2	10	10	9,2	11	31	72	2	○
AL-2R-D12.0R1.0-AIR		1	12	12	11	12	37	83	2	●
AL-2R-D12.0R2.0-AIR		2	12	12	11	12	37	83	2	○
AL-2R-D12.0R3.0-AIR		3	12	12	11	12	37	83	2	○
AL-2R-D16.0R1.0-AIR		1	16	16	15	16	43	92	2	○
AL-2R-D16.0R2.0-AIR		2	16	16	15	16	43	92	2	○
AL-2R-D16.0R3.0-AIR		3	16	16	15	16	43	92	2	○
AL-2R-D16.0R4.0-AIR		4	16	16	15	16	43	92	2	○
AL-2R-D20.0R1.0-AIR		1	20	20	19	20	53	104	2	●
AL-2R-D20.0R2.0-AIR		2	20	20	19	20	53	104	2	○
AL-2R-D20.0R3.0-AIR		3	20	20	19	20	53	104	2	○
AL-2R-D20.0R4.0-AIR		4	20	20	19	20	53	104	2	○
AL-2R-D20.0R5.0-AIR		5	20	20	19	20	53	104	2	●
AL-2R-D20.0R6.0-AIR		6	20	20	19	20	53	104	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

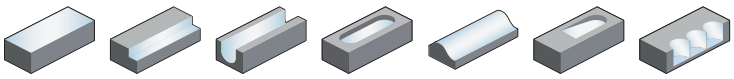
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie AL

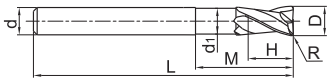
Frese toroidali codolo lungo — Lavorazione generica di Al. e leghe di alluminio

AL-2RL-AIR



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado YK40F
AL-2RL-D6.0R1.0-AIR		1	6	6	5,5	7	43	80	2	●
AL-2RL-D8.0R1.0-AIR		1	8	8	7,4	9	53	90	2	●
AL-2RL-D10.0R1.0-AIR		1	10	10	9,2	11	59	100	2	●
AL-2RL-D10.0R2.0-AIR		2	10	10	9,2	11	59	100	2	●
AL-2RL-D12.0R1.0-AIR		1	12	12	11	12	74	120	2	●
AL-2RL-D12.0R2.0-AIR		2	12	12	11	12	74	120	2	●
AL-2RL-D12.0R3.0-AIR		3	12	12	11	12	74	120	2	●
AL-2RL-D16.0R1.0-AIR		1	16	16	15	16	84	140	2	●
AL-2RL-D16.0R2.0-AIR		2	16	16	15	16	84	140	2	●
AL-2RL-D16.0R3.0-AIR		3	16	16	15	16	84	140	2	●
AL-2RL-D16.0R4.0-AIR		4	16	16	15	16	84	140	2	●
AL-2RL-D20.0R1.0-AIR		1	20	20	19	20	89	140	2	○
AL-2RL-D20.0R2.0-AIR		2	20	20	19	20	89	140	2	●
AL-2RL-D20.0R3.0-AIR		3	20	20	19	20	89	140	2	●
AL-2RL-D20.0R4.0-AIR		4	20	20	19	20	89	140	2	●
AL-2RL-D20.0R5.0-AIR		5	20	20	19	20	89	140	2	○
AL-2RL-D20.0R6.0-AIR		6	20	20	19	20	89	140	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

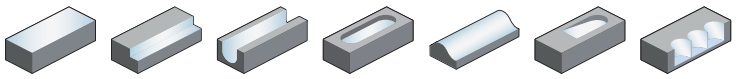
P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

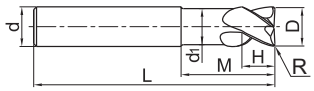
Frese toroidali — Lavorazione generica di Al. e leghe di alluminio

AL-3R-AIR



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado YK40F
AL-3R-D12.0R1.0-AIR		1	12	12	11	12	37	83	3	●
AL-3R-D12.0R2.0-AIR		2	12	12	11	12	37	83	3	●
AL-3R-D12.0R3.0-AIR		3	12	12	11	12	37	83	3	●
AL-3R-D16.0R1.0-AIR		1	16	16	15	16	43	92	3	●
AL-3R-D16.0R2.0-AIR		2	16	16	15	16	43	92	3	●
AL-3R-D16.0R3.0-AIR		3	16	16	15	16	43	92	3	●
AL-3R-D16.0R4.0-AIR		4	16	16	15	16	43	92	3	●
AL-3R-D20.0R1.0-AIR		1	20	20	19	20	53	104	3	●
AL-3R-D20.0R2.0-AIR		2	20	20	19	20	53	104	3	○
AL-3R-D20.0R3.0-AIR		3	20	20	19	20	53	104	3	○
AL-3R-D20.0R4.0-AIR		4	20	20	19	20	53	104	3	○
AL-3R-D20.0R5.0-AIR		5	20	20	19	20	53	104	3	●
AL-3R-D20.0R6.0-AIR		6	20	20	19	20	53	104	3	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

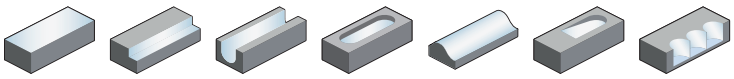
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese toroidali codolo lungo

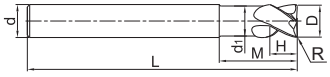
Lavorazione generica di Al. e leghe di alluminio

AL-3RL-AIR



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		YK40F
AL-3RL-D12.0R1.0-AIR		1	12	12	11	12	74	120	3	●
AL-3RL-D12.0R2.0-AIR		2	12	12	11	12	74	120	3	●
AL-3RL-D12.0R3.0-AIR		3	12	12	11	12	74	120	3	●
AL-3RL-D16.0R1.0-AIR		1	16	16	15	16	84	140	3	●
AL-3RL-D16.0R2.0-AIR		2	16	16	15	16	84	140	3	○
AL-3RL-D16.0R3.0-AIR		3	16	16	15	16	84	140	3	●
AL-3RL-D16.0R4.0-AIR		4	16	16	15	16	84	140	3	●
AL-3RL-D20.0R1.0-AIR		1	20	20	19	20	89	140	3	●
AL-3RL-D20.0R2.0-AIR		2	20	20	19	20	89	140	3	○
AL-3RL-D20.0R3.0-AIR		3	20	20	19	20	89	140	3	○
AL-3RL-D20.0R4.0-AIR		4	20	20	19	20	89	140	3	○
AL-3RL-D20.0R5.0-AIR		5	20	20	19	20	89	140	3	○
AL-3RL-D20.0R6.0-AIR		6	20	20	19	20	89	140	3	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

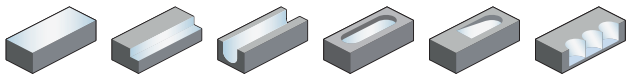
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela

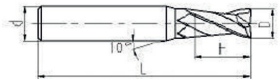
Lavorazione generica di Al. e leghe di alluminio

ALG-2E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 30°





A



B

Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado YK40F
ALG-2E-D1.0		1	4	3	50	2	A	●
ALG-2E-D1.5		1,5	4	4	50	2	A	○
ALG-2E-D2.0		2	4	6	50	2	A	●
ALG-2E-D2.5		2,5	4	8	50	2	A	○
ALG-2E-D3.0S		3	4	8	50	2	A	●
ALG-2E-D3.5S		3,5	4	10	50	2	A	○
ALG-2E-D4.0S		4	4	11	50	2	B	○
ALG-2E-D3.0		3	6	8	50	2	A	●
ALG-2E-D3.5		3,5	6	10	50	2	A	○
ALG-2E-D4.0		4	6	11	50	2	A	●
ALG-2E-D4.5		4,5	6	11	50	2	A	○
ALG-2E-D5.0		5	6	13	50	2	A	●
ALG-2E-D5.5		5,5	6	16	50	2	A	○
ALG-2E-D6.0		6	6	16	50	2	B	●
ALG-2E-D7.0		7	8	20	60	2	A	○
ALG-2E-D8.0		8	8	20	60	2	B	●
ALG-2E-D9.0		9	10	22	75	2	A	○
ALG-2E-D10.0		10	10	25	75	2	B	●
ALG-2E-D11.0		11	12	26	75	2	A	○
ALG-2E-D12.0		12	12	30	75	2	B	●
ALG-2E-D14.0		14	14	32	75	2	B	●
ALG-2E-D16.0		16	16	45	100	2	B	●
ALG-2E-D18.0		18	18	45	100	2	B	○
ALG-2E-D20.0		20	20	45	100	2	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

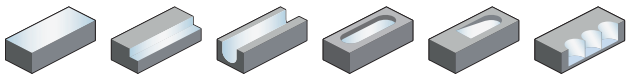
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie ALG/ALP

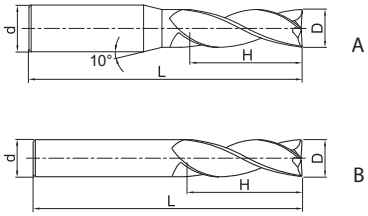
Frese a candela — Lavorazione generica di Al. e leghe di alluminio

ALG-3E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMD401	YK40F
ALG-3E-D1.0		1	4	3	50	3	A	○	●
ALG-3E-D1.5		1,5	4	4	50	3	A	○	●
ALG-3E-D2.0		2	4	6	50	3	A	○	●
ALG-3E-D2.5		2,5	4	8	50	3	A	○	○
ALG-3E-D3.0S		3	4	8	50	3	A	○	●
ALG-3E-D3.5S		3,5	4	10	50	3	A	○	○
ALG-3E-D4.0S		4	4	11	50	3	B	○	●
ALG-3E-D3.0		3	6	8	50	3	A	●	●
ALG-3E-D3.5		3,5	6	10	50	3	A	●	○
ALG-3E-D4.0		4	6	11	50	3	A	●	●
ALG-3E-D4.5		4,5	6	11	50	3	A	●	○
ALG-3E-D5.0		5	6	13	50	3	A	●	●
ALG-3E-D5.5		5,5	6	16	50	3	A	●	○
ALG-3E-D6.0		6	6	16	50	3	B	●	●
ALG-3E-D7.0		7	8	20	60	3	A	●	○
ALG-3E-D8.0		8	8	20	60	3	B	●	●
ALG-3E-D9.0		9	10	22	75	3	A	●	○
ALG-3E-D10.0		10	10	25	75	3	B	●	●
ALG-3E-D11.0		11	12	26	75	3	A	●	○
ALG-3E-D12.0		12	12	30	75	3	B	●	●
ALG-3E-D14.0		14	14	32	75	3	B	●	●
ALG-3E-D16.0		16	16	45	100	3	B	●	●
ALG-3E-D18.0		18	18	45	100	3	B	●	○
ALG-3E-D20.0		20	20	45	100	3	B	○	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

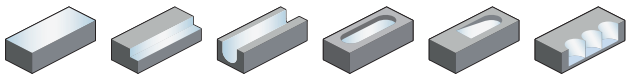
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

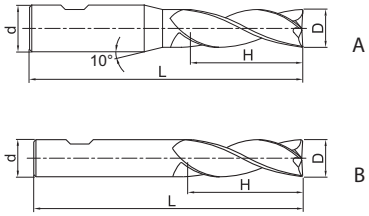
Lavorazione generica di Al. e leghe di alluminio

ALG-3E-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMD401
ALG-3E-D3.0-W		3	6	8	50	3	A	●
ALG-3E-D3.5-W		3,5	6	10	50	3	A	●
ALG-3E-D4.0-W		4	6	11	50	3	A	●
ALG-3E-D4.5-W		4,5	6	11	50	3	A	●
ALG-3E-D5.0-W		5	6	13	50	3	A	●
ALG-3E-D5.5-W		5,5	6	16	50	3	A	●
ALG-3E-D6.0-W		6	6	16	50	3	B	●
ALG-3E-D7.0-W		7	8	20	60	3	A	●
ALG-3E-D8.0-W		8	8	20	60	3	B	●
ALG-3E-D9.0-W		9	10	22	75	3	A	●
ALG-3E-D10.0-W		10	10	25	75	3	B	●
ALG-3E-D11.0-W		11	12	26	75	3	A	●
ALG-3E-D12.0-W		12	12	30	75	3	B	●
ALG-3E-D14.0-W		14	14	32	75	3	B	●
ALG-3E-D16.0-W		16	16	45	100	3	B	●
ALG-3E-D18.0-W		18	18	45	100	3	B	●
ALG-3E-D20.0-W		20	20	45	100	3	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

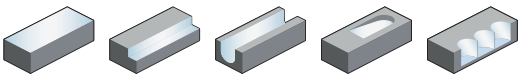
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie ALG/ALP

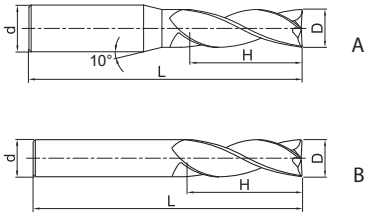
Frese a candela — Lavorazione ad alte prestazioni di Al. e leghe di alluminio

ALP-3E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMD401	YK40F
ALP-3E-D1.0		1	4	3	50	3	A	○	○
ALP-3E-D1.5		1,5	4	4	50	3	A	○	●
ALP-3E-D2.0		2	4	6	50	3	A	○	●
ALP-3E-D2.5		2,5	4	8	50	3	A	○	○
ALP-3E-D3.0S		3	4	8	50	3	A	○	●
ALP-3E-D4.0S		4	4	11	50	3	B	○	●
ALP-3E-D3.0		3	6	8	50	3	A	●	●
ALP-3E-D4.0		4	6	11	50	3	A	●	●
ALP-3E-D4.5		4,5	6	11	50	3	A	●	○
ALP-3E-D5.0		5	6	13	50	3	A	●	●
ALP-3E-D5.5		5,5	6	16	50	3	A	●	○
ALP-3E-D6.0		6	6	16	50	3	B	●	●
ALP-3E-D7.0		7	8	20	60	3	B	●	○
ALP-3E-D8.0		8	8	20	60	3	B	●	●
ALP-3E-D9.0		9	10	22	75	3	B	●	○
ALP-3E-D10.0		10	10	25	75	3	B	●	●
ALP-3E-D11.0		11	12	26	75	3	B	●	●
ALP-3E-D12.0		12	12	30	75	3	B	●	●
ALP-3E-D14.0		14	14	32	75	3	B	●	●
ALP-3E-D16.0		16	16	45	100	3	B	●	●
ALP-3E-D20.0		20	20	45	100	3	B	●	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

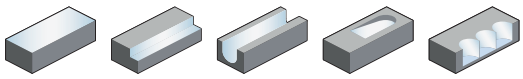
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

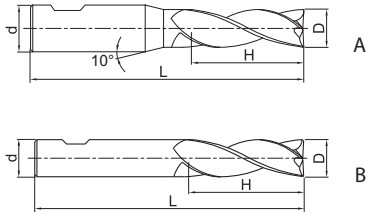
Lavorazione ad alte prestazioni di Al. e leghe di alluminio

ALP-3E-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMD401
ALP-3E-D3.0-W		3	6	8	50	3	A	●
ALP-3E-D4.0-W		4	6	11	50	3	A	●
ALP-3E-D4.5-W		4,5	6	11	50	3	A	●
ALP-3E-D5.0-W		5	6	13	50	3	A	●
ALP-3E-D5.5-W		5,5	6	16	50	3	A	●
ALP-3E-D6.0-W		6	6	16	50	3	B	●
ALP-3E-D7.0-W		7	8	20	60	3	B	●
ALP-3E-D8.0-W		8	8	20	60	3	B	●
ALP-3E-D9.0-W		9	10	22	75	3	B	●
ALP-3E-D10.0-W		10	10	25	75	3	B	●
ALP-3E-D11.0-W		11	12	26	75	3	B	●
ALP-3E-D12.0-W		12	12	30	75	3	B	●
ALP-3E-D14.0-W		14	14	32	75	3	B	●
ALP-3E-D16.0-W		16	16	45	100	3	B	●
ALP-3E-D20.0-W		20	20	45	100	3	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

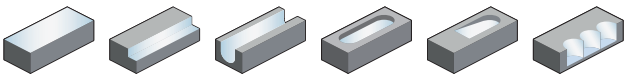
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie ALG/ALP

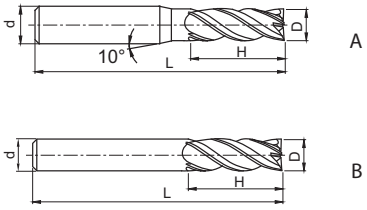
Frese a candela Lavorazione ad alte prestazioni di Al. e leghe di alluminio

ALP-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✲	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMD401	YK40F
ALP-4E-D3.0S		3	4	9	50	4	A	○	●
ALP-4E-D4.0S		4	4	11	50	4	B	○	●
ALP-4E-D3.0		3	6	9	50	4	A	●	●
ALP-4E-D4.0		4	6	11	50	4	A	●	●
ALP-4E-D5.0		5	6	13	50	4	A	●	●
ALP-4E-D6.0		6	6	16	50	4	B	●	●
ALP-4E-D8.0		8	8	20	60	4	B	●	●
ALP-4E-D10.0		10	10	25	75	4	B	●	●
ALP-4E-D12.0		12	12	30	75	4	B	●	●
ALP-4E-D16.0		16	16	45	100	4	B	●	●
ALP-4E-D18.0		18	18	45	100	4	B	●	○
ALP-4E-D20.0		20	20	45	100	4	B	●	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

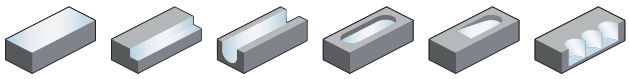
P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

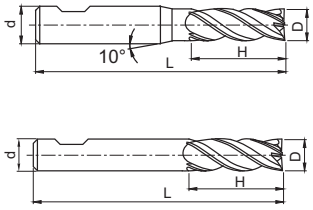
Frese a candela — Lavorazione ad alte prestazioni di Al. e leghe di alluminio

ALP-4E-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Geometria	Grado KMD401
ALP-4E-D3.0-W		3	6	9	50	4	A	●
ALP-4E-D4.0-W		4	6	11	50	4	A	●
ALP-4E-D5.0-W		5	6	13	50	4	A	●
ALP-4E-D6.0-W		6	6	16	50	4	B	●
ALP-4E-D8.0-W		8	8	20	60	4	B	●
ALP-4E-D10.0-W		10	10	25	75	4	B	●
ALP-4E-D12.0-W		12	12	30	75	4	B	●
ALP-4E-D16.0-W		16	16	45	100	4	B	●
ALP-4E-D18.0-W		18	18	45	100	4	B	●
ALP-4E-D20.0-W		20	20	45	100	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

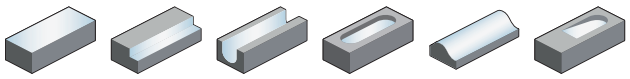
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie ALG/ALP

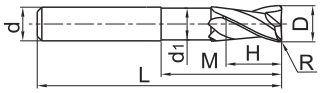
Frese toroidali Lavorazione generica di Al. e leghe di alluminio

ALG-2R



– Codolo cilindrico
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMD401	YK40F
ALG-2R-D6.0R0.3		0,3	6	6	5,7	8	16	75	2	●	●
ALG-2R-D6.0R0.5		0,5	6	6	5,7	8	16	75	2	●	●
ALG-2R-D6.0R1.0		1	6	6	5,7	8	16	75	2	●	●
ALG-2R-D8.0R0.3		0,3	8	8	7,4	10	20	75	2	●	●
ALG-2R-D8.0R0.5		0,5	8	8	7,4	10	20	75	2	●	●
ALG-2R-D8.0R1.0		1	8	8	7,4	10	20	75	2	●	●
ALG-2R-D10.0R0.5		0,5	10	10	9,4	12	35	100	2	●	●
ALG-2R-D10.0R1.0		1	10	10	9,4	12	35	100	2	●	●
ALG-2R-D10.0R1.6		1,6	10	10	9,4	12	35	100	2	●	●
ALG-2R-D10.0R2.5		2,5	10	10	9,4	12	35	100	2	●	●
ALG-2R-D12.0R0.5		0,5	12	12	11,4	15	35	100	2	●	●
ALG-2R-D12.0R1.0		1	12	12	11,4	15	35	100	2	●	●
ALG-2R-D12.0R1.6		1,6	12	12	11,4	15	35	100	2	●	●
ALG-2R-D12.0R2.5		2,5	12	12	11,4	15	35	100	2	●	●
ALG-2R-D12.0R3.2		3,2	12	12	11,4	15	35	100	2	●	●
ALG-2R-D12.0R4.0		4	12	12	11,4	15	35	100	2	●	●
ALG-2R-D16.0R1.0		1	16	16	15,4	15	45	125	2	●	●
ALG-2R-D16.0R1.6		1,6	16	16	15,4	15	45	125	2	●	●
ALG-2R-D16.0R2.5		2,5	16	16	15,4	15	45	125	2	●	●
ALG-2R-D16.0R3.2		3,2	16	16	15,4	15	45	125	2	●	●
ALG-2R-D16.0R4.0		4	16	16	15,4	15	45	125	2	●	●
ALG-2R-D16.0R6.3		6,3	16	16	15,4	15	45	125	2	○	○
ALG-2R-D20.0R1.0		1	20	20	18	20	50	125	2	●	●
ALG-2R-D20.0R1.6		1,6	20	20	18	20	50	125	2	●	●
ALG-2R-D20.0R2.5		2,5	20	20	18	20	50	125	2	●	●
ALG-2R-D20.0R3.2		3,2	20	20	18	20	50	125	2	●	●
ALG-2R-D20.0R4.0		4	20	20	18	20	50	125	2	●	●
ALG-2R-D20.0R6.3		6,3	20	20	18	20	50	125	2	○	○
ALG-2R-D25.0R6.3		6,3	25	25	23	25	75	150	2	○	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

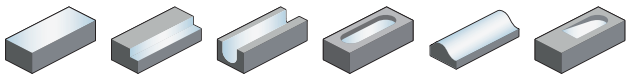
P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

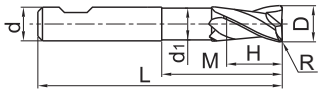
Frese toroidali — Lavorazione generica di Al. e leghe di alluminio

ALG-2R-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMD401
ALG-2R-D6.0R0.3-W		0,3	6	6	5,7	8	16	75	2	●
ALG-2R-D6.0R0.5-W		0,5	6	6	5,7	8	16	75	2	●
ALG-2R-D6.0R1.0-W		1	6	6	5,7	8	16	75	2	●
ALG-2R-D8.0R0.3-W		0,3	8	8	7,4	10	20	75	2	●
ALG-2R-D8.0R0.5-W		0,5	8	8	7,4	10	20	75	2	●
ALG-2R-D8.0R1.0-W		1	8	8	7,4	10	20	75	2	●
ALG-2R-D10.0R0.5-W		0,5	10	10	9,4	12	35	100	2	●
ALG-2R-D10.0R1.0-W		1	10	10	9,4	12	35	100	2	●
ALG-2R-D10.0R1.6-W		1,6	10	10	9,4	12	35	100	2	●
ALG-2R-D10.0R2.5-W		2,5	10	10	9,4	12	35	100	2	●
ALG-2R-D12.0R0.5-W		0,5	12	12	11,4	15	35	100	2	●
ALG-2R-D12.0R1.0-W		1	12	12	11,4	15	35	100	2	●
ALG-2R-D12.0R1.6-W		1,6	12	12	11,4	15	35	100	2	●
ALG-2R-D12.0R2.5-W		2,5	12	12	11,4	15	35	100	2	●
ALG-2R-D12.0R3.2-W		3,2	12	12	11,4	15	35	100	2	●
ALG-2R-D12.0R4.0-W		4	12	12	11,4	15	35	100	2	●
ALG-2R-D16.0R1.0-W		1	16	16	15,4	15	45	125	2	●
ALG-2R-D16.0R1.6-W		1,6	16	16	15,4	15	45	125	2	●
ALG-2R-D16.0R2.5-W		2,5	16	16	15,4	15	45	125	2	●
ALG-2R-D16.0R3.2-W		3,2	16	16	15,4	15	45	125	2	●
ALG-2R-D16.0R4.0-W		4	16	16	15,4	15	45	125	2	●
ALG-2R-D16.0R6.3-W		6,3	16	16	15,4	15	45	125	2	○
ALG-2R-D20.0R1.0-W		1	20	20	18	20	50	125	2	●
ALG-2R-D20.0R1.6-W		1,6	20	20	18	20	50	125	2	●
ALG-2R-D20.0R2.5-W		2,5	20	20	18	20	50	125	2	●
ALG-2R-D20.0R3.2-W		3,2	20	20	18	20	50	125	2	●
ALG-2R-D20.0R4.0-W		4	20	20	18	20	50	125	2	●
ALG-2R-D20.0R6.3-W		6,3	20	20	18	20	50	125	2	○
ALG-2R-D25.0R6.3-W		6,3	25	25	23	25	75	150	2	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

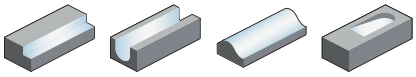
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Notes

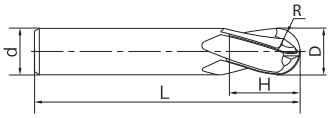
Frese a testa sferica — Lavorazione ad alte prestazioni

TM-4B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-4B-R3.0		3	6	6	9	50	4	●
TM-4B-R4.0		4	8	8	12	60	4	●
TM-4B-R5.0		5	10	10	15	75	4	●
TM-4B-R6.0		6	12	12	18	75	4	●
TM-4B-R8.0		8	16	16	24	85	4	●
TM-4B-R10.0		10	20	20	30	100	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

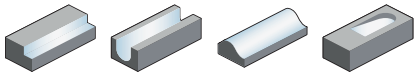
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

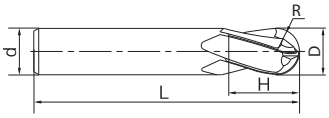
Frese a testa sferica | Lavorazione ad alte prestazioni

TM-4BL



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-4BL-R3.0		3	6	6	16	57	4	●
TM-4BL-R4.0		4	8	8	20	63	4	●
TM-4BL-R5.0		5	10	10	22	72	4	●
TM-4BL-R6.0		6	12	12	25	83	4	●
TM-4BL-R8.0		8	16	16	32	92	4	●
TM-4BL-R10.0		10	20	20	38	104	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

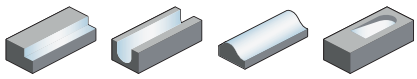
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

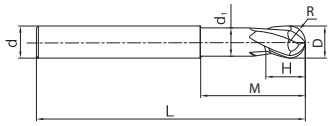
Frese a testa sferica — Lavorazione ad alte prestazioni

TM-4BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMS405
TM-4BP-R3.0		3	6	6	5,5	9	18	60	4	●
TM-4BP-R4.0		4	8	8	7,4	12	24	75	4	●
TM-4BP-R5.0		5	10	10	9,4	15	30	75	4	●
TM-4BP-R6.0		6	12	12	11,4	18	35	90	4	●
TM-4BP-R8.0		8	16	16	15,4	24	40	90	4	●
TM-4BP-R10.0		10	20	20	19,4	35	50	110	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

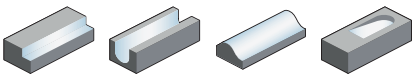
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

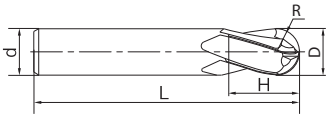
Frese a testa sferica — Lavorazione ad alte prestazioni

TM-5B



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-5B-R3.0		3	6	6	9	50	5	●
TM-5B-R4.0		4	8	8	12	60	5	●
TM-5B-R5.0		5	10	10	15	75	5	●
TM-5B-R6.0		6	12	12	18	75	5	●
TM-5B-R8.0		8	16	16	24	85	5	●
TM-5B-R10.0		10	20	20	35	100	5	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

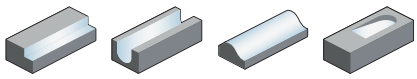
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 | Dati di taglio B492 | Ordine utensili speciali B541

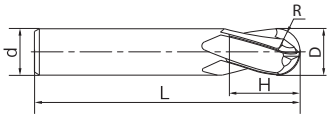
Frese a testa sferica — Lavorazione ad alte prestazioni

TM-5BL



– Versione del codolo DIN 6535HA
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-5BL-R3.0		3	6	6	16	57	5	●
TM-5BL-R4.0		4	8	8	20	63	5	●
TM-5BL-R5.0		5	10	10	22	72	5	●
TM-5BL-R6.0		6	12	12	25	83	5	●
TM-5BL-R8.0		8	16	16	32	92	5	●
TM-5BL-R10.0		10	20	20	38	104	5	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
	✔			✔	

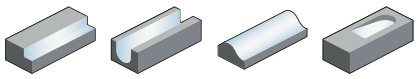
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

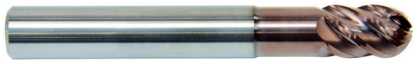
Frese in metallo duro integrale Serie TM

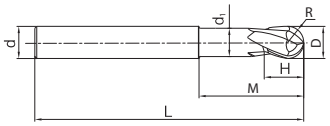
Frese a testa sferica Lavorazione ad alte prestazioni

TM-5BP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMS405
TM-5BP-R3.0		3	6	6	5,5	9	18	60	5	●
TM-5BP-R4.0		4	8	8	7,4	12	24	75	5	●
TM-5BP-R5.0		5	10	10	9,4	15	30	75	5	●
TM-5BP-R6.0		6	12	12	11,4	18	35	90	5	●
TM-5BP-R8.0		8	16	16	15,4	24	40	90	5	●
TM-5BP-R10.0		10	20	20	19,4	35	50	110	5	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

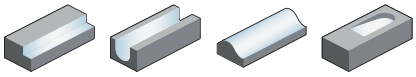
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

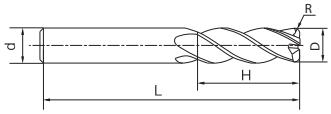
Frese toroidali — Lavorazione ad alte prestazioni

TM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-4R-D6R0.5		0,5	6	6	16	50	4	●
TM-4R-D6R 0.75		0,75	6	6	16	50	4	○
TM-4R-D6R0.3		0,3	6	6	16	50	4	●
TM-4R-D6R1.0		1	6	6	16	50	4	●
TM-4R-D8R1.0		1	8	8	20	60	4	●
TM-4R-D8R0.75		0,75	8	8	20	60	4	○
TM-4R-D8R0.3		0,3	8	8	20	60	4	●
TM-4R-D8R0.5		0,5	8	8	20	60	4	●
TM-4R-D10R1.0		1	10	10	25	75	4	●
TM-4R-D10R1.6		1,6	10	10	25	75	4	●
TM-4R-D10R3.0		3	10	10	25	75	4	●
TM-4R-D10R2.5		2,5	10	10	25	75	4	○
TM-4R-D10R0.5		0,5	10	10	25	75	4	●
TM-4R-D10R2.0		2	10	10	25	75	4	●
TM-4R-D10R1.25		1,25	10	10	25	75	4	○
TM-4R-D10R0.75		0,75	10	10	25	75	4	○
TM-4R-D10R1.5		1,5	10	10	25	75	4	●
TM-4R-D12R3.2		3,2	12	12	30	75	4	●
TM-4R-D12R4.0		4	12	12	30	75	4	●
TM-4R-D12R1.5		1,5	12	12	30	75	4	●
TM-4R-D12R1.0		1	12	12	30	75	4	●
TM-4R-D12R1.6		1,6	12	12	30	75	4	●
TM-4R-D12R0.75		0,75	12	12	30	75	4	○
TM-4R-D12R2.0		2	12	12	30	75	4	●
TM-4R-D12R0.5		0,5	12	12	30	75	4	●
TM-4R-D12R1.25		1,25	12	12	30	75	4	○
TM-4R-D12R2.5		2,5	12	12	30	75	4	●
TM-4R-D12R3.0		3	12	12	30	75	4	●
TM-4R-D16R1.25		1,25	16	16	35	90	4	●
TM-4R-D16R2.0		2	16	16	35	90	4	●
TM-4R-D16R1.0		1	16	16	35	90	4	●
TM-4R-D16R6.3		6,3	16	16	35	90	4	○
TM-4R-D16R3.2		3,2	16	16	35	90	4	●
TM-4R-D16R1.6		1,6	16	16	35	90	4	●
TM-4R-D16R3.0		3	16	16	35	90	4	●
TM-4R-D16R5.0		5	16	16	35	90	4	●
TM-4R-D16R2.5		2,5	16	16	35	90	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
	✔			✔	

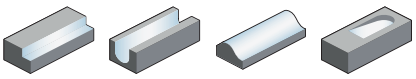
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie TM

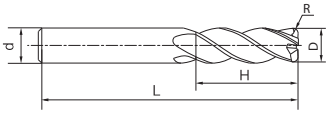
Frese toroidali Lavorazione ad alte prestazioni

TM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-4R-D16R1.5		1,5	16	16	35	90	4	●
TM-4R-D16R4.0		4	16	16	35	90	4	●
TM-4R-D20R1.5		1,5	20	20	45	100	4	●
TM-4R-D20R3.0		3	20	20	45	100	4	●
TM-4R-D20R3.2		3,2	20	20	45	100	4	●
TM-4R-D20R1.6		1,6	20	20	45	100	4	●
TM-4R-D20R6.3		6,3	20	20	45	100	4	●
TM-4R-D20R2.5		2,5	20	20	45	100	4	●
TM-4R-D20R4.0		4	20	20	45	100	4	●
TM-4R-D20R1.0		1	20	20	45	100	4	●
TM-4R-D20R5.0		5	20	20	45	100	4	●
TM-4R-D20R2.0		2	20	20	45	100	4	●
TM-4R-D20R1.25		1,25	21	20	45	100	4	●
TM-4R-D25R2.5		2,5	25	25	50	110	4	○
TM-4R-D25R1.5		1,5	25	25	50	110	4	●
TM-4R-D25R1.6		1,6	25	25	50	110	4	●
TM-4R-D25R2.0		2	25	25	50	110	4	●
TM-4R-D25R1.25		1,25	25	25	50	110	4	○
TM-4R-D25R3.0		3	25	25	50	110	4	●
TM-4R-D25R1.0		1	25	25	50	110	4	●
TM-4R-D25R4.0		4	25	25	50	110	4	●
TM-4R-D25R6.3		6,3	25	25	50	110	4	●
TM-4R-D25R5.0		5	25	25	50	110	4	●
TM-4R-D25R3.2		3,2	25	25	50	110	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

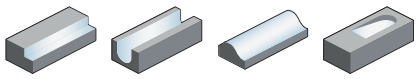
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

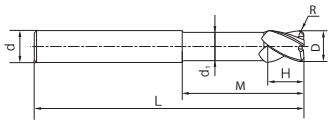
Frese toroidali — Lavorazione ad alte prestazioni

TM-4RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMS405
TM-4RP-D8R0.3		0,3	8	8	7,4	16	25	75	4	●
TM-4RP-D8R0.75		0,75	8	8	7,4	16	25	75	4	○
TM-4RP-D8R1.0		1	8	8	7,4	16	25	75	4	●
TM-4RP-D8R0.5		0,5	8	8	7,4	16	25	75	4	●
TM-4RP-D10R1.5		1,5	10	10	9,4	20	32	75	4	●
TM-4RP-D10R2.0		2	10	10	9,4	20	32	75	4	●
TM-4RP-D10R3.0		3	10	10	9,4	20	32	75	4	●
TM-4RP-D10R0.75		0,75	10	10	9,4	20	32	75	4	○
TM-4RP-D10R1.25		1,25	10	10	9,4	20	32	75	4	●
TM-4RP-D10R2.5		2,5	10	10	9,4	20	32	75	4	○
TM-4RP-D10R1.6		1,6	10	10	9,4	20	32	75	4	●
TM-4RP-D10R0.5		0,5	10	10	9,4	20	32	75	4	●
TM-4RP-D10R1.0		1	10	10	9,4	20	32	75	4	●
TM-4RP-D12R0.5		0,5	12	12	11,4	24	40	90	4	●
TM-4RP-D12R4.0		4	12	12	11,4	24	40	90	4	●
TM-4RP-D12R3.0		3	12	12	11,4	24	40	90	4	●
TM-4RP-D12R1.5		1,5	12	12	11,4	24	40	90	4	●
TM-4RP-D12R2.5		2,5	12	12	11,4	24	40	90	4	○
TM-4RP-D12R1.0		1	12	12	11,4	24	40	90	4	●
TM-4RP-D12R2.0		2	12	12	11,4	24	40	90	4	●
TM-4RP-D12R0.75		0,75	12	12	11,4	24	40	90	4	○
TM-4RP-D12R3.2		3,2	12	12	11,4	24	40	90	4	●
TM-4RP-D12R1.25		1,25	12	12	11,4	24	40	90	4	●
TM-4RP-D12R1.6		1,6	12	12	11,4	24	40	90	4	●
TM-4RP-D16R6.3		6,3	16	16	15	32	50	100	4	○
TM-4RP-D16R1.6		1,6	16	16	15	32	50	100	4	●
TM-4RP-D16R1.25		1,25	16	16	15	32	50	100	4	●
TM-4RP-D16R3.0		3	16	16	14	32	50	100	4	●
TM-4RP-D16R2.5		2,5	16	16	15	32	50	100	4	○
TM-4RP-D16R3.2		3,2	16	16	15	32	50	100	4	●
TM-4RP-D16R1.5		1,5	16	16	15	32	50	100	4	●
TM-4RP-D16R4.0		4	16	16	15	32	50	100	4	●
TM-4RP-D16R1.0		1	16	16	15	32	50	100	4	●
TM-4RP-D16R5.0		5	16	16	15	32	50	100	4	●
TM-4RP-D16R2.0		2	16	16	15	32	50	100	4	●
TM-4RP-D20R3.2		3,2	20	20	19	35	60	110	4	●
TM-4RP-D20R5.0		5	20	20	19	35	60	110	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
	✔			✔	

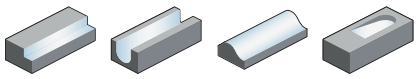
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie TM

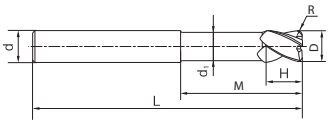
Frese toroidali Lavorazione ad alte prestazioni

TM-4RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMS405
TM-4RP-D20R2.0		2	20	20	19	35	60	110	4	●
TM-4RP-D20R1.25		1,25	20	20	19	35	60	110	4	●
TM-4RP-D20R6.3		6,3	20	20	19	35	60	110	4	●
TM-4RP-D20R3.0		3	20	20	19	35	60	110	4	●
TM-4RP-D20R4.0		4	20	20	19	35	60	110	4	●
TM-4RP-D20R1.0		1	20	20	19	35	60	110	4	●
TM-4RP-D20R2.5		2,5	20	20	19	35	60	110	4	○
TM-4RP-D20R1.5		1,5	20	20	19	35	60	110	4	●
TM-4RP-D20R1.6		1,6	20	20	19	35	60	110	4	●
TM-4RP-D25R1.5		1,5	25	25	24	45	75	150	4	●
TM-4RP-D25R1.0		1	25	25	24	45	75	150	4	●
TM-4RP-D25R1.25		1,25	25	25	24	45	75	150	4	○
TM-4RP-D25R3.0		3	25	25	24	45	75	150	4	●
TM-4RP-D25R2.5		2,5	25	25	24	45	75	150	4	●
TM-4RP-D25R2.0		2	25	25	24	45	75	150	4	●
TM-4RP-D25R3.2		3,2	25	25	24	45	75	150	4	●
TM-4RP-D25R1.6		1,6	25	25	24	45	75	150	4	●
TM-4RP-D25R4.0		4	25	25	24	45	75	150	4	●
TM-4RP-D25R6.3		6,3	25	25	24	45	75	150	4	●
TM-4RP-D25R5.0		5	25	25	24	45	75	150	4	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

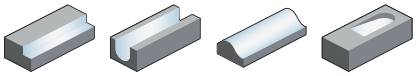
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

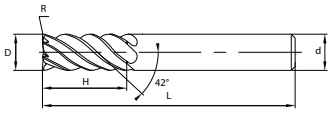
Frese toroidali | Lavorazione ad alte prestazioni

TM-5R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 42°





Articolo	✻	Dimensioni [mm]					Denti	Grado
		R	D	d (h6)	H	L		KMS405
TM-5R-D6R0.75		0,75	6	6	16	50	5	○
TM-5R-D6R0.5		0,5	6	6	16	50	5	●
TM-5R-D6R0.3		0,3	6	6	16	50	5	●
TM-5R-D6R1.0		1	6	6	16	50	5	●
TM-5R-D8R0.5		0,5	8	8	20	60	5	●
TM-5R-D8R0.3		0,3	8	8	20	60	5	●
TM-5R-D8R0.75		0,75	8	8	20	60	5	○
TM-5R-D8R1.0		1	8	8	20	60	5	●
TM-5R-D10R1.5		1,5	10	10	25	75	5	●
TM-5R-D10R3.0		3	10	10	25	75	5	●
TM-5R-D10R0.5		0,5	10	10	25	75	5	●
TM-5R-D10R2.0		2	10	10	25	75	5	●
TM-5R-D10R2.5		2,5	10	10	25	75	5	○
TM-5R-D10R0.75		0,75	10	10	25	75	5	○
TM-5R-D10R1.0		1	10	10	25	75	5	●
TM-5R-D10R1.6		1,6	10	10	25	75	5	●
TM-5R-D10R1.25		1,25	10	10	25	75	5	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
	✔			✔	

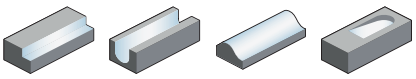
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie TM

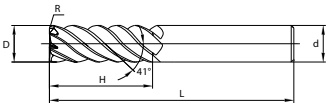
Frese toroidali Lavorazione ad alte prestazioni

TM-7R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 41°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-7R-D12R1.6		1,6	12	12	30	75	7	●
TM-7R-D12R3.2		3,2	12	12	30	75	7	●
TM-7R-D12R2.5		2,5	12	12	30	75	7	●
TM-7R-D12R4.0		4	12	12	30	75	7	●
TM-7R-D12R1.25		1,25	12	12	30	75	7	○
TM-7R-D12R0.75		0,75	12	12	30	75	7	○
TM-7R-D12R3.0		3	12	12	30	75	7	●
TM-7R-D12R0.5		0,5	12	12	30	75	7	●
TM-7R-D12R2.0		2	12	12	30	75	7	●
TM-7R-D12R1.5		1,5	12	12	30	75	7	●
TM-7R-D12R1.0		1	12	12	30	75	7	●
TM-7R-D16R6.3		6,3	16	16	35	90	7	○
TM-7R-D16R2.5		2,5	16	16	35	90	7	●
TM-7R-D16R4.0		4	16	16	35	90	7	●
TM-7R-D16R3.2		3,2	16	16	35	90	7	●
TM-7R-D16R5.0		5	16	16	35	90	7	●
TM-7R-D16R3.0		3	16	16	35	90	7	●
TM-7R-D16R2.0		2	16	16	35	90	7	●
TM-7R-D16R1.6		1,6	16	16	35	90	7	●
TM-7R-D16R1.25		1,25	16	16	35	90	7	○
TM-7R-D16R1.5		1,5	16	16	35	90	7	●
TM-7R-D16R1.0		1	16	16	35	90	7	●
TM-7R-D20R2.0		2	20	20	45	100	7	●
TM-7R-D20R1.5		1,5	20	20	45	100	7	●
TM-7R-D20R5.0		5	20	20	45	100	7	●
TM-7R-D20R2.5		2,5	20	20	45	100	7	●
TM-7R-D20R1.0		1	20	20	45	100	7	●
TM-7R-D20R3.2		3,2	20	20	45	100	7	●
TM-7R-D20R6.3		6,3	20	20	45	100	7	●
TM-7R-D20R3.0		3	20	20	45	100	7	●
TM-7R-D20R1.6		1,6	20	20	45	100	7	●
TM-7R-D20R4.0		4	20	20	45	100	7	●
TM-7R-D20R1.25		1,25	21	20	45	100	7	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

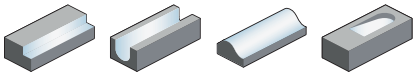
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

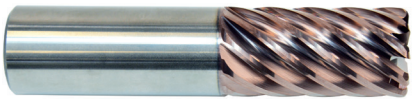
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

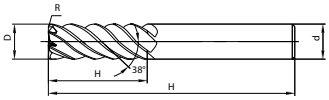
Frese toroidali | Lavorazione ad alte prestazioni

TM-9R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] R	D	d (h6)	H	L	Denti	Grado KMS405
TM-9R-D25R1.5		1,5	25	25	50	110	9	●
TM-9R-D25R2.5		2,5	25	25	50	110	9	○
TM-9R-D25R3.2		3,2	25	25	50	110	9	●
TM-9R-D25R1.25		1,25	25	25	50	110	9	○
TM-9R-D25R1.0		1	25	25	50	110	9	●
TM-9R-D25R6.3		6,3	25	25	50	110	9	●
TM-9R-D25R2.0		2	25	25	50	110	9	●
TM-9R-D25R1.6		1,6	25	25	50	110	9	●
TM-9R-D25R4.0		4	25	25	50	110	9	●
TM-9R-D25R3.0		3	25	25	50	110	9	●
TM-9R-D25R5.0		5	25	25	50	110	9	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

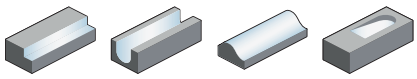
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

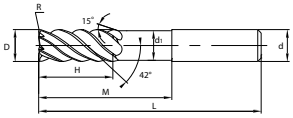
Frese toroidali Lavorazione ad alte prestazioni

TM-5RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 42°





Articolo	✲	Dimensioni [mm] R	D	d (h6)	d_1	H	M	L	Denti	Grado KMS405
TM-5RP-D8R0.3		0,3	8	8	7,4	16	25	75	5	●
TM-5RP-D8R0.75		0,75	8	8	7,4	16	25	75	5	○
TM-5RP-D8R0.5		0,5	8	8	7,4	16	25	75	5	●
TM-5RP-D8R1.0		1	8	8	7,4	16	25	75	5	●
TM-5RP-D10R1.6		1,6	10	10	9,4	20	32	75	5	●
TM-5RP-D10R0.5		0,5	10	10	9,4	20	32	75	5	●
TM-5RP-D10R1.0		1	10	10	9,4	20	32	75	5	●
TM-5RP-D10R1.5		1,5	10	10	9,4	20	32	75	5	●
TM-5RP-D10R2.0		2	10	10	9,4	20	32	75	5	●
TM-5RP-D10R0.75		0,75	10	10	9,4	20	32	75	5	○
TM-5RP-D10R1.25		1,25	10	10	9,4	20	32	75	5	○
TM-5RP-D10R2.5		2,5	10	10	9,4	20	32	75	5	●
TM-5RP-D10R3.0		3	10	10	9,4	20	32	75	5	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

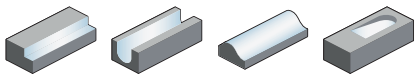
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

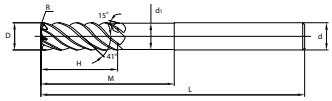
Frese toroidali | Lavorazione ad alte prestazioni

TM-7RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 41°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMS405
TM-7RP-D12R1.25		1,25	12	12	11,4	24	40	90	7	○
TM-7RP-D12R2.0		2	12	12	11,4	24	40	90	7	●
TM-7RP-D12R4.0		4	12	12	11,4	24	40	90	7	●
TM-7RP-D12R0.5		0,5	12	12	11,4	24	40	90	7	●
TM-7RP-D12R0.75		0,75	12	12	11,4	24	40	90	7	○
TM-7RP-D12R1.5		1,5	12	12	11,4	24	40	90	7	●
TM-7RP-D12R1.6		1,6	12	12	11,4	24	40	90	7	●
TM-7RP-D12R1.0		1	12	12	11,4	24	40	90	7	●
TM-7RP-D12R2.5		2,5	12	12	11,4	24	40	90	7	●
TM-7RP-D12R3.0		3	12	12	11,4	24	40	90	7	●
TM-7RP-D12R3.2		3,2	12	12	11,4	24	40	90	7	●
TM-7RP-D16R6.3		6,3	16	16	15	32	50	100	7	○
TM-7RP-D16R1.0		1	16	16	15	32	50	100	7	●
TM-7RP-D16R1.6		1,6	16	16	15	32	50	100	7	●
TM-7RP-D16R3.2		3,2	16	16	15	32	50	100	7	●
TM-7RP-D16R2.0		2	16	16	15	32	50	100	7	●
TM-7RP-D16R4.0		4	16	16	15	32	50	100	7	●
TM-7RP-D16R1.5		1,5	16	16	15	32	50	100	7	●
TM-7RP-D16R1.25		1,25	16	16	15	32	50	100	7	○
TM-7RP-D16R5.0		5	16	16	15	32	50	100	7	●
TM-7RP-D16R3.0		3	16	16	15	32	50	100	7	●
TM-7RP-D16R2.5		2,5	16	16	15	32	50	100	7	●
TM-7RP-D20R3.0		3	20	20	19	35	60	110	7	●
TM-7RP-D20R5.0		5	20	20	19	35	60	110	7	●
TM-7RP-D20R1.6		1,6	20	20	19	35	60	110	7	●
TM-7RP-D20R6.3		6,3	20	20	19	35	60	110	7	●
TM-7RP-D20R2.5		2,5	20	20	19	35	60	110	7	●
TM-7RP-D20R3.2		3,2	20	20	19	35	60	110	7	●
TM-7RP-D20R1.25		1,25	20	20	19	35	60	110	7	○
TM-7RP-D20R1.0		1	20	20	19	35	60	110	7	●
TM-7RP-D20R1.5		1,5	20	20	19	35	60	110	7	●
TM-7RP-D20R4.0		4	20	20	19	35	60	110	7	●
TM-7RP-D20R2.0		2	20	20	19	35	60	110	7	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

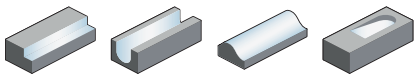
P	M	K	N	S	H
	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

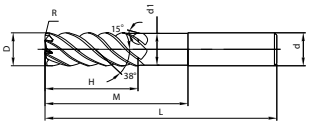
Frese toroidali Lavorazione ad alte prestazioni

TM-9RP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm]							Denti	Grado KMS405
		R	D	d (h6)	d_1	H	M	L		
TM-9RP-D25R1.6		1,6	25	25	24	45	75	150	9	●
TM-9RP-D25R2.5		2,5	25	25	24	45	75	150	9	●
TM-9RP-D25R3.2		3,2	25	25	24	45	75	150	9	●
TM-9RP-D25R4.0		4	25	25	24	45	75	150	9	●
TM-9RP-D25R3.0		3	25	25	24	45	75	150	9	●
TM-9RP-D25R6.3		6,3	25	25	24	45	75	150	9	●
TM-9RP-D25R1.25		1,25	25	25	24	45	75	150	9	○
TM-9RP-D25R1.5		1,5	25	25	24	45	75	150	9	●
TM-9RP-D25R2.0		2	25	25	24	45	75	150	9	●
TM-9RP-D25R5.0		5	25	25	24	45	75	150	9	●
TM-9RP-D25R1.0		1	25	25	24	45	75	150	9	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
	✔			✔	

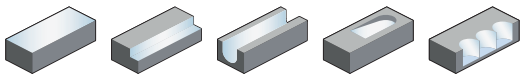
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese a candela

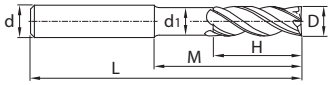
Lavorazione HSC/HPC

5501R38414GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
5501R38414GM-0400		4	6	3,7	8	16	54	4	●
5501R38414GM-0500		5	6	4,7	9	17	54	4	●
5501R38414GM-0600		6	6	5,7	10	18	54	4	●
5501R38414GM-0800		8	8	7,7	12	22	58	4	●
5501R38414GM-1000		10	10	9,5	14	26	66	4	●
5501R38414GM-1200		12	12	11,5	16	28	73	4	●
5501R38414GM-1400		14	14	13,5	18	30	75	4	●
5501R38414GM-1600		16	16	15,5	22	34	82	4	●
5501R38414GM-1800		18	18	17,5	24	36	84	4	●
5501R38414GM-2000		20	20	19,5	26	42	92	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

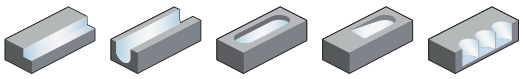
Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie HPC

Frese a candela tagliente lungo

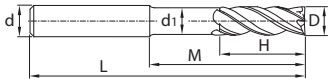
Lavorazione HSC/HPC

5502R38414GM



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405	KMG406
5502R38414GM-0400		4	6	3,7	11	19	57	4	●	●
5502R38414GM-0500		5	6	4,7	13	21	57	4	●	●
5502R38414GM-0600		6	6	5,7	13	21	57	4	●	●
5502R38414GM-0800		8	8	7,7	19	27	63	4	●	●
5502R38414GM-1000		10	10	9,5	22	32	72	4	●	●
5502R38414GM-1200		12	12	11,5	26	38	83	4	●	●
5502R38414GM-1400		14	14	13,5	26	38	83	4	●	●
5502R38414GM-1600		16	16	15,5	32	44	92	4	●	●
5502R38414GM-1800		18	18	17,5	32	44	92	4	●	●
5502R38414GM-2000		20	20	19,5	38	54	104	4	●	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

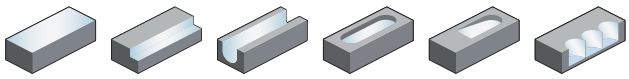
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

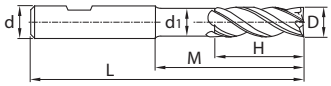
Lavorazione HSC/HPC

5601R38414GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
5601R38414GM-0400		4	6	3,7	8	16	54	4	●
5601R38414GM-0500		5	6	4,7	9	17	54	4	●
5601R38414GM-0600		6	6	5,7	10	18	54	4	●
5601R38414GM-0800		8	8	7,7	12	22	58	4	●
5601R38414GM-1000		10	10	9,5	14	26	66	4	●
5601R38414GM-1200		12	12	11,5	16	28	73	4	●
5601R38414GM-1400		14	14	13,5	18	30	75	4	●
5601R38414GM-1600		16	16	15,5	22	34	82	4	●
5601R38414GM-1800		18	18	17,5	24	36	84	4	●
5601R38414GM-2000		20	20	19,5	26	42	92	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

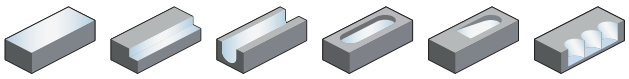
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela tagliente lungo

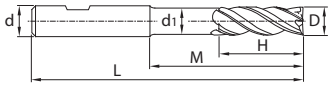
Lavorazione HSC/HPC

5602R38414GM



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405	KMG406
5602R38414GM-0400		4	6	3,7	11	19	57	4	●	●
5602R38414GM-0500		5	6	4,7	13	21	57	4	●	●
5602R38414GM-0600		6	6	5,7	13	21	57	4	●	●
5602R38414GM-0800		8	8	7,7	19	27	63	4	●	●
5602R38414GM-1000		10	10	9,5	22	32	72	4	●	●
5602R38414GM-1200		12	12	11,5	26	38	83	4	●	●
5602R38414GM-1400		14	14	13,5	26	38	83	4	●	●
5602R38414GM-1600		16	16	15,5	32	44	92	4	●	●
5602R38414GM-1800		18	18	17,5	32	44	92	4	●	●
5602R38414GM-2000		20	20	19,5	38	54	104	4	●	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

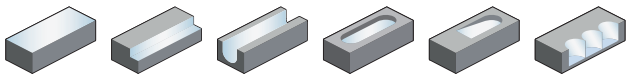
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese toroidali con tagliente lungo

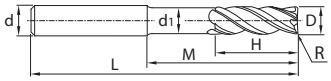
Lavorazione HSC/HPC

5502R38414GM-R



– Versione del codolo DIN 6535HA
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]							Denti	Grado KMG405
		D	R	d (h6)	d_1	H	M	L		
5502R38414GM-R02-0400		4	0,2	6	3,7	11	19	57	4	●
5502R38414GM-R05-0400		4	0,5	6	3,7	11	19	57	4	●
5502R38414GM-R02-0500		5	0,2	6	4,7	13	21	57	4	●
5502R38414GM-R05-0500		5	0,5	6	4,7	13	21	57	4	●
5502R38414GM-R02-0600		6	0,2	6	5,7	13	21	57	4	●
5502R38414GM-R05-0600		6	0,5	6	5,7	13	21	57	4	●
5502R38414GM-R10-0600		6	1	6	5,7	13	21	57	4	●
5502R38414GM-R02-0800		8	0,2	8	7,7	19	27	63	4	●
5502R38414GM-R05-0800		8	0,5	8	7,7	19	27	63	4	●
5502R38414GM-R10-0800		8	1	8	7,7	19	27	63	4	●
5502R38414GM-R15-0800		8	1,5	8	7,7	19	27	63	4	●
5502R38414GM-R20-0800		8	2	8	7,7	19	27	63	4	●
5502R38414GM-R02-1000		10	0,2	10	9,5	22	32	72	4	●
5502R38414GM-R05-1000		10	0,5	10	9,5	22	32	72	4	●
5502R38414GM-R10-1000		10	1	10	9,5	22	32	72	4	●
5502R38414GM-R15-1000		10	1,5	10	9,5	22	32	72	4	●
5502R38414GM-R20-1000		10	2	10	9,5	22	32	72	4	●
5502R38414GM-R05-1200		12	0,5	12	11,5	26	38	83	4	●
5502R38414GM-R10-1200		12	1	12	11,5	26	38	83	4	●
5502R38414GM-R15-1200		12	1,5	12	11,5	26	38	83	4	●
5502R38414GM-R20-1200		12	2	12	11,5	26	38	83	4	●
5502R38414GM-R10-1600		16	1	16	15,5	32	44	92	4	●
5502R38414GM-R15-1600		16	1,5	16	15,5	32	44	92	4	●
5502R38414GM-R20-1600		16	2	16	15,5	32	44	92	4	●
5502R38414GM-R30-1600		16	3	16	15,5	32	44	92	4	●
5502R38414GM-R10-2000		20	1	20	19,5	38	54	104	4	●
5502R38414GM-R15-2000		20	1,5	20	19,5	38	54	104	4	●
5502R38414GM-R20-2000		20	2	20	19,5	38	54	104	4	●
5502R38414GM-R30-2000		20	3	20	19,5	38	54	104	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

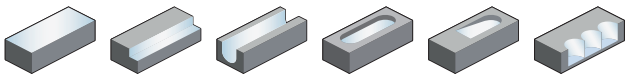
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

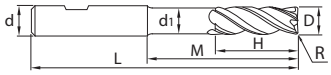
Frese toroidali con tagliente lungo Lavorazione HSC/HPC

5602R38414GM-R



– Versione del codolo DIN 6535HB
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		D	R	d (h6)	d_1	H	M	L		KMG405
5602R38414GM-R02-0400		4	0,2	6	3,7	11	19	57	4	●
5602R38414GM-R05-0400		4	0,5	6	3,7	11	19	57	4	●
5602R38414GM-R02-0500		5	0,2	6	4,7	13	21	57	4	●
5602R38414GM-R05-0500		5	0,5	6	4,7	13	21	57	4	●
5602R38414GM-R02-0600		6	0,2	6	5,7	13	21	57	4	●
5602R38414GM-R05-0600		6	0,5	6	5,7	13	21	57	4	●
5602R38414GM-R10-0600		6	1	6	5,7	13	21	57	4	●
5602R38414GM-R02-0800		8	0,2	8	7,7	19	27	63	4	●
5602R38414GM-R05-0800		8	0,5	8	7,7	19	27	63	4	●
5602R38414GM-R10-0800		8	1	8	7,7	19	27	63	4	●
5602R38414GM-R15-0800		8	1,5	8	7,7	19	27	63	4	●
5602R38414GM-R20-0800		8	2	8	7,7	19	27	63	4	●
5602R38414GM-R02-1000		10	0,2	10	9,5	22	32	72	4	●
5602R38414GM-R05-1000		10	0,5	10	9,5	22	32	72	4	●
5602R38414GM-R10-1000		10	1	10	9,5	22	32	72	4	●
5602R38414GM-R15-1000		10	1,5	10	9,5	22	32	72	4	●
5602R38414GM-R20-1000		10	2	10	9,5	22	32	72	4	●
5602R38414GM-R05-1200		12	0,5	12	11,5	26	38	83	4	●
5602R38414GM-R10-1200		12	1	12	11,5	26	38	83	4	●
5602R38414GM-R15-1200		12	1,5	12	11,5	26	38	83	4	●
5602R38414GM-R20-1200		12	2	12	11,5	26	38	83	4	●
5602R38414GM-R10-1600		16	1	16	15,5	32	44	92	4	●
5602R38414GM-R15-1600		16	1,5	16	15,5	32	44	92	4	●
5602R38414GM-R20-1600		16	2	16	15,5	32	44	92	4	●
5602R38414GM-R30-1600		16	3	16	15,5	32	44	92	4	●
5602R38414GM-R10-2000		20	1	20	19,5	38	54	104	4	●
5602R38414GM-R15-2000		20	1,5	20	19,5	38	54	104	4	●
5602R38414GM-R20-2000		20	2	20	19,5	38	54	104	4	●
5602R38414GM-R30-2000		20	3	20	19,5	38	54	104	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

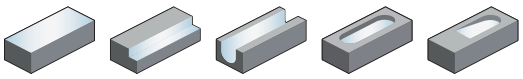
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

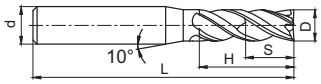
Lavorazione HSC/HPC

UM-4E

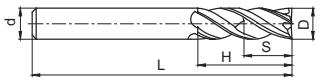


– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





A



B

Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	S	Denti	Geometria	Grado KMG405	YK40F
UM-4E-D4.0S		4	4	11	50	6	4	B	●	
UM-4E-D4.0		4	6	11	50	6	4	A	●	
UM-4E-D4.5		4,5	6	11	50	6,75	4	A	●	
UM-4E-D5.0		5	6	13	50	7,5	4	A	●	
UM-4E-D5.5		5,5	6	16	50	8,25	4	A	●	
UM-4E-D6.0		6	6	16	50	9	4	B	●	○
UM-4E-D7.0		7	8	20	60	10,5	4	A	●	
UM-4E-D8.0		8	8	20	60	12	4	B	●	○
UM-4E-D9.0		9	10	22	75	13,5	4	A	●	
UM-4E-D10.0		10	10	25	75	15	4	B	●	○
UM-4E-D11.0		11	12	26	75	16,5	4	A	●	
UM-4E-D12.0		12	12	30	75	18	4	B	●	○
UM-4E-D14.0		14	14	32	75	21	4	B	●	
UM-4E-D16.0		16	16	45	100	24	4	B	●	○
UM-4E-D18.0		18	18	45	100	27	4	B	●	
UM-4E-D20.0		20	20	45	100	30	4	B	●	

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

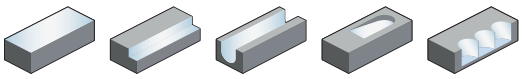
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie UM

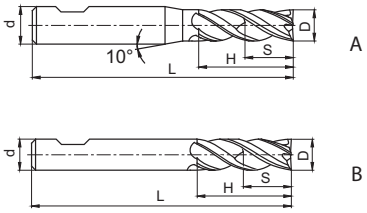
Frese a candela Lavorazione HSC/HPC

UM-4E-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]					Denti	Geometria	Grado	
		D	d (h6)	H	L	S			KMG405	YK40F
UM-4E-D4.0-W		4	6	11	50	6	4	A	●	
UM-4E-D4.5-W		4,5	6	11	50	6,75	4	A	●	
UM-4E-D5.0-W		5	6	13	50	7,5	4	A	●	
UM-4E-D5.5-W		5,5	6	16	50	8,25	4	A	●	
UM-4E-D6.0-W		6	6	16	50	9	4	B	●	○
UM-4E-D7.0-W		7	8	20	60	10,5	4	A	●	
UM-4E-D8.0-W		8	8	20	60	12	4	B	●	○
UM-4E-D9.0-W		9	10	22	75	13,5	4	A	●	
UM-4E-D10.0-W		10	10	25	75	15	4	B	●	○
UM-4E-D11.0-W		11	12	26	75	16,5	4	A	●	
UM-4E-D12.0-W		12	12	30	75	18	4	B	●	○
UM-4E-D14.0-W		14	14	32	75	21	4	B	●	
UM-4E-D16.0-W		16	16	45	100	24	4	B	●	○
UM-4E-D18.0-W		18	18	45	100	27	4	B	●	
UM-4E-D20.0-W		20	20	45	100	30	4	B	●	

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

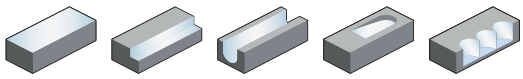
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

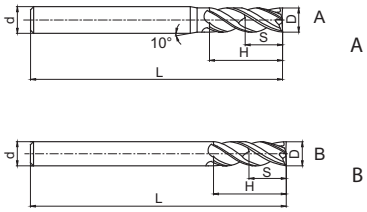
Frese a candela tagliente lungo — Lavorazione HSC/HPC

UM-4EL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	S	Denti	Geometria	Grado KMG405
UM-4EL-D4.0		4	6	15	75	6	4	A	●
UM-4EL-D5.0		5	6	20	75	7,5	4	A	●
UM-4EL-D6.0		6	6	20	75	9	4	B	●
UM-4EL-D8.0		8	8	25	100	12	4	B	●
UM-4EL-D10.0		10	10	30	100	15	4	B	●
UM-4EL-D12.0		12	12	35	100	18	4	B	●
UM-4EL-D14.0		14	14	40	100	21	4	B	●
UM-4EL-D16.0		16	16	50	150	24	4	B	●
UM-4EL-D20.0		20	20	55	150	30	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

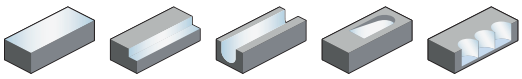
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie UM

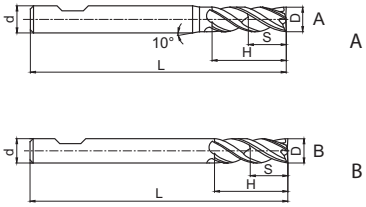
Frese a candela tagliente lungo Lavorazione HSC/HPC

UM-4EL-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✲	Dimensioni [mm]					Denti	Geometria	Grado
		D	d (h6)	H	L	S			KMG405
UM-4EL-D4.0-W		4	6	15	75	6	4	A	●
UM-4EL-D5.0-W		5	6	20	75	7,5	4	A	●
UM-4EL-D6.0-W		6	6	20	75	9	4	B	●
UM-4EL-D8.0-W		8	8	25	100	12	4	B	●
UM-4EL-D10.0-W		10	10	30	100	15	4	B	●
UM-4EL-D12.0-W		12	12	35	100	18	4	B	●
UM-4EL-D14.0-W		14	14	40	100	21	4	B	●
UM-4EL-D16.0-W		16	16	50	150	24	4	B	●
UM-4EL-D20.0-W		20	20	55	150	30	4	B	●

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Campo di applicazione

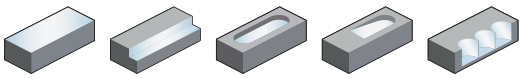
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

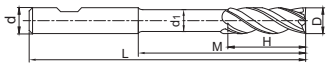
Frese a candela a collo ridotto — Lavorazione HSC/HPC

UM-4ELP-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	d_1	H	M	L	Denti	Grado KMG405
UM-4ELP-D4.0-W		4	6	3,8	15	36	75	4	●
UM-4ELP-D5.0-W		5	6	4,8	20	36	75	4	●
UM-4ELP-D6.0-W		6	6	5,7	20	36	75	4	●
UM-4ELP-D8.0-W		8	8	7,7	25	60	100	4	●
UM-4ELP-D10.0-W		10	10	9,5	30	55	100	4	●
UM-4ELP-D12.0-W		12	12	11,5	35	50	100	4	●
UM-4ELP-D14.0-W		14	14	13,5	40	50	100	4	●
UM-4ELP-D16.0-W		16	16	15,5	50	100	150	4	●
UM-4ELP-D20.0-W		20	20	19,5	55	98	150	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

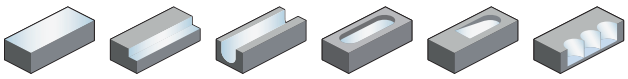
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

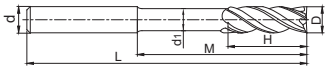
Frese a candela tagliente corto — Lavorazione HSC/HPC

UM-4EFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]						Denti	Grado
		D	d (h6)	d_1	H	M	L		KMG405
UM-4EFP-D6.0		6	6	5,8	9	30	75	4	●
UM-4EFP-D8.0		8	8	7,8	12	40	100	4	●
UM-4EFP-D10.0		10	10	9,6	15	50	100	4	●
UM-4EFP-D12.0		12	12	11,5	18	50	100	4	●
UM-4EFP-D16.0		16	16	15,5	24	50	150	4	●
UM-4EFP-D20.0		20	20	19,5	30	60	150	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

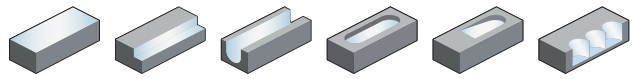
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

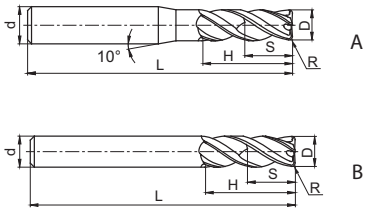
Lavorazione HSC/HPC

UM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]						Denti	Geometria	Grado
		R	D	d (h6)	H	L	S			KMG405
UM-4R-D4.0R0.3		0,3	4	6	10	50	6	4	A	●
UM-4R-D4.0R0.5		0,5	4	6	10	50	6	4	A	●
UM-4R-D5.0R0.5		0,5	5	6	13	50	7,5	4	A	●
UM-4R-D5.0R1.0		1	5	6	13	50	7,5	4	A	●
UM-4R-D6.0R0.5		0,5	6	6	16	50	9	4	B	●
UM-4R-D6.0R1.0		1	6	6	16	50	9	4	B	●
UM-4R-D8.0R0.5		0,5	8	8	20	60	12	4	B	●
UM-4R-D8.0R1.0		1	8	8	20	60	12	4	B	●
UM-4R-D10.0R0.5		0,5	10	10	25	75	15	4	B	●
UM-4R-D10.0R1.0		1	10	10	25	75	15	4	B	●
UM-4R-D10.0R2.0		2	10	10	25	75	15	4	B	●
UM-4R-D10.0R3.0		3	10	10	25	75	15	4	B	●
UM-4R-D12.0R0.5		0,5	12	12	30	75	18	4	B	●
UM-4R-D12.0R1.0		1	12	12	30	75	18	4	B	●
UM-4R-D12.0R2.0		2	12	12	30	75	18	4	B	●
UM-4R-D12.0R3.0		3	12	12	30	75	18	4	B	●
UM-4R-D16.0R0.5		0,5	16	16	45	100	24	4	B	●
UM-4R-D16.0R1.0		1	16	16	45	100	24	4	B	●
UM-4R-D16.0R2.0		2	16	16	45	100	24	4	B	●
UM-4R-D16.0R3.0		3	16	16	45	100	24	4	B	●
UM-4R-D20.0R1.0		1	20	20	45	100	30	4	B	●
UM-4R-D20.0R2.0		2	20	20	45	100	30	4	B	●
UM-4R-D20.0R3.0		3	20	20	45	100	30	4	B	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

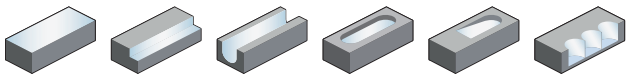
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie UM

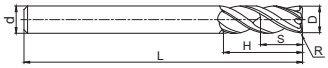
Frese toroidali codolo lungo Lavorazione HSC/HPC

UM-4RL



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]						Denti	Grado
		R	D	d (h6)	H	L	S		KMG405
UM-4RL-D6.0R0.5		0,5	6	6	16	75	9	4	●
UM-4RL-D6.0R1.0		1	6	6	16	75	9	4	●
UM-4RL-D8.0R0.5		0,5	8	8	20	100	12	4	●
UM-4RL-D8.0R1.0		1	8	8	20	100	12	4	●
UM-4RL-D10.0R0.5		0,5	10	10	25	100	15	4	●
UM-4RL-D10.0R1.0		1	10	10	25	100	15	4	●
UM-4RL-D10.0R2.0		2	10	10	25	100	15	4	●
UM-4RL-D12.0R0.5		0,5	12	12	30	100	18	4	●
UM-4RL-D12.0R1.0		1	12	12	30	100	18	4	●
UM-4RL-D12.0R2.0		2	12	12	30	100	18	4	●
UM-4RL-D16.0R1.0		1	16	16	45	150	24	4	●
UM-4RL-D16.0R2.0		2	16	16	45	150	24	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

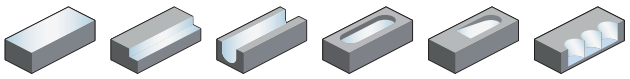
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

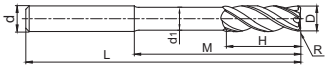
Frese toroidali tagliente corto — Lavorazione HSC/HPC

UM-4RFP



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm]							Denti	Grado
		R	D	d (h6)	d_1	H	M	L		KMG405
UM-4RFP-D6.0R0.5		0,5	6	6	5,8	6	18	75	4	●
UM-4RFP-D6.0R1.0		1	6	6	5,8	6	18	75	4	●
UM-4RFP-D8.0R0.5		0,5	8	8	7,7	8	24	100	4	●
UM-4RFP-D8.0R1.0		1	8	8	7,7	8	24	100	4	●
UM-4RFP-D10.0R0.5		0,5	10	10	9,6	10	30	100	4	●
UM-4RFP-D10.0R1.0		1	10	10	9,6	10	30	100	4	●
UM-4RFP-D10.0R2.0		2	10	10	9,6	10	30	100	4	●
UM-4RFP-D12.0R0.5		0,5	12	12	11,5	12	36	100	4	●
UM-4RFP-D12.0R1.0		1	12	12	11,5	12	36	100	4	●
UM-4RFP-D12.0R2.0		2	12	12	11,5	12	36	100	4	●
UM-4RFP-D16.0R1.0		1	16	16	15,5	16	40	150	4	●
UM-4RFP-D16.0R2.0		2	16	16	15,5	16	40	150	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

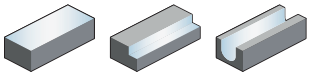
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

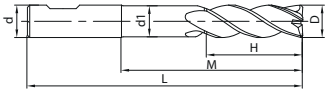
Frese a candela Lavorazione HSC/HPC

UM-5EP-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 38°/39°/40°





Articolo	✻	Dimensioni [mm]						Grado
		D	d (h6)	d_1	H	M	L	KMG405
UM-5EP-D6.0-W		6	6	5,7	16	22	58	●
UM-5EP-D8.0-W		8	8	7,7	21	27	63	●
UM-5EP-D10.0-W		10	10	9,5	24	35	75	●
UM-5EP-D12.0-W		12	12	11,5	31	43	88	●
UM-5EP-D16.0-W		16	16	15,5	36	52	100	●
UM-5EP-D20.0-W		20	20	19,5	41	72	126	●
UM-5EP-D25.0-W		25	25	24	51	102	160	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

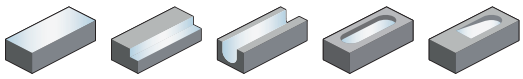
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

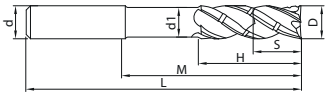
Lavorazione HSC/HPC

UMC-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/40°





Articolo	✻	Dimensioni [mm]							Grado
		D	d (h6)	d_1	H	M	L	S	KMG405
UMC-4E-D6.0		6	6	5,8	18	24	60	9	○
UMC-4E-D8.0		8	8	7,8	24	34	70	12	○
UMC-4E-D10.0		10	10	9,6	30	40	80	15	○
UMC-4E-D12.0		12	12	11,5	36	45	90	18	○
UMC-4E-D16.0		16	16	15,5	48	62	110	24	○
UMC-4E-D20.0		20	20	19,5	60	80	130	30	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

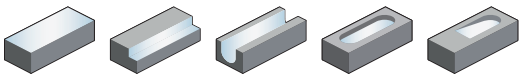
✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

Frese in metallo duro integrale Serie UMC

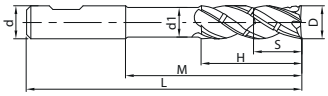
Frese a candela Lavorazione HSC/HPC

UMC-4E-W



– Codolo cilindrico standard di fabbrica ZCC-CT attacco Weldon
– taglio al centro
– Angolo di inclinazione dell'elica 38°/40°





Articolo	✻	Dimensioni [mm]							Grado
		D	d (h6)	d_1	H	M	L	S	KMG405
UMC-4E-D6.0-W		6	6	5,8	18	24	60	9	○
UMC-4E-D8.0-W		8	8	7,8	24	34	70	12	○
UMC-4E-D10.0-W		10	10	9,6	30	40	80	15	○
UMC-4E-D12.0-W		12	12	11,5	36	45	90	18	○
UMC-4E-D16.0-W		16	16	15,5	48	62	110	24	○
UMC-4E-D20.0-W		20	20	19,5	60	80	130	30	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

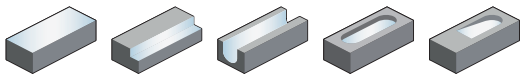
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

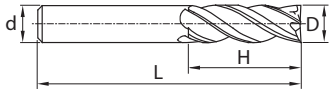
Frese a candela — Lavorazione generica di materiali a difficile asportazione

VSM-4E



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG405
VSM-4E-D4.0		4	6	11	50	4	●
VSM-4E-D5.0		5	6	13	50	4	●
VSM-4E-D6.0		6	6	16	50	4	●
VSM-4E-D8.0		8	8	20	60	4	●
VSM-4E-D10.0		10	10	25	75	4	●
VSM-4E-D12.0		12	12	30	75	4	●
VSM-4E-D16.0		16	16	45	100	4	●
VSM-4E-D20.0		20	20	45	100	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

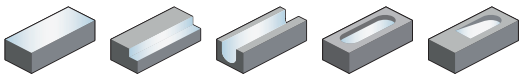
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a candela

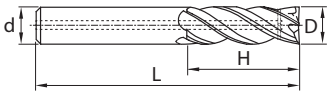
Lavorazione generica di materiali a difficile asportazione

VSM-4E-C



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Uscita refrigerante radiale
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	d (h6)	H	L	Denti	Grado KMG405
VSM-4E-C-D10.0	✻	10	10	25	75	4	○
VSM-4E-C-D12.0	✻	12	12	30	75	4	○
VSM-4E-C-D16.0	✻	16	16	45	100	4	○
VSM-4E-C-D20.0	✻	20	20	45	100	4	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

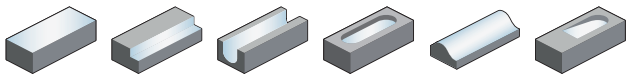
P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

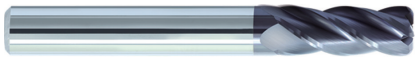
Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

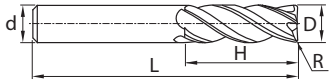
Frese toroidali — Lavorazione generica di materiali a difficile asportazione

VSM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	R	d (h6)	H	L	Denti	Grado KMG405
VSM-4R-D4.0R0.2		4	0,2	6	11	50	4	●
VSM-4R-D4.0R0.5		4	0,5	6	11	50	4	●
VSM-4R-D5.0R0.2		5	0,2	6	13	50	4	●
VSM-4R-D5.0R0.5		5	0,5	6	13	50	4	●
VSM-4R-D6.0R0.2		6	0,2	6	16	50	4	●
VSM-4R-D6.0R0.5		6	0,5	6	16	50	4	●
VSM-4R-D6.0R1.0		6	1	6	16	50	4	●
VSM-4R-D6.0R1.5		6	1,5	6	16	50	4	●
VSM-4R-D8.0R0.5		8	0,5	8	20	63	4	●
VSM-4R-D8.0R0.8		8	0,8	8	20	63	4	●
VSM-4R-D8.0R1.0		8	1	8	20	63	4	●
VSM-4R-D8.0R1.5		8	1,5	8	20	63	4	●
VSM-4R-D8.0R2.0		8	2	8	20	63	4	●
VSM-4R-D10.0R0.5		10	0,5	10	25	75	4	●
VSM-4R-D10.0R0.8		10	0,8	10	25	75	4	●
VSM-4R-D10.0R1.0		10	1	10	25	75	4	●
VSM-4R-D10.0R1.5		10	1,5	10	25	75	4	●
VSM-4R-D10.0R2.0		10	2	10	25	75	4	●
VSM-4R-D12.0R0.5		12	0,5	12	30	75	4	●
VSM-4R-D12.0R0.8		12	0,8	12	30	75	4	●
VSM-4R-D12.0R1.0		12	1	12	30	75	4	●
VSM-4R-D12.0R1.5		12	1,5	12	30	75	4	●
VSM-4R-D12.0R2.0		12	2	12	30	75	4	●
VSM-4R-D12.0R2.5		12	2,5	12	30	75	4	●
VSM-4R-D12.0R3.0		12	3	12	30	75	4	●
VSM-4R-D12.0R4.0		12	4	12	30	75	4	●
VSM-4R-D16.0R0.5		16	0,5	16	45	100	4	●
VSM-4R-D16.0R0.8		16	0,8	16	45	100	4	●
VSM-4R-D16.0R1.0		16	1	16	45	100	4	●
VSM-4R-D16.0R1.5		16	1,5	16	45	100	4	●
VSM-4R-D16.0R2.0		16	2	16	45	100	4	●
VSM-4R-D16.0R2.5		16	2,5	16	45	100	4	●
VSM-4R-D16.0R3.0		16	3	16	45	100	4	●
VSM-4R-D16.0R4.0		16	4	16	45	100	4	●
VSM-4R-D20.0R0.5		20	0,5	20	45	100	4	●
VSM-4R-D20.0R1.0		20	1	20	45	100	4	●
VSM-4R-D20.0R1.5		20	1,5	20	45	100	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

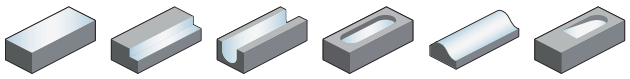
P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

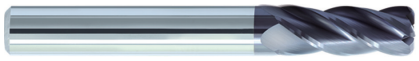
Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

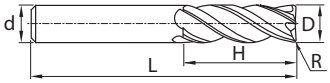
Frese toroidali Lavorazione generica di materiali a difficile asportazione

VSM-4R



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– taglio al centro
– Angolo di inclinazione dell'elica 38°/41°





Articolo	✻	Dimensioni [mm] D	R	d (h6)	H	L	Denti	Grado KMG405
VSM-4R-D20.0R2.0		20	2	20	45	100	4	●
VSM-4R-D20.0R2.5		20	2,5	20	45	100	4	●
VSM-4R-D20.0R3.0		20	3	20	45	100	4	●
VSM-4R-D20.0R4.0		20	4	20	45	100	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

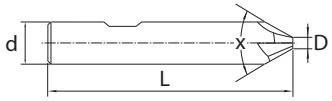
Frese a sbavare 60° Lavorazione generica

5501/5601R60*FM



– Versione del codolo DIN 6535HA
– Versione del codolo DIN 6535HB
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 0°





Articolo	✻	Dimensioni [mm]					Denti	Grado
		d(h6)	L	D	Codolo	X		KMG303
5501R603FM-0300		3	48	0,2	HA	60	3	●
5501R604FM-0400		4	48	0,2	HA	60	4	●
5601R604FM-0600		6	55	0,2	HB	60	4	●
5601R604FM-0800		8	58	0,5	HB	60	4	●
5601R604FM-1000		10	65	0,5	HB	60	4	●
5601R606FM-1000		10	65	0,7	HB	60	6	○
5601R604FM-1200		12	75	0,5	HB	60	4	●
5601R606FM-1200		12	75	0,7	HB	60	6	○
5601R604FM-1600		16	85	0,7	HB	60	4	●
5601R606FM-1600		16	85	0,7	HB	60	6	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

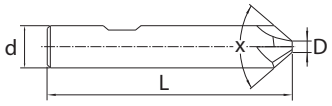
Frese a sbavare 90° Lavorazione generica

5501/5601R90*FM



– Versione del codolo DIN 6535HA
– Versione del codolo DIN 6535HB
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 0°





Articolo	✻	Dimensioni [mm] d(h6)	L	D	Codolo	X	Denti	Grado KMG303
5501R903FM-0300		3	48	0,2	HA	90	3	●
5501R904FM-0400		4	48	0,2	HA	90	4	●
5601R904FM-0600		6	55	0,2	HB	90	4	●
5601R904FM-0800		8	58	0,5	HB	90	4	●
5601R904FM-1000		10	65	0,5	HB	90	4	●
5601R906FM-1000		10	65	0,7	HB	90	6	○
5601R904FM-1200		12	75	0,5	HB	90	4	●
5601R906FM-1200		12	75	0,7	HB	90	6	○
5501R904FM-1600		16	85	0,7	HA	90	4	○
5601R904FM-1600		16	85	0,7	HB	90	4	●
5601R906FM-1600		16	85	0,7	HB	90	6	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

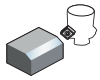
P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

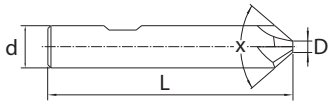
Frese a sbavare — Lavorazione generica

5501/5601R120*FM



– Versione del codolo DIN 6535HA
– Versione del codolo DIN 6535HB
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 0°





Articolo	✻	Dimensioni [mm]					Denti	Grado
		d(h6)	L	D	Codolo	X		KMG406
5501R1203FM-0300		3	48	0,2	HA	120	3	○
5501R1204FM-0400		4	48	0,2	HA	120	4	○
5601R1204FM-0600		6	55	0,2	HB	120	4	○
5501R1204FM-0600		6	55	0,2	HA	120	4	○
5601R1204FM-0800		8	58	0,5	HB	120	4	○
5501R1204FM-0800		8	58	0,5	HA	120	4	○
5501R1204FM-1000		10	65	0,5	HA	120	4	○
5601R1204FM-1000		10	65	0,5	HB	120	4	○
5601R1206FM-1000		10	65	0,7	HB	120	6	○
5501R1206FM-1000		10	65	0,7	HA	120	6	○
5501R1204FM-1200		12	75	0,5	HA	120	4	○
5601R1204FM-1200		12	75	0,5	HB	120	4	○
5501R1206FM-1200		12	75	0,7	HA	120	6	○
5601R1206FM-1200		12	75	0,7	HB	120	6	○
5501R1206FM-1600		16	85	0,7	HA	120	6	○
5601R1206FM-1600		16	85	0,7	HB	120	6	○
5501R1204FM-1600		16	85	0,7	HA	120	4	○
5601R1204FM-1600		16	85	0,7	HB	120	4	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

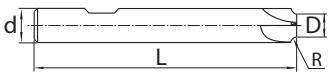
Frese a raggio concave a quarto di raggio — Lavorazione generica

5601R90*FM-R



– Versione del codolo DIN 6535HB
– taglio non oltre il centro
– Angolo di inclinazione dell'elica 0°





Articolo	✻	Dimensioni [mm] d(h6)	L	D	R	Denti	Grado KMG303
5601R904FM-R02-0600		6	60	5,6	0,2	4	●
5601R904FM-R03-0600		6	60	5,4	0,3	4	●
5601R904FM-R04-0600		6	60	5,2	0,4	4	●
5601R904FM-R05-0800		8	70	7	0,5	4	●
5601R904FM-R06-0800		8	70	6,8	0,6	4	●
5601R904FM-R075-0800		8	70	6,5	0,75	4	●
5601R904FM-R08-0800		8	70	6,4	0,8	4	●
5601R904FM-R10-0800		8	70	6	1	4	●
5601R904FM-R15-1000		10	75	7	1,5	4	●
5601R904FM-R20-1000		10	75	6	2	4	●
5601R904FM-R25-1200		12	75	7	2,5	4	●
5601R904FM-R30-1200		12	75	6	3	4	●
5601R904FM-R40-1600		16	80	8	4	4	●
5601R904FM-R50-2000		20	80	10	5	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

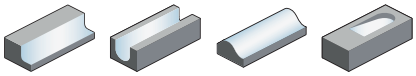
P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

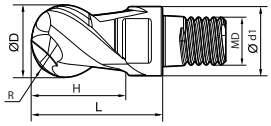
Frese a testa sferica — Lavorazione ad alte prestazioni

PM-2B



– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✻	Dimensioni [mm] R	D	d1	H	L	MD	Denti	Grado KMG405
Q08-PM-2B-D12.0		6	12	11,5	7	17	8	2	●
Q10-PM-2B-D16.0		8	16	15,2	9	21,5	10	2	●
Q12-PM-2B-D20.0		10	20	19	11	25,5	12	2	●
Q14-PM-2B-D25.0		12,5	25	24	13,5	31,5	14	2	●
Q18-PM-2B-D32.0		16	32	30	17	36	18	2	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

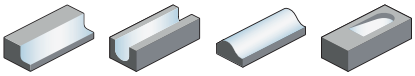
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie QCH

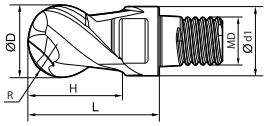
Frese a testa sferica Lavorazione ad alte prestazioni

PM-4B



– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d1	H	L	MD	Denti	Grado KMG405
Q08-PM-4B-D12.0		6	12	11,5	7	17	8	4	●
Q10-PM-4B-D16.0		8	16	15,2	9	21,5	10	4	●
Q12-PM-4B-D20.0		10	20	19	11	25,5	12	4	●
Q14-PM-4B-D25.0		12,5	25	24	13,5	31,5	14	4	●
Q18-PM-4B-D32.0		16	32	30	17	36	18	4	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

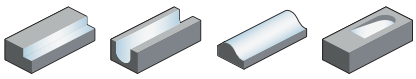
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

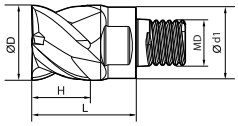
Frese a spallamento — Lavorazione ad alte prestazioni

PM-4E



– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✻	Dimensioni [mm] D	d1	H	L	MD	Denti	Grado KMG405
Q08-PM-4E-D12.0		12	11,5	7	17	8	4	●
Q10-PM-4E-D16.0		16	15,2	9	21,5	10	4	●
Q12-PM-4E-D20.0		20	19	11	25,5	12	4	●
Q14-PM-4E-D25.0		25	24	13,5	31,5	14	4	●
Q18-PM-4E-D32.0		32	30	17	36	18	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

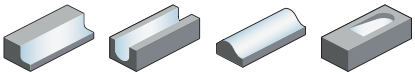
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese in metallo duro integrale Serie QCH

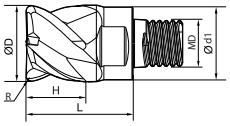
Frese toroidali Lavorazione ad alte prestazioni

PM-4R



– taglio al centro
– Angolo di inclinazione dell'elica 30°





Articolo	✲	Dimensioni [mm] R	D	d1	H	L	MD	Denti	Grado KMG405
Q08-PM-4R-D12.0R1.0		1	12	11,5	7	17	8	4	●
Q08-PM-4R-D12.0R2.0		2	12	11,5	7	17	8	4	●
Q10-PM-4R-D16.0R1.0		1	16	15,2	9	21,5	10	4	●
Q10-PM-4R-D16.0R1.5		1,5	16	15,2	9	21,5	10	4	●
Q10-PM-4R-D16.0R2.0		2	16	15,2	9	21,5	10	4	●
Q12-PM-4R-D20.0R1.0		1	20	19	11	25,5	12	4	●
Q12-PM-4R-D20.0R2.0		2	20	19	11	25,5	12	4	●
Q14-PM-4R-D25.0R1.0		1	25	24	13,5	31,5	14	4	●
Q14-PM-4R-D25.0R2.0		2	25	24	13,5	31,5	14	4	●
Q14-PM-4R-D25.0R2.5		2,5	25	24	13,5	31,5	14	4	●
Q18-PM-4R-D32.0R1.0		1	32	30	17	36	18	4	●
Q18-PM-4R-D32.0R2.0		2	32	30	17	36	18	4	●
Q18-PM-4R-D32.0R3.0		3	32	30	17	36	18	4	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

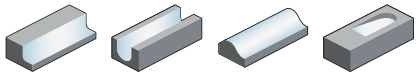
P	M	K	N	S	H
✔	✔	✔			✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

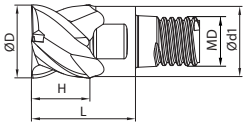
Frese a spallamento — Lavorazione ad alte prestazioni

VPM-4E



– taglio al centro
– Angolo di inclinazione dell'elica 38°





Articolo	✻	Dimensioni [mm] D	d1	H	L	MD	Denti	Grado KMG406
Q08-VPM-4E-D12.0		12	11,5	7	17	8	4	●
Q10-VPM-4E-D16.0		16	15,2	9	21,5	10	4	●
Q12-VPM-4E-D20.0		20	19	11	25,5	12	4	●
Q14-VPM-4E-D25.0		25	24	13,5	31,5	14	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			✔

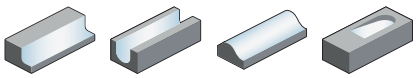
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a testa sferica

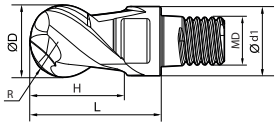
Lavorazioni di acciai temprati

HMX-2B



– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d1	H	L	MD	Denti	Grado KMG5515
Q08-HMX-2B-D12.0		6	12	11,5	7	17	8	2	●
Q10-HMX-2B-D16.0		8	16	15,2	9	21,5	10	2	●
Q12-HMX-2B-D20.0		10	20	19	11	25,5	12	2	●
Q14-HMX-2B-D25.0		12,5	25	24	13,5	31,5	14	2	●
Q18-HMX-2B-D32.0		16	32	30	17	36	18	2	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

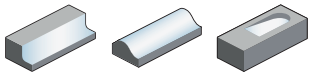
P	M	K	N	S	H
					✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

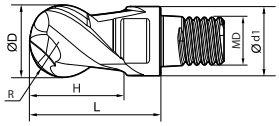
Frese a testa sferica — Lavorazioni di acciai temprati

HMX-4B



– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✻	Dimensioni [mm] R	D	d1	H	L	MD	Denti	Grado KMG5515
Q08-HMX-4B-D12.0		6	12	11,5	7	17	8	4	●
Q10-HMX-4B-D16.0		8	16	15,2	9	21,5	10	4	●
Q12-HMX-4B-D20.0		10	20	19	11	25,5	12	4	●
Q14-HMX-4B-D25.0		12,5	25	24	13,5	31,5	14	4	●
Q18-HMX-4B-D32.0		16	32	30	17	36	18	4	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

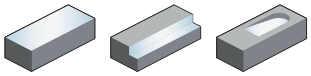
✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

Frese a spallamento

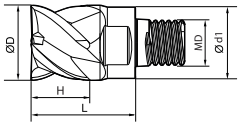
Lavorazioni di acciai temprati

HMX-4E



– taglio al centro
– Angolo di inclinazione dell'elica 45°





Articolo	✲	Dimensioni [mm] D	d1	H	L	MD	Denti	Grado KMG5515
Q08-HMX-4E-D12.0		12	11,5	7	17	8	4	●
Q10-HMX-4E-D16.0		16	15,2	9	21,5	10	4	●
Q12-HMX-4E-D20.0		20	19	11	25,5	12	4	●
Q14-HMX-4E-D25.0		25	24	13,5	31,5	14	4	●
Q18-HMX-4E-D32.0		32	30	17	36	18	4	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

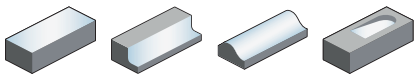
P	M	K	N	S	H
					✔

✔ Molto adatto
✔ Adatto

Codice sistema B278 Dati di taglio B492 Ordine utensili speciali B541

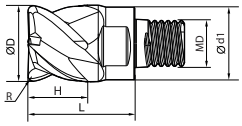
Frese toroidali | Lavorazioni di acciai temprati

HMX-4R



– taglio al centro
– Angolo di inclinazione dell'elica 35°





Articolo	✲	Dimensioni [mm] R	D	d1	H	L	MD	Denti	Grado KMG405
Q08-HMX-4R-D12.0R1.0		1	12	11,5	7	17	8	4	●
Q08-HMX-4R-D12.0R2.0		2	12	11,5	7	17	8	4	●
Q10-HMX-4R-D16.0R1.0		1	16	15,2	9	21,5	10	4	●
Q10-HMX-4R-D16.0R1.5		1,5	16	15,2	9	21,5	10	4	●
Q10-HMX-4R-D16.0R2.0		2	16	15,2	9	21,5	10	4	●
Q12-HMX-4R-D20.0R1.0		1	20	19	11	25,5	12	4	●
Q12-HMX-4R-D20.0R2.0		2	20	19	11	25,5	12	4	●
Q14-HMX-4R-D25.0R1.0		1	25	24	13,5	31,5	14	4	●
Q14-HMX-4R-D25.0R2.0		2	25	24	13,5	31,5	14	4	●
Q14-HMX-4R-D25.0R2.5		2,5	25	24	13,5	31,5	14	4	●
Q18-HMX-4R-D32.0R1.0		1	32	30	17	36	18	4	●
Q18-HMX-4R-D32.0R2.0		2	32	30	17	36	18	4	●
Q18-HMX-4R-D32.0R3.0		3	32	30	17	36	18	4	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

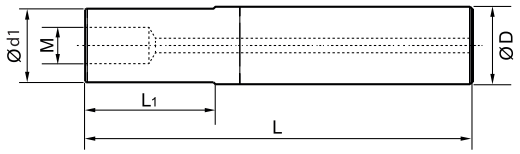
P	M	K	N	S	H
					✔

✔ Molto adatto
✔ Adatto

Codice sistema > B278 Dati di taglio > B492 Ordine utensili speciali > B541

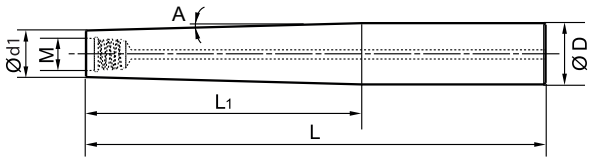
Sistema di attacchi

Stelo in metallo duro integrale, scaricato



Articolo	Dimensioni [mm]				Angolo (M)	Stock
	D	d1	L	L1		
G12-QCH-Q08-80C	12	11,5	80	30	Q8	●
G12-QCH-Q08-100C	12	11,5	100	50	Q8	●
G12-QCH-Q08-120C	12	11,5	120	70	Q8	●
G16-QCH-Q10-90C	16	15,2	90	40	Q10	●
G16-QCH-Q10-120C	16	15,2	120	70	Q10	●
G16-QCH-Q10-150C	16	15,2	150	100	Q10	●
G20-QCH-Q12-100C	20	19	100	40	Q12	●
G20-QCH-Q12-140C	20	19	140	80	Q12	●
G20-QCH-Q12-180C	20	19	180	120	Q12	●
G25-QCH-Q14-120C	25	24	120	50	Q14	●
G25-QCH-Q14-170C	25	24	170	100	Q14	●
G25-QCH-Q14-220C	25	24	220	150	Q14	●
G32-QCH-Q18-140C	32	30	140	70	Q18	●
G32-QCH-Q18-200C	32	30	200	130	Q18	●
G32-QCH-Q18-260C	32	30	260	190	Q18	●
G32-QCH-Q18-320C	32	30	320	250	Q18	●

Stelo in metallo duro integrale, conico



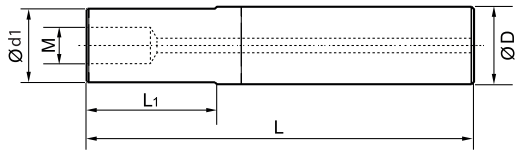
Articolo	Dimensioni [mm]				Filetto (M)	Angolo (A)	Stock
	D	d1	L	L1			
G16-QCH-Q08-140C-ZJ90	16	11,5	140	90	Q8	1,0	●
G20-QCH-Q10-200C-ZJ140	20	15,2	200	140	Q8	0,8	●
G25-QCH-Q12-250C-ZJ180	25	19	250	180	Q8	0,8	●
G32-QCH-Q14-270C-ZJ200	32	30	270	200	Q10	0,8	●

Parti di ricambio

	Filetto	Q8 / Q10	Q12 / Q14	Q18
	Chiave	QCH-10×13	QCH-16×20	QCH-26

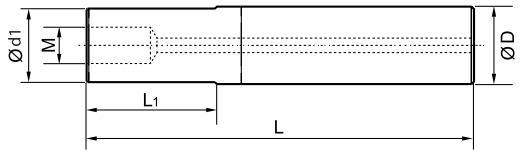
Sistema di attacchi

Codolo in acciaio, scaricato



Articolo	Dimensioni [mm]				Angolo (M)	Stock
	D	d1	L	L1		
G12-QCH-Q08-65S	12	11,5	65	19	Q08	●
G16-QCH-Q10-100S	16	15,2	100	42	Q10	●
G20-QCH-Q12-110S	20	19	110	54	Q12	●

Stelo in metallo duro integrale, scaricato, filettatura metrica



Articolo	Dimensioni [mm]				Angolo (M)	Stock
	D	d1	L	L1		
G16-QCH-M8-90C-125	16	12,5	90	35	M8	○
G16-QCH-M8-110C-125	16	12,5	110	55	M8	○
G16-QCH-M8-130C-125	16	12,5	130	75	M8	○
G16-QCH-M8-90C	16	15	90	35	M8	○
G16-QCH-M8-110C	16	15	110	55	M8	○
G16-QCH-M8-130C	16	15	130	75	M8	○
G16-QCH-M8-170C	16	15	170	115	M8	○
G16-QCH-M8-200C	16	15	200	145	M8	○
G20-QCH-M10-87C	20	18,5	87	30	M10	○
G20-QCH-M10-107C	20	18,5	107	50	M10	○
G20-QCH-M10-127C	20	18,5	127	70	M10	○
G20-QCH-M10-167C	20	18,5	167	110	M10	○
G20-QCH-M10-197C	20	18,5	197	140	M10	○
G25-QCH-M12-128C	25	23	128	65	M12	○
G25-QCH-M12-148C	25	23	148	85	M12	○
G25-QCH-M12-168C	25	23	168	105	M12	○
G25-QCH-M12-198C	25	23	198	135	M12	○
G25-QCH-M12-228C	25	23	228	165	M12	○
G32-QCH-M16-161C	32	29	161	95	M16	○
G32-QCH-M16-211C	32	29	211	145	M16	○
G32-QCH-M16-281C	32	29	281	215	M16	○
G32-QCH-M16-311C	32	29	311	245	M16	○
G32-QCH-M16-361C	32	29	361	295	M16	○

Principi guida per i dati di taglio consigliati – Frese in metallo duro integrale

End mill – GM series

1

2

3

4

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min] 5501R302GM 5601R302GM 5502R302GM 5602R302GM – Slot milling Ø [mm] $a_{p\,max}$	Shoulder milling Ø [mm] $a_{e\,max}$	GM-2E GM-2EFP GM-2F – Slot milling Ø [mm] $a_{p\,max}$	Shoulder milling Ø [mm] $a_{e\,max}$
						0<x<3 0,1 x D	0<x≤20 <0,5 x D	0<x<3 0,1 x D	0<x≤20 <0,5 x D
						3≤x≤20 0,8 x D		3≤x≤20 0,8 x D	
						KMG303 a_e / D		KMG303 a_e / D	
						1/1	1/2	1/10	f-group	1/1	1/2	1/10	f-group
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1	150	200	270	2	150	200	270	2
		ca. 0,45 % C	annealed	190	2	145	190	260	2	145	190	260	2
		ca. 0,45 % C	tempered	250	3	105	140	190	2	105	140	190	2
		ca. 0,75 % C	annealed	270	4	90	120	165	2	90	120	165	2
		ca. 0,75 % C	tempered	300	5	85	110	150	2	85	110	150	2
	Low-alloyed steel		annealed	180	6	115	150	205	2	115	150	205	2
			tempered	275	7	90	120	165	2	90	120	165	2
			tempered	300	8	85	110	150	2	85	110	150	2
			tempered	350	9	80	105	145	2	80	105	145	2
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	105	140	190	2	105	140	190	2
			hardened and tempered	325	11	80	110	145	2	80	110	145	2
M	Stainless steel	ferritic/martensitic	annealed	200	12	50	65	90	2	50	65	90	2
		martensitic	tempered	240	13	45	60	80	2	45	60	80	2
		austenitic	quench hardened	180	14	55	70	95	2	55	70	95	2
		austenitic-ferritic		230	15	45	60	80	2	45	60	80	2
K	Grey cast iron	perlitic/ferritic		180	16	110	150	200	2	110	150	200	2
		perlitic (martensitic)		260	17	90	120	165	2	90	120	165	2
	Cast iron with spheroidal graphite	ferritic		160	18	135	180	245	2	135	180	245	2
		perlitic		250	19	105	140	190	2	105	140	190	2
	Malleable cast iron	ferritic		130	20	150	200	270	2	150	200	270	2
		perlitic		230	21	120	160	220	2	120	160	220	2
N	Aluminium wrought alloys	cannot be hardened		60	22								
		hardenable	hardened	100	23								
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24								
		≤ 12 % Si, hardenable	hardened	90	25								
		> 12 % Si, cannot be hardened		130	26								
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, Pb-free copper, electrolytic copper		100	29								
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30								
			hardened	280	31								
		Ni or Co bass	annealed	250	32								
			hardened	350	33								
			cast	320	34								
	Titanium alloys	pure titanium		R_m 400	35								
		α and β alloys	hardened	R_m 1050	36								
H	Hardened steel		hardened and tempered	55 HRC	37								
			hardened and tempered	60 HRC	38								
	Hard cast iron		cast	400	39								
	Hardened cast iron		hardened and tempered	55 HRC	40								
X	Non-metallic materials	Thermoplasts			41								
		Thermosetting plastics			42								
		Plastic, glass-fibre reinforced GFRP			43								
		Plastic, carbon fibre reinforced CFRP			44								
		Graphite			45								
		Wood			46								

Note: The given cutting values are guide values, which were determined under ideal conditons.
The values have to be adapted in individual cases.
Feed rate recommendations on page B460
For examples of material for cutting tool groups view page D22.

Recommend feed rate

Solid carbide milling group 2 – Square shoulder mills GM *series*

	a_e / D	Feed rate per cutting edge (f_z) [mm]																	
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20			
P	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09			
	1/2	0,01	0,03	0,03	0,03	0,03	0,03	0,04	0,04	0,05	0,08	0,09	0,09	0,10	0,10	0,12			
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,08	0,12	0,14	0,14	0,16	0,16	0,18			
M	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,05	0,06	0,06	0,06	0,06	0,07			
	1/2	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09			
	1/10	0,02	0,03	0,03	0,03	0,03	0,03	0,05	0,05	0,06	0,10	0,11	0,11	0,13	0,13	0,15			
K	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09			
	1/2	0,01	0,03	0,03	0,03	0,03	0,03	0,04	0,04	0,05	0,08	0,09	0,09	0,10	0,10	0,12			
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,08	0,12	0,14	0,14	0,16	0,16	0,18			

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Selezionare la serie di prodotti adatta.
2. Determinare il rapporto di contatto.
3. Seleziona il materiale utilizzato e selezionare la velocità di taglio.
4. Determinare il gruppo di avanzamento e consultare i dati di avanzamento consigliati.
5. Selezionare il diametro dell'utensile e il rapporto di contatto.

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie GM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						5501R302GM 5601R302GM 5502R302GM 5602R302GM				GM-2E GM-2EFP GM-2F			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D
						3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D		
						KMG303				KMG303			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	150	200	270	2	150	200	270	2
		ca. 0,45 % C	Temprato	190	2	145	190	260	2	145	190	260	2
		ca. 0,45 % C	pre-temprato	250	3	105	140	190	2	105	140	190	2
		ca. 0,75 % C	Temprato	270	4	90	120	165	2	90	120	165	2
		ca. 0,75 % C	pre-temprato	300	5	85	110	150	2	85	110	150	2
	Acciaio al carbonio		Temprato	180	6	115	150	205	2	115	150	205	2
			pre-temprato	275	7	90	120	165	2	90	120	165	2
			pre-temprato	300	8	85	110	150	2	85	110	150	2
			pre-temprato	350	9	80	105	145	2	80	105	145	2
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	105	140	190	2	105	140	190	2
			temprato e rinvenuto	325	11	80	110	145	2	80	110	145	2
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	50	65	90	2	50	65	90	2
		martensitico	pre-temprato	240	13	45	60	80	2	45	60	80	2
		austenitico	quencing	180	14	55	70	95	2	55	70	95	2
		austenitico-ferritico		230	15	45	60	80	2	45	60	80	2
K	Ghisa grigia	perlitico/ferritico		180	16	110	150	200	2	110	150	200	2
		perlitico (martensitico)		260	17	90	120	165	2	90	120	165	2
	Ghise con grafite sferoidale	ferritico		160	18	135	180	245	2	135	180	245	2
		perlitico		250	19	105	140	190	2	105	140	190	2
	Ghisa malleabile	ferritico		130	20	150	200	270	2	150	200	270	2
		perlitico		230	21	120	160	220	2	120	160	220	2
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	GM-2EL GM-2EX GM-2FL				GM-2EP GM-2ES				GM-3E GM-4E GM-4E-G				GM-2EL GM-4EL-G				5501R303GM 5601R303GM 5502R303GM 5602R303GM			
	Cave		Spallamento		Cave		Spallamento		Cave		Spallamento		Cave		Spallamento		Cave		Spallamento	
	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D
	3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D		
	KMG303				KMG303				KMG303				KMG303				KMG303			
	a_e / D				a_e / D				a_e / D				a_e / D				a_e / D			
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
	130	170	230	2	150	200	270	2	150	200	270	2	130	170	230	2	140	185	245	2
	125	165	220	2	145	190	260	2	145	190	260	2	125	165	220	2	135	180	235	2
	95	120	165	2	105	140	190	2	105	140	190	2	95	120	165	2	100	130	175	2
	80	105	140	2	90	120	165	2	90	120	165	2	80	105	140	2	85	115	150	2
	75	95	130	2	85	110	150	2	85	110	150	2	75	95	130	2	80	105	135	2
	100	130	175	2	115	150	205	2	115	150	205	2	100	130	175	2	105	140	185	2
	80	105	140	2	90	120	165	2	90	120	165	2	80	105	140	2	85	115	150	2
	75	95	130	2	85	110	150	2	85	110	150	2	75	95	130	2	80	105	135	2
	70	90	120	2	80	105	145	2	80	105	145	2	70	90	120	2	75	100	130	2
	95	120	165	2	105	140	190	2	105	140	190	2	95	120	165	2	100	130	175	2
	70	95	125	2	80	110	145	2	80	110	145	2	70	95	125	2	75	100	130	2
	45	55	75	2	50	65	90	2	50	65	90	2	45	55	75	2	45	60	80	2
	40	50	65	2	45	60	80	2	45	60	80	2	40	50	65	2	40	55	70	2
	45	60	80	2	55	70	95	2	55	70	95	2	45	60	80	2	50	65	85	2
	40	50	65	2	45	60	80	2	45	60	80	2	40	50	65	2	40	55	70	2
	95	125	170	2	110	150	200	2	110	150	200	2	95	125	170	2	105	140	180	2
	80	105	140	2	90	120	165	2	90	120	165	2	80	105	140	2	85	115	150	2
	120	155	210	2	135	180	245	2	135	180	245	2	120	155	210	2	130	170	225	2
	95	120	165	2	105	140	190	2	105	140	190	2	95	120	165	2	100	130	175	2
	130	170	230	2	150	200	270	2	150	200	270	2	130	170	230	2	140	185	245	2
	105	140	185	2	120	160	220	2	120	160	220	2	105	140	185	2	115	150	200	2

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie GM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						5501R304GF 5601R304GF 5502R304GF 5602R304GF				GM-4F-G GM-4EFP			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D
						3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D		
						KMG303				KMG303			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	155	200	265	2	150	200	270	2
		ca. 0,45 % C	Temprato	190	2	150	190	255	2	145	190	260	2
		ca. 0,45 % C	pre-temprato	250	3	110	140	190	2	105	140	190	2
		ca. 0,75 % C	Temprato	270	4	95	120	160	2	90	120	165	2
		ca. 0,75 % C	pre-temprato	300	5	90	110	150	2	85	110	150	2
	Acciaio al carbonio		Temprato	180	6	120	150	200	2	115	150	205	2
			pre-temprato	275	7	95	120	160	2	90	120	165	2
			pre-temprato	300	8	90	110	150	2	85	110	150	2
			pre-temprato	350	9	85	105	140	2	80	105	145	2
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	110	140	190	2	105	140	190	2
			temprato e rinvenuto	325	11	85	110	145	2	80	110	145	2
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	50	65	85	2	50	65	90	2
		martensitico	pre-temprato	240	13	45	60	75	2	45	60	80	2
		austenitico	quencing	180	14	55	70	95	2	55	70	95	2
		austenitico-ferritico		230	15	45	60	75	2	45	60	80	2
K	Ghisa grigia	perlitico/ferritico		180	16	115	150	195	2	110	150	200	2
		perlitico (martensitico)		260	17	95	120	160	2	90	120	165	2
	Ghise con grafite sferoidale	ferritico		160	18	140	180	240	2	135	180	245	2
		perlitico		250	19	110	140	190	2	105	140	190	2
	Ghisa malleabile	ferritico		130	20	155	200	265	2	150	200	270	2
		perlitico		230	21	125	160	215	2	120	160	220	2
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	GM-4FL-G GM-4EX-G				GM-6E				GM-6E 5589R45MGFR				5565R302GF 5565R302GM 5566R302GF				GM-2B GM-4B GM-2BS GM-2BP			
	Cave		Spallamento				Spallamento				Spallamento		Cave		Spallamento					
	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$			Ø [mm]	$a_{e\,max}$			Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$				
	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D			0 < x ≤ 20	< 0,5 x D			0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D				
	3 ≤ x ≤ 20	0,8 x D											3 ≤ x ≤ 20	0,8 x D						
	KMG303				KMG303				KMG303				KMG303				KMG303			
	a_e / D				a_e / D				a_e / D				a_e / D				a_e / D			
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/10	1/20	Gruppo f	1/1	1/10	1/20	Gruppo f
	130	170	230	2	–	–	270	2	–	–	230	2	–	250	280	5	–	250	280	5
	125	165	220	2	–	–	260	2	–	–	220	2	–	240	270	5	–	240	270	5
	95	120	165	2	–	–	190	2	–	–	165	2	–	175	200	5	–	175	200	5
	80	105	140	2	–	–	165	2	–	–	140	2	–	150	170	5	–	150	170	5
	75	95	130	2	–	–	150	2	–	–	130	2	–	140	155	5	–	140	155	5
	100	130	175	2	–	–	205	2	–	–	175	2	–	190	210	5	–	190	210	5
	80	105	140	2	–	–	165	2	–	–	140	2	–	150	170	5	–	150	170	5
	75	95	130	2	–	–	150	2	–	–	130	2	–	140	155	5	–	140	155	5
	70	90	120	2	–	–	145	2	–	–	120	2	–	130	150	5	–	130	150	5
	95	120	165	2	–	–	190	2	–	–	165	2	–	175	200	5	–	175	200	5
	70	95	125	2	–	–	145	2	–	–	125	2	–	135	150	5	–	135	150	5
	45	55	75	2	–	–	90	2	–	–	75	2	–	80	90	5	–	80	90	5
	40	50	65	2	–	–	80	2	–	–	65	2	–	70	80	5	–	70	80	5
	45	60	80	2	–	–	95	2	–	–	80	2	–	85	100	5	–	85	100	5
	40	50	65	2	–	–	80	2	–	–	65	2	–	70	80	5	–	70	80	5
	95	125	170	2	–	–	200	2	–	–	170	2	–	185	205	5	–	185	205	5
	80	105	140	2	–	–	165	2	–	–	140	2	–	150	170	5	–	150	170	5
	120	155	210	2	–	–	245	2	–	–	210	2	–	225	255	5	–	225	255	5
	95	120	165	2	–	–	190	2	–	–	165	2	–	175	200	5	–	175	200	5
	130	170	230	2	–	–	270	2	–	–	230	2	–	250	280	5	–	250	280	5
	105	140	185	2	–	–	220	2	–	–	185	2	–	200	225	5	–	200	225	5

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie GM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						GM-2BL GM-4BL GM-2BFP				GM-2R GM-4R			
										Cave		Spallamento	
										Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
										0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D
										3 ≤ x ≤ 20	0,8 x D		
						KMG303				KMG303			
						a_e / D				a_e / D			
						1/1	1/10	1/20	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	–	220	250	5	160	215	275	2
		ca. 0,45 % C	Temprato	190	2	–	210	240	5	155	205	265	2
		ca. 0,45 % C	pre-temprato	250	3	–	155	175	5	115	155	195	2
		ca. 0,75 % C	Temprato	270	4	–	135	150	5	100	130	165	2
		ca. 0,75 % C	pre-temprato	300	5	–	125	140	5	90	120	155	2
	Acciaio al carbonio		Temprato	180	6	–	165	190	5	120	165	210	2
			pre-temprato	275	7	–	135	150	5	100	130	165	2
			pre-temprato	300	8	–	125	140	5	90	120	155	2
			pre-temprato	350	9	–	115	130	5	85	115	145	2
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	–	155	175	5	115	155	195	2
			temprato e rinvenuto	325	11	–	120	135	5	85	115	150	2
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	–	75	80	5	55	70	90	2
		martensitico	pre-temprato	240	13	–	65	70	5	45	65	80	2
		austenitico	quencing	180	14	–	75	85	5	55	75	95	2
		austenitico-ferritico		230	15	–	65	70	5	45	65	80	2
K	Ghisa grigia	perlitico/ferritico		180	16	–	165	185	5	120	160	205	2
		perlitico (martensitico)		260	17	–	135	150	5	100	130	165	2
	Ghise con grafite sferoidale	ferritico		160	18	–	200	225	5	145	195	250	2
		perlitico		250	19	–	155	175	5	115	155	195	2
	Ghisa malleabile	ferritico		130	20	–	220	250	5	160	215	275	2
		perlitico		230	21	–	180	200	5	130	175	220	2
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
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Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]								
	GM-4RL				5602R303GR 5602R304GR 5602R305GR GM-4W				
	Cave		Spallamento		Cave		Spallamento		
	Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$	Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$	
	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	0 < x < 3	0,1 x D	0 < x ≤ 20	< 0,5 x D	
	3 ≤ x ≤ 20	0,8 x D			3 ≤ x ≤ 20	0,8 x D			
	KMG303				KMG303				
	a_e / D				a_e / D				
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	
	145	200	240	2	135	180	240	2	
	140	190	230	2	130	175	230	2	
	105	140	170	2	95	130	170	2	
	90	120	145	2	85	110	145	2	
	80	110	135	2	75	100	135	2	
	110	150	180	2	105	135	180	2	
	90	120	145	2	85	110	145	2	
	80	110	135	2	75	100	135	2	
	80	105	125	2	75	95	125	2	
	105	140	170	2	95	130	170	2	
	80	110	130	2	75	100	130	2	
	50	65	80	2	45	60	80	2	
	45	60	70	2	40	55	70	2	
	50	70	85	2	50	65	85	2	
	45	60	70	2	40	55	70	2	
	110	150	180	2	100	135	180	2	
	90	120	145	2	85	110	145	2	
	135	180	220	2	125	165	220	2	
	105	140	170	2	95	130	170	2	
	145	200	240	2	135	180	240	2	
	120	160	195	2	110	145	195	2	

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie HM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						HM-2E HM-2EP HM-2ES HM-4E				HM-2EFP HM-4EL HM-4EFP			
								Spallamento				Spallamento	
								Ø [mm]	$a_{e\,max}$			Ø [mm]	$a_{e\,max}$
								0 < x ≤ 20	0,05 x D			0 < x ≤ 20	0,05 x D
						KMG555				KMG555			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1								
		ca. 0,45 % C	Temprato	190	2								
		ca. 0,45 % C	pre-temprato	250	3								
		ca. 0,75 % C	Temprato	270	4								
		ca. 0,75 % C	pre-temprato	300	5								
	Acciaio al carbonio		Temprato	180	6								
			pre-temprato	275	7								
			pre-temprato	300	8								
			pre-temprato	350	9								
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10								
			temprato e rinvenuto	325	11								
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16								
		perlitico (martensitico)		260	17								
	Ghise con grafite sferoidale	ferritico		160	18								
		perlitico		250	19								
	Ghisa malleabile	ferritico		130	20								
		perlitico		230	21								
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	55	100	125	3	50	95	115	3
			temprato e rinvenuto	60 HRC	38	55	95	120	3	50	95	110	3
	Ghisa dura		fuso	400	39	70	125	160	3	65	120	145	3
	Ghise temprate		temprato e rinvenuto	55 HRC	40	55	100	125	3	50	95	115	3
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
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I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

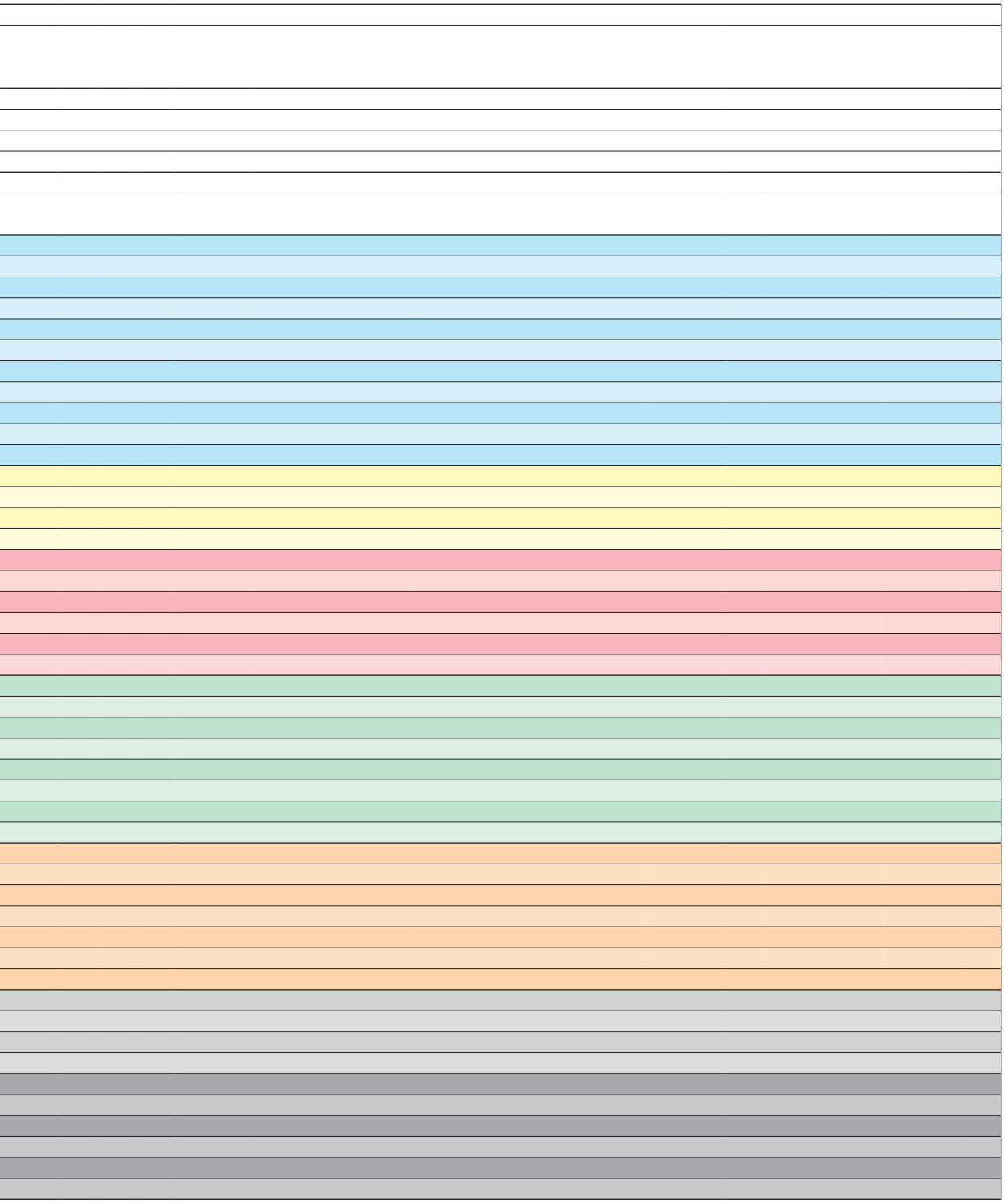
	Velocità di taglio v_c [m/min]																			
	HM-6E				HM-6EL				HM-2B HM-2BP HM-2BS HM-4B				HM-2BL HM-4BL				HM-4R HM-4RP HM-4RF			
			Spallamento				Spallamento												Spallamento	
			Ø [mm]	$a_{e\,max}$			Ø [mm]	$a_{e\,max}$											Ø [mm]	$a_{e\,max}$
			0 < x ≤ 20	0,05 x D			0 < x ≤ 20	0,05 x D											0 < x ≤ 20	0,05 x D
	KMG555				KMG555				KMG555				KMG555				KMG555			
	a_e / D				a_e / D				a_e / D				a_e / D				a_e / D			
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/10	1/20	Gruppo f	1/1	1/10	1/20	Gruppo f	1/1	1/2	1/10	Gruppo f
	–	–	125	3	–	–	115	3	–	130	145	7	–	125	140	7	55	100	125	3
	–	–	120	3	–	–	110	3	–	80	90	7	–	80	90	7	55	95	120	3
	–	–	160	3	–	–	145	3	–	163	181	7	–	156	175	7	70	125	160	3
	–	–	125	3	–	–	115	3	–	109	145	7	–	105	140	7	55	100	125	3

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie NM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						5502R402NM NM-2E NM-4E NM-2EP				NM-2B NM-4BP			
						Cave		Spallamento					
						Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$				
						0<x<12	0,5xD	0<x≤20	<0,5xD				
						12≤x≤20	1,0xD						
						KMG309				KMG309			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/10	1/20	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1								
		ca. 0,45 % C	Temprato	190	2								
		ca. 0,45 % C	pre-temprato	250	3								
		ca. 0,75 % C	Temprato	270	4								
		ca. 0,75 % C	pre-temprato	300	5								
	Acciaio al carbonio		Temprato	180	6								
			pre-temprato	275	7								
			pre-temprato	300	8								
			pre-temprato	350	9								
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10								
			temprato e rinvenuto	325	11								
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16								
		perlitico (martensitico)		260	17								
	Ghise con grafite sferoidale	ferritico		160	18								
		perlitico		250	19								
	Ghisa malleabile	ferritico		130	20								
		perlitico		230	21								
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	920	1100	1200	4	–	1400	1550	4
		invecchiabile	indurito	100	23	555	660	720	4	–	840	930	4
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	370	440	480	4	–	560	620	4
		≤ 12 % Si, invecchiabile	indurito	90	25	460	550	600	4	–	700	775	4
		> 12 % Si, non invecchiabile		130	26	140	165	180	4	–	210	235	4
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	280	330	360	4	–	420	465	4
		CuZn, CuSnZn		90	28	325	385	420	4	–	490	545	4
		CuSn, rame senza piombo e rame elettrolitico		100	29	280	330	360	4	–	420	465	4
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
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Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.



Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie AL, Serie ALP/ALG

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						ALP-1EP				AL-1E, AL-2E, AL-3E (W), ALG-2E			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0<x<12	0,5xD	0<x≤20	<0,5xD	0<x<12	0,5xD	0<x≤20	<0,5xD
						12≤x≤20	1,0xD			12≤x≤20	1,0xD		
						YK40F / KMD401				YK30F / YK40F			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1								
		ca. 0,45 % C	Temprato	190	2								
		ca. 0,45 % C	pre-temprato	250	3								
		ca. 0,75 % C	Temprato	270	4								
		ca. 0,75 % C	pre-temprato	300	5								
	Acciaio al carbonio		Temprato	180	6								
			pre-temprato	275	7								
			pre-temprato	300	8								
			pre-temprato	350	9								
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10								
			temprato e rinvenuto	325	11								
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16								
		perlitico (martensitico)		260	17								
	Ghise con grafite sferoidale	ferritico		160	18								
		perlitico		250	19								
	Ghisa malleabile	ferritico		130	20								
		perlitico		230	21								
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	300	345	375	12	920	1100	1200	4
		invecchiabile	indurito	100	23	250	290	315	12	555	660	720	4
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	250	280	315	12	370	440	480	4
		≤ 12 % Si, invecchiabile	indurito	90	25	210	240	265	12	460	550	600	4
		> 12 % Si, non invecchiabile		130	26	180	210	225	12	140	165	180	4
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	280	320	350	12	280	330	360	4
		CuZn, CuSnZn		90	28	310	360	390	12	325	385	420	4
		CuSn, rame senza piombo e rame elettrolitico		100	29	280	320	350	12	280	330	360	4
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	AL-2EL AL-3EL				ALG-3E ALP-3E ALP-4E				ALG-3E (W) ALP-3E (W) ALP-4E (W)				5566R302NH AL-2B				AL-2R-AIR AL-3R-AIR			
	Cave		Spallamento		Cave		Spallamento		Cave		Spallamento		Cave		Spallamento		Cave		Spallamento	
	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
	0<x<12	0,5xD	0<x≤20	<0,5xD	0<x<12	0,5xD	0<x≤20	<0,5xD	0<x<12	0,5xD	0<x≤20	<0,5xD	0<x<12	0,5xD	0<x≤20	<0,5xD	0<x<12	0,5xD	0<x≤20	<0,5xD
	12≤x≤20	1,0xD			12≤x≤20	1,0xD			12≤x≤20	1,0xD			12≤x≤20	1,0xD			12≤x≤20	1,0xD		
	YK30F				YK40F				KMD401				YK30F / YK40F				YK40F			
	a_e / D				ae / D				a_e / D				a_e / D				ae / D			
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/10	1/20	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
	830	990	1080	4	920	1100	1200	4	1200	1430	1560	4	–	1400	1550	4	1150	1380	1500	8
	500	595	650	4	555	660	720	4	725	860	940	4	–	840	930	4	690	830	900	8
	335	400	435	4	370	440	480	4	485	575	625	4	–	560	620	4	460	555	600	8
	415	495	540	4	460	550	600	4	600	715	780	4	–	700	775	4	575	690	750	8
	125	150	165	4	140	165	180	4	185	215	235	4	–	210	235	4	175	210	225	8
	250	300	325	4	280	330	360	4	365	430	470	4	–	420	465	4	345	415	450	8
	295	350	380	4	325	385	420	4	425	505	550	4	–	490	545	4	405	485	525	8
	250	300	325	4	280	330	360	4	365	430	470	4	–	420	465	4	345	415	450	8

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie AL, Serie ALP/ALG

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						ALG-2R (W)				AL-2RL-AIR AL-3RL-AIR			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$	Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$
						0<x<12	0,5xD	0<x≤20	<0,5xD	0<x<12	0,5xD	0<x≤20	<0,5xD
						12≤x≤20	1,0xD			12≤x≤20	1,0xD		
						KMD401				YK40F			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1								
		ca. 0,45 % C	Temprato	190	2								
		ca. 0,45 % C	pre-temprato	250	3								
		ca. 0,75 % C	Temprato	270	4								
		ca. 0,75 % C	pre-temprato	300	5								
	Acciaio al carbonio		Temprato	180	6								
			pre-temprato	275	7								
			pre-temprato	300	8								
			pre-temprato	350	9								
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10								
			temprato e rinvenuto	325	11								
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16								
		perlitico (martensitico)		260	17								
	Ghise con grafite sferoidale	ferritico		160	18								
		perlitico		250	19								
	Ghisa malleabile	ferritico		130	20								
		perlitico		230	21								
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	1495	1795	1950	8	1035	1250	1350	8
		invecchiabile	indurito	100	23	900	1080	1170	8	625	750	810	8
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	600	725	780	8	415	500	540	8
		≤ 12 % Si, invecchiabile	indurito	90	25	750	900	975	8	520	625	675	8
		> 12 % Si, non invecchiabile		130	26	230	275	295	8	160	190	205	8
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	450	540	585	8	315	375	405	8
		CuZn, CuSnZn		90	28	530	635	685	8	365	440	475	8
		CuSn, rame senza piombo e rame elettrolitico		100	29	450	540	585	8	315	375	405	8
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Frese in metallo duro integrale

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie TM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						TM-4R / TM-4RP TM-5R / TM-5RP TM-7R / TM-7RP TM-9R / TM-9RP				TM-4B / TM-4BP TM-5B / TM-5BP			
						Cave		Spallamento					
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$				
						0 < x < 3	0,3 x D	0 < x < 3					
						3 ≤ x < 12	0,7 x D	3 ≤ x < 20	0,3 x D				
						12 ≤ x ≤ 20	1,5 x D						
						KMS405				KMS405			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/10	1/20	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1								
		ca. 0,45 % C	Temprato	190	2								
		ca. 0,45 % C	pre-temprato	250	3								
		ca. 0,75 % C	Temprato	270	4								
		ca. 0,75 % C	pre-temprato	300	5								
	Acciaio al carbonio		Temprato	180	6								
			pre-temprato	275	7								
			pre-temprato	300	8								
			pre-temprato	350	9								
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10								
			temprato e rinvenuto	325	11								
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16								
		perlitico (martensitico)		260	17								
	Ghisa sferodale	ferritico		160	18								
		perlitico		250	19								
	Ghisa malleabile	ferritico		130	20								
		perlitico		230	21								
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30	45	55	85	10	–	85	90	10
			indurito	280	31	25	30	45	10	–	45	50	10
		Base Ni o Co	Temprato	250	32	45	55	85	10	–	85	90	10
			indurito	350	33	25	30	45	10	–	45	50	10
			fuso	320	34	25	30	45	10	–	45	50	10
	Leghe di titanio	Titanio puro		R_m 400	35	75	90	135	10	–	135	145	10
		Leghe Alpha + Beta	indurito	R_m 1050	36	45	55	85	10	–	85	90	10
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie PM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						PM-2E PM-2ES / PM-2EP / PM-2RP PM-4E PM-4E-G				PM-4EL PM-4EL-G PM-4EX-G			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0 < x < 3	0,1 5 x D	0 < x ≤ 20	0,15 x D	0 < x < 3	0,1 5 x D	0 < x ≤ 20	0,15 x D
						3 ≤ x < 6	0,3 x D			3 ≤ x < 6	0,3 x D		
						6 ≤ x ≤ 20	0,5 x D			6 ≤ x ≤ 20	0,5 x D		
						KMG405				KMG405			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	165	220	300	1	140	190	255	1
		ca. 0,45 % C	Temprato	190	2	160	210	285	1	135	185	245	1
		ca. 0,45 % C	pre-temprato	250	3	120	155	210	1	100	135	180	1
		ca. 0,75 % C	Temprato	270	4	100	135	180	1	85	115	155	1
		ca. 0,75 % C	pre-temprato	300	5	95	125	165	1	80	105	145	1
	Acciaio al carbonio		Temprato	180	6	125	165	225	1	110	145	195	1
			pre-temprato	275	7	100	135	180	1	85	115	155	1
			pre-temprato	300	8	95	125	165	1	80	105	145	1
			pre-temprato	350	9	90	115	160	1	75	100	135	1
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	120	155	210	1	100	135	180	1
			temprato e rinvenuto	325	11	90	120	160	1	75	105	140	1
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	55	75	100	1	45	65	85	1
		martensitico	pre-temprato	240	13	50	65	85	1	40	55	75	1
		austenitico	quencing	180	14	60	75	105	1	50	65	90	1
		austenitico-ferritico		230	15	50	65	85	1	40	55	75	1
K	Ghisa grigia	perlitico/ferritico		180	16	125	165	220	1	105	140	190	1
		perlitico (martensitico)		260	17	100	135	180	1	85	115	155	1
	Ghisa sferodale	ferritico		160	18	150	200	270	1	130	175	230	1
		perlitico		250	19	120	155	210	1	100	135	180	1
	Ghisa malleabile	ferritico		130	20	165	220	300	1	145	190	255	1
		perlitico		230	21	135	180	240	1	115	155	205	1
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	80	105	140	1	65	90	120	1
			temprato e rinvenuto	60 HRC	38	–	–	–	–	–	–	–	–
	Ghisa dura		fuso	400	39	105	140	185	1	85	120	160	1
	Ghise temprate		temprato e rinvenuto	55 HRC	40	–	–	–	–	–	–	–	–
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
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Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	PM-6E				PM-6EL				PM-2B PM-2BS / PM-2BP PM-4B				PM-2BL PM-2BFP PM-4BL				PM-2BC			
			Spallamento				Spallamento													
			Ø [mm]	$a_{p\ max}$			Ø [mm]	$a_{p\ max}$												
			0 < x ≤ 20	0.15 x D			0 < x ≤ 20	0.15 x D												
	KMG405				KMG405				KMG405				KMG405				KMG405			
	a_e / D				a_e / D				a_e / D				a_e / D				a_e / D			
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/10	1/20	Gruppo f	1/1	1/10	1/20	Gruppo f	1/1	1/10	1/20	Gruppo f
	–	220	300	1	–	190	255	1	–	270	300	5	–	230	255	5	–	230	255	5
	–	210	285	1	–	185	245	1	–	260	285	5	–	220	245	5	–	220	245	5
	–	155	210	1	–	135	180	1	–	190	210	5	–	165	180	5	–	165	180	5
	–	135	180	1	–	115	155	1	–	165	180	5	–	140	155	5	–	140	155	5
	–	125	165	1	–	105	145	1	–	150	165	5	–	130	145	5	–	130	145	5
	–	165	225	1	–	145	195	1	–	205	225	5	–	175	195	5	–	175	195	5
	–	135	180	1	–	115	155	1	–	165	180	5	–	140	155	5	–	140	155	5
	–	125	165	1	–	105	145	1	–	150	165	5	–	130	145	5	–	130	145	5
	–	115	160	1	–	100	135	1	–	145	160	5	–	120	135	5	–	120	135	5
	–	155	210	1	–	135	180	1	–	190	210	5	–	165	180	5	–	165	180	5
	–	120	160	1	–	105	140	1	–	145	160	5	–	125	140	5	–	125	140	5
	–	75	100	1	–	65	85	1	–	90	100	5	–	75	85	5	–	75	85	5
	–	65	85	1	–	55	75	1	–	80	85	5	–	65	75	5	–	65	75	5
	–	75	105	1	–	65	90	1	–	95	105	5	–	80	90	5	–	80	90	5
	–	65	85	1	–	55	75	1	–	80	85	5	–	65	75	5	–	65	75	5
	–	165	220	1	–	140	190	1	–	200	220	5	–	170	190	5	–	170	190	5
	–	135	180	1	–	115	155	1	–	165	180	5	–	140	155	5	–	140	155	5
	–	200	270	1	–	175	230	1	–	245	270	5	–	210	230	5	–	210	230	5
	–	155	210	1	–	135	180	1	–	190	210	5	–	165	180	5	–	165	180	5
	–	220	300	1	–	190	255	1	–	270	300	5	–	230	255	5	–	230	255	5
	–	180	240	1	–	155	205	1	–	220	240	5	–	185	205	5	–	185	205	5
	–	105	140	1	–	90	120	1	–	125	140	5	–	110	120	5	–	110	120	5
	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	–	140	185	1	–	120	160	1	–	165	185	1	–	145	160	1	–	145	160	1
	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – serie PM, serie VPM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						PM-2R PM-4R				PM-4RL			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0 < x < 3	0,1 5x D	0 < x ≤ 20	0.15 x D	0 < x < 3	0,1 5x D	0 < x ≤ 20	0.15 x D
						3 ≤ x < 6	0,3 x D			3 ≤ x < 6	0,3 x D		
						6 ≤ x ≤ 20	0,5 x D			6 ≤ x ≤ 20	0,5 x D		
						KMG405				KMG405			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	165	220	300	1	150	200	265	1
		ca. 0,45 % C	Temprato	190	2	160	210	285	1	145	190	255	1
		ca. 0,45 % C	pre-temprato	250	3	120	155	210	1	105	140	190	1
		ca. 0,75 % C	Temprato	270	4	100	135	180	1	90	120	160	1
		ca. 0,75 % C	pre-temprato	300	5	95	125	165	1	85	110	150	1
	Acciaio al carbonio		Temprato	180	6	125	165	225	1	115	150	200	1
			pre-temprato	275	7	100	135	180	1	90	120	160	1
			pre-temprato	300	8	95	125	165	1	85	110	150	1
			pre-temprato	350	9	90	115	160	1	80	105	140	1
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	120	155	210	1	105	140	190	1
			temprato e rinvenuto	325	11	90	120	160	1	80	110	145	1
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	55	75	100	1	50	65	85	1
		martensitico	pre-temprato	240	13	50	65	85	1	45	60	75	1
		austenitico	quencing	180	14	60	75	105	1	55	70	95	1
		austenitico-ferritico		230	15	50	65	85	1	45	60	75	1
K	Ghisa grigia	perlitico/ferritico		180	16	125	165	220	1	110	150	195	1
		perlitico (martensitico)		260	17	100	135	180	1	90	120	160	1
	Ghisa sferodale	ferritico		160	18	150	200	270	1	135	180	240	1
		perlitico		250	19	120	155	210	1	105	140	190	1
	Ghisa malleabile	ferritico		130	20	165	220	300	1	150	200	265	1
		perlitico		230	21	135	180	240	1	120	160	215	1
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	85	110	145	1	70	95	125	1
			temprato e rinvenuto	60 HRC	38	–	–	–	–	–	–	–	–
	Ghisa dura		fuso	400	39	115	145	190	1	95	125	165	1
	Ghise temprate		temprato e rinvenuto	55 HRC	40	–	–	–	–	–	–	–	–
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]								
	PM-4H PM-4HL				VPM-4E				
			Spallamento						
			Ø [mm]	$a_{e\ max}$					
			0 < x ≤ 20	0.15 x D	0 < x < 3	0,5x D	0 < x < 3	0.15 x D	
					3 ≤ x < 12	1,5x D	3 ≤ x < 20	0,5 x D	
					12≤x≤20	2,0x D			
	KMG405				KMG406				
	a_e / D				a_e / D				
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10		
	–	210	270	6	230	280	350	9	
	–	200	260	6	220	270	340	9	
	–	150	190	6	160	190	250	9	
	–	130	165	6	140	160	210	9	
	–	120	150	6	130	150	200	9	
	–	160	205	6	180	215	270	9	
	–	130	165	6	130	170	220	9	
	–	120	150	6	125	150	190	9	
	–	110	145	6	120	150	190	9	
	–	150	190	6	160	190	250	9	
	–	115	145	6	115	140	190	9	
	–	70	90	6	70	90	110	9	
	–	60	80	6	60	80	100	9	
	–	75	95	6	75	90	120	9	
	–	60	80	6	65	80	100	9	
	–	155	200	6	160	200	260	9	
	–	130	165	6	140	170	220	9	
	–	190	245	6	215	250	330	9	
	–	150	190	6	160	200	250	9	
	–	210	270	6	230	280	360	9	
	–	170	220	6	180	230	290	9	
	–	100	125	1	100	120	150	9	
	–	–	–	–	–	–	–	–	
	–	130	165	1	110	150	180	9	
	–	–	–	–	–	–	–	–	

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie EPM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						EPM-2E EPM-4E				EPM-2EL EPM-4EL			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0 < x < 3	0,1 5 x D	0 < x ≤ 20	0,15 x D	0 < x < 3	0,1 5 x D	0 < x ≤ 20	0,15 x D
						3 ≤ x < 6	0,3 x D			3 ≤ x < 6	0,3 x D		
						6 ≤ x ≤ 20	0,5 x D			6 ≤ x ≤ 20	0,5 x D		
						KMG406				KMG406			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	165	220	300	1	140	190	255	1
		ca. 0,45 % C	Temprato	190	2	160	210	285	1	135	185	245	1
		ca. 0,45 % C	pre-temprato	250	3	120	155	210	1	100	135	180	1
		ca. 0,75 % C	Temprato	270	4	100	135	180	1	85	115	155	1
		ca. 0,75 % C	pre-temprato	300	5	95	125	165	1	80	105	145	1
	Acciaio al carbonio		Temprato	180	6	125	165	225	1	110	145	195	1
			pre-temprato	275	7	100	135	180	1	85	115	155	1
			pre-temprato	300	8	95	125	165	1	80	105	145	1
			pre-temprato	350	9	90	115	160	1	75	100	135	1
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	120	155	210	1	100	135	180	1
			temprato e rinvenuto	325	11	90	120	160	1	75	105	140	1
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	55	75	100	1	45	65	85	1
		martensitico	pre-temprato	240	13	50	65	85	1	40	55	75	1
		austenitico	quencing	180	14	60	75	105	1	50	65	90	1
		austenitico-ferritico		230	15	50	65	85	1	40	55	75	1
K	Ghisa grigia	perlitico/ferritico		180	16	125	165	220	1	105	140	190	1
		perlitico (martensitico)		260	17	100	135	180	1	85	115	155	1
	Ghisa sferodale	ferritico		160	18	150	200	270	1	130	175	230	1
		perlitico		250	19	120	155	210	1	100	135	180	1
	Ghisa malleabile	ferritico		130	20	165	220	300	1	145	190	255	1
		perlitico		230	21	135	180	240	1	115	155	205	1
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	80	105	140	1	65	90	120	1
			temprato e rinvenuto	60 HRC	38	–	–	–	–	–	–	–	–
	Ghisa dura		fuso	400	39	105	140	185	1	85	120	160	1
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	EPM-2B EPM-4B				EPM-2BL EPM-4BL															
	KMG406				KMG406															
	a_e / D				a_e / D															
	1/1	1/10	1/20	Gruppo f	1/1	1/10	1/20													
	–	270	300	5	–	230	255	5												
	–	260	285	5	–	220	245	5												
	–	190	210	5	–	165	180	5												
	–	165	180	5	–	140	155	5												
	–	150	165	5	–	130	145	5												
	–	205	225	5	–	175	195	5												
	–	165	180	5	–	140	155	5												
	–	150	165	5	–	130	145	5												
	–	145	160	5	–	120	135	5												
	–	190	210	5	–	165	180	5												
	–	145	160	5	–	125	140	5												
	–	90	100	5	–	75	85	5												
	–	80	85	5	–	65	75	5												
	–	95	105	5	–	80	90	5												
	–	80	85	5	–	65	75	5												
	–	200	220	5	–	170	190	5												
	–	165	180	5	–	140	155	5												
	–	245	270	5	–	210	230	5												
	–	190	210	5	–	165	180	5												
	–	270	300	5	–	230	255	5												
	–	220	240	5	–	185	205	5												
	–	125	140	5	–	110	120	5												
	–	–	–	–	–	–	–	–												
	–	165	185	1	–	145	160	1												

Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie HPC, Serie UM/UMC, Serie VSM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						5501R38414GM (-R) 5502R38414GM (-R) 5602R38414GM (-R)				5501R38414GM 5502R38414GM 5602R38414GM			
						Cave		Spallamento		Cave		Spallamento	
						Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
						0 < x < 3	0,3x D	0 < x < 3	0.15 x D	0 < x < 3	0,3x D	0 < x < 3	0.15 x D
						3 ≤ x < 12	0,7 x D	3 ≤ x < 20	0,3 x D	3 ≤ x < 12	0,7 x D	3 ≤ x < 20	0,3 x D
						12≤x≤20	1,5xD			12≤x≤20	1,5xD		
						KMG405				KMG406			
						a_e / D				a_e / D			
						1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	250	300	380	9	230	280	350	9
		ca. 0,45 % C	Temprato	190	2	240	285	365	9	220	270	340	9
		ca. 0,45 % C	pre-temprato	250	3	175	210	270	9	160	190	250	9
		ca. 0,75 % C	Temprato	270	4	150	180	230	9	140	160	210	9
		ca. 0,75 % C	pre-temprato	300	5	140	165	210	9	130	150	200	9
	Acciaio al carbonio		Temprato	180	6	190	225	285	9	180	215	270	9
			pre-temprato	275	7	150	180	230	9	130	170	220	9
			pre-temprato	300	8	140	165	210	9	125	150	190	9
			pre-temprato	350	9	130	160	200	9	120	150	190	9
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	175	210	270	9	160	190	250	9
			temprato e rinvenuto	325	11	135	160	205	9	115	140	190	9
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	80	100	125	9	70	90	110	9
		martensitico	pre-temprato	240	13	70	85	110	9	60	80	100	9
		austenitico	quencing	180	14	85	105	130	9	75	90	120	9
		austenitico-ferritico		230	15	70	85	110	9	65	80	100	9
K	Ghisa grigia	perlitico/ferritico		180	16	185	220	280	9	160	200	260	9
		perlitico (martensitico)		260	17	150	180	230	9	140	170	220	9
	Ghisa sferodale	ferritico		160	18	225	270	345	9	215	250	330	9
		perlitico		250	19	175	210	270	9	160	200	250	9
	Ghisa malleabile	ferritico		130	20	250	300	380	9	230	280	360	9
		perlitico		230	21	200	240	305	9	180	230	290	9
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22								
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	115	140	175	9	100	120	150	9
			temprato e rinvenuto	60 HRC	38	–	–	–	–	–	–	–	–
	Ghisa dura		fuso	400	39	135	165	205	9	110	150	180	9
	Ghise temprate		temprato e rinvenuto	55 HRC	40	–	–	–	–	–	–	–	–
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	UM-4E UM-4E-W UM-4R UM-5EP				UM-4EL UM-4EL-W UM-4ELP UM-4EFP				UM-4RL UM-4RFP				UMC-4E UMC-4E-W				VSM-4E VSM-4R			
	Cave		Spallamento		Cave		Spallamento		Cave		Spallamento		Cave		Spallamento		Cave		Spallamento	
	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$	Ø [mm]	$a_{p\,max}$	Ø [mm]	$a_{e\,max}$
	0<x<3	0,3xD	0<x<3	0.15xD	0<x<3	0,3xD	0<x<3	0.15xD	0<x<3	0,3xD	0<x<3	0.15xD	0<x<3	0,3xD	0<x<3	0.15xD	0<x<3	0,3xD	0<x<3	0.15xD
	3≤x<12	0,7xD	3≤x<20	0,3xD	3≤x<12	0,7xD	3≤x<20	0,3xD	3≤x<12	0,7xD	3≤x<20	0,3xD	3≤x<12	0,7xD	3≤x<20	0,3xD	3≤x<12	0,7xD	3≤x<20	0,3xD
	12≤x≤20	1,5xD			12≤x≤20	1,5xD			12≤x≤20	1,5xD			12≤x≤20	1,5xD			12≤x≤20	1,5xD		
	KMG405				KMG405				KMG405				KMG405				KMG405			
	a_e / D				a_e / D				a_e / D				a_e / D				a_e / D			
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
	250	300	380	9	150	180	230	9	150	180	230	9	–	–	300	9	145	180	250	10
	240	285	365	9	145	175	220	9	145	175	220	9	–	–	285	9	140	175	240	10
	175	210	270	9	105	130	165	9	105	130	165	9	–	–	210	9	105	130	175	10
	150	180	230	9	90	110	140	9	90	110	140	9	–	–	180	9	90	110	150	10
	140	165	210	9	85	100	130	9	85	100	130	9	–	–	165	9	80	100	140	10
	190	225	285	9	115	135	175	9	115	135	175	9	–	–	225	9	110	135	190	10
	150	180	230	9	90	110	140	9	90	110	140	9	–	–	180	9	90	110	150	10
	140	165	210	9	85	100	130	9	85	100	130	9	–	–	165	9	80	100	140	10
	130	160	200	9	80	95	120	9	80	95	120	9	–	–	160	9	80	95	130	10
	175	210	270	9	105	130	165	9	105	130	165	9	–	–	210	9	105	130	175	10
	135	160	205	9	80	100	125	9	80	100	125	9	–	–	160	9	80	100	135	10
	80	100	125	9	50	60	75	9	50	60	75	9	–	–	100	9	50	60	80	10
	70	85	110	9	45	55	65	9	45	55	65	9	–	–	85	9	45	55	70	10
	85	105	130	9	55	65	80	9	55	65	80	9	–	–	105	9	50	65	85	10
	70	85	110	9	45	55	65	9	45	55	65	9	–	–	85	9	45	55	70	10
	185	220	280	9	110	135	170	9	110	135	170	9	–	–	220	9				
	150	180	230	9	90	110	140	9	90	110	140	9	–	–	180	9				
	225	270	345	9	135	165	210	9	135	165	210	9	–	–	270	9				
	175	210	270	9	105	130	165	9	105	130	165	9	–	–	210	9				
	250	300	380	9	150	180	230	9	150	180	230	9	–	–	300	9				
	200	240	305	9	120	145	185	9	120	145	185	9	–	–	240	9				
																	45	55	85	10
																	25	30	45	10
																	45	55	85	10
																	25	30	45	10
																	25	30	45	10
																	75	90	135	10
																	45	55	85	10
	115	140	175	9	70	85	110	9	70	85	110	9								
	–	–	–	–	–	–	–	–	–	–	–	–								
	135	165	205	9	85	100	130	9	85	100	130	9								
	–	–	–	–	–	–	–	–	–	–	–	–								

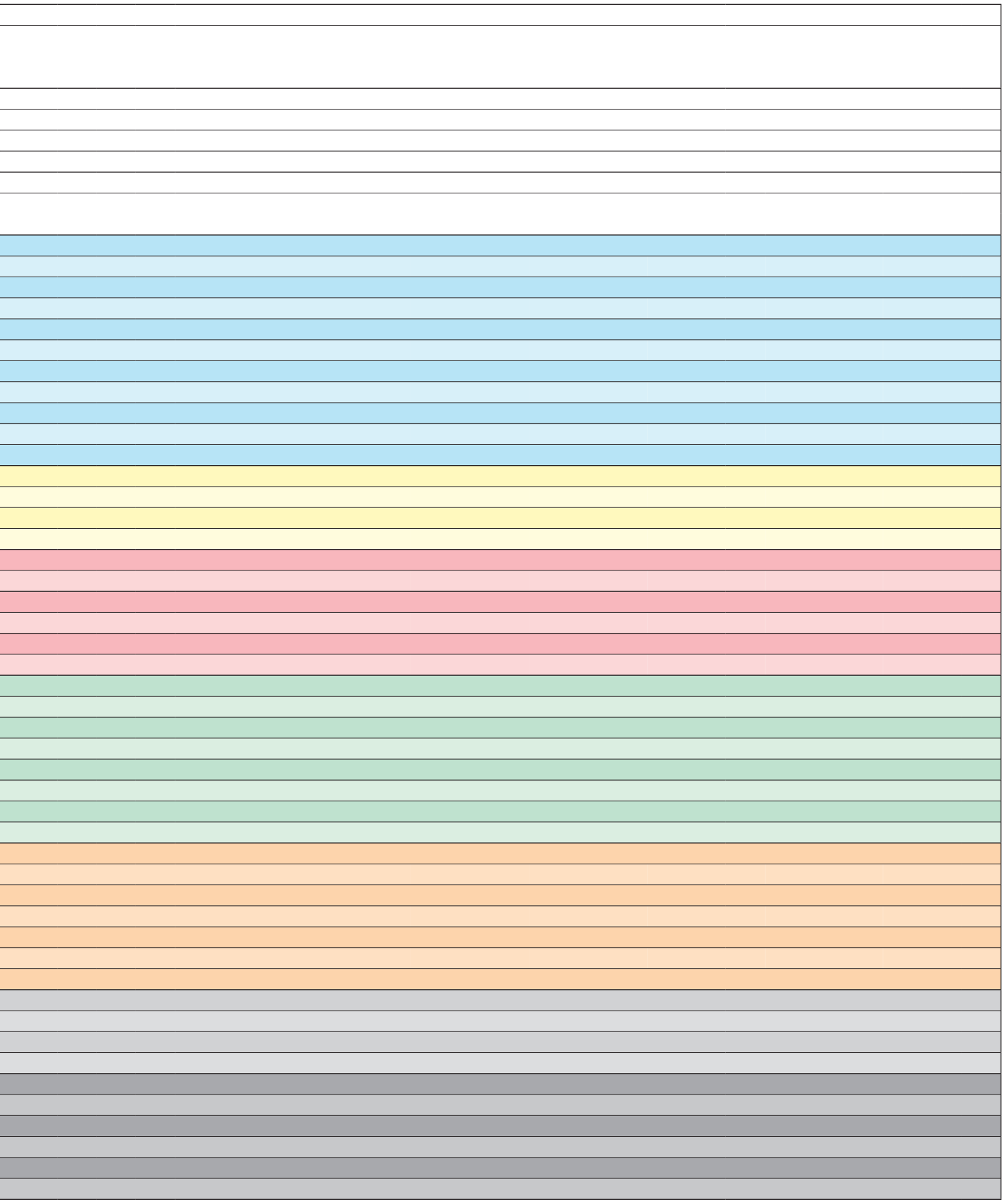
Frese in metallo duro integrale Dati di taglio consigliati

Frese a sbavare – Serie FM

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min] 5501 / 5601 5501 / 5601 5601 KMG303 a_e / D 1/1	1/2	1/10	Gruppo f	
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	–	–	230	11	
		ca. 0,45 % C	Temprato	190	2	–	–	220	11	
		ca. 0,45 % C	pre-temprato	250	3	–	–	165	11	
		ca. 0,75 % C	Temprato	270	4	–	–	140	11	
		ca. 0,75 % C	pre-temprato	300	5	–	–	130	11	
	Acciaio al carbonio		Temprato	180	6	–	–	175	11	
			pre-temprato	275	7	–	–	140	11	
			pre-temprato	300	8	–	–	130	11	
			pre-temprato	350	9	–	–	120	11	
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	–	–	165	11	
			temprato e rinvenuto	325	11	–	–	125	11	
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	–	–	75	11	
		martensitico	pre-temprato	240	13	–	–	65	11	
		austenitico	quencing	180	14	–	–	80	11	
		austenitico-ferritico		230	15	–	–	65	11	
K	Ghisa grigia	perlitico/ferritico		180	16	–	–	170	11	
		perlitico (martensitico)		260	17	–	–	140	11	
	Ghise con grafite sferoidale	ferritico		160	18	–	–	210	11	
		perlitico		250	19	–	–	165	11	
	Ghisa malleabile	ferritico		130	20	–	–	230	11	
		perlitico		230	21	–	–	185	11	
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	–	–	1200	11	
		invecchiabile	indurito	100	23	–	–	720	11	
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	–	–	480	11	
		≤ 12 % Si, invecchiabile	indurito	90	25	–	–	600	11	
		> 12 % Si, non invecchiabile		130	26	–	–	180	11	
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	–	–	360	11	
		CuZn, CuSnZn		90	28	–	–	420	11	
		CuSn, rame senza piombo e rame elettrolitico		100	29	–	–	360	11	
S	Leghe resistenti al calore	Base Fe	Temprato	200	30					
			indurito	280	31					
		Base Ni o Co	Temprato	250	32					
			indurito	350	33					
			fuso	320	34					
	Leghe di titanio	Titanio puro		R_m 400	35					
		Leghe Alpha + Beta	indurito	R_m 1050	36					
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37					
			temprato e rinvenuto	60 HRC	38					
	Ghisa dura		fuso	400	39					
	Ghise temprate		temprato e rinvenuto	55 HRC	40					
X	Materiali non metallici	Termoplastiche			41					
		Termoindurenti			42					
		Vetroresina VTR			43					
		Plastica rinforzata in fibra di carbonio			44					
		Grafite			45					
		Legno			46					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Frese in metallo duro integrale



Frese in metallo duro integrale Dati di taglio consigliati

Frese frontali – Serie QCH

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						Q**-PM-4E Q**-PM-4R Q**-VPM-4E				Q**PM-2B Q**PM-4B			
						Cave Ø [mm]	Cave $a_{p\,max}$	Spallamento Ø [mm]	Spallamento $a_{e\,max}$				
						0 < x < 3	0,3 x D	0 < x < 20	0,15xD				
						3 ≤ x < 6	0,3 x D						
						6 ≤ x ≤ 20	0,5 x D						
						KMG405 a_e / D				KMG405 a_e / D			
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f
		ca. 0,45 % C	Temprato	190	2	165	220	300	1	–	270	300	5
		ca. 0,45 % C	pre-temprato	250	3	160	210	285	1	–	260	285	5
		ca. 0,75 % C	Temprato	270	4	120	155	210	1	–	190	210	5
		ca. 0,75 % C	pre-temprato	300	5	100	135	180	1	–	165	180	5
	Acciaio al carbonio		Temprato	180	6	95	125	165	1	–	150	165	5
			pre-temprato	275	7	125	165	225	1	–	205	225	5
			pre-temprato	300	8	100	135	180	1	–	165	180	5
			pre-temprato	350	9	95	125	165	1	–	150	165	5
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	90	115	160	1	–	145	160	5
			temprato e rinvenuto	325	11	120	155	210	1	–	190	210	5
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	90	120	160	1	–	145	160	5
		martensitico	pre-temprato	240	13	55	75	100	1	–	90	100	5
		austenitico	quencing	180	14	50	65	85	1	–	80	85	5
		austenitico-ferritico		230	15	60	75	105	1	–	95	105	5
K	Ghisa grigia	perlitico/ferritico		180	16	50	65	85	1	–	80	85	5
		perlitico (martensitico)		260	17	125	165	220	1	–	200	220	5
	Ghise con grafite sferoidale	ferritico		160	18	100	135	180	1	–	165	180	5
		perlitico		250	19	150	200	270	1	–	245	270	5
	Ghisa malleabile	ferritico		130	20	120	155	210	1	–	190	210	5
		perlitico		230	21	165	220	300	1	–	270	300	5
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	135	180	240	1	–	220	240	5
		invecchiabile	indurito	100	23								
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24								
		≤ 12 % Si, invecchiabile	indurito	90	25								
		> 12 % Si, non invecchiabile		130	26								
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27								
		CuZn, CuSnZn		90	28								
		CuSn, rame senza piombo e rame elettrolitico		100	29								
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37	–	–	–	–				
			temprato e rinvenuto	60 HRC	38	80	105	140	1				
	Ghisa dura		fuso	400	39	–	–	–	–				
	Ghise temprate		temprato e rinvenuto	55 HRC	40	105	140	185	1				
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
I valori di avanzamento consigliati sono consultabili a pagina B522.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																			
	Q**-HMX-4E Q**-HMX-4R				Q**-HMX-2B Q**-HMX-4B															
			Spallamento																	
	Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$	Ø [mm]	$a_{p\ max}$	Ø [mm]	$a_{e\ max}$												
			0 < x ≤ 20	0.15 x D																
	KMG5515 a_e / D				KMG5515 a_e / D															
	1/1	1/2	1/10	Gruppo f	1/1	1/2	1/10	Gruppo f												
	–	–	–	–	–	–	–	–												
	55	100	125	3	–	130	145	7												
	55	95	120	3	–	80	90	7												
	70	125	160	3	–	163	181	7												
	55	100	125	3	–	109	145	7												

Dati di avanzamento consigliato

Frese in metallo duro integrale Gruppo 1 – Frese a spallamento Serie PM, Serie QCH, Serie EPM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20					
P	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,05	0,07	0,08	0,08	0,09	0,09	0,10					
	1/2	0,01	0,03	0,03	0,03	0,03	0,03	0,04	0,04	0,06	0,09	0,10	0,10	0,12	0,12	0,13					
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,20					
M	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,06	0,07	0,07	0,08					
	1/2	0,01	0,02	0,02	0,02	0,02	0,02	0,04	0,04	0,05	0,07	0,08	0,08	0,10	0,10	0,11					
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16					
K	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,05	0,07	0,08	0,08	0,09	0,09	0,10					
	1/2	0,01	0,03	0,03	0,03	0,03	0,03	0,04	0,04	0,06	0,09	0,10	0,10	0,12	0,12	0,13					
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,20					
H	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,05	0,06	0,06	0,07	0,07	0,08					
	1/2	0,01	0,02	0,02	0,02	0,02	0,02	0,04	0,04	0,05	0,07	0,08	0,08	0,10	0,10	0,11					
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 2 – Frese a spallamento Serie GM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20					
P	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09					
	1/2	0,01	0,03	0,03	0,03	0,03	0,03	0,04	0,04	0,05	0,08	0,09	0,09	0,10	0,10	0,12					
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,08	0,12	0,14	0,14	0,16	0,16	0,18					
M	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,05	0,06	0,06	0,06	0,06	0,07					
	1/2	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09					
	1/10	0,02	0,03	0,03	0,03	0,03	0,03	0,05	0,05	0,06	0,10	0,11	0,11	0,13	0,13	0,15					
K	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09					
	1/2	0,01	0,03	0,03	0,03	0,03	0,03	0,04	0,04	0,05	0,08	0,09	0,09	0,10	0,10	0,12					
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,08	0,12	0,14	0,14	0,16	0,16	0,18					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 3 – Frese a spallamento Serie HM, Serie QCH

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20					
H	1/1	0,01	0,02	0,02	0,02	0,02	0,02	0,02	0,02	0,03	0,05	0,06	0,06	0,06	0,06	0,07					
	1/2	0,01	0,02	0,02	0,02	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09					
	1/10	0,02	0,03	0,03	0,03	0,03	0,03	0,05	0,05	0,06	0,10	0,11	0,11	0,13	0,13	0,15					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 4 – Frese a spallamento Serie AL, Serie HM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20					
N	1/1	0,02	0,03	0,03	0,03	0,03	0,03	0,05	0,05	0,06	0,09	0,11	0,11	0,12	0,12	0,14					
	3/4	0,02	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,08	0,12	0,14	0,14	0,16	0,16	0,18					
	1/10	0,03	0,06	0,06	0,06	0,06	0,06	0,09	0,09	0,12	0,19	0,22	0,22	0,25	0,25	0,28					
	1/20	0,04	0,08	0,08	0,08	0,08	0,08	0,12	0,12	0,16	0,23	0,27	0,27	0,31	0,31	0,35					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Dati di avanzamento consigliato

Frese in metallo duro integrale Gruppo 5 – Frese a testa sferica Serie GM, Serie QCH, Serie EPM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20					
P	1/1																				
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,20					
	1/20	0,03	0,06	0,06	0,06	0,06	0,06	0,08	0,08	0,11	0,17	0,20	0,20	0,23	0,23	0,25					
M	1/1																				
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16					
	1/20	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,21					
K	1/1																				
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,20					
	1/20	0,03	0,06	0,06	0,06	0,06	0,06	0,08	0,08	0,11	0,17	0,20	0,20	0,23	0,23	0,25					
H	1/1																				
	1/10	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16					
	1/20	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,21					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 6 – Frese ad alto avanzamento Serie PM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12													
P	1/1																				
	1/10																				
	1/20	0,15	0,25	0,28	0,33	0,44	0,55	0,66													
M	1/1																				
	1/10																				
	1/20	0,12	0,22	0,25	0,30	0,41	0,52	0,63													
K	1/1																				
	1/10																				
	1/20	0,15	0,25	0,28	0,33	0,44	0,55	0,66													
H	1/1																				
	1/10																				
	1/20	0,12	0,22	0,25	0,30	0,41	0,52	0,63													

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 7 – Frese a testa sferica Serie HM, Serie QCH

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø0,5	Ø0,8	Ø 1	Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20					
H	1/1																				
	1/2	0,02	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,07	0,11	0,13	0,13	0,15	0,15	0,16					
	1/10	0,02	0,05	0,05	0,05	0,05	0,05	0,07	0,07	0,09	0,14	0,16	0,16	0,18	0,18	0,21					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 8 – Frese ad alto avanzamento Serie AL, Serie ALP/ALG

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20												
N	1/1	0,04	0,05	0,08	0,09	0,11	0,13	0,16	0,18												
	3/4	0,05	0,07	0,10	0,12	0,14	0,16	0,20	0,23												
	1/10	0,08	0,11	0,16	0,19	0,22	0,25	0,31	0,36												

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Dati di avanzamento consigliato

Frese in metallo duro integrale Gruppo 9 – Frese a spallamento Serie UM/UMC Lavorazione HSC/HPC

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20										
P	1/1	0,06	0,06	0,06	0,07	0,07	0,07	0,07	0,08	0,08	0,08										
	1/2	0,08	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10	0,10										
	1/10	0,14	0,14	0,16	0,18	0,22	0,25	0,27	0,3	0,32	0,36										
M	1/1	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,06	0,06	0,06										
	1/2	0,06	0,06	0,06	0,07	0,07	0,07	0,07	0,08	0,08	0,08										
	1/10	0,10	0,10	0,10	0,12	0,12	0,14	0,16	0,16	0,18	0,18										
K	1/1	0,06	0,06	0,06	0,07	0,07	0,07	0,07	0,08	0,08	0,08										
	1/2	0,08	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10	0,10										
	1/10	0,14	0,14	0,16	0,18	0,22	0,25	0,27	0,3	0,32	0,36										
H	1/1	0,045	0,045	0,045	0,053	0,053	0,053	0,053	0,06	0,06	0,06										
	1/2	0,06	0,06	0,06	0,07	0,07	0,07	0,07	0,08	0,08	0,08										
	1/10	0,10	0,10	0,10	0,12	0,12	0,14	0,16	0,16	0,18	0,18										

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 10 – Frese a spallamento Serie VSM, Serie TM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20										
P	1/1	0,03	0,04	0,05	0,05	0,05	0,05	0,06	0,06	0,07	0,08										
	1/2	0,04	0,06	0,07	0,07	0,07	0,07	0,08	0,09	0,10	0,11										
	1/10	0,05	0,08	0,09	0,09	0,09	0,09	0,11	0,12	0,14	0,15										
M	1/1	0,02	0,03	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,06										
	1/2	0,03	0,05	0,05	0,05	0,05	0,05	0,06	0,07	0,08	0,08										
	1/10	0,04	0,06	0,07	0,07	0,07	0,07	0,08	0,09	0,10	0,11										
S	1/1	0,02	0,03	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,06										
	1/2	0,03	0,05	0,05	0,05	0,05	0,05	0,06	0,07	0,08	0,08										
	1/10	0,04	0,06	0,07	0,07	0,07	0,07	0,08	0,09	0,10	0,11										

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Frese in metallo duro integrale Gruppo 11 – Frese a sbavare Serie FM

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20									
P	1/1																				
	1/2																				
	1/10	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09									
M	1/1																				
	1/2																				
	1/10	0,02	0,02	0,02	0,02	0,03	0,05	0,06	0,06	0,06	0,06	0,07									
K	1/1																				
	1/2																				
	1/10	0,02	0,02	0,03	0,03	0,04	0,06	0,07	0,07	0,08	0,08	0,09									
N	1/1																				
	1/2																				
	1/10	0,03	0,03	0,05	0,05	0,06	0,09	0,11	0,11	0,12	0,12	0,14									

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Dati di avanzamento consigliato

Frese in metallo duro integrale Gruppo 12 – Fresa a candela singola ALP-1EP

	a_e / D	Avanzamento per tagliente (f_z) [mm]																			
		Ø 2	**Ø 3**	**Ø 4**	**Ø 5**	**Ø 6**	**Ø 8**	**Ø 10**													
N	**1/1**	0,03	0,05	0,07	0,09	0,11	0,14	0,18													
	1/2	0,04	0,07	0,10	0,13	0,15	0,20	0,25													
	1/10	0,06	0,11	0,15	0,19	0,23	0,29	0,38													

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

Note

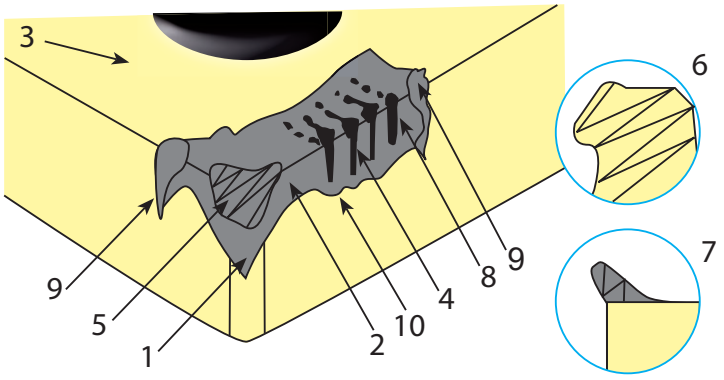
Informazioni tecniche

Misure per la risoluzione dei problemi – Fresatura	**B528**
Informazioni tecniche – Fresatura	**B529-B540**
Gli utensili speciali – fresatura	**B541**

B

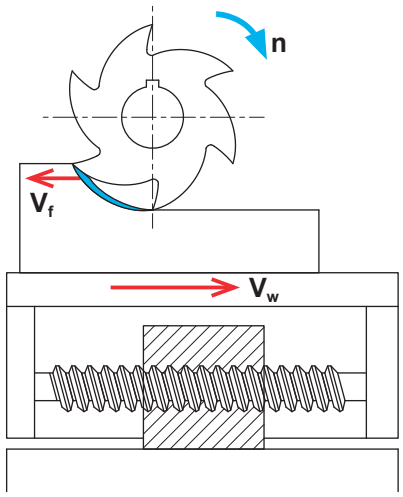
Misure per la risoluzione dei problemi - inserti per fresatura

vedi fig.	Tipo di usura	Effetti	Causa	Contromisura
1+2	Usura sul fianco	– Scarsa qualità superficiale e dimensioni inconsistenti – Aumento della forza di taglio	– Grado con resistenza all'usura insufficiente – Velocità di taglio troppo elevata – Angolo di spoglia inferiore troppo piccolo – Velocità di avanzamento troppo bassa	– Grado con maggiore resistenza all'usura – Ridurre la velocità di taglio – Aumentare l'angolo di spoglia – Ridurre la velocità di avanzamento
3	Craterizzazione	– Qualità superficiale e controllo del truciolo scarsi	– Grado con resistenza all'usura insufficiente – Velocità di taglio troppo elevata – Velocità di avanzamento troppo alta	– Grado con maggiore resistenza all'usura – Ridurre la velocità di taglio – Ridurre la velocità di avanzamento
4	Scheggiatura	– Durata utensile non stabile – Rottura improvvisa del tagliente	– Grado troppo duro – Velocità di avanzamento troppo alta – Stabilità tagliente Stabilità del portautensile o bloccaggio insufficienti	– Grado con maggiore tenacità – Ridurre la velocità di avanzamento – Cambiare l'arrotondamento del tagliente – Utilizzare un portautensile con maggiore stabilità
5	Rottura	– Aumento della forza di taglio – Scarsa qualità superficiale e dimensioni inconsistenti	– Grado troppo duro – Velocità di avanzamento troppo alta – Stabilità del tagliente insufficiente – Stabilità del portautensile o bloccaggio insufficienti	– Grado con maggiore tenacità – Ridurre la velocità di avanzamento – Cambiare l'arrotondamento del tagliente – Utilizzare un portautensile con maggiore stabilità
6	Deformazione plastica	– Dimensioni inconsistenti – Danneggiamento del tagliente	– Grado con resistenza all'usura insufficiente – Velocità di taglio troppo elevata – Profondità e/o velocità di taglio troppo alta – Temperatura sul tagliente troppo alta	– Grado con maggiore resistenza all'usura – Ridurre la velocità di taglio – Ridurre la profondità di taglio e la velocità di avanzamento – Grado con maggiore resistenza al calore
7	Tagliente di riporto	– Aumento della forza di taglio – Pessima finitura superficiale	– Velocità di taglio troppo bassa – Tagliente non sufficientemente affilato – Grado non adatto	– Aumentare la velocità di taglio – Aumentare l'angolo di spoglia – Selezionare un grado adatto
8	Termica usura	– Rottura per interazione termica, soprattutto in caso di taglio interrotto (fresatura)	– Variazioni di temperatura della lavorazione – Grado troppo duro	– Taglio a secco – Grado con maggiore tenacità
9	Intagliatura	– Bave – Aumento della forza di taglio	– Danneggiamento dovuto ai trucioli (rompitruciolo sfilacciato) – Avanzamento e velocità di taglio troppo alte	– Grado con maggiore resistenza all'usura – Aumentare l'angolo di spoglia per ottenere un tagliente più affilato – Ridurre la velocità di taglio
10	Sfaldamento (rivestimento)	– Soprattutto durante la lavorazione di materiali più duri o quando si verificano vibrazioni	– Adesioni sul tagliente e scheggiature – Scarso deflusso del truciolo	– Aumentare l'angolo di spoglia per ottenere un tagliente più affilato – Rompitruciolo con gola più grande



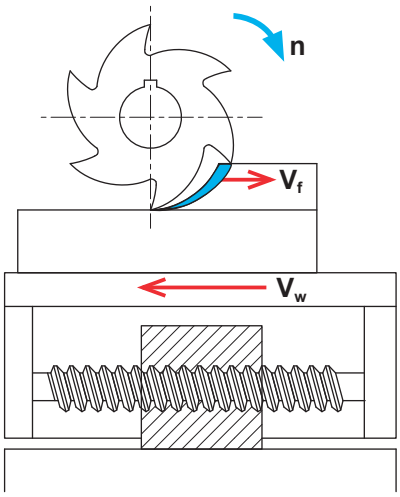
Inserti per fresatura

Differenza tra fresatura concorde e discorde



Fresatura discorde

Nella fresatura discorde, il senso di rotazione della fresa è opposto rispetto alla direzione di avanzamento del pezzo.



Fresatura concorde

Nella fresatura concorde, il senso di rotazione della fresa è lo stesso rispetto alla direzione di avanzamento del pezzo.

V_f Avanzamento utensile
V_w Avanzamento pezzo
n Direzione di taglio

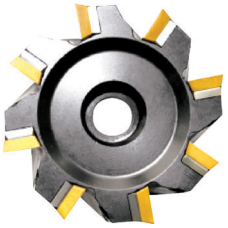
Vantaggi e svantaggi

Direzione	Vantaggio	Svantaggio
Fresatura discorde	– Previene che l'utensile si agganci, taglio più regolare – Taglio più regolare	– Maggiore stress sul tagliente – Vita dell'utensile più breve
Fresatura concorde	– Vita dell'utensile più lunga – Meno stress termico	– Possibile aggancio dell'utensile

Inserti per fresatura

Passo di fresatura

Il passo è la distanza tra un punto su un tagliente e lo stesso punto sul tagliente successivo.
La classificazione distingue i seguenti passi: lungo (differenziale), stretto e extra stretto.

Stabilità di lavorazione		
L (basso)	M (medio)	H (alto)
Passo lungo	Passo normale	Passo stretto
		
Se la larghezza di fresatura è uguale al diametro della fresa, il sistema di lavorazione stabile e l'alimentazione principale della macchina sufficiente, è consigliato un passo lungo. Ciò consente di raggiungere un'alta efficienza produttiva.	Prima scelta per la fresatura generale e la lavorazione mista.	Se la larghezza di fresatura è più piccola del diametro della fresa, un gran numero di taglienti permette un'elevata produttività. Le frese sono adatte a tutti i materiali, specialmente per materiali a difficile asportazione.

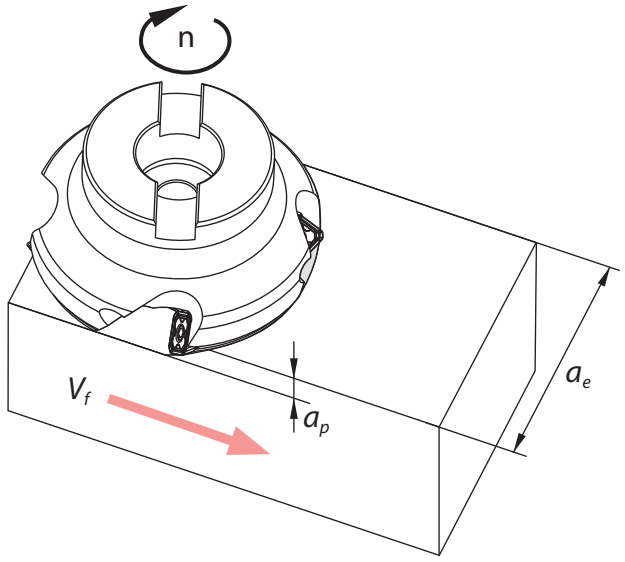
Angolo di inclinazione [mm]

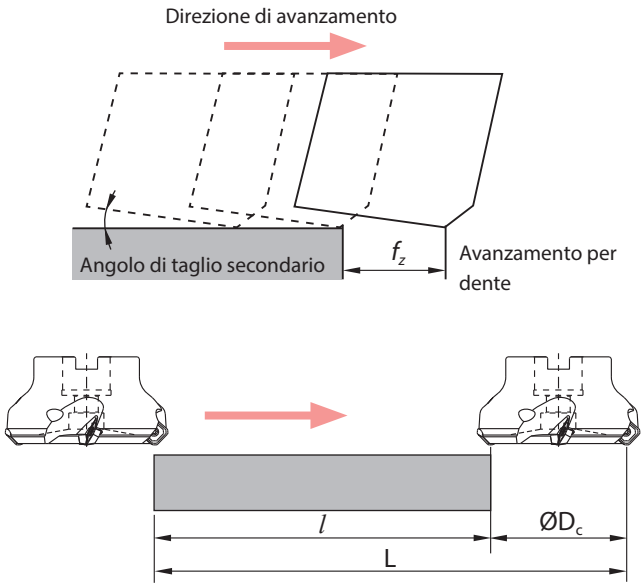
L'angolo di attacco di una fresa a spianare è in relazione allo spessore del truciolo. Questo è l'angolo tra il tagliente principale dell'inserto e la superficie del pezzo. L'angolo di attacco influenza in particolare modo lo spessore del truciolo, le forze di taglio e la durata dell'utensile. Diminuendo l'angolo di attacco, per una data velocità di avanzamento, si riduce lo spessore del truciolo. Questo ha l'effetto che il materiale si distribuisce su una parte più grande del tagliente. Un piccolo angolo di attacco provoca anche un ingresso meno brusco nel taglio. In questo modo la pressione radiale si riduce e il tagliente è protetto. Le forze assiali più elevate aumentano, tuttavia, la pressione sul pezzo. Non adatto per la lavorazione di componenti con pareti sottili.

Angolo di inclinazione [mm]	Avanzamento per dente	Max. spessore del truciolo
90°	f_z	$h_{ex} = f_z \times sin_{kr}$
75°		$h_{ex} = 0{,}96 \times f_z$
60°		$h_{ex} = 0{,}86 \times f_z$
45°		$h_{ex} = 0{,}707 \times f_z$
Tondo		$h_{ex} = \frac{\sqrt{iC^2 \times (iC - 2a_p)^2}}{iC} \times f_z$

Inserti per fresatura

Formule generali





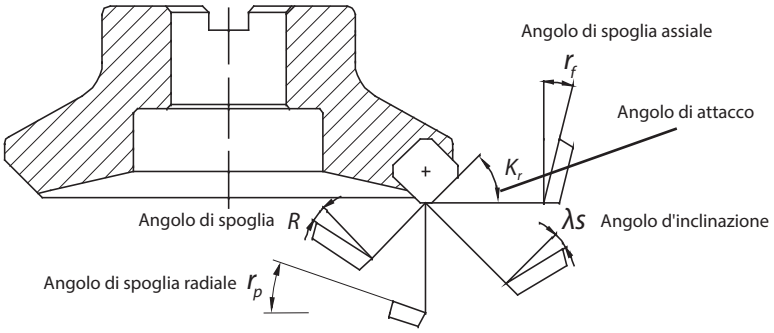
V_c: Velocità di taglio [m/min]
D_c: Diametro nominale utensili per fresatura [mm]
n: Velocità di rotazione [giri/min]
z_n: Numero di denti
Q: Volumi di sgrossatura [cm^3/min]

V_f: Avanzamento piano macchina (velocità di alimentazione) [mm/min]
f_z: Avanzamento per dente [mm/z]
π: Pi greco ~3,14
T_c: Tempo di lavorazione [min]
f_n: Avanzamento per rotazione [mm/giro]

Velocità di taglio	$V_c = \frac{\pi \times D_c \times n}{1000}$ [m/min]
Velocità di rotazione	$n = \frac{1000 \times V_c}{\pi \times D_c}$ [rev/min]
Avanzamento del piano macchina	$V_f = f_z \times n \times z_n$ [mm/min]
Avanzamento per dente	$f_z = \frac{V_f}{n \times Z_n}$ [mm/z]
Avanzamento per giro	$f_n = \frac{V_f}{n}$ [mm/rev]
Tempo di lavorazione	$T_c = \frac{1000 \times V_c}{\pi \times D_c}$ [min]
Volumi di sgrossatura	$Q = \frac{a_p \times a_e \times V_f}{1000}$ [cm^3/min]

Inserti per fresatura

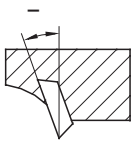
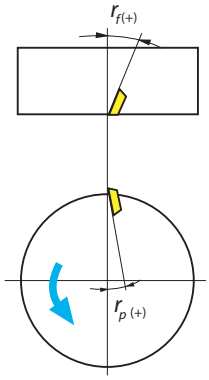
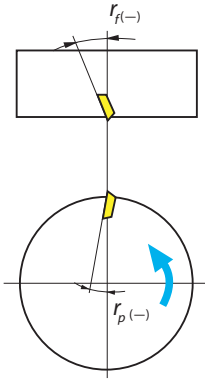
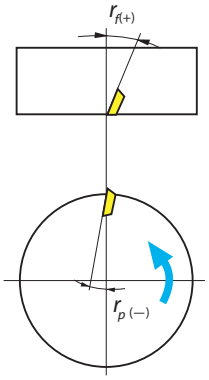
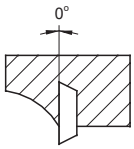
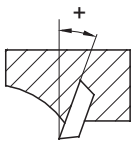
Angoli nella fresatura a spianare



Angoli nella fresatura a spianare

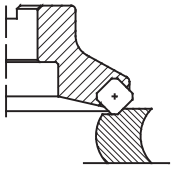
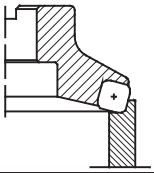
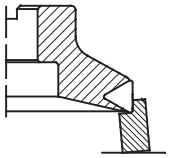
Angolo	Funzione	Effetto		
Angolo di spoglia assiale r_f	Influisce sulla direzione del flusso del truciolo	Angolo di spoglia negativo, buona asportazione del truciolo		
Angolo di spoglia radiale r_p	Definisce la taglienza	Angolo di spoglia positivo, buone prestazioni di taglio		
Angolo di attacco K_r	Influenza lo spessore del truciolo	K_r↑, Spessore del truciolo↑, K_r↓, Spessore del truciolo↓;		
Angolo di spoglia R	Influisce sulla forza di taglio	Scarse prestazioni di taglio, tagliente stabile	(−)←0→(+)	Buone prestazioni di taglio, tagliente instabile
Angolo d'inclinazione λs	Influisce sulla direzione del flusso del truciolo	Scarse prestazioni di taglio, tagliente stabile	(−)←0→(+)	Buone prestazioni di taglio, tagliente instabile

Combinazione di differenti angoli di spoglia

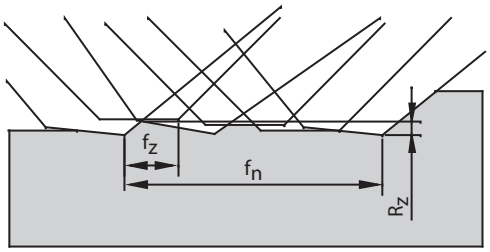
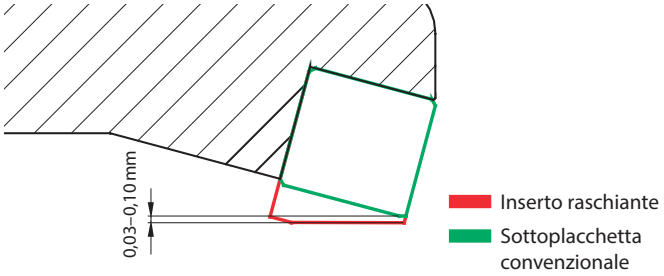
		Doppio positivo	Doppio negativo	Positivo/Negativo
Angolo di spoglia negativo				
Angolo neutrale				
Angolo di spoglia positivo				
Angolo di spoglia assiale r_f		+	−	+
Angolo di spoglia radiale r_p		+	−	−
Campo di applicazione	P	√		√
	M	√		√
	K		√	√
	N	√		
	S	√		√

Inserti per fresatura

Prestazioni di taglio a diversi angoli di inclinazione

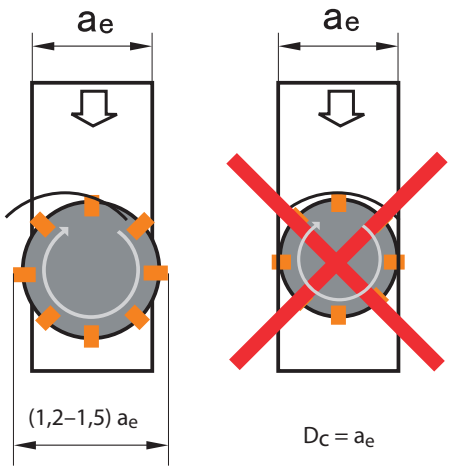
Angolo di inclinazione [mm]	Rappresentazione	Spiegazione
45°		La forza assiale è molto alta. A causa della flessione non è adatto per la lavorazione di componenti con pareti sottili. Ottimale per la spianatura di acciaio, ghise e acciaio inossidabile.
75°		La forza assiale è normale. Per la spianatura generica.
90°		La forza assiale è quasi zero. Adatto per la lavorazione di pezzi sottili e instabili.

Inserti con raschiante

Impiego di sottoplacchette convenzionali	Impiego di inserti raschianti
	
Finitura superficiale normale	Finitura superficiale elevata

L'inserto raschiante deve essere circa 0,03-0,1 mm sopra gli inserti normali in direzione assiale per ottenere l'effetto raschiante.
Per diametri standard è sufficiente un inserto raschiante. Per diametri molto grandi o grandi velocità di avanzamento di taglio possono essere utilizzati fino a tre inserti raschianti.

Larghezze di taglio



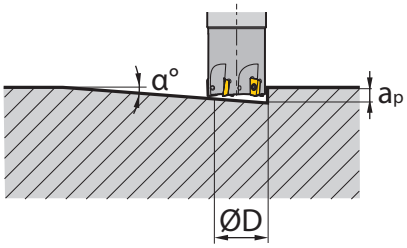
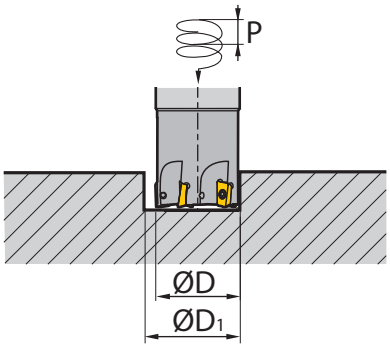
In generale, il rapporto tra larghezza di taglio e il diametro dell'utensile dovrebbe essere 1,2x bis 1,5x a_e .

Posizionare la fresa spostata dal centro.

D_C: Diametro utensile
a_e: Avanzamento laterale

Inserti per fresatura

Fresatura a tuffo e circolare con inserti APKT

		Fresatura a tuffo		Fresatura circolare	
		 $L_m = \frac{a_p}{\tan_\alpha}$ α: Angolo di immersione		 $P = \tan_\alpha \times \pi \times D_1$ α: Angolo di inclinazione dell'elica	
Inserto	Diametro ØD [mm]	Max. profondità di taglio a_p [mm]	Max. angolo di immersione α°	Diametro min. $ØD_1$ [mm]	Max. diametro [mm]
AP**11**	16	10	10	20	30
	20	10	5	28	38
	25	10	4	40	48
	32	10	3	56	60
	40	10	2	70	76

Per la fresatura a "tuffo" e circolare ridurre l'avanzamento.
Per le operazioni di foratura (assiale), impostare un avanzamento inferiore a 0,2 mm.
"Attenzione" - Durante la foratura possono prodursi trucioli lunghi.

Inserti per fresatura

Fresatura a tuffo e circolare con inserti APKT o SDMT

Raggio di punta programmato approx.

Inserto	ca. R [mm]	Materiale residuo K [mm]
WPGT050315ZSR	2	0,5
WPGT060415ZSR	2,5	0,7
WPGT080615ZSR	2,5	0,7
WPGT090725ZSR	4,5	1,2
SDMT06T208	1,6	0,5
SDMT09T312	2,5	0,87
SDMT120412	4,0	0,93
SDMT150620	4,0	1,38

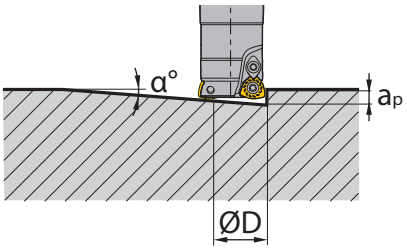
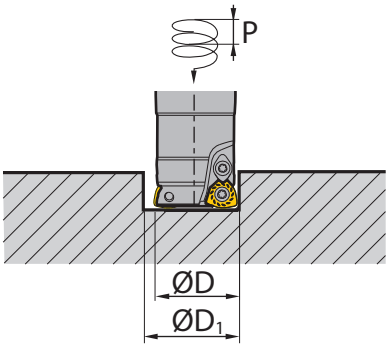
WPGT



SDMT



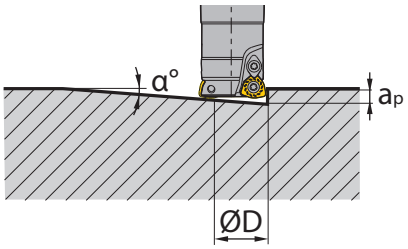
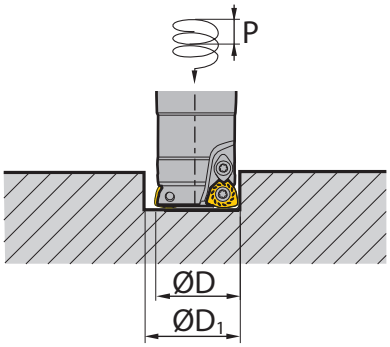
Inserto WPGT

		Fresatura a tuffo		Fresatura circolare	
		 $L_m = \frac{a_p}{\tan_\alpha}$ α: Angolo di immersione		 $P = \tan_\alpha \times \pi \times D_1$ α: Angolo di inclinazione dell'elica	
Inserto	Diametro ØD [mm]	Max. profondità di taglio a_p [mm]	Max. angolo di immersione α°	Diametro min. $ØD_1$ [mm]	Max. diametro [mm]
WP**05**	20	1,5	12	24	37
WP**06**	25	1,5	8,8	31	47
	32	1,5	5	45	61
	40	1,5	3,2	61	77
	50	1,5	2,8	81	97
WP**08**	40	1,5	9	52	77
	50	1,5	5,4	71	97
	63	1,5	4,3	97	123
	80	1,5	2,9	131	157
	100	1,5	2,1	171	197
	125	1,5	1,3	221	247
	160	1,5	1,1	291	317
WP**09**	50	3,0	7,2	70	96
	63	3,0	4,5	96	122
	80	3,0	2,8	130	156
	100	3,0	2,2	170	196
	125	3,0	1,6	220	246
	160	3,0	1,2	290	316

Per la fresatura a "tuffo" e circolare ridurre l'avanzamento.
Per le operazioni di foratura (assiale), impostare un avanzamento inferiore a 0,2 mm.
"Attenzione" - Durante la foratura possono prodursi trucioli lunghi.

Inserti per fresatura

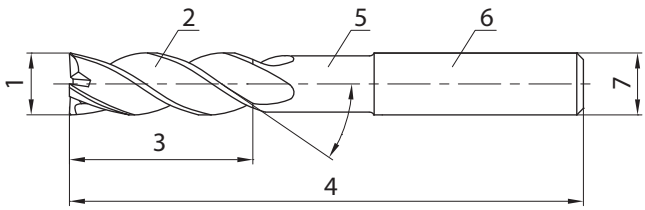
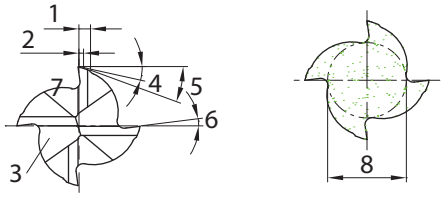
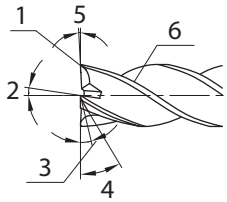
Inserto SDMT

		Fresatura a tuffo		Fresatura circolare	
					
		$L_m = \frac{a_p}{\tan_\alpha}$ α: Angolo di immersione		$P = \tan_\alpha x \pi x D_1$ α: Angolo di inclinazione dell'elica	
Inserto	Diametro ØD [mm]	Max. profondità di taglio a_p [mm]	Max. angolo di immersione α°	Diametro min. $ØD_1$ [mm]	Max. diametro [mm]
SD**06**	20	0,8	3,6	30	38
	25	0,8	2,8	40	48
	32	0,8	1,6	52	60
	40	0,8	1,1	70	78
	50	0,8	0,8	90	98
	63	0,8	0,7	114	122
SD**09**	25	1,4	6,5	34	48
	32	1,4	4,5	48	62
	35	1,4	3,6	54	68
	50	1,4	1,8	84	98
	63	1,4	1,3	110	124
SD**12**	32	1,8	10,4	44	60
	40	1,8	5,7	60	76
	50	1,8	3,5	80	96
	63	1,8	2,5	106	122
	80	1,8	1,6	140	156
	100	1,8	1,2	180	196
SD**15**	40	2,2	7,3	54	76
	80	2,2	1,4	134	156
	100	2,2	1,0	174	196
	125	2,2	0,9	234	246
	160	2,2	0,6	304	316

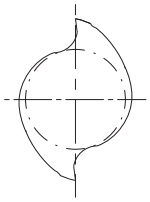
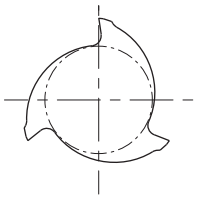
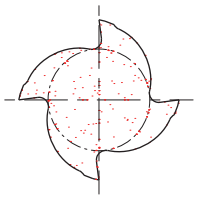
Per la fresatura a "tuffo" e circolare ridurre l'avanzamento.
Per le operazioni di foratura (assiale), impostare un avanzamento inferiore a 0,2 mm.
"Attenzione" - Durante la foratura possono prodursi trucioli lunghi.

Frese in metallo duro integrale

Spiegazione dei termini

A		1. Diametro del tagliente 2. Tasca del truciolo 3. Lunghezza tagliente 4. Lunghezza totale 5. Collo 6. Codolo 7. Diametro stelo
B		1. Larghezza onatura, tagliente principale 2. Larghezza onatura, diametro 3. Scanalatura, frontale 4. Angolo di spoglia inferiore primario radiale 5. Angolo di spoglia inferiore secondario radiale 6. Angolo di spoglia radiale 7. Tagliente principale assiale 8. Diametro interno
C		1. Angolo esterno 2. Angolo di spoglia assiale 3. Angolo di spoglia inferiore assiale primario 4. Angolo di spoglia inferiore assiale secondario 5. Angolo d'inclinazione 6. Tagliente radiale

Denti, vano del truciolo e stabilità

Denti	2 taglienti	3 taglienti	4 taglienti
Sezione del taglio			
Percentuale tagliente	**54 %**	**56 %**	**60 %**
Vantaggi	- Tasca del truciolo grande - Buon deflusso del truciolo	- Buon deflusso del truciolo - Buona finitura superficiale	- Buona rigidità - Buona finitura superficiale
Applicazione	- Fresatura di fessure - Fresatura a spallamento - Esecuzione di fori	- Fresatura di fessure - Fresatura a spallamento - Finitura	- Fresatura di cave (piatte) - Fresatura a spallamento - Finitura

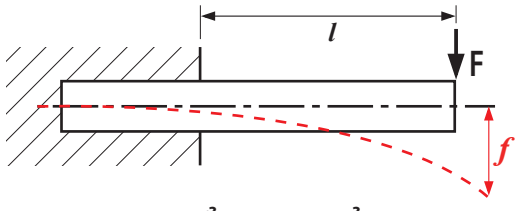
Lunghezza della sporgenza del tagliente e diametro del tagliente

Una minore sporgenza dell'utensile, si traduce in una maggiore stabilità della lavorazione.
La lavorazione può provocare flessioni dell'utensile e vibrazioni.

Incrementando la sporgenza dell'utensile del 100 %, il grado di deflessione (piegamento) viene aumentato di un fattore 8.

Riducendo la sporgenza del 20 % si riduce il grado di deflessione (piegamento) del 50 %.

Un aumento del 20 % del diametro dell'utensile riduce il grado di deflessione (piegamento) del 50 %.

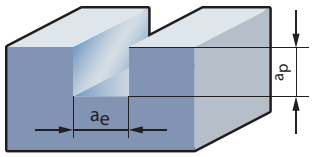


$$f = \frac{F \times l^3}{3 \times E \times l} = \frac{F \times l^3 \times 64}{3 \times E \times l}$$

Frese in metallo duro integrale

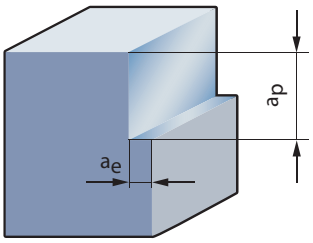
Strategie di lavorazione Frese HPC/UM (HSC)

HPC = High Performance Cutting
Sgrossatura con velocità di asportazione truciolo notevolmente maggiore a causa di velocità di taglio e avanzamento maggiori rispetto ai processi di lavorazione tradizionali.



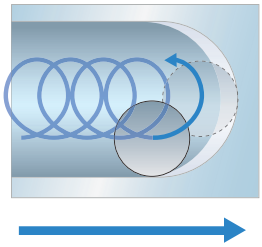
Fresature di cave dal pieno

HSC (UM) = High Speed Cutting
L'elevata velocità di taglio e velocità di avanzamento in combinazione con profondità di taglio inferiori comportano uno spessore del truciolo inferiore rispetto al taglio normale.



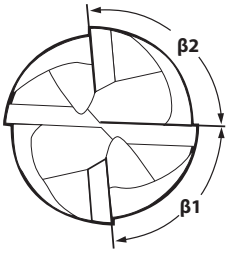
a_e <15 %
a_p = max

Rifilatura

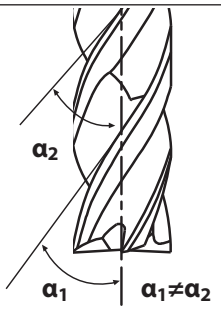


Fresatura trocoidale

La fresa UM è stata ottimizzata appositamente per la lavorazione HSC.



β1≠β2

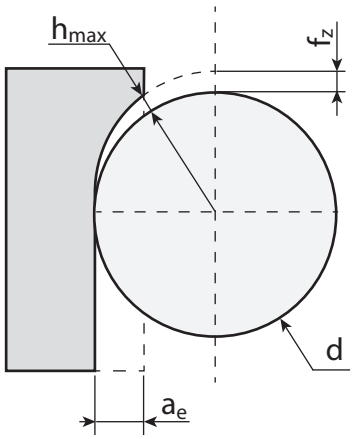


Con questo utensile è possibile realizzare i massimi volumi di taglio.
Soprattutto su macchine altamente dinamiche con percorsi utensile ottimizzati questa fresa mostra tutto il suo potenziale.

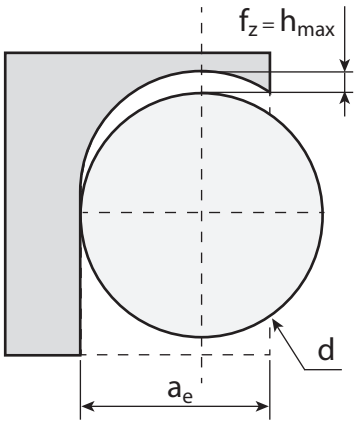
Frese in metallo duro integrale

Strategia HSC

La giusta strategia è importante. Durante la programmazione, è essenziale assicurarsi che l'avanzamento laterale sia rispettato. L'avanzamento laterale non dovrebbe normalmente superare il 15%. La profondità di incremento consente di utilizzare tutta la lunghezza del tagliente.



$a_e < d/2 \quad h_{max} < f_z$

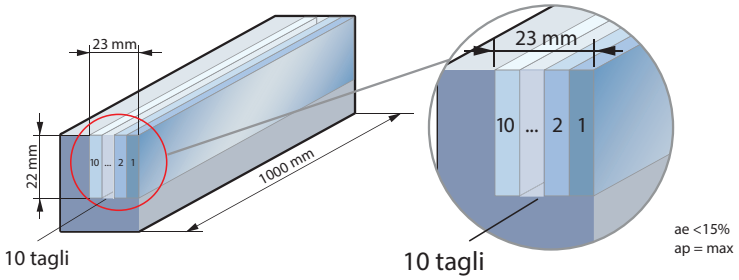


$a_e \geq d/2 \quad h_{max} = f_z$

$$h_{max} = 2f_z\sqrt{\frac{a_e}{d}\left(1-\frac{a_e}{d}\right)}$$

Quando si modifica l'avanzamento laterale, i parametri di taglio devono essere regolati.
La dimensione del calcolo è uno spessore del truciolo di circa 0,15-0,2 mm per i tipi comuni di acciaio.

Esempio

Utensile	Lavorazione
	
UM-4E-D20.0-W KMG405	Strategia HSC

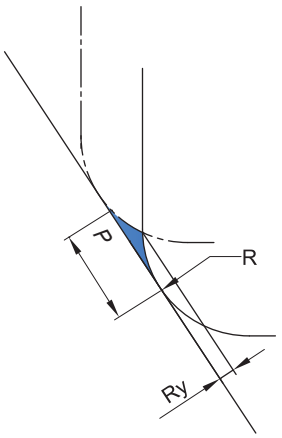
Materiale pezzo
16MnCr5 (1.7131) ca. 700 N/mm³

Dati di taglio	
V_c	550 m/min
n	8750 1/min
f_z	0,3 mm (**h_{max} = 0,19 mm**)
V_f	10500 mm/min
a_p	22 mm
a_e	2,3 mm

Risultato
Volume di materiale asportato **530 cm³/min**! tempo di lavoro 58 secondi! Spessore medio del truciolo 0,19mm.

Frese in metallo duro integrale

Valori di avanzamento per la profilatura con Frese a testa sferica e frese toroidali



$$Ry = R \times \{1-\cos[\arcsin(fr/2R)]\}$$

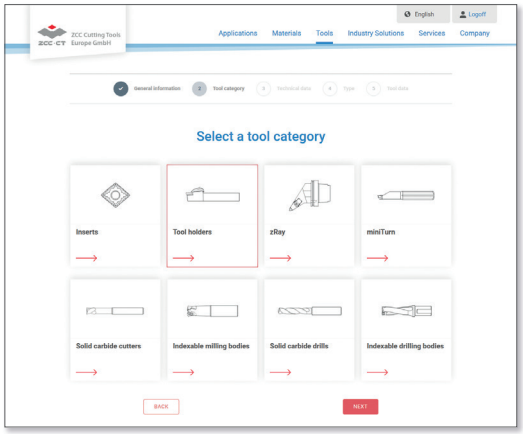
Ry: Valori teorici della qualità superficiale
P: Avanzamento
R: Raggio della fresa a testa semisferica o toroidale

R \ Ry	Avanzamento P									
	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9	1,0
0,5	0,003	0,010	0,023	0,042	0,067	0,100				
1,0	0,001	0,005	0,011	0,020	0,032	0,046	0,063	0,083	0,107	
1,5	0,001	0,003	0,008	0,013	0,021	0,030	0,041	0,054	0,069	0,086
2,0	0,001	0,003	0,006	0,010	0,015	0,023	0,031	0,040	0,051	0,064
2,5	0,001	0,002	0,005	0,008	0,013	0,018	0,025	0,032	0,041	0,051
3,0		0,001	0,004	0,007	0,010	0,015	0,020	0,027	0,034	0,042
4,0		0,001	0,003	0,005	0,008	0,011	0,015	0,020	0,025	0,031
5,0		0,001	0,002	0,004	0,006	0,009	0,012	0,016	0,020	0,025
6,0			0,002	0,003	0,005	0,008	0,010	0,013	0,017	0,021
8,0			0,001	0,003	0,004	0,006	0,008	0,010	0,013	0,016
10,0			0,001	0,002	0,003	0,005	0,006	0,008	0,010	0,013
12,5			0,001	0,002	0,003	0,004	0,005	0,006	0,008	0,010

R \ Ry	Avanzamento P									
	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2,0
0,5										
1,0										
1,5	0,104									
2,0	0,077	0,092	0,109							
2,5	0,061	0,073	0,086	0,100						
3,0	0,051	0,061	0,071	0,083	0,095	0,109				
4,0	0,038	0,045	0,053	0,062	0,071	0,081	0,091	0,103		
5,0	0,030	0,036	0,042	0,049	0,057	0,064	0,073	0,082	0,091	0,101
6,0	0,025	0,030	0,035	0,041	0,047	0,054	0,061	0,068	0,076	0,084
8,0	0,019	0,023	0,026	0,031	0,035	0,040	0,045	0,051	0,057	0,063
10,0	0,015	0,018	0,021	0,025	0,028	0,032	0,036	0,041	0,045	0,050
12,5	0,012	0,014	0,017	0,020	0,023	0,026	0,029	0,032	0,036	0,040

Andate direttamente all’utensile speciale personalizzato per operazioni di fresatura

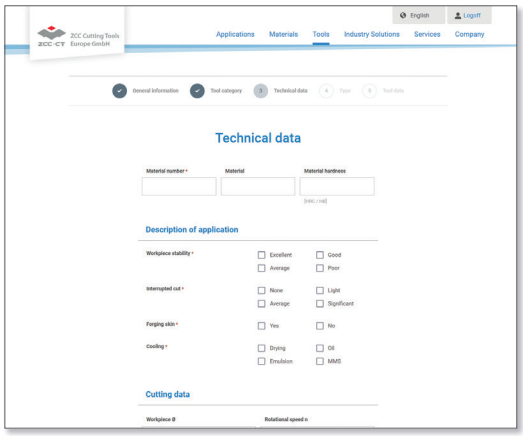
Lavorate con cicli di fresatura per cui è possibile ottenere vantaggi in termini commerciali, tecnici, logistici o di processo impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (https://www.zccct-europe.com/it/gli-utensili/gli-utensili-speciali).



Home page “Strumento online per utensili speciali” con Selezione della categoria dell’utensile

Selezione della categoria dell’utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell’utensile

Definizione dei parametri dell’utensile

Successivamente potrete seguire comodamente la procedura. Potrete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

Con noi, il vostro utensile speciale è a portata di mano.
ZCC Cutting Tools Europe GmbH.

Effettuate subito l’accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.



PUNTA AD INSERTI

Punta ad inserti

Panoramica prodotti	**C2**
Panoramica rompitrucioli	**C3-C4**
Panoramica gradi	**C6-C7**
Campo di applicazione dei gradi	**C8**
Codice sistema – Corpo punta	**C9**
Corpo punta	**C10-C31**
Codice ISO – Inserti	**C32**
Inserti	**C33-C35**
Dati di taglio consigliati	**C36-C37**
Gli utensili speciali	**C214**

C

Punta ad inserti Panoramica prodotti

Punte ad inserti







ZD03	ZTD02	ZTD03	ZTD04	ZTD05	
16-58	13-50	13-73	13-59,5	17-50	Diametro
C30	C22	C24	C26	C28	Pagina






ZSD02	ZSD03	ZSD04	ZSD05	
12-63	12-63	12-63	12-63	Diametro
C10	C13	C16	C19	Pagina

Inserti - Foratura










SPGT-EM	SPGT-PM	SPMX-EM	SPMX-LM	SPMX-XM	WCMX-53	WCMX-D	WCMX-PG	
05 06 07 09 11 14	05 06 07 09 11 14	04 05 06 07 09 11 14	04 05 06 07 09 11 14	04 05 06 07 09 11 14	03 04 05 06 08	06 08	03 04 05 06 08	Lunghezza tagl.
C34	C34	C33	C33	C33	C35	C35	C35	Pagina

Foratura

XM P M




Geometria monolaterale per l'asportazione media. Geometria universale con un controllo del truciolo molto buono per acciaio e ghisa.

LM P M




Geometria monolaterale per l'asportazione media. Geometria con taglio dolce per un controllo del truciolo molto buono per lavorazione di acciai dolci.

PM P M K




Per la lavorazione di acciaio, acciaio inossidabile e ghise.

EM P M S




Per la lavorazione di acciaio, acciaio inossidabile e materiali a difficile asportazione.

PG P K




Per la lavorazione di acciaio e ghise.

D P M K




Per la lavorazione di acciaio, acciaio inossidabile e ghise.

Foratura

53	P	M	K	N

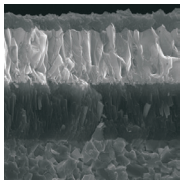




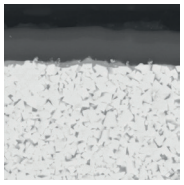
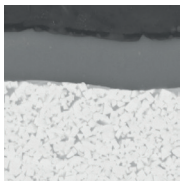
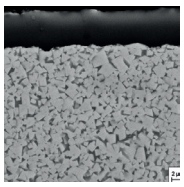
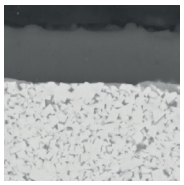
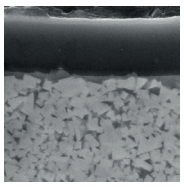
Per la lavorazione di acciaio, acciaio inossidabile e Metalli non ferrosi.

Note

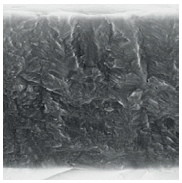
Metallo duro rivestito CVD

Grado	ISO	Microstruttura	Descrizione gradi
YB6338	P20 - P40 K20 - K40		Substrato in metallo duro rivestito in CVD P20–P40/K20–K40 per la lavorazione con velocità di taglio e avanzamento elevati di acciaio e materiali in ghisa.
YBD252	K20 - K35		Grado di metallo duro con rivestimento in CVD K20-K35 per lavorazioni da media fino alla sgrossatura di materiali in ghisa e acciaio. Elevata resistenza all´usura e alla rottura ad alte velocità di taglio.

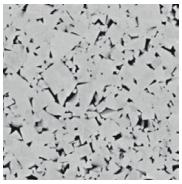
Metallo duro rivestito PVD

Grado	ISO	Microstruttura	Descrizione gradi
YBG105	S05 - S20		Grado di metallo duro con rivestimento multistrato in PVD S05-S20 adatto per lavorazioni dalla finitura all´asportazione media di superleghe ma anche di acciai inossidabili. Ottima resistenza all´usura e alla temperatura in una vasta gamma di applicazioni
YBG202	P10 - P30 M10 - M25		Grado di metallo duro con rivestimento in PVD P10–P30/M10–M25 per lavorazioni dalla finitura all'asportazione media di acciai inossidabili e acciaio (fresatura). Ottima resistenza all´usura in una vasta gamma di applicazioni.
YBS203	S15 – S25		Per la lavorazione di materiali resistenti al calore. Uno speciale substrato in metallo duro e la più recente tecnologia di rivestimento PVD consentono un'ottima resistenza all'usura, un'elevata resistenza alla rottura e un'alta stabilità termica.
YBG205	P10 - P30 M20 - M40 S15-S25		Grado di metallo duro P10 - P30/M20 - M40/S15 - S25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (fresatura). Resistenza all'usura e resistenza termica ottimali in un ampio campo di applicazione.
YB9320	P10 - P30 M10 - M25		Grado di metallo duro P10 - P30/M10 - M25 con rivestimento in PVD multistrato per lavorazioni che spaziano dalla finitura all'asportazione media di acciaio inossidabile, superleghe e acciaio (scanalatura/fresatura). Resistenza all'usura ottimale grazie al

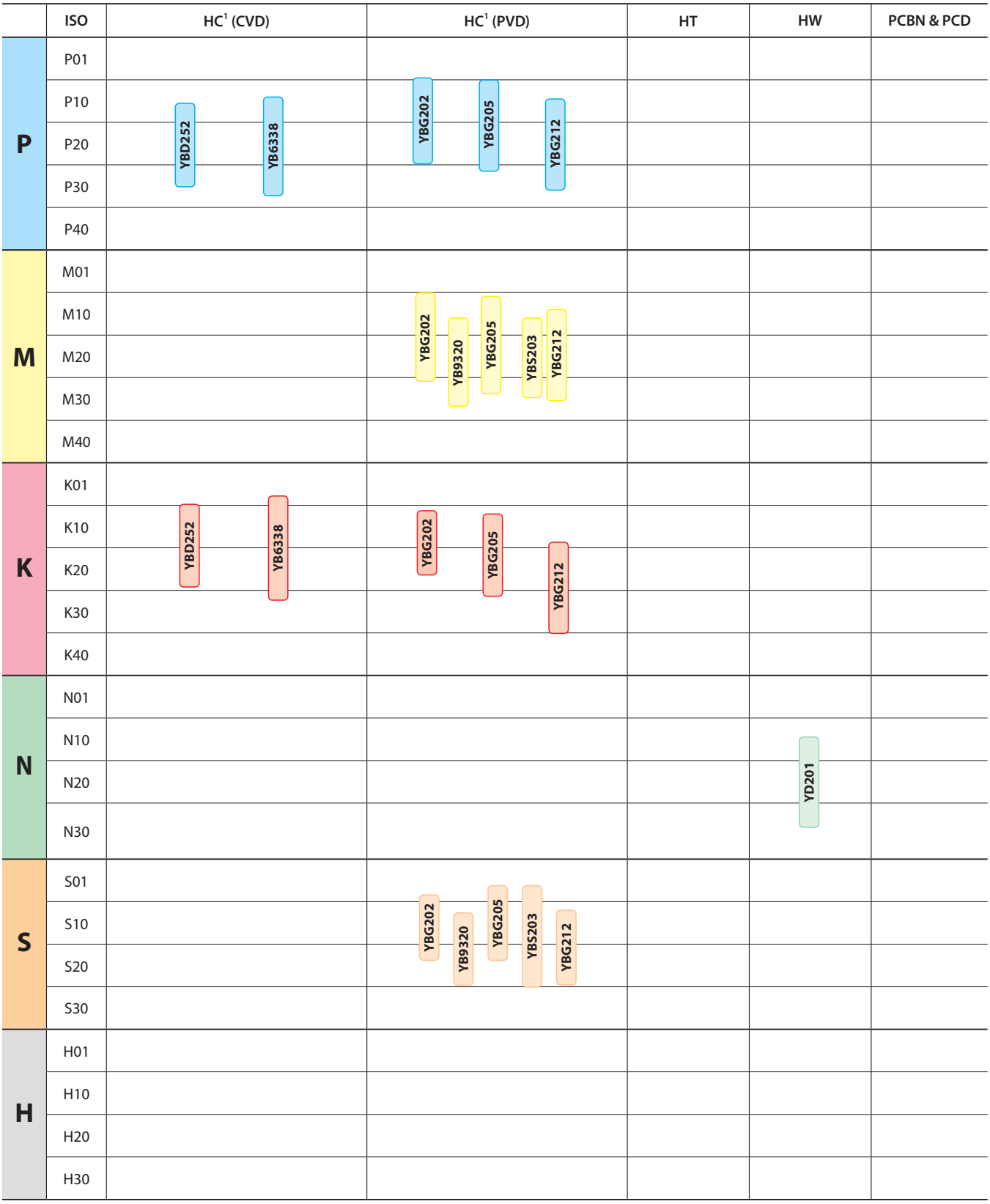
Metallo duro rivestito PVD

Grado	ISO	Microstruttura	Descrizione gradi
YBG212	P25 - P35 M25-M40		Grado di metallo duro con rivestimento in PVD P25–P35/M25–M40 per la lavorazione di acciaio e acciaio inossidabile. Particolarmente adatto come inserto di centraggio per la foratura.

Metallo duro non rivestito

Grado	ISO	Microstruttura	Descrizione gradi
YD201	K10 - K30 N10 - N30		Substrato in metallo duro non rivestito K10–K30/N10–N30 per l´asportazione media di alluminio e altri materiali.

Campi di applicazione dei gradi – punta ad inserti



P	Acciaio	
M	Acciaio inossidabile	
K	Ghisa	
N	Metalli non ferrosi	
S	Materiali a difficile asportazione	
H	Materiali ad elevata durezza	

HC[1] Carburo cementato rivestito
HT Cermet non rivestito
HW Metallo duro non rivestito

ZSD – 03 300 – XP – 32 S P 09 – 02

1	2	3	4	5	6	7	8	9

Versione

Code	Descrizione
ZSD	Punte ad inserti (SPMX*)
ZTD	Punte ad inserti (SPGT*)
ZD	Punte ad inserti (WCMX*)

1

Rapporto L/D

Code	Descrizione
02	2 x D
03	3 x D
04	4 x D
05	5 x D

2

Diametro [mm]

Code	Descrizione
130	13
...	

3

Versione del codolo

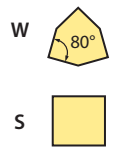
Code	Descrizione
XP	Stelo Weldon

4

Diametro accoppiamento [mm]

5

Forma dell'inserto



6

Angolo di spoglia inferiore

Code	Descrizione
C	7°
P	11°

7

Lunghezza tagliente [mm]

Code	Forma dell'inserto	
	W	S
03	3,8	
04	4,3	
05	5,4	5
06	6,5	6
08	8,7	7,94
09		9,8
11		11,5
12		12,7
14		14,3

8

Numero di denti

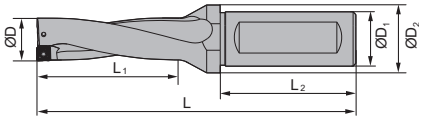
9

Punta ad inserti

ZSD02







Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD02-120-XP20-SP04-02	✻	•	12	20	25	27	50	94	0,162	SPMX040204**
ZSD02-125-XP20-SP04-02	✻	•	12,5	20	25	28	50	95	0,164	SPMX040204**
ZSD02-130-XP20-SP04-02	✻	•	13	20	25	29	50	96	0,167	SPMX040204**
ZSD02-135-XP20-SP04-02	✻	•	13,5	20	25	30	50	97	0,169	SPMX040204**
ZSD02-140-XP20-SP04-02	✻	•	14	20	25	31	50	98	0,172	SPMX040204**
ZSD02-145-XP20-SP04-02	✻	•	14,5	20	25	32	50	99	0,176	SPMX040204**
ZSD02-150-XP20-SP05-02	✻	•	15	20	25	33	50	100	0,179	SPMX050204**
ZSD02-155-XP20-SP05-02	✻	•	15,5	20	25	34	50	101	0,185	SPMX050204**
ZSD02-160-XP20-SP05-02	✻	•	16	20	25	35	50	102	0,189	SPMX050204**
ZSD02-165-XP20-SP05-02	✻	•	16,5	20	25	36	50	103	0,193	SPMX050204**
ZSD02-170-XP20-SP05-02	✻	•	17	20	25	37	50	104	0,201	SPMX050204**
ZSD02-175-XP20-SP05-02	✻	•	17,5	20	25	38	50	105	0,207	SPMX050204**
ZSD02-180-XP25-SP06-02	✻	•	18	25	32	39	56	113	0,304	SPMX060204**
ZSD02-185-XP25-SP06-02	✻	•	18,5	25	32	40	56	114	0,308	SPMX060204**
ZSD02-190-XP25-SP06-02	✻	•	19	25	32	41	56	115	0,313	SPMX060204**
ZSD02-195-XP25-SP06-02	✻	•	19,5	25	32	42	56	116	0,317	SPMX060204**
ZSD02-200-XP25-SP06-02	✻	•	20	25	32	43	56	117	0,323	SPMX060204**
ZSD02-205-XP25-SP06-02	✻	•	20,5	25	32	44	56	118	0,327	SPMX060204**
ZSD02-210-XP25-SP06-02	✻	•	21	25	32	45	56	119	0,33	SPMX060204**
ZSD02-215-XP25-SP06-02	✻	•	21,5	25	32	46	56	120	0,341	SPMX060204**
ZSD02-220-XP25-SP06-02	✻	•	22	25	32	47	56	121	0,346	SPMX060204**
ZSD02-225-XP25-SP07-02	✻	•	22,5	25	32	48	56	122	0,34	SPMX07T308**
ZSD02-230-XP25-SP07-02	✻	•	23	25	32	49	56	123	0,348	SPMX07T308**
ZSD02-235-XP25-SP07-02	✻	•	23,5	25	32	50	56	124	0,353	SPMX07T308**
ZSD02-240-XP25-SP07-02	✻	•	24	25	32	51	56	125	0,36	SPMX07T308**
ZSD02-245-XP25-SP07-02	✻	•	24,5	25	32	52	56	126	0,367	SPMX07T308**
ZSD02-250-XP25-SP07-02	✻	•	25	25	32	53	56	127	0,373	SPMX07T308**
ZSD02-255-XP25-SP07-02	✻	•	25,5	25	32	54	56	128	0,382	SPMX07T308**
ZSD02-260-XP25-SP07-02	✻	•	26	25	32	55	56	129	0,391	SPMX07T308**
ZSD02-265-XP25-SP07-02	✻	○	26,5	25	32	56	56	130	0,4	SPMX07T308**
ZSD02-270-XP25-SP07-02	✻	•	27	25	32	57	56	131	0,409	SPMX07T308**
ZSD02-275-XP25-SP07-02	✻	•	27,5	25	32	58	56	132	0,418	SPMX07T308**
ZSD02-280-XP32-SP09-02	✻	•	28	32	37	59	60	139	0,599	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD02-290-XP32-SP09-02	✻	•	29	32	37	60	60	141	0,619	SPMX090408**
ZSD02-300-XP32-SP09-02	✻	•	30	32	37	61	60	143	0,64	SPMX090408**
ZSD02-310-XP32-SP09-02	✻	•	31	32	37	65	60	145	0,663	SPMX090408**
ZSD02-320-XP32-SP09-02	✻	•	32	32	37	67	60	147	0,687	SPMX090408**
ZSD02-330-XP32-SP09-02	✻	•	33	32	37	69	60	149	0,713	SPMX090408**
ZSD02-340-XP40-SP11-02	✻	•	34	40	47	71	70	166	1,101	SPMX110408**
ZSD02-350-XP40-SP11-02	✻	•	35	40	47	73	70	168	1,136	SPMX110408**
ZSD02-360-XP40-SP11-02	✻	•	36	40	47	75	70	170	1,166	SPMX110408**
ZSD02-370-XP40-SP11-02	✻	•	37	40	47	77	70	172	1,202	SPMX110408**
ZSD02-380-XP40-SP11-02	✻	•	38	40	47	79	70	174	1,235	SPMX110408**
ZSD02-390-XP40-SP11-02	✻	•	39	40	47	81	70	176	1,271	SPMX110408**
ZSD02-400-XP40-SP11-02	✻	•	40	40	47	83	70	178	1,311	SPMX110408**
ZSD02-410-XP40-SP11-02	✻	•	41	40	47	85	70	180	1,347	SPMX110408**
ZSD02-420-XP40-SP11-02	✻	○	42	40	52	87	70	189	1,491	SPMX140512**
ZSD02-430-XP40-SP14-02	✻	○	43	40	52	89	70	191	1,496	SPMX140512**
ZSD02-440-XP40-SP14-02	✻	○	44	40	52	91	70	193	1,499	SPMX140512**
ZSD02-450-XP40-SP14-02	✻	○	45	40	52	93	70	195	1,535	SPMX140512**
ZSD02-460-XP40-SP14-02	✻	○	46	40	52	95	70	197	1,562	SPMX140512**
ZSD02-470-XP40-SP14-02	✻	○	47	40	52	97	70	199	1,644	SPMX140512**
ZSD02-480-XP40-SP14-02	✻	○	48	40	52	99	70	201	1,697	SPMX140512**
ZSD02-490-XP40-SP14-02	✻	○	49	40	52	102	70	203	1,757	SPMX140512**
ZSD02-500-XP40-SP14-02	✻	○	50	40	52	103	70	205	1,817	SPMX140512**
ZSD02-510-XP50-SP14-02	✻	○	51	50	57	105	80	217	2,46	SPMX140512**
ZSD02-520-XP50-SP14-02	✻	○	52	50	57	107	80	219	2,527	SPMX140512**
ZSD02-530-XP50-SP14-02	✻	○	53	50	57	109	80	221	2,594	SPMX140512**
ZSD02-540-XP50-SP09-04	✻	○	54	50	57	111	80	223	2,612	SPMX090408**
ZSD02-550-XP50-SP09-04	✻	○	55	50	57	113	80	225	2,673	SPMX090408**
ZSD02-560-XP50-SP09-04	✻	○	56	50	57	115	80	227	2,747	SPMX090408**
ZSD02-570-XP50-SP09-04	✻	○	57	50	57	117	80	229	2,816	SPMX090408**
ZSD02-580-XP50-SP09-04	✻	○	58	50	57	119	80	231	2,889	SPMX090408**
ZSD02-590-XP50-SP09-04	✻	○	59	50	57	121	80	233	2,967	SPMX090408**
ZSD02-600-XP50-SP09-04	✻	○	60	50	57	123	80	235	3,115	SPMX090408**
ZSD02-610-XP50-SP09-04	✻	○	61	50	57	125	80	237	3,195	SPMX090408**
ZSD02-620-XP50-SP09-04	✻	○	62	50	57	127	80	239	3,285	SPMX090408**
ZSD02-630-XP50-SP09-04	✻	○	63	50	57	129	80	241	3,368	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Vite	I60M1.8x4 (0,5Nm)	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT05IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Inserto



C33

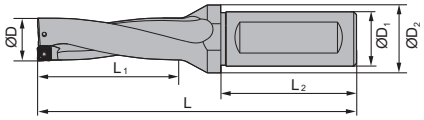
Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZSD03







Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD03-120-XP20-SP04-02	✻	•	12	20	25	39	50	105	0,165	SPMX040204**
ZSD03-125-XP20-SP04-02	✻	•	12,5	20	25	41	50	107	0,169	SPMX040204**
ZSD03-130-XP20-SP04-02	✻	•	13	20	25	42	50	108	0,171	SPMX040204**
ZSD03-135-XP20-SP04-02	✻	•	13,5	20	25	44	50	110	0,175	SPMX040204**
ZSD03-140-XP20-SP04-02	✻	•	14	20	25	45	50	111	0,178	SPMX040204**
ZSD03-145-XP20-SP04-02	✻	•	14,5	20	25	47	50	113	0,182	SPMX040204**
ZSD03-150-XP20-SP05-02	✻	•	15	20	25	48	50	114	0,189	SPMX050204**
ZSD03-155-XP20-SP05-02	✻	•	15,5	20	25	50	50	116	0,192	SPMX050204**
ZSD03-160-XP20-SP05-02	✻	•	16	20	25	51	50	117	0,201	SPMX050204**
ZSD03-165-XP20-SP05-02	✻	•	16,5	20	25	53	50	119	0,203	SPMX050204**
ZSD03-170-XP20-SP05-02	✻	•	17	20	25	54	50	120	0,205	SPMX050204**
ZSD03-175-XP20-SP05-02	✻	•	17,5	20	25	56	50	122	0,206	SPMX050204**
ZSD03-180-XP25-SP06-02	✻	•	18	25	32	57	56	131	0,319	SPMX060204**
ZSD03-185-XP25-SP06-02	✻	•	18,5	25	32	59	56	133	0,326	SPMX060204**
ZSD03-190-XP25-SP06-02	✻	•	19	25	32	60	56	134	0,332	SPMX060204**
ZSD03-195-XP25-SP06-02	✻	•	19,5	25	32	62	56	136	0,339	SPMX060204**
ZSD03-200-XP25-SP06-02	✻	•	20	25	32	63	56	137	0,344	SPMX060204**
ZSD03-205-XP25-SP06-02	✻	•	20,5	25	32	65	56	139	0,352	SPMX060204**
ZSD03-210-XP25-SP06-02	✻	•	21	25	32	66	56	140	0,368	SPMX060204**
ZSD03-215-XP25-SP06-02	✻	•	21,5	25	32	68	56	142	0,37	SPMX060204**
ZSD03-220-XP25-SP06-02	✻	•	22	25	32	69	56	143	0,375	SPMX060204**
ZSD03-225-XP25-SP07-02	✻	•	22,5	25	32	71	56	145	0,397	SPMX07T308**
ZSD03-230-XP25-SP07-02	✻	•	23	25	32	72	56	147	0,383	SPMX07T308**
ZSD03-235-XP25-SP07-02	✻	•	23,5	25	32	74	56	149	0,395	SPMX07T308**
ZSD03-240-XP25-SP07-02	✻	•	24	25	32	75	56	150	0,406	SPMX07T308**
ZSD03-245-XP25-SP07-02	✻	•	24,5	25	32	77	56	152	0,423	SPMX07T308**
ZSD03-250-XP25-SP07-02	✻	•	25	25	32	78	56	153	0,431	SPMX07T308**
ZSD03-255-XP25-SP07-02	✻	•	25,5	25	32	80	56	155	0,44	SPMX07T308**
ZSD03-260-XP25-SP07-02	✻	•	26	25	32	81	56	156	0,453	SPMX07T308**
ZSD03-265-XP25-SP07-02	✻	•	26,5	25	32	83	56	158	0,467	SPMX07T308**
ZSD03-270-XP25-SP07-02	✻	•	27	25	32	84	56	160	0,504	SPMX07T308**
ZSD03-275-XP25-SP07-02	✻	•	27,5	25	32	86	56	162	0,682	SPMX07T308**
ZSD03-280-XP32-SP09-02	✻	•	28	32	37	87	60	169	0,707	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 | Scelta gradi > C8 | Informazioni tecniche > C201 | Dati di taglio > C36

Punta ad inserti Corpo punta

Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD03-290-XP32-SP09-02	✻	•	29	32	37	90	60	172	0,739	SPMX090408**
ZSD03-300-XP32-SP09-02	✻	•	30	32	37	93	60	175	0,754	SPMX090408**
ZSD03-310-XP32-SP09-02	✻	•	31	32	37	96	60	178	0,771	SPMX090408**
ZSD03-320-XP32-SP09-02	✻	•	32	32	37	99	60	181	0,806	SPMX090408**
ZSD03-330-XP32-SP09-02	✻	•	33	32	37	102	60	184	0,847	SPMX090408**
ZSD03-340-XP40-SP11-02	✻	•	34	40	47	105	70	200	1,208	SPMX110408**
ZSD03-350-XP40-SP11-02	✻	•	35	40	47	108	70	203	1,248	SPMX110408**
ZSD03-360-XP40-SP11-02	✻	•	36	40	47	111	70	206	1,302	SPMX110408**
ZSD03-370-XP40-SP11-02	✻	•	37	40	47	114	70	209	1,341	SPMX110408**
ZSD03-380-XP40-SP11-02	✻	•	38	40	47	117	70	212	1,395	SPMX110408**
ZSD03-390-XP40-SP11-02	✻	•	39	40	47	120	70	215	1,447	SPMX110408**
ZSD03-400-XP40-SP11-02	✻	•	40	40	47	123	70	218	1,505	SPMX110408**
ZSD03-410-XP40-SP11-02	✻	•	41	40	47	126	70	221	1,549	SPMX110408**
ZSD03-420-XP40-SP11-02	✻	○	42	40	52	129	70	231	1,716	SPMX140512**
ZSD03-430-XP40-SP14-02	✻	•	43	40	52	132	70	234	1,656	SPMX140512**
ZSD03-440-XP40-SP14-02	✻	○	44	40	52	135	70	237	1,708	SPMX140512**
ZSD03-450-XP40-SP14-02	✻	○	45	40	52	138	70	240	1,776	SPMX140512**
ZSD03-460-XP40-SP14-02	✻	○	46	40	52	141	70	243	1,851	SPMX140512**
ZSD03-470-XP40-SP14-02	✻	○	47	40	52	144	70	245	1,924	SPMX140512**
ZSD03-480-XP40-SP14-02	✻	○	48	40	52	147	70	249	2,003	SPMX140512**
ZSD03-490-XP40-SP14-02	✻	○	49	40	52	150	70	252	2,094	SPMX140512**
ZSD03-500-XP40-SP14-02	✻	○	50	40	52	153	70	255	2,184	SPMX140512**
ZSD03-510-XP50-SP14-02	✻	○	51	50	57	156	80	268	2,882	SPMX140512**
ZSD03-520-XP50-SP14-02	✻	○	52	50	57	159	80	271	2,974	SPMX140512**
ZSD03-530-XP50-SP14-02	✻	○	53	50	57	162	80	274	3,071	SPMX140512**
ZSD03-540-XP50-SP09-04	✻	○	54	50	57	165	80	277	3,116	SPMX090408**
ZSD03-550-XP50-SP09-04	✻	○	55	50	57	168	80	280	3,208	SPMX090408**
ZSD03-560-XP50-SP09-04	✻	○	56	50	57	171	80	283	3,315	SPMX090408**
ZSD03-570-XP50-SP09-04	✻	○	57	50	57	174	80	286	3,499	SPMX090408**
ZSD03-580-XP50-SP09-04	✻	○	58	50	57	177	80	289	3,53	SPMX090408**
ZSD03-590-XP50-SP09-04	✻	○	59	50	57	180	80	292	3,649	SPMX090408**
ZSD03-600-XP50-SP09-04	✻	○	60	50	57	183	80	295	3,838	SPMX090408**
ZSD03-610-XP50-SP09-04	✻	○	61	50	57	186	80	298	3,961	SPMX090408**
ZSD03-620-XP50-SP09-04	✻	○	62	50	57	189	80	301	4,103	SPMX090408**
ZSD03-630-XP50-SP09-04	✻	○	63	50	57	192	80	304	4,238	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Vite	I60M1.8x4 (0,5Nm)	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT05IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Inserto



C33

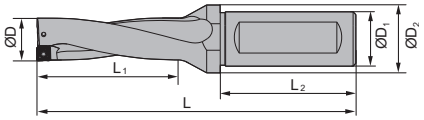
Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZSD04







Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD04-120-XP20-SP04-02	✻	•	12	20	25	51	50	117	0,169	SPMX040204**
ZSD04-125-XP20-SP04-02	✻	•	12,5	20	25	53	50	119	0,173	SPMX040204**
ZSD04-130-XP20-SP04-02	✻	•	13	20	25	55	50	121	0,177	SPMX040204**
ZSD04-135-XP20-SP04-02	✻	•	13,5	20	25	57	50	123	0,181	SPMX040204**
ZSD04-140-XP20-SP04-02	✻	•	14	20	25	59	50	125	0,186	SPMX040204**
ZSD04-145-XP20-SP04-02	✻	•	14,5	20	25	61	50	127	0,191	SPMX040204**
ZSD04-150-XP20-SP05-02	✻	•	15	20	25	63	50	129	0,2	SPMX050204**
ZSD04-155-XP20-SP05-02	✻	•	15,5	20	25	65	50	131	0,203	SPMX050204**
ZSD04-160-XP20-SP05-02	✻	•	16	20	25	67	50	133	0,207	SPMX050204**
ZSD04-165-XP20-SP05-02	✻	•	16,5	20	25	69	50	135	0,214	SPMX050204**
ZSD04-170-XP20-SP05-02	✻	•	17	20	25	71	50	137	0,218	SPMX050204**
ZSD04-175-XP20-SP05-02	✻	•	17,5	20	25	73	50	139	0,222	SPMX050204**
ZSD04-180-XP25-SP06-02	✻	•	18	25	32	75	56	149	0,34	SPMX060204**
ZSD04-185-XP25-SP06-02	✻	•	18,5	25	32	77	56	151	0,341	SPMX060204**
ZSD04-190-XP25-SP06-02	✻	•	19	25	32	79	56	153	0,369	SPMX060204**
ZSD04-195-XP25-SP06-02	✻	•	19,5	25	32	81	56	155	0,382	SPMX060204**
ZSD04-200-XP25-SP06-02	✻	•	20	25	32	83	56	157	0,367	SPMX060204**
ZSD04-205-XP25-SP06-02	✻	•	20,5	25	32	85	56	159	0,37	SPMX060204**
ZSD04-210-XP25-SP06-02	✻	•	21	25	32	87	56	161	0,413	SPMX060204**
ZSD04-215-XP25-SP06-02	✻	•	21,5	25	32	89	56	163	0,426	SPMX060204**
ZSD04-220-XP25-SP06-02	✻	•	22	25	32	91	56	165	0,441	SPMX060204**
ZSD04-225-XP25-SP07-02	✻	•	22,5	25	32	93	56	167	0,407	SPMX07T308**
ZSD04-230-XP25-SP07-02	✻	•	23	25	32	95	56	170	0,421	SPMX07T308**
ZSD04-235-XP25-SP07-02	✻	•	23,5	25	32	97	56	172	0,483	SPMX07T308**
ZSD04-240-XP25-SP07-02	✻	•	24	25	32	99	56	174	0,502	SPMX07T308**
ZSD04-245-XP25-SP07-02	✻	•	24,5	25	32	101	56	176	0,517	SPMX07T308**
ZSD04-250-XP25-SP07-02	✻	•	25	25	32	103	56	178	0,52	SPMX07T308**
ZSD04-255-XP25-SP07-02	✻	•	25,5	25	32	105	56	181	0,5	SPMX07T308**
ZSD04-260-XP25-SP07-02	✻	•	26	25	32	107	56	182	0,512	SPMX07T308**
ZSD04-265-XP25-SP07-02	✻	•	26,5	25	32	109	56	184	0,52	SPMX07T308**
ZSD04-270-XP25-SP07-02	✻	•	27	25	32	111	56	187	0,617	SPMX07T308**
ZSD04-275-XP25-SP07-02	✻	•	27,5	25	32	113	56	190	0,642	SPMX07T308**
ZSD04-280-XP32-SP09-02	✻	○	28	32	37	115	60	199	0,748	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD04-290-XP32-SP09-02	✻	•	29	32	37	119	60	203	0,793	SPMX090408**
ZSD04-300-XP32-SP09-02	✻	•	30	32	37	123	60	207	0,832	SPMX090408**
ZSD04-305-XP32-SP09-02	✻	•	30,5	32	37	125	60	209	0,854	SPMX090408**
ZSD04-310-XP32-SP09-02	✻	•	31	32	37	127	60	211	0,872	SPMX090408**
ZSD04-320-XP32-SP09-02	✻	•	32	32	37	131	60	215	0,922	SPMX090408**
ZSD04-330-XP32-SP09-02	✻	•	33	32	37	135	60	219	0,973	SPMX090408**
ZSD04-340-XP40-SP11-02	✻	•	34	40	47	139	70	234	1,326	SPMX110408**
ZSD04-350-XP40-SP11-02	✻	•	35	40	47	143	70	238	1,384	SPMX110408**
ZSD04-360-XP40-SP11-02	✻	•	36	40	47	147	70	242	1,445	SPMX110408**
ZSD04-370-XP40-SP11-02	✻	•	37	40	47	151	70	246	1,499	SPMX110408**
ZSD04-380-XP40-SP11-02	✻	•	38	40	47	155	70	250	1,563	SPMX110408**
ZSD04-390-XP40-SP11-02	✻	•	39	40	47	159	70	254	1,629	SPMX110408**
ZSD04-400-XP40-SP11-02	✻	•	40	40	47	163	70	258	1,697	SPMX110408**
ZSD04-405-XP40-SP11-02	✻	•	40,5	40	47	165	70	260	1,737	SPMX110408**
ZSD04-410-XP40-SP11-02	✻	•	41	40	47	167	70	262	1,775	SPMX110408**
ZSD04-420-XP40-SP11-02	✻	○	42	40	52	171	70	273	1,948	SPMX140512**
ZSD04-430-XP40-SP14-02	✻	○	43	40	52	175	70	277	1,952	SPMX140512**
ZSD04-440-XP40-SP14-02	✻	○	44	40	52	179	70	281	1,962	SPMX140512**
ZSD04-450-XP40-SP14-02	✻	○	45	40	52	183	70	285	2,06	SPMX140512**
ZSD04-460-XP40-SP14-02	✻	○	46	40	52	187	70	289	2,157	SPMX140512**
ZSD04-470-XP40-SP14-02	✻	•	47	40	52	191	70	293	2,256	SPMX140512**
ZSD04-480-XP40-SP14-02	✻	○	48	40	52	195	70	297	2,361	SPMX140512**
ZSD04-490-XP40-SP14-02	✻	○	49	40	52	199	70	301	2,489	SPMX140512**
ZSD04-500-XP40-SP14-02	✻	○	50	40	52	203	70	305	2,589	SPMX140512**
ZSD04-510-XP50-SP14-02	✻	○	51	50	57	207	80	319	3,292	SPMX140512**
ZSD04-520-XP50-SP14-02	✻	○	52	50	57	211	80	323	3,435	SPMX140512**
ZSD04-530-XP50-SP14-02	✻	○	53	50	57	215	80	327	3,574	SPMX140512**
ZSD04-540-XP50-SP09-04	✻	○	54	50	57	219	80	331	3,604	SPMX090408**
ZSD04-550-XP50-SP09-04	✻	○	55	50	57	223	80	335	3,731	SPMX090408**
ZSD04-560-XP50-SP09-04	✻	○	56	50	57	227	80	339	3,868	SPMX090408**
ZSD04-570-XP50-SP09-04	✻	○	57	50	57	231	80	343	4,01	SPMX090408**
ZSD04-580-XP50-SP09-04	✻	○	58	50	57	235	80	347	4,156	SPMX090408**
ZSD04-590-XP50-SP09-04	✻	○	59	50	57	239	80	351	4,312	SPMX090408**
ZSD04-600-XP50-SP09-04	✻	○	60	50	57	243	80	355	4,558	SPMX090408**
ZSD04-610-XP50-SP09-04	✻	○	61	50	57	247	80	359	4,72	SPMX090408**
ZSD04-620-XP50-SP09-04	✻	○	62	50	57	251	80	363	4,886	SPMX090408**
ZSD04-630-XP50-SP09-04	✻	○	63	50	57	255	80	367	5,068	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Vite	I60M1.8x4 (0,5Nm)	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT05IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Codice sistema C9 Scelta gradi C8 Informazioni tecniche C201 Dati di taglio C36

Inserto



C33

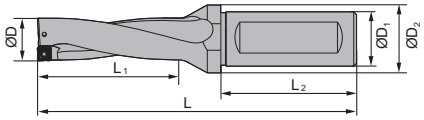
Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZSD05







Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD05-120-XP20-SP04-02	✻	•	12	20	25	63	50	129	0,173	SPMX040204**
ZSD05-125-XP20-SP04-02	✻	•	12,5	20	25	66	50	132	0,179	SPMX040204**
ZSD05-130-XP20-SP04-02	✻	•	13	20	25	68	50	134	0,183	SPMX040204**
ZSD05-135-XP20-SP04-02	✻	•	13,5	20	25	71	50	137	0,189	SPMX040204**
ZSD05-140-XP20-SP04-02	✻	•	14	20	25	73	50	139	0,194	SPMX040204**
ZSD05-145-XP20-SP04-02	✻	•	14,5	20	25	76	50	141	0,2	SPMX040204**
ZSD05-150-XP20-SP05-02	✻	•	15	20	25	78	50	144	0,206	SPMX050204**
ZSD05-155-XP20-SP05-02	✻	•	15,5	20	25	81	50	147	0,214	SPMX050204**
ZSD05-160-XP20-SP05-02	✻	•	16	20	25	83	50	149	0,219	SPMX050204**
ZSD05-165-XP20-SP05-02	✻	•	16,5	20	25	86	50	152	0,223	SPMX050204**
ZSD05-170-XP20-SP05-02	✻	•	17	20	25	88	50	154	0,23	SPMX050204**
ZSD05-175-XP20-SP05-02	✻	•	17,5	20	25	91	50	157	0,239	SPMX050204**
ZSD05-180-XP25-SP06-02	✻	•	18	25	32	93	56	167	0,355	SPMX060204**
ZSD05-185-XP25-SP06-02	✻	•	18,5	25	32	96	56	170	0,36	SPMX060204**
ZSD05-190-XP25-SP06-02	✻	•	19	25	32	98	56	172	0,369	SPMX060204**
ZSD05-195-XP25-SP06-02	✻	•	19,5	25	32	101	56	175	0,382	SPMX060204**
ZSD05-200-XP25-SP06-02	✻	•	20	25	32	103	56	177	0,39	SPMX060204**
ZSD05-205-XP25-SP06-02	✻	•	20,5	25	32	106	56	180	0,401	SPMX060204**
ZSD05-210-XP25-SP06-02	✻	•	21	25	32	108	56	182	0,413	SPMX060204**
ZSD05-215-XP25-SP06-02	✻	•	21,5	25	32	111	56	185	0,426	SPMX060204**
ZSD05-220-XP25-SP06-02	✻	•	22	25	32	113	56	187	0,441	SPMX060204**
ZSD05-225-XP25-SP07-02	✻	•	22,5	25	32	116	56	190	0,442	SPMX07T308**
ZSD05-230-XP25-SP07-02	✻	•	23	25	32	118	56	194	0,461	SPMX07T308**
ZSD05-235-XP25-SP07-02	✻	•	23,5	25	32	121	56	197	0,483	SPMX07T308**
ZSD05-240-XP25-SP07-02	✻	•	24	25	32	123	56	199	0,497	SPMX07T308**
ZSD05-245-XP25-SP07-02	✻	•	24,5	25	32	126	56	202	0,517	SPMX07T308**
ZSD05-250-XP25-SP07-02	✻	•	25	25	32	128	56	204	0,533	SPMX07T308**
ZSD05-255-XP25-SP07-02	✻	•	25,5	25	32	131	56	207	0,555	SPMX07T308**
ZSD05-260-XP25-SP07-02	✻	•	26	25	32	133	56	209	0,571	SPMX07T308**
ZSD05-265-XP25-SP07-02	✻	•	26,5	25	32	136	56	212	0,593	SPMX07T308**
ZSD05-270-XP25-SP07-02	✻	•	27	25	32	138	56	214	0,617	SPMX07T308**
ZSD05-275-XP25-SP07-02	✻	•	27,5	25	32	141	56	217	0,642	SPMX07T308**
ZSD05-280-XP32-SP09-02	✻	•	28	32	37	143	60	223	0,791	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 | Scelta gradi > C8 | Informazioni tecniche > C201 | Dati di taglio > C36

Punta ad inserti Corpo punta

Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZSD05-290-XP32-SP09-02	✻	•	29	32	37	148	60	228	0,837	SPMX090408**
ZSD05-300-XP32-SP09-02	✻	•	30	32	37	153	60	233	0,943	SPMX090408**
ZSD05-310-XP32-SP09-02	✻	•	31	32	37	158	60	238	0,943	SPMX090408**
ZSD05-320-XP32-SP09-02	✻	•	32	32	37	163	60	243	1,001	SPMX090408**
ZSD05-330-XP32-SP09-02	✻	•	33	32	37	168	60	249	1,067	SPMX090408**
ZSD05-340-XP40-SP11-02	✻	•	34	40	47	173	70	268	1,44	SPMX110408**
ZSD05-350-XP40-SP11-02	✻	•	35	40	47	178	70	273	1,505	SPMX110408**
ZSD05-360-XP40-SP11-02	✻	•	36	40	47	183	70	278	1,575	SPMX110408**
ZSD05-370-XP40-SP11-02	✻	•	37	40	47	188	70	283	1,723	SPMX110408**
ZSD05-380-XP40-SP11-02	✻	•	38	40	47	193	70	288	1,723	SPMX110408**
ZSD05-390-XP40-SP11-02	✻	•	39	40	47	198	70	293	1,808	SPMX110408**
ZSD05-400-XP40-SP11-02	✻	•	40	40	47	203	70	298	1,894	SPMX110408**
ZSD05-410-XP40-SP11-02	✻	•	41	40	47	208	70	303	1,991	SPMX110408**
ZSD05-420-XP40-SP11-02	✻	○	42	40	52	213	70	315	2,182	SPMX140512**
ZSD05-430-XP40-SP14-02	✻	•	43	40	52	218	70	320	2,11	SPMX140512**
ZSD05-440-XP40-SP14-02	✻	•	44	40	52	223	70	325	2,22	SPMX140512**
ZSD05-450-XP40-SP14-02	✻	•	45	40	52	228	70	330	2,331	SPMX140512**
ZSD05-460-XP40-SP14-02	✻	•	46	40	52	233	70	335	2,45	SPMX140512**
ZSD05-470-XP40-SP14-02	✻	○	47	40	52	238	70	340	2,582	SPMX140512**
ZSD05-480-XP40-SP14-02	✻	•	48	40	52	243	70	345	2,693	SPMX140512**
ZSD05-490-XP40-SP14-02	✻	•	19	40	52	248	70	350	2,823	SPMX140512**
ZSD05-500-XP40-SP14-02	✻	•	50	40	52	253	70	355	2,958	SPMX140512**
ZSD05-510-XP50-SP14-02	✻	○	51	50	57	258	80	370	3,7	SPMX140512**
ZSD05-520-XP50-SP14-02	✻	○	52	50	57	263	80	375	3,848	SPMX140512**
ZSD05-530-XP50-SP14-02	✻	○	53	50	57	268	80	380	3,998	SPMX140512**
ZSD05-540-XP50-SP09-04	✻	○	54	50	57	273	80	385	4,035	SPMX090408**
ZSD05-550-XP50-SP09-04	✻	○	55	50	57	278	80	390	4,203	SPMX090408**
ZSD05-560-XP50-SP09-04	✻	○	56	50	57	283	80	395	4,368	SPMX090408**
ZSD05-570-XP50-SP09-04	✻	○	57	50	57	288	80	400	4,671	SPMX090408**
ZSD05-580-XP50-SP09-04	✻	○	58	50	57	293	80	405	4,866	SPMX090408**
ZSD05-590-XP50-SP09-04	✻	○	59	50	57	298	80	410	5,047	SPMX090408**
ZSD05-600-XP50-SP09-04	✻	○	60	50	57	303	80	415	5,192	SPMX090408**
ZSD05-610-XP50-SP09-04	✻	○	61	50	57	308	80	420	5,4	SPMX090408**
ZSD05-620-XP50-SP09-04	✻	○	62	50	57	313	80	425	5,619	SPMX090408**
ZSD05-630-XP50-SP09-04	✻	○	63	50	57	318	80	430	5,834	SPMX090408**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	SPMX040204**	SPMX050204**	SPMX060204**	SPMX07T308**	SPMX090408**	SPMX110408**	SPMX140512**
	Vite	I60M1.8x4 (0,5Nm)	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT05IP	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Inserto



C33

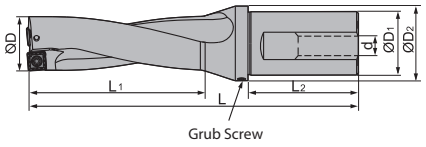
Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZTD02







Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD02-130-XP20-SP05-02	✻	•	13	20	25	31	50	98	M13×1	0,165	SPGT0502**
ZTD02-140-XP20-SP05-02	✻	•	14	20	25	33	50	100	M13×1	0,171	SPGT0502**
ZTD02-150-XP20-SP05-02	✻	•	15	20	25	35	50	102	M13×1	0,176	SPGT0502**
ZTD02-160-XP20-SP05-02	✻	•	16	20	25	37	50	104	M13×1	0,184	SPGT0502**
ZTD02-170-XP25-SP06-02	✻	•	17	25	32	39	56	117	M16×1,5	0,325	SPGT0602**
ZTD02-180-XP25-SP06-02	✻	•	18	25	32	41	56	119	M16×1,5	0,332	SPGT0602**
ZTD02-190-XP25-SP06-02	✻	•	19	25	32	43	56	121	M16×1,5	0,342	SPGT0602**
ZTD02-200-XP25-SP06-02	✻	•	20	25	32	45	56	123	M16×1,5	0,353	SPGT0602**
ZTD02-210-XP25-SP06-02	✻	•	21	25	32	47	56	125	M16×1,5	0,35	SPGT0602**
ZTD02-220-XP25-SP07-02	✻	•	22	25	32	49	56	127	M16×1,5	0,367	SPGT07T3**
ZTD02-230-XP25-SP07-02	✻	•	23	25	32	51	56	129	M16×1,5	0,38	SPGT07T3**
ZTD02-235-XP25-SP07-02	✻	○	23,5	25	32	52	56	130	M16x1,5	0,361	SPGT07T3**
ZTD02-240-XP25-SP07-02	✻	•	24	25	32	53	56	131	M16×1,5	0,443	SPGT07T3**
ZTD02-250-XP25-SP07-02	✻	•	25	25	32	55	56	133	M16×1,5	0,41	SPGT07T3**
ZTD02-260-XP25-SP07-02	✻	•	26	25	32	57	56	135	M16×1,5	0,454	SPGT07T3**
ZTD02-270-XP25-SP07-02	✻	•	27	25	32	59	56	137	M16×1,5	0,445	SPGT07T3**
ZTD02-280-XP32-SP09-02	✻	•	28	32	37	61	60	146	M22×2	0,661	SPGT0904**
ZTD02-290-XP32-SP09-02	✻	•	29	32	37	63	60	148	M22×2	0,682	SPGT0904**
ZTD02-300-XP32-SP09-02	✻	•	30	32	37	65	60	150	M22×2	0,702	SPGT0904**
ZTD02-310-XP32-SP09-02	✻	•	31	32	37	67	60	152	M22×2	0,759	SPGT0904**
ZTD02-320-XP32-SP09-02	✻	•	32	32	37	69	60	154	M22×2	0,742	SPGT0904**
ZTD02-330-XP32-SP09-02	✻	•	33	32	37	71	60	156	M22×2	0,774	SPGT0904**
ZTD02-340-XP40-SP11-02	✻	•	34	40	47	73	70	173	(BSPT)RC1/4	1,2	SPGT1104**
ZTD02-350-XP40-SP11-02	✻	•	35	40	47	75	70	175	(BSPT)RC1/4	1,23	SPGT1104**
ZTD02-360-XP40-SP11-02	✻	•	36	40	47	77	70	177	(BSPT)RC1/4	1,26	SPGT1104**
ZTD02-370-XP40-SP11-02	✻	•	37	40	47	79	70	179	(BSPT)RC1/4	1,29	SPGT1104**
ZTD02-380-XP40-SP11-02	✻	•	38	40	47	81	70	181	(BSPT)RC1/4	1,33	SPGT1104**
ZTD02-390-XP40-SP11-02	✻	•	39	40	47	83	70	183	(BSPT)RC1/4	1,39	SPGT1104**
ZTD02-400-XP40-SP11-02	✻	•	40	40	47	85	70	185	(BSPT)RC1/4	1,43	SPGT1104**
ZTD02-410-XP40-SP11-02	✻	•	41	40	47	87	70	187	(BSPT)RC1/4	1,44	SPGT1104**
ZTD02-420-XP40-SP14-02	✻	•	42	40	52	89	70	199	(BSPT)RC1/4	1,62	SPGT1405**
ZTD02-430-XP40-SP14-02	✻	•	43	40	52	91	70	201	(BSPT)RC1/4	1,67	SPGT1405**
ZTD02-440-XP40-SP14-02	✻	•	44	40	52	93	70	203	(BSPT)RC1/4	1,71	SPGT1405**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD02-450-XP40-SP14-02	✻	•	45	40	52	95	70	205	(BSPT)RC1/4	1,76	SPGT1405**
ZTD02-460-XP40-SP14-02	✻	•	46	40	52	97	70	207	(BSPT)RC1/4	1,81	SPGT1405**
ZTD02-470-XP40-SP14-02	✻	•	47	40	52	99	70	209	(BSPT)RC1/4	1,87	SPGT1405**
ZTD02-480-XP40-SP14-02	✻	•	48	40	52	101	70	211	(BSPT)RC1/4	1,92	SPGT1405**
ZTD02-490-XP40-SP14-02	✻	•	49	40	52	103	70	213	(BSPT)RC1/4	1,98	SPGT1405**
ZTD02-500-XP40-SP14-02	✻	•	50	40	52	105	70	215	(BSPT)RC1/4	2,05	SPGT1405**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	**SPGT0502****	**SPGT0602****	**SPGT07T3****	**SPGT0904****	**SPGT1104****	**SPGT1405****
	Vita senza testa					M6×6 (7,0Nm)	M8×8 (10,2Nm)
	Vite	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Inserto



C34

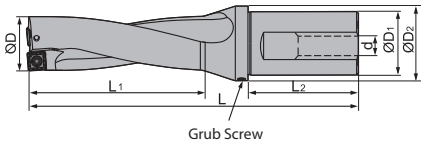
Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZTD03







Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD03-130-XP20-SP05-02	✻	•	13	20	25	44	50	111	M13×1	0,179	SPGT0502**
ZTD03-140-XP20-SP05-02	✻	•	14	20	25	47	50	114	M13×1	0,186	SPGT0502**
ZTD03-150-XP20-SP05-02	✻	•	15	20	25	50	50	117	M13×1	0,195	SPGT0502**
ZTD03-160-XP20-SP05-02	✻	•	16	20	25	53	50	120	M13×1	0,214	SPGT0502**
ZTD03-170-XP25-SP06-02	✻	•	17	25	32	56	56	134	M16×1,5	0,32	SPGT0602**
ZTD03-180-XP25-SP06-02	✻	•	18	25	32	59	56	137	M16×1,5	0,331	SPGT0602**
ZTD03-190-XP25-SP06-02	✻	•	19	25	32	62	56	140	M16×1,5	0,342	SPGT0602**
ZTD03-200-XP25-SP06-02	✻	•	20	25	32	65	56	143	M16×1,5	0,356	SPGT0602**
ZTD03-210-XP25-SP06-02	✻	•	21	25	32	68	56	146	M16×1,5	0,391	SPGT0602**
ZTD03-220-XP25-SP07-02	✻	•	22	25	32	71	56	149	M16×1,5	0,391	SPGT07T3**
ZTD03-230-XP25-SP07-02	✻	•	23	25	32	74	56	152	M16×1,5	0,442	SPGT07T3**
ZTD03-240-XP25-SP07-02	✻	•	24	25	32	77	56	155	M16×1,5	0,485	SPGT07T3**
ZTD03-250-XP25-SP07-02	✻	•	25	25	32	80	56	158	M16×1,5	0,492	SPGT07T3**
ZTD03-260-XP25-SP07-02	✻	•	26	25	32	83	56	161	M16×1,5	0,497	SPGT07T3**
ZTD03-270-XP25-SP07-02	✻	•	27	25	32	86	56	164	M16×1,5	0,521	SPGT07T3**
ZTD03-280-XP32-SP09-02	✻	•	28	32	37	89	60	174	M22×2	0,75	SPGT0904**
ZTD03-285-XP32-SP09-02	✻	○	28,5	32	37	91	60	171	M22x2	0,699	SPGT0904**
ZTD03-290-XP32-SP09-02	✻	•	29	32	37	92	60	177	M22×2	0,777	SPGT0904**
ZTD03-300-XP32-SP09-02	✻	•	30	32	37	95	60	180	M22×2	0,81	SPGT0904**
ZTD03-310-XP32-SP09-02	✻	•	31	32	37	98	60	183	M22×2	0,831	SPGT0904**
ZTD03-320-XP32-SP09-02	✻	•	32	32	37	101	60	186	M22×2	0,867	SPGT0904**
ZTD03-330-XP32-SP09-02	✻	•	33	32	37	104	60	189	M22×2	0,928	SPGT0904**
ZTD03-340-XP40-SP11-02	✻	•	34	40	47	107	70	207	(BSPT)RC1/4	1,33	SPGT1104**
ZTD03-350-XP40-SP11-02	✻	•	35	40	47	110	70	210	(BSPT)RC1/4	1,371	SPGT1104**
ZTD03-360-XP40-SP11-02	✻	•	36	40	47	113	70	213	(BSPT)RC1/4	1,414	SPGT1104**
ZTD03-370-XP40-SP11-02	✻	•	37	40	47	116	70	216	(BSPT)RC1/4	1,448	SPGT1104**
ZTD03-380-XP40-SP11-02	✻	•	38	40	47	119	70	219	(BSPT)RC1/4	1,498	SPGT1104**
ZTD03-390-XP40-SP11-02	✻	•	39	40	47	122	70	222	(BSPT)RC1/4	1,554	SPGT1104**
ZTD03-400-XP40-SP11-02	✻	•	40	40	47	125	70	225	(BSPT)RC1/4	1,667	SPGT1104**
ZTD03-410-XP40-SP11-02	✻	•	41	40	47	128	70	228	(BSPT)RC1/4	1,653	SPGT1104**
ZTD03-420-XP40-SP14-02	✻	•	42	40	52	131	70	241	(BSPT)RC1/4	1,903	SPGT1405**
ZTD03-430-XP40-SP14-02	✻	•	43	40	52	134	70	244	(BSPT)RC1/4	1,951	SPGT1405**
ZTD03-440-XP40-SP14-02	✻	•	44	40	52	137	70	247	(BSPT)RC1/4	2,039	SPGT1405**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 | Scelta gradi > C8 | Informazioni tecniche > C201 | Dati di taglio > C36

Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD03-450-XP40-SP14-02	✻	•	45	40	52	140	70	250	(BSPT)RC1/4	2,12	SPGT1405**
ZTD03-460-XP40-SP14-02	✻	•	46	40	52	143	70	253	(BSPT)RC1/4	2,186	SPGT1405**
ZTD03-470-XP40-SP14-02	✻	•	47	40	52	146	70	256	(BSPT)RC1/4	2,264	SPGT1405**
ZTD03-480-XP40-SP14-02	✻	•	48	40	52	149	70	259	(BSPT)RC1/4	2,341	SPGT1405**
ZTD03-490-XP40-SP14-02	✻	•	49	40	52	152	70	262	(BSPT)RC1/4	2,43	SPGT1405**
ZTD03-500-XP40-SP14-02	✻	•	50	40	52	155	70	265	(BSPT)RC1/4	2,52	SPGT1405**
ZTD03-508-XP40-SP14-02	✻	○	50,8	40	57	157	70	267	(BSPT)RC1/4	2,484	SPGT1405**
ZTD03-510-XP50-SP07-04	✻	○	51	50	62	158	80	278	(BSPT)RC1/4	3,128	SPGT07T3**
ZTD03-530-XP50-SP07-04	✻	○	53	50	62	164	80	284	(BSPT)RC1/4	3,426	SPGT07T3**
ZTD03-540-XP50-SP09-04	✻	○	54	50	57	167	80	287	(BSPT)RC1/4	3,292	SPGT0904**
ZTD03-550-XP50-SP09-04	✻	○	55	50	57	170	80	290	(BSPT)RC1/4	3,29	SPGT0904**
ZTD03-570-XP50-SP09-04	✻	○	57	50	67	176	80	296	(BSPT)RC1/4	3,853	SPGT0904**
ZTD03-580-XP50-SP09-04	✻	○	58	50	62	179	80	299	(BSPT)RC1/4	3,851	SPGT0904**
ZTD03-590-XP50-SP09-04	✻	○	59	50	62	182	80	302	(BSPT)RC1/4	3,814	SPGT0904**
ZTD03-600-XP50-SP09-04	✻	○	60	50	67	185	80	305	(BSPT)RC1/4	4,217	SPGT0904**
ZTD03-620-XP50-SP09-04	✻	○	62	50	67	191	80	311	(BSPT)RC1/4	4,454	SPGT0904**
ZTD03-630-XP50-SP09-04	✻	○	63	50	67	194	80	314	(BSPT)RC1/4	4,6	SPGT0904**
ZTD03-640-XP50-SP09-04	✻	○	64	50	67	197	80	317	(BSPT)RC1/4	4,574	SPGT0904**
ZTD03-650-XP50-SP09-04	✻	○	65	50	67	200	80	320	(BSPT)RC1/4	4,882	SPGT0904**
ZTD03-660-XP50-SP09-04	✻	○	66	50	67	203	80	323	(BSPT)RC1/4	5,024	SPGT0904**
ZTD03-670-XP50-SP11-04	✻	○	67	50	82	206	80	326	(BSPT)RC1/4	5,181	SPGT1104**
ZTD03-730-XP50-SP11-04	✻	○	73	50	85	224	80	344	(BSPT)RC1/4	6,71	SPGT1104**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	SPGT0502**	SPGT0602**	SPGT07T3**	SPGT0904**	SPGT1104**	SPGT1405**
	Vita senza testa					M6×6 (7,0Nm)	M8×8 (10,2Nm)
	Vite	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Inserto



C34

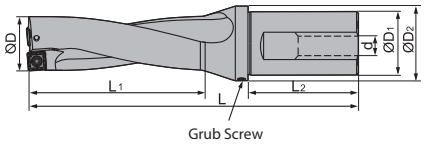
Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZTD04







Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD04-130-XP20-SP05-02	✻	○	13	20	25	57	50	124	M13×1	0,185	SPGT0502**
ZTD04-140-XP20-SP05-02	✻	○	14	20	25	61	50	128	M13×1	0,195	SPGT0502**
ZTD04-150-XP20-SP05-02	✻	○	15	20	25	65	50	132	M13×1	0,205	SPGT0502**
ZTD04-160-XP20-SP05-02	✻	○	16	20	25	69	50	136	M13×1	0,216	SPGT0502**
ZTD04-165-XP25-SP06-02	✻	○	16,5	25	32	71	56	137	M16x1,5	0,332	SPGT0602**
ZTD04-170-XP25-SP06-02	✻	○	17	25	32	73	56	151	M16×1,5	0,333	SPGT0602**
ZTD04-180-XP25-SP06-02	✻	○	18	25	32	77	56	155	M16×1,5	0,347	SPGT0602**
ZTD04-190-XP25-SP06-02	✻	○	19	25	32	81	56	159	M16×1,5	0,362	SPGT0602**
ZTD04-200-XP25-SP06-02	✻	○	20	25	32	85	56	163	M16×1,5	0,381	SPGT0602**
ZTD04-210-XP25-SP06-02	✻	○	21	25	32	89	56	167	M16×1,5	0,4	SPGT0602**
ZTD04-215-XP25-SP07-02	✻	○	21,5	25	32	91	56	165	M16x1,5	0,407	SPGT07T3**
ZTD04-220-XP25-SP07-02	✻	○	22	25	32	93	56	171	M16×1,5	0,391	SPGT07T3**
ZTD04-230-XP25-SP07-02	✻	○	23	25	32	97	56	175	M16×1,5	0,484	SPGT07T3**
ZTD04-240-XP25-SP07-02	✻	○	24	25	32	101	56	179	M16×1,5	0,513	SPGT07T3**
ZTD04-250-XP25-SP07-02	✻	○	25	25	32	105	56	183	M16×1,5	0,494	SPGT07T3**
ZTD04-260-XP25-SP07-02	✻	○	26	25	32	109	56	187	M16×1,5	0,535	SPGT07T3**
ZTD04-270-XP25-SP07-02	✻	○	27	25	32	113	56	191	M16×1,5	0,582	SPGT07T3**
ZTD04-275-XP25-SP07-02	✻	○	27,5	25	32	115	56	192	M16x1,5	0,571	SPGT07T3**
ZTD04-280-XP32-SP09-02	✻	○	28	32	37	117	60	202	M22×2	0,653	SPGT0904**
ZTD04-290-XP32-SP09-02	✻	○	29	32	37	121	60	206	M22×2	0,846	SPGT0904**
ZTD04-300-XP32-SP09-02	✻	○	30	32	37	125	60	210	M22×2	0,893	SPGT0904**
ZTD04-310-XP32-SP09-02	✻	○	31	32	37	129	60	214	M22×2	0,914	SPGT0904**
ZTD04-320-XP32-SP09-02	✻	○	32	32	37	133	60	218	M22×2	0,966	SPGT0904**
ZTD04-330-XP32-SP09-02	✻	○	33	32	37	137	60	222	M22×2	1,016	SPGT0904**
ZTD04-340-XP40-SP11-02	✻	○	34	40	47	141	70	241	(BSPT)RC1/4	1,46	SPGT1104**
ZTD04-350-XP40-SP11-02	✻	○	35	40	47	145	70	245	(BSPT)RC1/4	1,52	SPGT1104**
ZTD04-360-XP40-SP11-02	✻	○	36	40	47	149	70	249	(BSPT)RC1/4	1,579	SPGT1104**
ZTD04-370-XP40-SP11-02	✻	○	37	40	47	153	70	253	(BSPT)RC1/4	1,592	SPGT1104**
ZTD04-380-XP40-SP11-02	✻	○	38	40	47	157	70	257	(BSPT)RC1/4	1,801	SPGT1104**
ZTD04-390-XP40-SP11-02	✻	○	39	40	47	161	70	261	(BSPT)RC1/4	1,801	SPGT1104**
ZTD04-400-XP40-SP11-02	✻	○	40	40	47	165	70	265	(BSPT)RC1/4	1,874	SPGT1104**
ZTD04-410-XP40-SP11-02	✻	○	41	40	47	169	70	269	(BSPT)RC1/4	1,861	SPGT1104**
ZTD04-420-XP40-SP14-02	✻	○	42	40	52	173	70	283	(BSPT)RC1/4	2,168	SPGT1405**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD04-430-XP40-SP14-02	✻	○	43	40	52	177	70	287	(BSPT)RC1/4	2,17	SPGT1405**
ZTD04-440-XP40-SP14-02	✻	○	44	40	52	181	70	291	(BSPT)RC1/4	2,31	SPGT1405**
ZTD04-450-XP40-SP14-02	✻	○	45	40	52	185	70	295	(BSPT)RC1/4	2,421	SPGT1405**
ZTD04-460-XP40-SP14-02	✻	○	46	40	52	189	70	299	(BSPT)RC1/4	2,507	SPGT1405**
ZTD04-470-XP40-SP14-02	✻	○	47	40	52	193	70	303	(BSPT)RC1/4	2,612	SPGT1405**
ZTD04-480-XP40-SP14-02	✻	○	48	40	52	197	70	307	(BSPT)RC1/4	2,66	SPGT1405**
ZTD04-490-XP40-SP14-02	✻	○	49	40	52	201	70	311	(BSPT)RC1/4	2,836	SPGT1405**
ZTD04-500-XP40-SP14-02	✻	○	50	40	52	205	70	315	(BSPT)RC1/4	2,954	SPGT1405**
ZTD04-520-XP50-SP07-04	✻	○	52	50	62	213	80	325	(BSPT)RC1/4	3,685	SPGT07T3**
ZTD04-530-XP50-SP07-04	✻	○	53	50	62	217	80	329	(BSPT)RC1/4	3,777	SPGT07T3**
ZTD04-540-XP50-SP09-04	✻	○	54	50	57	222	80	333	(BSPT)RC1/4	3,906	SPGT0904**
ZTD04-545-XP50-SP09-04	✻	○	54,5	50	68	221	80	335	(BSPT)RC1/4	4,167	SPGT0904**
ZTD04-595-XP50-SP09-04	✻	○	59,5	50	68	241	80	355	(BSPT)RC1/4	4,784	SPGT0904**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	SPGT0502**	SPGT0602**	SPGT07T3**	SPGT0904**	SPGT1104**	SPGT1405**
	Vita senza testa					M6×6 (7,0Nm)	M8×8 (10,2Nm)
	Vite	I60M2×4.3 (0,5Nm)	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT06IP	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Inserto



C34

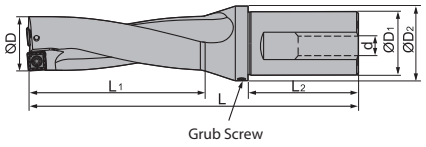
Codice sistema C9 Scelta gradi C8 Informazioni tecniche C201 Dati di taglio C36

Punta ad inserti

ZTD05







Articolo	✻	Stock	Dimensioni [mm]								Inserto
			ØD	ØD1	ØD2	L1	L2	L	d	kg	
ZTD05-170-XP25-SP06-02	✻	○	17	25	32	90	56	168	M13×1	0,374	SPGT0602**
ZTD05-180-XP25-SP06-02	✻	○	18	25	32	95	56	173	M13×1	0,394	SPGT0602**
ZTD05-190-XP25-SP06-02	✻	○	19	25	32	100	56	178	M13×1	0,415	SPGT0602**
ZTD05-200-XP25-SP06-02	✻	○	20	25	32	105	56	183	M13×1	0,44	SPGT0602**
ZTD05-210-XP25-SP06-02	✻	○	21	25	32	110	56	188	M16×1,5	0,466	SPGT0602**
ZTD05-220-XP25-SP07-02	✻	○	22	25	32	115	56	193	M16×1,5	0,476	SPGT07T3**
ZTD05-230-XP25-SP07-02	✻	○	23	25	32	120	56	198	M16×1,5	0,507	SPGT07T3**
ZTD05-240-XP25-SP07-02	✻	○	24	25	32	125	56	203	M16×1,5	0,542	SPGT07T3**
ZTD05-250-XP25-SP07-02	✻	○	25	25	32	130	56	208	M16×1,5	0,561	SPGT07T3**
ZTD05-260-XP25-SP07-02	✻	○	26	25	32	135	56	213	M16×1,5	0,613	SPGT07T3**
ZTD05-270-XP25-SP07-02	✻	○	27	25	32	140	56	218	M16×1,5	0,665	SPGT07T3**
ZTD05-280-XP32-SP09-02	✻	○	28	32	37	145	60	230	M16×1,5	0,891	SPGT0904**
ZTD05-290-XP32-SP09-02	✻	○	29	32	37	150	60	235	M16×1,5	0,965	SPGT0904**
ZTD05-300-XP32-SP09-02	✻	○	30	32	37	155	60	240	M16×1,5	0,959	SPGT0904**
ZTD05-310-XP32-SP09-02	✻	○	31	32	37	160	60	245	M16×1,5	1,042	SPGT0904**
ZTD05-320-XP32-SP09-02	✻	○	32	32	37	165	60	250	M22×2	1,11	SPGT0904**
ZTD05-330-XP32-SP09-02	✻	○	33	32	37	170	60	255	M22×2	1,117	SPGT0904**
ZTD05-340-XP40-SP11-02	✻	○	34	40	47	175	70	275	M22×2	1,57	SPGT1104**
ZTD05-350-XP40-SP11-02	✻	○	35	40	47	180	70	280	M22×2	1,65	SPGT1104**
ZTD05-360-XP40-SP11-02	✻	○	36	40	47	185	70	285	M22×2	1,712	SPGT1104**
ZTD05-370-XP40-SP11-02	✻	○	37	40	47	190	70	290	M22×2	1,802	SPGT1104**
ZTD05-380-XP40-SP11-02	✻	○	38	40	47	195	70	295	(BSPT)RC1/4	1,873	SPGT1104**
ZTD05-390-XP40-SP11-02	✻	○	39	40	47	200	70	300	(BSPT)RC1/4	1,962	SPGT1104**
ZTD05-400-XP40-SP11-02	✻	○	40	40	47	205	70	305	(BSPT)RC1/4	2,068	SPGT1104**
ZTD05-410-XP40-SP11-02	✻	○	41	40	47	210	70	310	(BSPT)RC1/4	2,167	SPGT1104**
ZTD05-420-XP40-SP14-02	✻	○	42	40	52	215	70	325	(BSPT)RC1/4	2,39	SPGT1405**
ZTD05-430-XP40-SP14-02	✻	○	43	40	52	220	70	330	(BSPT)RC1/4	2,502	SPGT1405**
ZTD05-440-XP40-SP14-02	✻	○	44	40	52	225	70	335	(BSPT)RC1/4	2,612	SPGT1405**
ZTD05-450-XP40-SP14-02	✻	○	45	40	52	230	70	340	(BSPT)RC1/4	2,733	SPGT1405**
ZTD05-460-XP40-SP14-02	✻	○	46	40	52	235	70	345	(BSPT)RC1/4	2,854	SPGT1405**
ZTD05-470-XP40-SP14-02	✻	○	47	40	52	240	70	350	(BSPT)RC1/4	2,894	SPGT1405**
ZTD05-480-XP40-SP14-02	✻	○	48	40	52	245	70	355	(BSPT)RC1/4	3,109	SPGT1405**
ZTD05-490-XP40-SP14-02	✻	○	49	40	52	250	70	360	(BSPT)RC1/4	3,271	SPGT1405**
ZTD05-500-XP40-SP14-02	✻	○	50	40	52	255	70	365	(BSPT)RC1/4	3,425	SPGT1405**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 | Scelta gradi > C8 | Informazioni tecniche > C201 | Dati di taglio > C36

Parti di ricambio

	Inserto	SPGT0602**	SPGT07T3**	SPGT0904**	SPGT1104**	SPGT1405**
	Vita senza testa				M6×6 (7,0Nm)	M8×8 (10,2Nm)
	Vite	I60M2.2×5.5 (0,8Nm)	I60M2.5×6.5 (1,0Nm)	I60M3.5×8 (2,7Nm)	I60M4×10 (3,4Nm)	I60M5×13 (6,7Nm)
	Chiave	WT07IP	WT07IP	WT15IP	WT15IP	WT20IP

Inserto



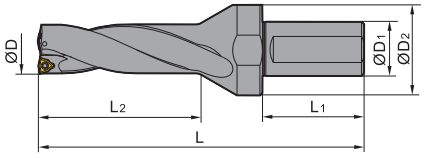
C34

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti

ZD03





Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZD03-160-XP25-WC03-02	✻	•	16	25	32	56	52	129	0,33	WCMX0302**
ZD03-170-XP25-WC03-02	✻	•	17	25	32	56	55	133	0,33	WCMX0302**
ZD03-180-XP25-WC03-02	✻	•	18	25	32	56	58	137	0,35	WCMX0302**
ZD03-190-XP25-WC03-02	✻	•	19	25	32	56	61	140	0,36	WCMX0302**
ZD03-200-XP25-WC03-02	✻	•	20	25	32	56	64	143	0,37	WCMX0302**
ZD03-210-XP25-WC04-02	✻	•	21	25	45	56	67	153	0,51	WCMX0402**
ZD03-220-XP25-WC04-02	✻	•	22	25	45	56	70	156	0,54	WCMX0402**
ZD03-230-XP25-WC04-02	✻	•	23	25	45	56	73	159	0,55	WCMX0402**
ZD03-240-XP25-WC04-02	✻	•	24	25	45	56	76	162	0,57	WCMX0402**
ZD03-250-XP25-WC04-02	✻	•	25	25	45	56	79	165	0,6	WCMX0402**
ZD03-260-XP32-WC05-02	✻	•	26	32	55	60	83	176	0,93	WCMX0503**
ZD03-270-XP32-WC05-02	✻	•	27	32	55	60	86	180	0,97	WCMX0503**
ZD03-280-XP32-WC05-02	✻	•	28	32	55	60	89	184	1,01	WCMX0503**
ZD03-290-XP32-WC05-02	✻	•	29	32	55	60	92	188	1,05	WCMX0503**
ZD03-300-XP32-WC05-02	✻	•	30	32	55	60	95	192	1,08	WCMX0503**
ZD03-310-XP40-WC06-02	✻	•	31	40	60	70	98	203	1,44	WCMX06T3**
ZD03-320-XP40-WC06-02	✻	•	32	40	60	70	101	206	1,48	WCMX06T3**
ZD03-330-XP40-WC06-02	✻	•	33	40	60	70	104	209	1,52	WCMX06T3**
ZD03-340-XP40-WC06-02	✻	•	34	40	60	70	107	212	1,55	WCMX06T3**
ZD03-350-XP40-WC06-02	✻	•	35	40	60	70	110	215	1,61	WCMX06T3**
ZD03-360-XP40-WC06-02	✻	•	36	40	60	70	113	218	1,66	WCMX06T3**
ZD03-370-XP40-WC06-02	✻	•	37	40	60	70	116	221	1,71	WCMX06T3**
ZD03-380-XP40-WC06-02	✻	•	38	40	60	70	119	225	1,76	WCMX06T3**
ZD03-390-XP40-WC06-02	✻	•	39	40	60	70	122	228	1,82	WCMX06T3**
ZD03-400-XP40-WC06-02	✻	•	40	40	60	70	125	231	1,93	WCMX06T3**
ZD03-410-XP40-WC06-02	✻	•	41	40	60	70	128	234	1,94	WCMX06T3**
ZD03-420-XP40-WC08-02	✻	•	42	40	60	70	131	239	2,18	WCMX0804**
ZD03-430-XP40-WC08-02	✻	•	43	40	60	70	134	242	2,245	WCMX0804**
ZD03-440-XP40-WC08-02	✻	•	44	40	60	70	137	245	2,34	WCMX0804**
ZD03-450-XP40-WC08-02	✻	•	45	40	60	70	140	248	2,34	WCMX0804**
ZD03-460-XP40-WC08-02	✻	•	46	40	60	70	143	251	2,49	WCMX0804**
ZD03-470-XP40-WC08-02	✻	•	47	40	60	70	146	253	2,88	WCMX0804**
ZD03-480-XP40-WC08-02	✻	•	48	40	70	70	149	255	2,55	WCMX0804**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Codice sistema > C9 | Scelta gradi > C8 | Informazioni tecniche > C201 | Dati di taglio > C36

Articolo	✻	Stock	Dimensioni [mm]							Inserto
			ØD	ØD1	ØD2	L1	L2	L	kg	
ZD03-490-XP40-WC08-02	✻	○	49	40	70	70	152	257	2,619	WCMX0804**
ZD03-500-XP40-WC08-02	✻	•	50	40	70	70	155	259	2,62	WCMX0804**
ZD03-510-XP40-WC08-02	✻	○	51	40	70	70	158	261	2,62	WCMX0804**
ZD03-520-XP40-WC08-02	✻	○	52	40	70	70	70	263	2,808	WCMX0804**
ZD03-530-XP40-WC08-02	✻	○	53	40	70	70	164	265	2,906	WCMX0804**
ZD03-540-XP40-WC08-02	✻	•	54	40	70	70	167	267	2,983	WCMX0804**
ZD03-550-XP40-WC08-02	✻	○	55	40	70	70	170	269	3,126	WCMX0804**
ZD03-560-XP40-WC08-02	✻	○	56	40	70	70	173	271	3,157	WCMX0804**
ZD03-580-XP40-WC08-02	✻	•	58	40	70	70	179	275	3,501	WCMX0804**

• In magazzino ○ Su richiesta

✻ Raffreddamento interno

Parti di ricambio

	Inserto	**WCMX0302****	**WCMX0402****	**WCMX0503****	**WCMX06T3****	**WCMX0804****
	Vite	I60M2.5×6.5 (1,0Nm)	I60M2.5×6.5T (1,0Nm)	I60M3×7 (1,8Nm)	I60M3×7 (1,8Nm)	I60M3.5×10.4 (2,7Nm)
	Chiave	WT06IP	WT07IP	WT15IP	WT15IP	WT20IP

Inserto



Media Lavor.

C35

Codice sistema > C9 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

Punta ad inserti Codice ISO – inserti

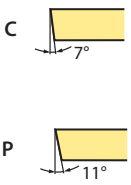
W	C	M	X	08	04	12	R	–	PG
1	2	3	4	5	6	7	8		9

Forma dell'inserto



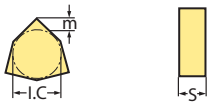
1

Angolo di spoglia inferiore



2

Grado di tolleranza



Code	I.C [mm]	m [mm]	S [mm]
G	±0,025	±0,025	±0,130
M	±0,05–0,13	±0,08–0,18	±0,130

3

Caratteristiche di fissaggio (metrico)

Forma dell'inserto



T

X Speciale

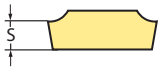
4

Lunghezza tagliente [mm]

I.C [mm]	Forma dell'inserto	
		
	S	W
3,8		**03**
4,3		**04**
5,4		**05**
6,35	**06**	
6,5		**06**
8,0		**08**
8,7	**08**	
9,252	**09**	
12,7	**12**	

5

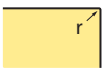
Spessore dell'inserto S [mm]



Code	S	Code	S
00	0,79	**05**	5,56
T0	0,99	**T5**	5,95
01	1,59	**06**	6,35
T1	1,98	**T6**	6,75
02	2,38	**07**	7,94
T2	2,58	**09**	9,52
03	3,18	**T9**	9,72
T3	3,97	**11**	11,11
04	4,76	**12**	12,70
T4	4,96		

6

Raggio di punta r [mm]



Code	r
04	0,4
08	0,8
12	1,2

7

Direzione di taglio

Code	Descrizione
R	Destra
L	Sinistra

8

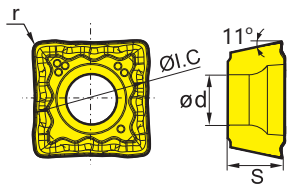
Panoramica rompitrucioli (da p. C3)

9

SPMX	L	I.C	S	d
04 02	4	4	2,38	2,2
05 02	5	5	2,38	2,2
06 02	6	6	2,38	2,5
07 T3	7,94	7,94	3,97	2,8
09 04	9,8	9,8	4,3	4,1
11 04	11,5	11,5	4,76	4,4
14 05	14,3	14,3	5,2	5,5

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Foratura

SP** Inserti - Fresatura			HC[1] (CVD)						HC[1] (PVD)						HW
		P													
		M													
		K													
		N													
		S													
		H													
ISO		r	YB6338	YBD252					YBG105	YBG202	YBS203	YBG205	YB9320	YBG212	YD201
EM 	**SPMX040203-EM**	0,3	●										●		
	SPMX050204-EM	0,4	●										●		
	SPMX060204-EM	0,4	●										●		
	SPMX07T308-EM	0,8	●										●		
	SPMX090408-EM	0,8	●										●		
	SPMX110408-EM	0,8	●										●		
	SPMX140512-EM	1,2	●										●		
LM 	**SPMX040203-LM**	0,3											○		
	SPMX050204-LM	0,4											○		
	SPMX060204-LM	0,4											○		
	SPMX07T308-LM	0,8											○		
	SPMX090408-LM	0,8											○		
	SPMX110408-LM	0,8											○		
	SPMX140512-LM	1,2											○		
XM 	**SPMX040203-XM**	0,3											○		
	SPMX050204-XM	0,4											●		
	SPMX060204-XM	0,4										●	●		
	SPMX07T308-XM	0,8										●	●	○	
	SPMX090408-XM	0,8											●		
	SPMX110408-XM	0,8											●		
	SPMX140512-XM	1,2											●		

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Portautensile

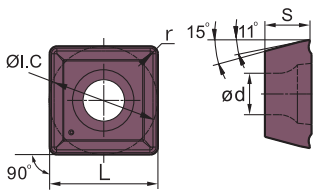
ZSD02	ZSD03	ZSD04	ZSD05
			
C10	C13	C16	C19

Codice sistema C32 | Scelta gradi C8 | Informazioni tecniche C201 | Dati di taglio C36

SPGT	L	I.C	S	d
05 02	5	5	2,38	2,2
06 02	6	6	2,38	2,6
07 T3	7,94	7,94	3,97	2,8
09 04	9,8	9,8	4,76	4,2
11 04	11,5	11,5	4,76	4,4
14 05	14,3	14,3	5,2	5,75

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Foratura

SP ** Inserti - Foratura			HC[1] (CVD)		HC[1] (PVD)						HW
		P									
		M									
		K									
		N									
		S									
		H									
ISO		r	YB6338	YBD252	YBG105	YBG202	YBS203	YBG205	YB9320	YBG212	YD201
PM 	**SPGT050204-PM**	0,4	●					●		●	
	SPGT060204-PM	0,4	●					●		●	
	SPGT07T308-PM	0,8	●					●		●	
	SPGT090408-PM	0,8	●					●		●	
	SPGT110408-PM	0,8	●					●		●	
	SPGT140512-PM	1,2	●					●		●	
EM 	**SPGT050204-EM**	0,4						●		●	
	SPGT060204-EM	0,4						●		●	
	SPGT07T308-EM	0,8						●		●	
	SPGT090408-EM	0,8						●		●	
	SPGT110408-EM	0,8						●		●	
	SPGT140512-EM	1,2						●		●	

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Portautensile

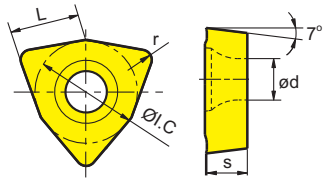
ZTD02	ZTD03	ZTD04	ZTD05
			
C22	C24	C26	C28

Codice sistema > C32 Scelta gradi > C8 Informazioni tecniche > C201 Dati di taglio > C36

WCMX	L	I.C	S	d
03 02	3,8	5,56	2,38	2,8
04 02	4,3	6,35	2,38	3,1
05 03	5,4	7,94	3,18	3,2
06 T3	6,5	9,525	3,97	3,7
08 04	8,7	12,7	4,76	4,3

Buone condizioni di lavorazione
Condizioni di lavorazione normali
Condizioni di lavorazione sfavorevoli

Inserti - Foratura

WC ** Inserti - Foratura			HC[1] (CVD)		HC[1] (PVD)					HW
		P								
		M								
		K								
		N								
		S								
		H								
ISO		r	YB6338	YBD252	YBG105	YBG202	YBS203	YBG205	YB9320	YBG212	YD201
53 	**WCMX030208R-53**	0,8		●		○					
	WCMX040208R-53	0,8		●		○					
	WCMX050308R-53	0,8		●		○					
	WCMX06T308R-53	0,8		●		○					○
	WCMX080412R-53	1,2		●		○					
D 	**WCMX06T308-D**	0,8		○							
	WCMX080412-D	1,2		●							
PG 	**WCMX030208R-PG**	0,8				○					
	WCMX040208R-PG	0,8				○					
	WCMX050308R-PG	0,8		○		○		○			
	WCMX06T308R-PG	0,8				○					
	WCMX080412R-PG	1,2				○					

● In magazzino ○ Su richiesta

HC[1] Carburo cementato rivestito
HW Carburo cementato non rivestito

Portautensile
ZD03



C30

Codice sistema C32 | Scelta gradi C8 | Informazioni tecniche C201 | Dati di taglio C36

Punta ad inserti

Gruppo materiali		Composizione/Struttura/Trattamento termico		HB	Gruppo di sgrossatura	ZSD* SPMX04		ZSD* SPMX05/06		
						v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	200-300	0,05-0,08	200-300	0,05-0,10	
		ca. 0,45 % C	Temprato	190	2	200-300	0,05-0,08	200-300	0,05-0,10	
		ca. 0,45 % C	pre-temprato	250	3	200-300	0,05-0,08	200-300	0,05-0,10	
		ca. 0,75 % C	Temprato	270	4	200-300	0,05-0,08	200-300	0,05-0,10	
		ca. 0,75 % C	pre-temprato	300	5	200-300	0,05-0,08	200-300	0,05-0,10	
	Acciaio al carbonio		Temprato	180	6	140-220	0,05-0,08	140-220	0,05-0,10	
			pre-temprato	275	7	140-220	0,05-0,08	140-220	0,05-0,10	
			pre-temprato	300	8	140-220	0,05-0,08	140-220	0,05-0,10	
			pre-temprato	350	9	140-220	0,05-0,08	140-220	0,05-0,10	
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	120-180	0,05-0,08	120-180	0,05-0,10	
			temprato e rinvenuto	325	11	120-180	0,05-0,08	120-180	0,05-0,10	
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	110-230	0,05-0,08	110-230	0,05-0,10	
		martensitico	pre-temprato	240	13	110-230	0,05-0,08	110-230	0,05-0,10	
		austenitico	quencing	180	14	110-230	0,05-0,08	110-230	0,05-0,10	
		austenitico-ferritico		230	15	110-230	0,05-0,08	110-230	0,05-0,10	
K	Ghisa grigia	perlitico/ferritico		180	16	170-240	0,05-0,08	170-240	0,05-0,10	
		perlitico (martensitico)		260	17	170-240	0,05-0,08	170-240	0,05-0,10	
	Ghisa sferodale	ferritico		160	18	130-200	0,05-0,08	130-200	0,05-0,10	
		perlitico		250	19	130-200	0,05-0,08	130-200	0,05-0,10	
	Ghisa malleabile	ferritico		130	20	120-220	0,05-0,08	120-220	0,05-0,10	
		perlitico		230	21	120-220	0,05-0,08	120-220	0,05-0,10	
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22					
		invecchiabile	indurito	100	23					
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24					
		≤ 12 % Si, invecchiabile	indurito	90	25					
		> 12 % Si, non invecchiabile		130	26					
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27					
		CuZn, CuSnZn		90	28					
		CuSn, rame senza piombo e rame elettrolitico		100	29					
S	Leghe resistenti al calore	Base Fe	Temprato	200	30					
			indurito	280	31					
		Base Ni o Co	Temprato	250	32					
			indurito	350	33					
			fuso	320	34					
	Leghe di titanio	Titanio puro		R_m 400	35					
		Leghe Alpha + Beta	indurito	R_m 1050	36					
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37					
			temprato e rinvenuto	60 HRC	38					
	Ghisa dura		fuso	400	39					
	Ghise temprate		temprato e rinvenuto	55 HRC	40					
X	Materiali non metallici	Termoplastiche			41					
		Termoindurenti			42					
		Vetroresina VTR			43					
		Plastica rinforzata in fibra di carbonio			44					
		Grafite			45					
		Legno			46					

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Per profondità di foratura di 5xD, i dati di taglio devono essere adattati al corrispondente campo di applicazione.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	ZSD*		ZSD*		ZTD*		ZTD*		ZTD*		ZD03		ZD03		
	SPMX07/09		SPMX11/14		SPGT05/06		SPGT07/09		SPGT11/14		WCMX03-05		WCMX06-08		
	v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	v_c [m/min]	f [mm]	
	200-300	0,06-0,14	200-300	0,08-0,17	200-300	0,05-0,08	200-300	0,06-0,11	200-300	0,08-0,14	200-300	0,05-0,08	200-300	0,06-0,11	
	200-300	0,06-0,14	200-300	0,08-0,17	200-300	0,05-0,08	200-300	0,06-0,11	200-300	0,08-0,14	200-300	0,05-0,08	200-300	0,06-0,11	
	200-300	0,06-0,14	200-300	0,08-0,17	200-300	0,05-0,08	200-300	0,06-0,11	200-300	0,08-0,14	200-300	0,05-0,08	200-300	0,06-0,11	
	200-300	0,06-0,14	200-300	0,08-0,17	200-300	0,05-0,08	200-300	0,06-0,11	200-300	0,08-0,14	200-300	0,05-0,08	200-300	0,06-0,11	
	200-300	0,06-0,14	200-300	0,08-0,17	200-300	0,05-0,08	200-300	0,06-0,11	200-300	0,08-0,14	200-300	0,05-0,08	200-300	0,06-0,11	
	140-220	0,06-0,14	140-220	0,09-0,19	140-220	0,05-0,08	140-220	0,07-0,12	140-220	0,09-0,16	140-220	0,05-0,08	140-220	0,07-0,12	
	140-220	0,06-0,14	140-220	0,09-0,19	140-220	0,05-0,08	140-220	0,07-0,12	140-220	0,09-0,16	140-220	0,05-0,08	140-220	0,07-0,12	
	140-220	0,06-0,14	140-220	0,09-0,19	140-220	0,05-0,08	140-220	0,07-0,12	140-220	0,09-0,16	140-220	0,05-0,08	140-220	0,07-0,12	
	140-220	0,06-0,14	140-220	0,09-0,19	140-220	0,05-0,08	140-220	0,07-0,12	140-220	0,09-0,16	140-220	0,05-0,08	140-220	0,07-0,12	
	120-180	0,06-0,14	120-180	0,09-0,19	120-180	0,05-0,08	120-180	0,07-0,12	120-180	0,09-0,16	120-180	0,05-0,08	120-180	0,07-0,12	
	120-180	0,06-0,14	120-180	0,09-0,19	120-180	0,05-0,08	120-180	0,07-0,12	120-180	0,09-0,16	120-180	0,05-0,08	120-180	0,07-0,12	
	110-230	0,06-0,14	110-230	0,08-0,17	110-230	0,05-0,08	110-230	0,06-0,11	110-230	0,08-0,14	110-230	0,05-0,08	110-230	0,06-0,11	
	110-230	0,06-0,14	110-230	0,08-0,17	110-230	0,05-0,08	110-230	0,06-0,11	110-230	0,08-0,14	110-230	0,05-0,08	110-230	0,06-0,11	
	110-230	0,06-0,14	110-230	0,08-0,17	110-230	0,05-0,08	110-230	0,06-0,11	110-230	0,08-0,14	110-230	0,05-0,08	110-230	0,06-0,11	
	110-230	0,06-0,14	110-230	0,08-0,17	110-230	0,05-0,08	110-230	0,06-0,11	110-230	0,08-0,14	110-230	0,05-0,08	110-230	0,06-0,11	
	170-240	0,08-0,16	170-240	0,12-0,24	170-240	0,05-0,08	170-240	0,08-0,14	170-240	0,12-0,21	170-240	0,05-0,08	170-240	0,08-0,14	
	170-240	0,08-0,16	170-240	0,12-0,24	170-240	0,05-0,08	170-240	0,08-0,14	170-240	0,12-0,21	170-240	0,05-0,08	170-240	0,08-0,14	
	130-200	0,08-0,16	130-200	0,12-0,24	130-200	0,05-0,08	130-200	0,08-0,14	130-200	0,12-0,21	130-200	0,05-0,08	130-200	0,08-0,14	
	130-200	0,08-0,16	130-200	0,12-0,24	130-200	0,05-0,08	130-200	0,08-0,14	130-200	0,12-0,21	130-200	0,05-0,08	130-200	0,08-0,14	
	120-220	0,08-0,16	120-220	0,12-0,24	120-220	0,05-0,08	120-220	0,08-0,14	120-220	0,12-0,21	120-220	0,05-0,08	120-220	0,08-0,14	
	120-220	0,08-0,16	120-220	0,12-0,24	120-220	0,05-0,08	120-220	0,08-0,14	120-220	0,12-0,21	120-220	0,05-0,08	120-220	0,08-0,14	

PUNTE IN METALLO DURO INTEGRALE



Punte in metallo duro integrale

Panoramica prodotti	**C40-C41**
Panoramica gradi	**C42**
Codice sistema – Punte in metallo duro integrale	**C44-C45**
Serie SU	**C47-C88**
Serie SL/SP	**C89-C108**
Serie DU	**C109-C116**
Serie DU	**C117-C126**
Serie SH	**C127-C128**
Serie SC	**C129-C132**
Serie PA	**C133-C136**
Serie PC	**C137-C140**
Centrino – Serie SC	**C141-C143**
Dati di taglio consigliati	**C144-C149**
Misure per la risoluzione dei problemi	**C202-C205**
Informazioni tecniche	**C201-C207**
Gli utensili speciali	**C150-C151**

C

Punte in metallo duro integrale

Panoramica prodotti

	Prodotti	Punte in metallo duro integrale	L/D	✻	Ø	Applicazione						Versione	Pagina
						P	M	K	N	S	H		
SU	1534SU03		3xD		0,9-20	✓	✓	✓				Punta elicoidale	C48
	1534SU03C		3xD	✻	3-20	✓	✓	✓				Punta elicoidale	C48
	1634SU03C		3xD	✻	3-20	✓	✓	✓				Punta elicoidale	C72
	1734SU03C		3xD	✻	3-20	✓	✓	✓				Punta elicoidale	C80
	1536SU05		5xD		2-20	✓	✓	✓				Punta elicoidale	C59
	1536SU05C		5xD	✻	3-20	✓	✓	✓				Punta elicoidale	C59
	1636SU05C		5xD	✻	3-20	✓	✓	✓				Punta elicoidale	C76
	1736SU05C		5xD	✻	3-20	✓	✓	✓				Punta elicoidale	C84
	1538SU08C		8xD	✻	3-18	✓	✓	✓				Punta elicoidale	C69
	1557SU03		3xD		M4-M16	✓	✓	✓				Punta a gradino	C88
SL SP	1588SL10C		10xD	✻	3-14	✓	✓	✓	✓	✓		Punta lunga	C89
	1588SL12C		12xD	✻	3-21	✓	✓	✓	✓	✓		Punta lunga	C92
	1588SL15C		15xD	✻	3-14	✓	✓	✓	✓	✓		Punta lunga	C96
	1588SL20C		20xD	✻	3-14	✓	✓	✓	✓	✓		Punta lunga	C99
	1588SL30C		30xD	✻	3-10	✓	✓	✓	✓	✓		Punta lunga	C102
	1534SP03C		3xD	✻	3,03-20,03	✓	✓	✓	✓	✓		Punta pilota	C104
UD	1534UD03C		3xD	✻	3-20	✓	✓			✓		Punta elicoidale	C110
	1536UD05C		5xD	✻	3-20	✓	✓			✓		Punta elicoidale	C113
GD	1534GD03C		3xD	✻	3-20	✓		✓				Punta elicoidale	C118
	1536GD05C		5xD	✻	3-20	✓		✓				Punta elicoidale	C121
	1636GD05C		5xD	✻	5-20	✓		✓				Punta elicoidale	C124
SH	1534SH03		3xD		3-16						✓	Punta elicoidale	C127
SC	1105SC03		3xD		2-16				✓			Punta elicoidale	C129
	1101SC05		5xD		2-16				✓			Punta elicoidale	C132
PA	1165PA03		3xD		3-20				✓			Punta a tre taglienti	C133
PC	1576PC05		5xD		4-20			✓				Punta con scanalature diritte	C137
	1576PC05C		5xD	✻	4-20			✓				Punta con scanalature diritte	C137

✓ Molto adatto ✓ Adatto

✻ Con raffreddamento interno SC*: Centrino

Punte in metallo duro integrale

	Prodotti	Punte in metallo duro integrale	L/D	✻	Ø	Applicazione						Versione	Pagina
						P	M	K	N	S	H		
PC	1579PC15C		15xD	✻	5-14			✔				Punta con scanalature diritte	C139
SC*	1143SC90		-		5-20	✔	✔	✔	✔			Centrino	C141
	1143SC120		-	✻	5-20	✔	✔	✔	✔			Centrino	C142
	1143SC142		-	✻	5-20	✔	✔	✔	✔			Centrino	C143

✔ Molto adatto ✔ Adatto

✻ Con raffreddamento interno SC*: Centrino

Punte in metallo duro integrale Panoramica gradi

Metallo duro rivestito PVD

Grado	Descrizione gradi
KDG303	Grado di metallo duro con rivestimento in PVD P10–P20/M10–M20/K10–K20 per la lavorazione di acciaio, acciaio inossidabile e materiali in ghisa. Resistenza all'usura e tenacità bilanciate per un ampio spettro di applicazioni.
KDG304	Substrato in metallo duro rivestito PVD per lavorazione di acciaio e materiali fusi. Tenacità ottimizzata per velocità di avanzamento elevate.
KDG305	Substrato in metallo duro rivestito PVD per la lavorazione di acciaio inossidabile e HRSA. Elevata sicurezza nella lavorazione grazie alla resistenza all'usura.

Metallo duro non rivestito

Grado	Descrizione gradi
YK20F	Substrato in metallo duro non rivestito K20 per la lavorazione di acciaio, materiali in ghisa e metalli non ferrosi.
YK30F	Substrato in metallo duro non rivestito K30 per la lavorazione di acciaio, acciaio inossidabile, materiali in ghisa e metalli non ferrosi.

Note

Punte in metallo duro integrale

Codice sistema – punte in metallo duro integrale

1	5	3	6	SU	05	(C)	–	0850	(S)
1	2	3	4	5	6	7		8	9

Versione	
Code	Descrizione
1	Punte

1

Versione del codolo	
Code	Descrizione
1	Codolo cilindrico
2	Codolo DIN 10 a 4 spigoli
3	Codolo cilindrico DIN 1809 a 2 superfici
5	Codolo cilindrico DIN 6535 HA
6	Stelo Weldon DIN 6535 HB
7	Stelo Whistle-Notch DIN 6535 HE
9	Stelo a conicità Morse

2

Tipologia punta	
Code	Descrizione
0	Punta elicoidale
3	Punta elicoidale universale
4	Centrino
5	Punta a gradino
6	Punta a tre taglienti
7	Punta con scanalature diritte
8	Punta lunga

3

Lunghezza utensile	
Code	Descrizione
1	DIN 338
2	DIN 1897
3	QJ/ZZQ(TO)01.001.002
4	DIN 6537 K
5	DIN 6539
6	DIN 6537 L
7	Secondo la norma del costruttore ZCC-C
8	Secondo la norma del costruttore ZCC-D
9	Secondo la norma del costruttore ZCC-E

4

Applicazione	
Code	Descrizione
UD	Punta elicoidale per materiali tenaci
GD	Punta elicoidale per velocità di avanzamento elevate
SU	Punta elicoidale per lavorazione generica
SUK	Punta elicoidale per ghise
SL	Punta elicoidale per forature profonde
SLK	Punta lunga per ghise
SP	Punta pilota
SH	Punta elicoidale per materiali ad elevata durezza
SC	Punta elicoidale per metalli non ferrosi e ghise
PA	Punta a tre taglienti per metalli non ferrosi e ghise
PC	Punta con scanalature diritte per metalli non ferrosi e ghise

5

Punte in metallo duro integrale

Rapporto L/D		Angolo	
Punte		Centrino	
Code	Descrizione	Code	Descrizione
03	3 x D	**90**	90°
05	5 x D	**120**	120°
08	8 x D		
10	10 x D		
12	12 x D		
15	15 x D		
20	20 x D		
30	30 x D		

6

Con raffreddamento interno

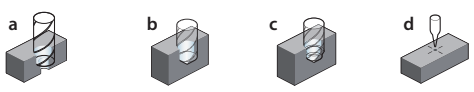
7

Diametro foro [mm]	
Code	Descrizione
0200	2,0
0850	8,5
1800	18,0
...	

8

Diametro stelo [mm]	
Code	Descrizione
S	4,0

9



a Foratura **b** Perforazione in materiale solido **c** Punta a gradino **d** Bulinatura

Note

INFORMAZIONI IMPORTANTI

Raccomandazione di impiego per la **serie SU**

Calcolo per avanzamento

Gruppo ISO	Materiale	Velocità di taglio v_c (m/min)	Fattore per l' avanzamento F_m
P	Acciaio debolmente legato	180	0,015
	Acciaio altamente legato	120	0,012
M	Acciai inossidabili	80	0,01
K	Ghisa	250	0,018
	Acciaio fuso	180	0,015
S	HRSA	45	0,008
N	Alluminio	400	0,02

Formula:	Avanzamento per giro (F_n)	$D \times F_m$
Esempio:	Diametro punta (D)	10 mm
	Materiale	acero de alta aleación

$$F_n = 10\ mm \times 0{,}012 = 0{,}12\ mm/g$$



Fig.: **1536SU05C**

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C

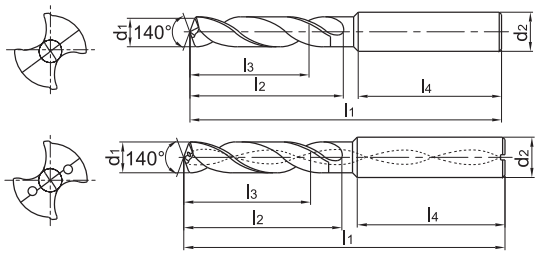
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-0090S		0,9	4	47	4,2	3,4	37,9	○
1534SU03-0100S		1	4	47	4,7	3,8	37,6	●
1534SU03-0105S		1,05	4	47	4,9	3,9	37,5	●
1534SU03-0110S		1,1	4	47	5,2	4,1	37,2	○
1534SU03-0115S		1,15	4	47	5,4	4,3	37,1	○
1534SU03-0120S		1,2	4	47	5,6	4,5	37	●
1534SU03-0125S		1,25	4	47	5,9	4,7	36,8	○
1534SU03-0130S		1,3	4	47	6,1	4,9	36,6	●
1534SU03-0135S		1,35	4	47	6,3	5,1	36,5	○
1534SU03-0140S		1,4	4	47	6,6	5,3	36,3	○
1534SU03-0145S		1,45	4	47	6,8	5,4	36,2	○
1534SU03-0147S		1,47	4	47	6,9	5,5	36,1	●
1534SU03-0150S		1,5	4	47	7,1	5,6	36	●
1534SU03-0155S		1,55	4	47	7,3	5,8	35,8	○
1534SU03-0160S		1,6	4	47	7,5	6	35,7	●
1534SU03-0165S		1,65	4	47	7,8	6,2	35,5	○
1534SU03-0170S		1,7	4	47	8	6,4	35,4	●
1534SU03-0175S		1,75	4	47	8,2	6,6	35,2	○
1534SU03-0180S		1,8	4	47	8,5	6,8	35	●
1534SU03-0185S		1,85	4	47	8,7	6,9	34,9	○
1534SU03-0190S		1,9	4	47	8,9	7,1	34,8	●
1534SU03-0195S		1,95	4	47	9,2	7,3	34,5	○
1534SU03-0200		2	6	62	20	14	36	●
1534SU03-0210		2,1	6	62	20	14	36	●
1534SU03-0220		2,2	6	62	20	14	36	●
1534SU03-0230		2,33	3	59	13,8	14	36	●
1534SU03-0240		2,4	6	62	20	14	36	●
1534SU03-0250		2,5	6	62	20	14	36	●
1534SU03-0260		2,6	6	62	20	14	36	●
1534SU03-0270		2,7	6	62	20	14	36	●
1534SU03-0280		2,8	6	62	20	14	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C



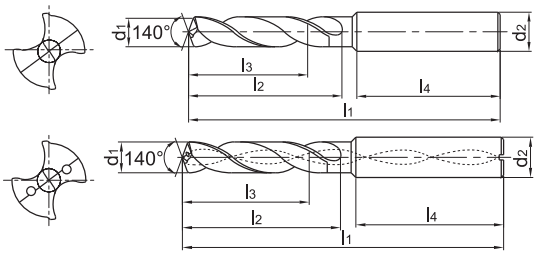
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-0290		2,9	6	62	20	14	36	●
1534SU03-0300		3	6	62	20	14	36	●
1534SU03C-0300	✻	3	6	62	20	14	36	●
1534SU03-0310		3,1	6	62	20	14	36	●
1534SU03C-0310	✻	3,1	6	62	20	14	36	●
1534SU03-0320		3,2	6	62	20	14	36	●
1534SU03C-0320	✻	3,2	6	62	20	14	36	●
1534SU03-0325		3,25	6	62	20	14	36	●
1534SU03C-0325	✻	3,25	6	62	20	14	36	●
1534SU03-0330		3,3	6	62	20	14	36	●
1534SU03C-0330	✻	3,3	6	62	20	14	36	●
1534SU03-0340		3,4	6	62	20	14	36	●
1534SU03C-0340	✻	3,4	6	62	20	14	36	●
1534SU03-0350		3,5	6	62	20	14	36	●
1534SU03C-0350	✻	3,5	6	62	20	14	36	●
1534SU03-0360		3,6	6	62	20	14	36	●
1534SU03C-0360	✻	3,6	6	62	20	14	36	●
1534SU03-0370		3,7	6	62	20	14	36	●
1534SU03C-0370	✻	3,7	6	62	20	14	36	●
1534SU03-0380		3,8	6	66	24	17	36	●
1534SU03C-0380	✻	3,8	6	66	24	17	36	●
1534SU03-0390		3,9	6	66	24	17	36	●
1534SU03C-0390	✻	3,9	6	66	24	17	36	●
1534SU03-0400		4	6	66	24	17	36	●
1534SU03C-0400	✻	4	6	66	24	17	36	●
1534SU03-0410		4,1	6	66	24	17	36	●
1534SU03C-0410	✻	4,1	6	66	24	17	36	●
1534SU03-0420		4,2	6	66	24	17	36	●
1534SU03C-0420	✻	4,2	6	66	24	17	36	●
1534SU03-0430		4,3	6	66	24	17	36	●
1534SU03C-0430	✻	4,3	6	66	24	17	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C

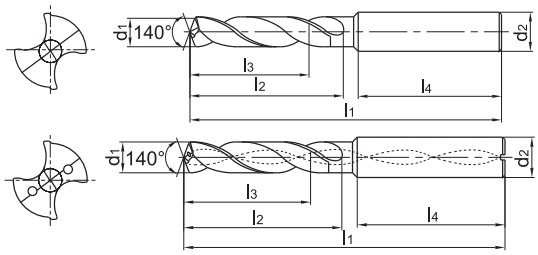
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-0440		4,4	6	66	24	17	36	●
1534SU03C-0440	✻	4,4	6	66	24	17	36	●
1534SU03-0450		4,5	6	66	24	17	36	●
1534SU03C-0450	✻	4,5	6	66	24	17	36	●
1534SU03-0460		4,6	6	66	24	17	36	●
1534SU03C-0460	✻	4,6	6	66	24	17	36	●
1534SU03-0465		4,65	6	66	24	17	36	●
1534SU03C-0465	✻	4,65	6	66	24	17	36	●
1534SU03-0470		4,7	6	66	24	17	36	●
1534SU03C-0470	✻	4,7	6	66	24	17	36	●
1534SU03-0480		4,8	6	66	28	20	36	●
1534SU03C-0480	✻	4,8	6	66	28	20	36	●
1534SU03-0490		4,9	6	66	28	20	36	●
1534SU03C-0490	✻	4,9	6	66	28	20	36	●
1534SU03-0500		5	6	66	28	20	36	●
1534SU03C-0500	✻	5	6	66	28	20	36	●
1534SU03-0510		5,1	6	66	28	20	36	●
1534SU03C-0510	✻	5,1	6	66	28	20	36	●
1534SU03-0520		5,2	6	66	28	20	36	●
1534SU03C-0520	✻	5,2	6	66	28	20	36	●
1534SU03-0530		5,3	6	66	28	20	36	●
1534SU03C-0530	✻	5,3	6	66	28	20	36	●
1534SU03-0540		5,4	6	66	28	20	36	●
1534SU03C-0540	✻	5,4	6	66	28	20	36	●
1534SU03-0550		5,5	6	66	28	20	36	●
1534SU03C-0550	✻	5,5	6	66	28	20	36	●
1534SU03-0555		5,55	6	66	28	20	36	●
1534SU03C-0555	✻	5,55	6	66	28	20	36	●
1534SU03-0560		5,6	6	66	28	20	36	●
1534SU03C-0560	✻	5,6	6	66	28	20	36	●
1534SU03-0570		5,7	6	66	28	20	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C

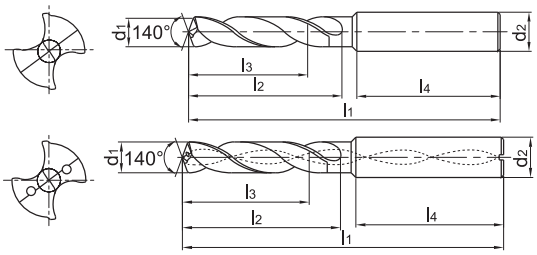
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-0570	✻	5,7	6	66	28	20	36	●
1534SU03-0580		5,8	6	66	28	20	36	●
1534SU03C-0580	✻	5,8	6	66	28	20	36	●
1534SU03-0590		5,9	6	66	28	20	36	●
1534SU03C-0590	✻	5,9	6	66	28	20	36	●
1534SU03-0600		6	6	66	28	20	36	●
1534SU03C-0600	✻	6	6	66	28	20	36	●
1534SU03-0610		6,1	8	79	34	24	36	●
1534SU03C-0610	✻	6,1	8	79	34	24	36	●
1534SU03-0620		6,2	8	79	34	24	36	●
1534SU03C-0620	✻	6,2	8	79	34	24	36	●
1534SU03-0630		6,3	8	79	34	24	36	●
1534SU03C-0630	✻	6,3	8	79	34	24	36	●
1534SU03-0640		6,4	8	79	34	24	36	●
1534SU03C-0640	✻	6,4	8	79	34	24	36	●
1534SU03-0650		6,5	8	79	34	24	36	●
1534SU03C-0650	✻	6,5	8	79	34	24	36	●
1534SU03-0660		6,6	8	79	34	24	36	●
1534SU03C-0660	✻	6,6	8	79	34	24	36	●
1534SU03-0670		6,7	8	79	34	24	36	●
1534SU03C-0670	✻	6,7	8	79	34	24	36	●
1534SU03-0675		6,75	8	79	34	24	36	●
1534SU03C-0675	✻	6,75	8	79	34	24	36	●
1534SU03-0680		6,8	8	79	34	24	36	●
1534SU03C-0680	✻	6,8	8	79	34	24	36	●
1534SU03-0690		6,9	8	79	34	24	36	●
1534SU03C-0690	✻	6,9	8	79	34	24	36	●
1534SU03-0700		7	8	79	34	24	36	●
1534SU03C-0700	✻	7	8	79	34	24	36	●
1534SU03-0710		7,1	8	79	41	29	36	●
1534SU03C-0710	✻	7,1	8	79	41	29	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C

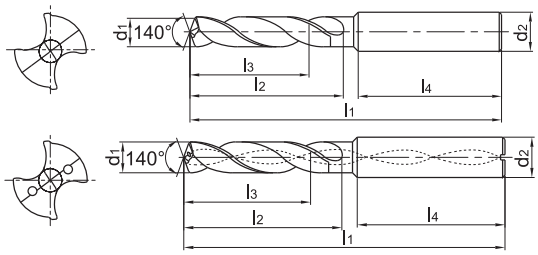
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-0720		7,2	8	79	41	29	36	●
1534SU03C-0720	✻	7,2	8	79	41	29	36	●
1534SU03-0730		7,3	8	79	41	29	36	●
1534SU03C-0730	✻	7,3	8	79	41	29	36	●
1534SU03-0740		7,4	8	79	41	29	36	●
1534SU03C-0740	✻	7,4	8	79	41	29	36	●
1534SU03-0745		7,45	8	79	41	29	36	○
1534SU03C-0745	✻	7,45	8	79	41	29	36	○
1534SU03-0750		7,5	8	79	41	29	36	●
1534SU03C-0750	✻	7,5	8	79	41	29	36	●
1534SU03-0760		7,6	8	79	41	29	36	●
1534SU03C-0760	✻	7,6	8	79	41	29	36	●
1534SU03-0770		7,7	8	79	41	29	36	●
1534SU03C-0770	✻	7,7	8	79	41	29	36	●
1534SU03-0780		7,8	8	79	41	29	36	●
1534SU03C-0780	✻	7,8	8	79	41	29	36	●
1534SU03-0790		7,9	8	79	41	29	36	●
1534SU03C-0790	✻	7,9	8	79	41	29	36	●
1534SU03-0800		8	8	79	41	29	36	●
1534SU03C-0800	✻	8	8	79	41	29	36	●
1534SU03-0810		8,1	10	89	47	35	40	●
1534SU03C-0810	✻	8,1	10	89	47	35	40	●
1534SU03-0820		8,2	10	89	47	35	40	●
1534SU03C-0820	✻	8,2	10	89	47	35	40	●
1534SU03-0830		8,3	10	89	47	35	40	●
1534SU03C-0830	✻	8,3	10	89	47	35	40	●
1534SU03-0840		8,4	10	89	47	35	40	●
1534SU03C-0840	✻	8,4	10	89	47	35	40	●
1534SU03-0850		8,5	10	89	47	35	40	●
1534SU03C-0850	✻	8,5	10	89	47	35	40	●
1534SU03-0860		8,6	10	89	47	35	40	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema C44 | Indicazioni d´uso C201 | Dati di taglio C144 | Ordine utensili speciali C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C



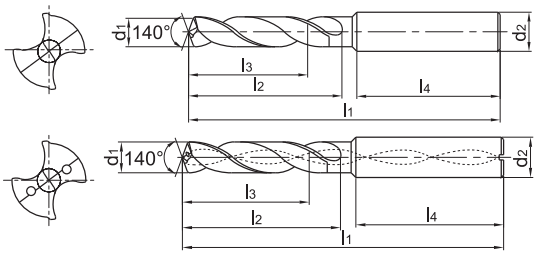
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-0860	✻	8,6	10	89	47	35	40	●
1534SU03-0870		8,7	10	89	47	35	40	●
1534SU03C-0870	✻	8,7	10	89	47	35	40	●
1534SU03-0880		8,8	10	89	47	35	40	●
1534SU03C-0880	✻	8,8	10	89	47	35	40	●
1534SU03-0890		8,9	10	89	47	35	40	●
1534SU03C-0890	✻	8,9	10	89	47	35	40	●
1534SU03-0900		9	10	89	47	35	40	●
1534SU03C-0900	✻	9	10	89	47	35	40	●
1534SU03-0910		9,1	10	89	47	35	40	●
1534SU03C-0910	✻	9,1	10	89	47	35	40	●
1534SU03-0920		9,2	10	89	47	35	40	●
1534SU03C-0920	✻	9,2	10	89	47	35	40	●
1534SU03-0930		9,3	10	89	47	35	40	●
1534SU03C-0930	✻	9,3	10	89	47	35	40	●
1534SU03-0935		9,35	10	89	47	35	40	○
1534SU03C-0935	✻	9,35	10	89	47	35	40	○
1534SU03-0940		9,4	10	89	47	35	40	●
1534SU03C-0940	✻	9,4	10	89	47	35	40	●
1534SU03-0945		9,45	10	89	47	35	40	○
1534SU03C-0945	✻	9,45	10	89	47	35	40	○
1534SU03-0950		9,5	10	89	47	35	40	●
1534SU03C-0950	✻	9,5	10	89	47	35	40	●
1534SU03-0960		9,6	10	89	47	35	40	●
1534SU03C-0960	✻	9,6	10	89	47	35	40	●
1534SU03-0970		9,7	10	89	47	35	40	●
1534SU03C-0970	✻	9,7	10	89	47	35	40	●
1534SU03-0980		9,8	10	89	47	35	40	●
1534SU03C-0980	✻	9,8	10	89	47	35	40	●
1534SU03-0990		9,9	10	89	47	35	40	●
1534SU03C-0990	✻	9,9	10	89	47	35	40	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C



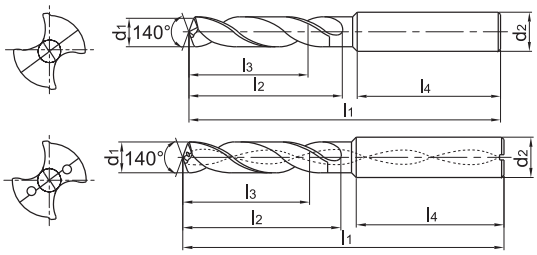
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1000		10	10	89	47	35	40	●
1534SU03C-1000	✻	10	10	89	47	35	40	●
1534SU03-1010		10,1	12	102	55	40	45	●
1534SU03C-1010	✻	10,1	12	102	55	40	45	●
1534SU03-1020		10,2	12	102	55	40	45	●
1534SU03C-1020	✻	10,2	12	102	55	40	45	●
1534SU03-1025		10,25	12	102	55	40	45	●
1534SU03C-1025	✻	10,25	12	102	55	40	45	●
1534SU03-1030		10,3	12	102	55	40	45	●
1534SU03C-1030	✻	10,3	12	102	55	40	45	●
1534SU03-1040		10,4	12	102	55	40	45	●
1534SU03C-1040	✻	10,4	12	102	55	40	45	●
1534SU03-1050		10,5	12	102	55	40	45	●
1534SU03C-1050	✻	10,5	12	102	55	40	45	●
1534SU03-1060		10,6	12	102	55	40	45	●
1534SU03C-1060	✻	10,6	12	102	55	40	45	●
1534SU03-1070		10,7	12	102	55	40	45	●
1534SU03C-1070	✻	10,7	12	102	55	40	45	●
1534SU03-1080		10,8	12	102	55	40	45	●
1534SU03C-1080	✻	10,8	12	102	55	40	45	●
1534SU03-1090		10,9	12	102	55	40	45	●
1534SU03C-1090	✻	10,9	12	102	55	40	45	●
1534SU03-1100		11	12	102	55	40	45	●
1534SU03C-1100	✻	11	12	102	55	40	45	●
1534SU03-1110		11,1	12	102	55	40	45	●
1534SU03C-1110	✻	11,1	12	102	55	40	45	●
1534SU03-1120		11,2	12	102	55	40	45	●
1534SU03C-1120	✻	11,2	12	102	55	40	45	●
1534SU03-1125		11,25	12	102	55	40	45	○
1534SU03C-1125	✻	11,25	12	102	55	40	45	○
1534SU03-1130		11,3	12	102	55	40	45	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C



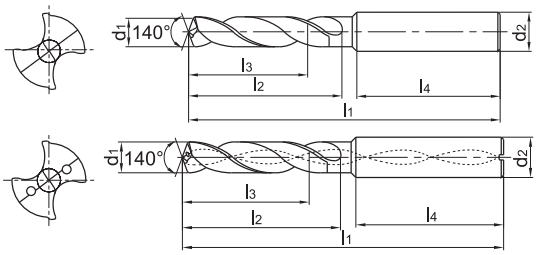
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-1130	✻	11,3	12	102	55	40	45	●
1534SU03-1135		11,35	12	102	55	40	45	○
1534SU03C-1135	✻	11,35	12	102	55	40	45	○
1534SU03-1140		11,4	12	102	55	40	45	●
1534SU03C-1140	✻	11,4	12	102	55	40	45	●
1534SU03-1145		11,45	12	102	55	40	45	○
1534SU03C-1145	✻	11,45	12	102	55	40	45	○
1534SU03-1150		11,5	12	102	55	40	45	●
1534SU03C-1150	✻	11,5	12	102	55	40	45	●
1534SU03-1160		11,6	12	102	55	40	45	●
1534SU03C-1160	✻	11,6	12	102	55	40	45	●
1534SU03-1170		11,7	12	102	55	40	45	●
1534SU03C-1170	✻	11,7	12	102	55	40	45	●
1534SU03-1180		11,8	12	102	55	40	45	●
1534SU03C-1180	✻	11,8	12	102	55	40	45	●
1534SU03-1190		11,9	12	102	55	40	45	●
1534SU03C-1190	✻	11,9	12	102	55	40	45	●
1534SU03-1200		12	12	102	55	40	45	●
1534SU03C-1200	✻	12	12	102	55	40	45	●
1534SU03-1210		12,1	14	107	60	43	45	●
1534SU03C-1210	✻	12,1	14	107	60	43	45	●
1534SU03-1220		12,2	14	107	60	43	45	●
1534SU03C-1220	✻	12,2	14	107	60	43	45	●
1534SU03-1225		12,25	14	107	60	43	45	●
1534SU03C-1225	✻	12,25	14	107	60	43	45	●
1534SU03-1230		12,3	14	107	60	43	45	●
1534SU03C-1230	✻	12,3	14	107	60	43	45	●
1534SU03-1250		12,5	14	107	60	43	45	●
1534SU03C-1250	✻	12,5	14	107	60	43	45	●
1534SU03-1270		12,7	14	107	60	43	45	●
1534SU03C-1270	✻	12,7	14	107	60	43	45	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C



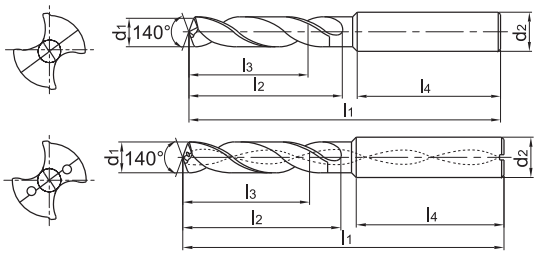
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1275		12,75	14	107	60	43	45	●
1534SU03C-1275	✲	12,75	14	107	60	43	45	●
1534SU03-1280		12,8	14	107	60	43	45	●
1534SU03C-1280	✲	12,8	14	107	60	43	45	●
1534SU03-1300		13	14	107	60	43	45	●
1534SU03C-1300	✲	13	14	107	60	43	45	●
1534SU03-1310		13,1	14	107	60	43	45	●
1534SU03C-1310	✲	13,1	14	107	60	43	45	●
1534SU03C-1335	✲	13,35	14	107	60	43	45	●
1534SU03-1350		13,5	14	107	60	43	45	●
1534SU03C-1350	✲	13,5	14	107	60	43	45	●
1534SU03-1380		13,8	14	107	60	43	45	●
1534SU03C-1380	✲	13,8	14	107	60	43	45	●
1534SU03-1400		14	14	107	60	43	45	●
1534SU03C-1400	✲	14	14	107	60	43	45	●
1534SU03-1420		14,2	16	107	60	43	45	●
1534SU03C-1420	✲	14,2	16	107	60	43	45	●
1534SU03-1425		14,25	16	115	65	45	48	●
1534SU03C-1425	✲	14,25	16	115	65	45	48	●
1534SU03-1430		14,3	16	115	65	45	48	●
1534SU03C-1430	✲	14,3	16	115	65	45	48	●
1534SU03-1450		14,5	16	115	65	45	48	●
1534SU03C-1450	✲	14,5	16	115	65	45	48	●
1534SU03-1475		14,75	16	115	65	45	48	●
1534SU03C-1475	✲	14,75	16	115	65	45	48	●
1534SU03-1480		14,8	16	115	65	45	48	●
1534SU03C-1480	✲	14,8	16	115	65	45	48	●
1534SU03-1500		15	16	115	65	45	48	●
1534SU03C-1500	✲	15	16	115	65	45	48	●
1534SU03-1510		15,1	16	115	65	45	48	●
1534SU03C-1510	✲	15,1	16	115	65	45	48	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C

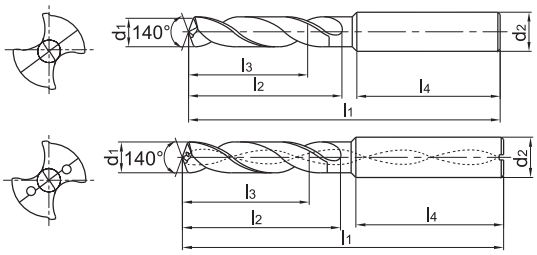
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1530		15,3	16	115	65	45	48	●
1534SU03C-1535	✲	15,35	16	115	65	45	48	○
1534SU03-1550		15,5	16	115	65	45	48	●
1534SU03C-1550	✲	15,5	16	115	65	45	48	●
1534SU03-1580		15,8	16	115	65	45	48	●
1534SU03C-1580	✲	15,8	16	115	65	45	48	●
1534SU03-1600		16	16	115	65	45	48	●
1534SU03C-1600	✲	16	16	115	65	45	48	●
1534SU03-1610		16,1	18	123	73	51	48	●
1534SU03-1650		16,5	18	123	73	51	48	●
1534SU03C-1650	✲	16,5	18	123	73	51	48	●
1534SU03-1675		16,75	18	123	73	51	48	●
1534SU03C-1675	✲	16,75	18	123	73	51	48	●
1534SU03-1680		16,8	18	123	73	51	48	●
1534SU03C-1680	✲	16,8	18	123	73	51	48	●
1534SU03-1700		17	18	123	73	51	48	●
1534SU03C-1700	✲	17	18	123	73	51	48	●
1534SU03-1750		17,5	18	123	73	51	48	●
1534SU03C-1750	✲	17,5	18	123	73	51	48	●
1534SU03-1780		17,8	18	123	73	51	48	●
1534SU03C-1780	✲	17,8	18	123	73	51	48	●
1534SU03-1800		18	18	123	73	51	48	●
1534SU03C-1800	✲	18	18	123	73	51	48	●
1534SU03-1850		18,5	20	131	79	55	50	●
1534SU03C-1850	✲	18,5	20	131	79	55	50	●
1534SU03-1880		18,8	20	131	79	55	50	●
1534SU03C-1880	✲	18,8	20	131	79	55	50	●
1534SU03-1900		19	20	131	79	55	50	●
1534SU03C-1900	✲	19	20	131	79	55	50	●
1534SU03-1950		19,5	20	131	79	55	50	●
1534SU03C-1950	✲	19,5	20	131	79	55	50	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1534SU03/1534SU03C



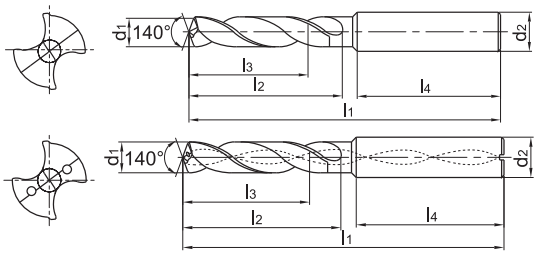
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1980		19,8	20	131	79	55	50	●
1534SU03C-1980	✲	19,8	20	131	79	55	50	●
1534SU03-2000		20	20	131	79	55	50	●
1534SU03C-2000	✲	20	20	131	79	55	50	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1534SU*	✔	✔	✔			
1534SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C



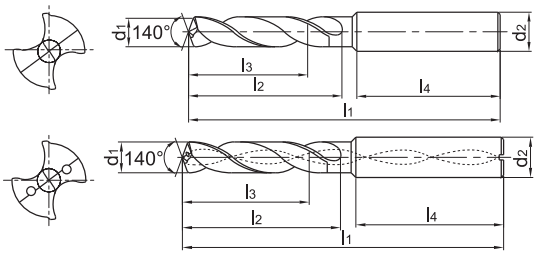
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-0200		2	6	66	28	23	36	●
1536SU05-0210		2,1	6	66	28	23	36	●
1536SU05-0220		2,2	6	66	28	23	36	●
1536SU05-0230		2,3	6	66	28	23	36	●
1536SU05-0240		2,4	6	66	28	23	36	●
1536SU05-0250		2,5	6	66	28	23	36	●
1536SU05-0260		2,6	6	66	28	23	36	●
1536SU05-0270		2,7	6	66	28	23	36	●
1536SU05-0280		2,8	6	66	28	23	36	●
1536SU05-0290		2,9	6	66	28	23	36	●
1536SU05-0300		3	6	66	28	23	36	●
1536SU05C-0300	✻	3	6	66	28	23	36	●
1536SU05-0310		3,1	6	66	28	23	36	●
1536SU05C-0310	✻	3,1	6	66	28	23	36	●
1536SU05-0320		3,2	6	66	28	23	36	●
1536SU05C-0320	✻	3,2	6	66	28	23	36	●
1536SU05-0325		3,25	6	66	28	23	36	●
1536SU05C-0325	✻	3,25	6	66	28	23	36	●
1536SU05-0330		3,3	6	66	28	23	36	●
1536SU05C-0330	✻	3,3	6	66	28	23	36	●
1536SU05-0340		3,4	6	66	28	23	36	●
1536SU05C-0340	✻	3,4	6	66	28	23	36	●
1536SU05-0350		3,5	6	66	28	23	36	●
1536SU05C-0350	✻	3,5	6	66	28	23	36	●
1536SU05-0360		3,6	6	66	28	23	36	●
1536SU05C-0360	✻	3,6	6	66	28	23	36	●
1536SU05-0370		3,7	6	66	28	23	36	●
1536SU05C-0370	✻	3,7	6	66	28	23	36	●
1536SU05-0380		3,8	6	74	36	29	36	●
1536SU05C-0380	✻	3,8	6	74	36	29	36	●
1536SU05-0390		3,9	6	74	36	29	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C

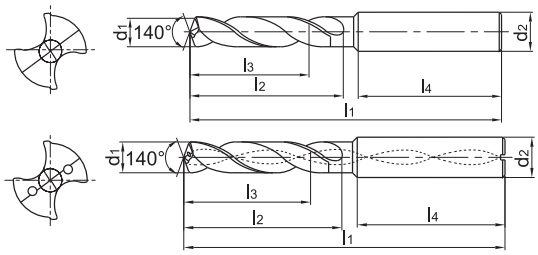
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-0390	✲	3,9	6	74	36	29	36	●
1536SU05-0400		4	6	74	36	29	36	●
1536SU05C-0400	✲	4	6	74	36	29	36	●
1536SU05-0410		4,1	6	74	36	29	36	●
1536SU05C-0410	✲	4,1	6	74	36	29	36	●
1536SU05-0420		4,2	6	74	36	29	36	●
1536SU05C-0420	✲	4,2	6	74	36	29	36	●
1536SU05-0430		4,3	6	74	36	29	36	●
1536SU05C-0430	✲	4,3	6	74	36	29	36	●
1536SU05-0440		4,4	6	74	36	29	36	●
1536SU05C-0440	✲	4,4	6	74	36	29	36	●
1536SU05-0450		4,5	6	74	36	29	36	●
1536SU05C-0450	✲	4,5	6	74	36	29	36	●
1536SU05-0460		4,6	6	74	36	29	36	●
1536SU05C-0460	✲	4,6	6	74	36	29	36	●
1536SU05-0465		4,65	6	74	36	29	36	●
1536SU05C-0465	✲	4,65	6	74	36	29	36	●
1536SU05-0470		4,7	6	74	36	29	36	●
1536SU05C-0470	✲	4,7	6	74	36	29	36	●
1536SU05-0480		4,8	6	82	44	35	36	●
1536SU05C-0480	✲	4,8	6	82	44	35	36	●
1536SU05-0490		4,9	6	82	44	35	36	●
1536SU05C-0490	✲	4,9	6	82	44	35	36	●
1536SU05-0500		5	6	82	44	35	36	●
1536SU05C-0500	✲	5	6	82	44	35	36	●
1536SU05-0510		5,1	6	82	44	35	36	●
1536SU05C-0510	✲	5,1	6	82	44	35	36	●
1536SU05-0520		5,2	6	82	44	35	36	●
1536SU05C-0520	✲	5,2	6	82	44	35	36	●
1536SU05-0530		5,3	6	82	44	35	36	●
1536SU05C-0530	✲	5,3	6	82	44	35	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C



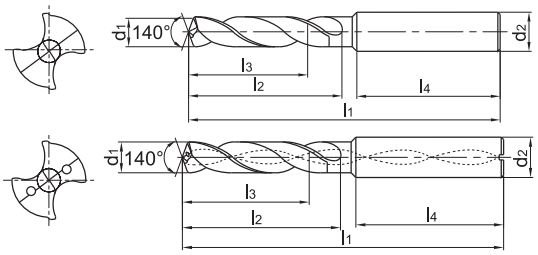
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-0540		5,4	6	82	44	35	36	●
1536SU05C-0540	✲	5,4	6	82	44	35	36	●
1536SU05-0550		5,5	6	82	44	35	36	●
1536SU05C-0550	✲	5,5	6	82	44	35	36	●
1536SU05-0555		5,55	6	82	44	35	36	●
1536SU05C-0555	✲	5,55	6	82	44	35	36	●
1536SU05-0560		5,6	6	82	44	35	36	●
1536SU05C-0560	✲	5,6	6	82	44	35	36	●
1536SU05-0570		5,7	6	82	44	35	36	●
1536SU05C-0570	✲	5,7	6	82	44	35	36	●
1536SU05-0580		5,8	6	82	44	35	36	●
1536SU05C-0580	✲	5,8	6	82	44	35	36	●
1536SU05-0590		5,9	6	82	44	35	36	●
1536SU05C-0590	✲	5,9	6	82	44	35	36	●
1536SU05-0600		6	6	82	44	35	36	●
1536SU05C-0600	✲	6	6	82	44	35	36	●
1536SU05-0610		6,1	8	91	53	43	36	●
1536SU05C-0610	✲	6,1	8	91	53	43	36	●
1536SU05-0620		6,2	8	91	53	43	36	●
1536SU05C-0620	✲	6,2	8	91	53	43	36	●
1536SU05-0630		6,3	8	91	53	43	36	●
1536SU05C-0630	✲	6,3	8	91	53	43	36	●
1536SU05-0640		6,4	8	91	53	43	36	●
1536SU05C-0640	✲	6,4	8	91	53	43	36	●
1536SU05-0650		6,5	8	91	53	43	36	●
1536SU05C-0650	✲	6,5	8	91	53	43	36	●
1536SU05-0660		6,6	8	91	53	43	36	●
1536SU05C-0660	✲	6,6	8	91	53	43	36	●
1536SU05-0670		6,7	8	91	53	43	36	●
1536SU05C-0670	✲	6,7	8	91	53	43	36	●
1536SU05-0675		6,75	8	91	53	43	36	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C

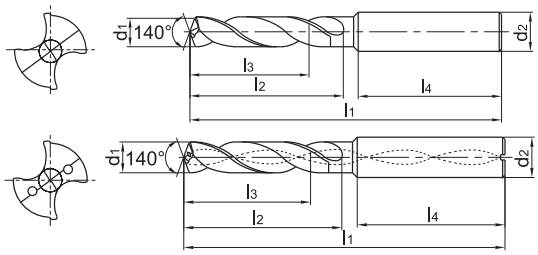
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-0675	✻	6,75	8	91	53	43	36	●
1536SU05-0680		6,8	8	91	53	43	36	●
1536SU05C-0680	✻	6,8	8	91	53	43	36	●
1536SU05-0690		6,9	8	91	53	43	36	●
1536SU05C-0690	✻	6,9	8	91	53	43	36	●
1536SU05-0700		7	8	91	53	43	36	●
1536SU05C-0700	✻	7	8	91	53	43	36	●
1536SU05-0710		7,1	8	91	53	43	36	●
1536SU05C-0710	✻	7,1	8	91	53	43	36	●
1536SU05-0720		7,2	8	91	53	43	36	●
1536SU05C-0720	✻	7,2	8	91	53	43	36	●
1536SU05-0730		7,3	8	91	53	43	36	●
1536SU05C-0730	✻	7,3	8	91	53	43	36	●
1536SU05-0740		7,4	8	91	53	43	36	●
1536SU05C-0740	✻	7,4	8	91	53	43	36	●
1536SU05-0745		7,45	8	91	53	43	36	●
1536SU05C-0745	✻	7,45	8	91	53	43	36	●
1536SU05-0750		7,5	8	91	53	43	36	●
1536SU05C-0750	✻	7,5	8	91	53	43	36	●
1536SU05-0760		7,6	8	91	53	43	36	●
1536SU05C-0760	✻	7,6	8	91	53	43	36	●
1536SU05-0770		7,7	8	91	53	43	36	●
1536SU05C-0770	✻	7,7	8	91	53	43	36	●
1536SU05-0780		7,8	8	91	53	43	36	●
1536SU05C-0780	✻	7,8	8	91	53	43	36	●
1536SU05-0790		7,9	8	91	53	43	36	●
1536SU05C-0790	✻	7,9	8	91	53	43	36	●
1536SU05-0800		8	8	91	53	43	36	●
1536SU05C-0800	✻	8	8	91	53	43	36	●
1536SU05-0810		8,1	10	103	61	49	40	●
1536SU05C-0810	✻	8,1	10	103	61	49	40	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C



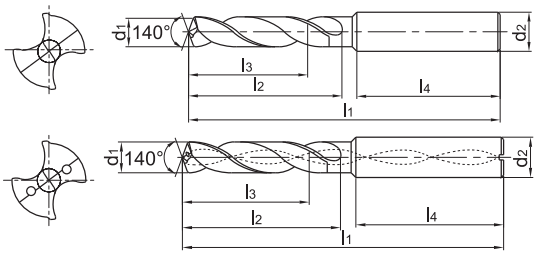
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-0820		8,2	10	103	61	49	40	●
1536SU05C-0820	✻	8,2	10	103	61	49	40	●
1536SU05-0830		8,3	10	103	61	49	40	●
1536SU05C-0830	✻	8,3	10	103	61	49	40	●
1536SU05-0840		8,4	10	103	61	49	40	●
1536SU05C-0840	✻	8,4	10	103	61	49	40	●
1536SU05-0850		8,5	10	103	61	49	40	●
1536SU05C-0850	✻	8,5	10	103	61	49	40	●
1536SU05-0860		8,6	10	103	61	49	40	●
1536SU05C-0860	✻	8,6	10	103	61	49	40	●
1536SU05-0870		8,7	10	103	61	49	40	●
1536SU05C-0870	✻	8,7	10	103	61	49	40	●
1536SU05-0880		8,8	10	103	61	49	40	●
1536SU05C-0880	✻	8,8	10	103	61	49	40	●
1536SU05-0890		8,9	10	103	61	49	40	●
1536SU05C-0890	✻	8,9	10	103	61	49	40	●
1536SU05-0900		9	10	103	61	49	40	●
1536SU05C-0900	✻	9	10	103	61	49	40	●
1536SU05-0910		9,1	10	103	61	49	40	●
1536SU05C-0910	✻	9,1	10	103	61	49	40	●
1536SU05-0920		9,2	10	103	61	49	40	●
1536SU05C-0920	✻	9,2	10	103	61	49	40	●
1536SU05-0930		9,3	10	103	61	49	40	●
1536SU05C-0930	✻	9,3	10	103	61	49	40	●
1536SU05-0935		9,35	10	103	61	49	40	●
1536SU05C-0935	✻	9,35	10	103	61	49	40	○
1536SU05-0940		9,4	10	103	61	49	40	●
1536SU05C-0940	✻	9,4	10	103	61	49	40	●
1536SU05-0945		9,45	10	103	61	49	40	●
1536SU05C-0945	✻	9,45	10	103	61	49	40	○
1536SU05-0950		9,5	10	103	61	49	40	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C

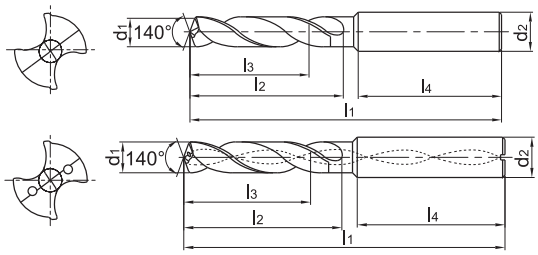
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-0950	✻	9,5	10	103	61	49	40	●
1536SU05-0960		9,6	10	103	61	49	40	●
1536SU05C-0960	✻	9,6	10	103	61	49	40	●
1536SU05-0970		9,7	10	103	61	49	40	●
1536SU05C-0970	✻	9,7	10	103	61	49	40	●
1536SU05-0980		9,8	10	103	61	49	40	●
1536SU05C-0980	✻	9,8	10	103	61	49	40	●
1536SU05-0990		9,9	10	103	61	49	40	●
1536SU05C-0990	✻	9,9	10	103	61	49	40	●
1536SU05-1000		10	10	103	61	49	40	●
1536SU05C-1000	✻	10	10	103	61	49	40	●
1536SU05-1010		10,1	12	118	71	56	45	●
1536SU05C-1010	✻	10,1	12	118	71	56	45	●
1536SU05-1020		10,2	12	118	71	56	45	●
1536SU05C-1020	✻	10,2	12	118	71	56	45	●
1536SU05-1025		10,25	12	118	71	56	45	●
1536SU05C-1025	✻	10,25	12	118	71	56	45	●
1536SU05-1030		10,3	12	118	71	56	45	●
1536SU05C-1030	✻	10,3	12	118	71	56	45	●
1536SU05-1040		10,4	12	118	71	56	45	●
1536SU05C-1040	✻	10,4	12	118	71	56	45	●
1536SU05-1050		10,5	12	118	71	56	45	●
1536SU05C-1050	✻	10,5	12	118	71	56	45	●
1536SU05-1060		10,6	12	118	71	56	45	●
1536SU05C-1060	✻	10,6	12	118	71	56	45	●
1536SU05-1070		10,7	12	118	71	56	45	●
1536SU05C-1070	✻	10,7	12	118	71	56	45	●
1536SU05-1080		10,8	12	118	71	56	45	●
1536SU05C-1080	✻	10,8	12	118	71	56	45	●
1536SU05-1090		10,9	12	118	71	56	45	●
1536SU05C-1090	✻	10,9	12	118	71	56	45	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C



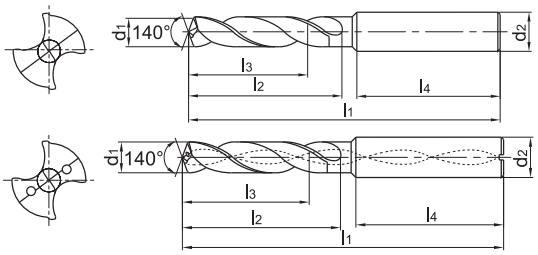
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-1100		11	12	118	71	56	45	●
1536SU05C-1100	✲	11	12	118	71	56	45	●
1536SU05-1110		11,1	12	118	71	56	45	●
1536SU05C-1110	✲	11,1	12	118	71	56	45	●
1536SU05-1120		11,2	12	118	71	56	45	●
1536SU05C-1120	✲	11,2	12	118	71	56	45	●
1536SU05-1125		11,25	12	118	71	56	45	●
1536SU05C-1125	✲	11,25	12	118	71	56	45	○
1536SU05-1130		11,3	12	118	71	56	45	●
1536SU05C-1130	✲	11,3	12	118	71	56	45	●
1536SU05-1135		11,35	12	118	71	56	45	●
1536SU05C-1135	✲	11,35	12	118	71	56	45	○
1536SU05-1140		11,4	12	118	71	56	45	●
1536SU05C-1140	✲	11,4	12	118	71	56	45	●
1536SU05-1145		11,45	12	118	71	56	45	○
1536SU05C-1145	✲	11,45	12	118	71	56	45	○
1536SU05-1150		11,5	12	118	71	56	45	●
1536SU05C-1150	✲	11,5	12	118	71	56	45	●
1536SU05-1160		11,6	12	118	71	56	45	●
1536SU05C-1160	✲	11,6	12	118	71	56	45	●
1536SU05-1170		11,7	12	118	71	56	45	●
1536SU05C-1170	✲	11,7	12	118	71	56	45	●
1536SU05-1180		11,8	12	118	71	56	45	●
1536SU05C-1180	✲	11,8	12	118	71	56	45	●
1536SU05-1190		11,9	12	118	71	56	45	●
1536SU05C-1190	✲	11,9	12	118	71	56	45	●
1536SU05-1200		12	12	118	71	56	45	●
1536SU05C-1200	✲	12	12	118	71	56	45	●
1536SU05-1210		12,1	14	124	77	60	45	●
1536SU05C-1210	✲	12,1	14	124	77	60	45	●
1536SU05-1220		12,2	14	124	77	60	45	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C

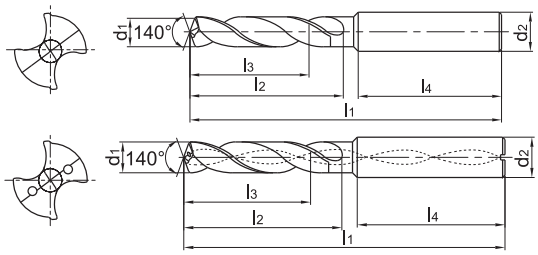
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-1220	✻	12,2	14	124	77	60	45	●
1536SU05-1225		12,25	14	124	77	60	45	●
1536SU05C-1225	✻	12,25	14	124	77	60	45	●
1536SU05-1230		12,3	14	124	77	60	45	●
1536SU05C-1230	✻	12,3	14	124	77	60	45	●
1536SU05-1250		12,5	14	124	77	60	45	●
1536SU05C-1250	✻	12,5	14	124	77	60	45	●
1536SU05-1270		12,7	14	124	77	60	45	●
1536SU05C-1270	✻	12,7	14	124	77	60	45	●
1536SU05-1275		12,75	14	124	77	60	45	●
1536SU05C-1275	✻	12,75	14	124	77	60	45	●
1536SU05-1280		12,8	14	124	77	60	45	●
1536SU05C-1280	✻	12,8	14	124	77	60	45	●
1536SU05-1300		13	14	124	77	60	45	●
1536SU05C-1300	✻	13	14	124	77	60	45	●
1536SU05-1310		13,1	14	124	77	60	45	●
1536SU05C-1310	✻	13,1	14	124	77	60	45	●
1536SU05-1335		13,35	14	124	77	60	56	○
1536SU05C-1335	✻	13,35	14	124	77	60	56	○
1536SU05-1350		13,5	14	124	77	60	45	●
1536SU05C-1350	✻	13,5	14	124	77	60	45	●
1536SU05-1380		13,8	14	124	77	60	45	●
1536SU05C-1380	✻	13,8	14	124	77	60	45	●
1536SU05-1400		14	14	124	77	60	45	●
1536SU05C-1400	✻	14	14	124	77	60	45	●
1536SU05-1420		14,2	16	124	77	60	45	●
1536SU05C-1420	✻	14,2	16	124	77	60	45	●
1536SU05-1425		14,25	16	133	83	63	48	●
1536SU05C-1425	✻	14,25	16	133	83	63	48	●
1536SU05-1430		14,3	16	133	83	63	48	●
1536SU05C-1430	✻	14,3	16	133	83	63	48	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C



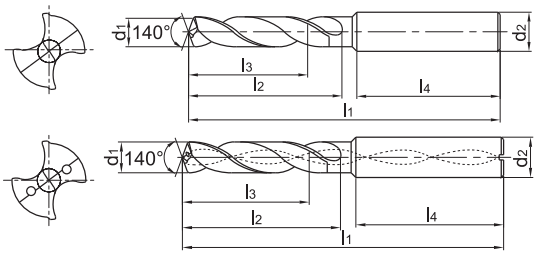
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-1450		14,5	16	133	83	63	48	●
1536SU05C-1450	✻	14,5	16	133	83	63	48	●
1536SU05-1475		14,75	16	133	83	63	48	●
1536SU05C-1475	✻	14,75	16	133	83	63	48	●
1536SU05-1480		14,8	16	133	83	63	48	●
1536SU05C-1480	✻	14,8	16	133	83	63	48	●
1536SU05-1500		15	16	133	83	63	48	●
1536SU05C-1500	✻	15	16	133	83	63	48	●
1536SU05-1510		15,1	16	133	83	63	48	●
1536SU05C-1510	✻	15,1	16	133	83	63	48	●
1536SU05C-1530	✻	15,3	16	133	83	63	48	●
1536SU05-1535		15,35	16	133	83	63	48	○
1536SU05C-1535	✻	15,35	16	133	83	63	48	○
1536SU05-1550		15,5	16	133	83	63	48	●
1536SU05C-1550	✻	15,5	16	133	83	63	48	●
1536SU05-1580		15,8	16	133	83	63	48	●
1536SU05C-1580	✻	15,8	16	133	83	63	48	●
1536SU05-1600		16	16	133	83	63	48	●
1536SU05C-1600	✻	16	16	133	83	63	48	●
1536SU05-1650		16,5	18	143	93	71	48	●
1536SU05C-1650	✻	16,5	18	143	93	71	48	●
1536SU05-1675		16,75	18	143	93	71	48	●
1536SU05C-1675	✻	16,75	18	143	93	71	48	●
1536SU05-1680		16,8	18	143	93	71	48	●
1536SU05C-1680	✻	16,8	18	143	93	71	48	●
1536SU05-1700		17	18	143	93	71	48	●
1536SU05C-1700	✻	17	18	143	93	71	48	●
1536SU05-1750		17,5	18	143	93	71	48	●
1536SU05C-1750	✻	17,5	18	143	93	71	48	●
1536SU05-1780		17,8	18	143	93	71	48	●
1536SU05C-1780	✻	17,8	18	143	93	71	48	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1536SU05/1536SU05C

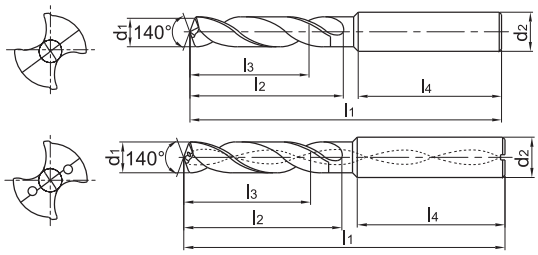
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-1800		18	18	143	93	71	48	●
1536SU05C-1800	✲	18	18	143	93	71	48	●
1536SU05-1850		18,5	20	153	101	77	50	●
1536SU05C-1850	✲	18,5	20	153	101	77	50	●
1536SU05-1880		18,8	20	153	101	77	50	●
1536SU05C-1880	✲	18,8	20	153	101	77	50	●
1536SU05-1900		19	20	153	101	77	50	●
1536SU05C-1900	✲	19	20	153	101	77	50	●
1536SU05-1950		19,5	20	153	101	77	50	●
1536SU05C-1950	✲	19,5	20	153	101	77	50	●
1536SU05-1980		19,8	20	153	101	77	50	●
1536SU05C-1980	✲	19,8	20	153	101	77	50	●
1536SU05-2000		20	20	153	101	77	50	●
1536SU05C-2000	✲	20	20	153	101	77	50	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1536SU*	✔	✔	✔			
1536SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 8xD | Lavorazione generica | Per ghise aggiungere K (SUK)

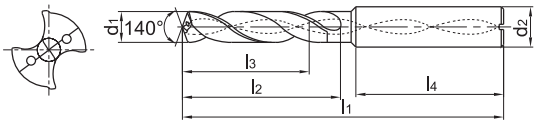
1538SU08C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1538SU08C-0300	✻	3	6	72	34	29	36	●
1538SU08C-0310	✻	3,1	6	72	34	29	36	●
1538SU08C-0320	✻	3,2	6	72	34	29	36	●
1538SU08C-0330	✻	3,3	6	72	34	29	36	●
1538SU08C-0340	✻	3,4	6	72	34	29	36	●
1538SU08C-0350	✻	3,5	6	72	34	29	36	●
1538SU08C-0360	✻	3,6	6	72	34	29	36	●
1538SU08C-0370	✻	3,7	6	72	34	29	36	●
1538SU08C-0380	✻	3,8	6	81	43	36	36	●
1538SU08C-0390	✻	3,9	6	81	43	36	36	●
1538SU08C-0400	✻	4	6	81	43	36	36	●
1538SU08C-0410	✻	4,1	6	81	43	36	36	●
1538SU08C-0420	✻	4,2	6	81	43	36	36	●
1538SU08C-0430	✻	4,3	6	81	43	36	36	●
1538SU08C-0440	✻	4,4	6	81	43	36	36	●
1538SU08C-0450	✻	4,5	6	81	43	36	36	●
1538SU08C-0460	✻	4,6	6	81	43	36	36	●
1538SU08C-0470	✻	4,7	6	81	43	36	36	●
1538SU08C-0480	✻	4,8	6	95	57	48	36	●
1538SU08C-0490	✻	4,9	6	95	57	48	36	●
1538SU08C-0500	✻	5	6	95	57	48	36	●
1538SU08C-0510	✻	5,1	6	95	57	48	36	●
1538SU08C-0520	✻	5,2	6	95	57	48	36	●
1538SU08C-0530	✻	5,3	6	95	57	48	36	●
1538SU08C-0540	✻	5,4	6	95	57	48	36	●
1538SU08C-0550	✻	5,5	6	95	57	48	36	●
1538SU08C-0560	✻	5,6	6	95	57	48	36	●
1538SU08C-0570	✻	5,7	6	95	57	48	36	●
1538SU08C-0580	✻	5,8	6	95	57	48	36	●
1538SU08C-0590	✻	5,9	6	95	57	48	36	●
1538SU08C-0600	✻	6	6	95	57	48	36	●
1538SU08C-0610	✻	6,1	8	114	76	66	36	●
1538SU08C-0620	✻	6,2	8	114	76	66	36	●
1538SU08C-0630	✻	6,3	8	114	76	66	36	●
1538SU08C-0640	✻	6,4	8	114	76	66	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1538SU*	✔	✔	✔			
1538SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 8xD | Lavorazione generica | Per ghise aggiungere K (SUK)

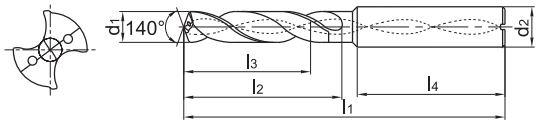
1538SU08C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1538SU08C-0650	✲	6,5	8	114	76	66	36	●
1538SU08C-0660	✲	6,6	8	114	76	66	36	●
1538SU08C-0670	✲	6,7	8	114	76	66	36	●
1538SU08C-0680	✲	6,8	8	114	76	66	36	●
1538SU08C-0690	✲	6,9	8	114	76	66	36	●
1538SU08C-0700	✲	7	8	116	76	66	36	●
1538SU08C-0710	✲	7,1	8	116	76	66	36	●
1538SU08C-0720	✲	7,2	8	116	76	66	36	●
1538SU08C-0730	✲	7,3	8	116	76	66	36	●
1538SU08C-0740	✲	7,4	8	116	76	66	36	●
1538SU08C-0750	✲	7,5	8	116	76	66	36	●
1538SU08C-0760	✲	7,6	8	116	76	66	36	●
1538SU08C-0770	✲	7,7	8	116	76	66	36	●
1538SU08C-0780	✲	7,8	8	116	76	66	36	●
1538SU08C-0790	✲	7,9	8	116	76	66	36	●
1538SU08C-0800	✲	8	8	116	76	66	36	●
1538SU08C-0810	✲	8,1	10	142	95	83	40	●
1538SU08C-0820	✲	8,2	10	142	95	83	40	●
1538SU08C-0830	✲	8,3	10	142	95	83	40	●
1538SU08C-0840	✲	8,4	10	142	95	83	40	●
1538SU08C-0850	✲	8,5	10	142	95	83	40	●
1538SU08C-0860	✲	8,6	10	142	95	83	40	●
1538SU08C-0870	✲	8,7	10	142	95	83	40	●
1538SU08C-0880	✲	8,8	10	142	95	83	40	●
1538SU08C-0890	✲	8,9	10	142	95	83	40	●
1538SU08C-0900	✲	9	10	142	95	83	40	●
1538SU08C-0910	✲	9,1	10	142	95	83	40	●
1538SU08C-0920	✲	9,2	10	142	95	83	40	●
1538SU08C-0930	✲	9,3	10	142	95	83	40	●
1538SU08C-0940	✲	9,4	10	142	95	83	40	●
1538SU08C-0950	✲	9,5	10	142	95	83	40	●
1538SU08C-0960	✲	9,6	10	142	95	83	40	●
1538SU08C-0970	✲	9,7	10	142	95	83	40	●
1538SU08C-0980	✲	9,8	10	142	95	83	40	●
1538SU08C-0990	✲	9,9	10	142	95	83	40	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1538SU*	✔	✔	✔			
1538SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 8xD | Lavorazione generica | Per ghise aggiungere K (SUK)

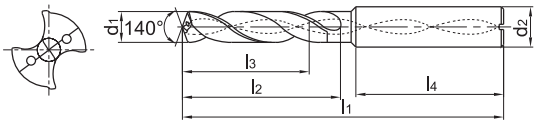
1538SU08C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1538SU08C-1000	✻	10	10	142	95	83	40	●
1538SU08C-1010	✻	10,1	12	162	114	99	45	●
1538SU08C-1020	✻	10,2	12	162	114	99	45	●
1538SU08C-1030	✻	10,3	12	162	114	99	45	●
1538SU08C-1040	✻	10,4	12	162	114	99	45	●
1538SU08C-1050	✻	10,5	12	162	114	99	45	●
1538SU08C-1060	✻	10,6	12	162	114	99	45	●
1538SU08C-1070	✻	10,7	12	162	114	99	45	●
1538SU08C-1080	✻	10,8	12	162	114	99	45	●
1538SU08C-1090	✻	10,9	12	162	114	99	45	●
1538SU08C-1100	✻	11	12	162	114	99	45	●
1538SU08C-1110	✻	11,1	12	162	114	99	45	●
1538SU08C-1120	✻	11,2	12	162	114	99	45	●
1538SU08C-1130	✻	11,3	12	162	114	99	45	●
1538SU08C-1140	✻	11,4	12	162	114	99	45	●
1538SU08C-1150	✻	11,5	12	162	114	99	45	●
1538SU08C-1160	✻	11,6	12	162	114	99	45	●
1538SU08C-1170	✻	11,7	12	162	114	99	45	●
1538SU08C-1180	✻	11,8	12	162	114	99	45	●
1538SU08C-1190	✻	11,9	12	162	114	99	45	●
1538SU08C-1200	✻	12	12	162	114	99	45	●
1538SU08C-1250	✻	12,5	14	178	133	116	45	●
1538SU08C-1270	✻	12,7	14	178	133	116	45	●
1538SU08C-1280	✻	12,8	14	178	133	116	45	●
1538SU08C-1300	✻	13	14	178	133	116	45	●
1538SU08C-1350	✻	13,5	14	178	133	116	45	●
1538SU08C-1400	✻	14	14	178	133	116	45	●
1538SU08C-1450	✻	14,5	16	204	152	132	48	●
1538SU08C-1480	✻	14,8	16	204	152	132	48	●
1538SU08C-1500	✻	15	16	204	152	132	48	●
1538SU08C-1550	✻	15,5	16	204	152	132	48	●
1538SU08C-1600	✻	16	16	204	152	132	48	●
1538SU08C-1650	✻	16,5	18	223	171	149	48	●
1538SU08C-1700	✻	17	18	223	171	149	48	●
1538SU08C-1750	✻	17,5	18	223	171	149	48	●
1538SU08C-1800	✻	18	18	223	171	149	48	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1538SU*	✔	✔	✔			
1538SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

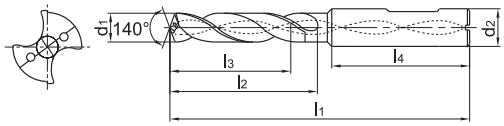
1634SU03C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1634SU03C-0300	✲	3	6	62	20	14	36	●
1634SU03C-0310	✲	3,1	6	62	20	14	36	●
1634SU03C-0320	✲	3,2	6	62	20	14	36	●
1634SU03C-0325	✲	3,25	6	62	20	14	36	○
1634SU03C-0330	✲	3,3	6	62	20	14	36	●
1634SU03C-0340	✲	3,4	6	62	20	14	36	●
1634SU03C-0350	✲	3,5	6	62	20	14	36	●
1634SU03C-0360	✲	3,6	6	62	20	14	36	●
1634SU03C-0370	✲	3,7	6	62	20	14	36	●
1634SU03C-0380	✲	3,8	6	66	24	17	36	●
1634SU03C-0390	✲	3,9	6	66	24	17	36	●
1634SU03C-0400	✲	4	6	66	24	17	36	●
1634SU03C-0410	✲	4,1	6	66	24	17	36	●
1634SU03C-0420	✲	4,2	6	66	24	17	36	●
1634SU03C-0430	✲	4,3	6	66	24	17	36	●
1634SU03C-0440	✲	4,4	6	66	24	17	36	●
1634SU03C-0450	✲	4,5	6	66	24	17	36	●
1634SU03C-0460	✲	4,6	6	66	24	17	36	●
1634SU03C-0465	✲	4,65	6	66	24	17	36	○
1634SU03C-0470	✲	4,7	6	66	24	17	36	●
1634SU03C-0480	✲	4,8	6	66	28	20	36	●
1634SU03C-0490	✲	4,9	6	66	28	20	36	●
1634SU03C-0500	✲	5	6	66	28	20	36	●
1634SU03C-0510	✲	5,1	6	66	28	20	36	●
1634SU03C-0520	✲	5,2	6	66	28	20	36	●
1634SU03C-0530	✲	5,3	6	66	28	20	36	●
1634SU03C-0540	✲	5,4	6	66	28	20	36	●
1634SU03C-0550	✲	5,5	6	66	28	20	36	●
1634SU03C-0555	✲	5,55	6	66	28	20	36	●
1634SU03C-0560	✲	5,6	6	66	28	20	36	●
1634SU03C-0570	✲	5,7	6	66	28	20	36	●
1634SU03C-0580	✲	5,8	6	66	28	20	36	●
1634SU03C-0590	✲	5,9	6	66	28	20	36	●
1634SU03C-0600	✲	6	6	66	28	20	36	●
1634SU03C-0610	✲	6,1	8	79	34	24	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1634SU*	✔	✔	✔			
1634SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

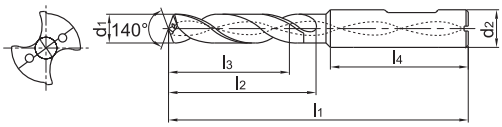
1634SU03C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1634SU03C-0620	✻	6,2	8	79	34	24	36	●
1634SU03C-0630	✻	6,3	8	79	34	24	36	●
1634SU03C-0640	✻	6,4	8	79	34	24	36	●
1634SU03C-0650	✻	6,5	8	79	34	24	36	●
1634SU03C-0660	✻	6,6	8	79	34	24	36	●
1634SU03C-0670	✻	6,7	8	79	34	24	36	●
1634SU03C-0675	✻	6,75	8	79	34	24	36	○
1634SU03C-0680	✻	6,8	8	79	34	24	36	●
1634SU03C-0690	✻	6,9	8	79	34	24	36	●
1634SU03C-0700	✻	7	8	79	34	24	36	●
1634SU03C-0710	✻	7,1	8	79	41	29	36	●
1634SU03C-0720	✻	7,2	8	79	41	29	36	●
1634SU03C-0730	✻	7,3	8	79	41	29	36	●
1634SU03C-0740	✻	7,4	8	79	41	29	36	●
1634SU03C-0745	✻	7,45	8	79	41	29	36	○
1634SU03C-0750	✻	7,5	8	79	41	29	36	●
1634SU03C-0760	✻	7,6	8	79	41	29	36	●
1634SU03C-0770	✻	7,7	8	79	41	29	36	●
1634SU03C-0780	✻	7,8	8	79	41	29	36	●
1634SU03C-0790	✻	7,9	8	79	41	29	36	●
1634SU03C-0800	✻	8	8	79	41	29	36	●
1634SU03C-0810	✻	8,1	10	89	47	35	40	●
1634SU03C-0820	✻	8,2	10	89	47	35	40	●
1634SU03C-0830	✻	8,3	10	89	47	35	40	●
1634SU03C-0840	✻	8,4	10	89	47	35	40	●
1634SU03C-0850	✻	8,5	10	89	47	35	40	●
1634SU03C-0860	✻	8,6	10	89	47	35	40	●
1634SU03C-0870	✻	8,7	10	89	47	35	40	●
1634SU03C-0880	✻	8,8	10	89	47	35	40	●
1634SU03C-0890	✻	8,9	10	89	47	35	40	●
1634SU03C-0900	✻	9	10	89	47	35	40	●
1634SU03C-0910	✻	9,1	10	89	47	35	40	●
1634SU03C-0920	✻	9,2	10	89	47	35	40	●
1634SU03C-0930	✻	9,3	10	89	47	35	40	●
1634SU03C-0935	✻	9,35	10	89	47	35	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1634SU*	✔	✔	✔			
1634SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

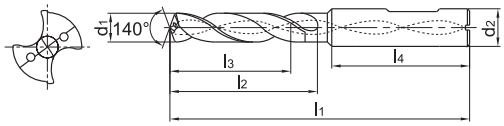
1634SU03C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1634SU03C-0940	✲	9,4	10	89	47	35	40	●
1634SU03C-0945	✲	9,45	10	89	47	35	40	○
1634SU03C-0950	✲	9,5	10	89	47	35	40	●
1634SU03C-0960	✲	9,6	10	89	47	35	40	●
1634SU03C-0970	✲	9,7	10	89	47	35	40	●
1634SU03C-0980	✲	9,8	10	89	47	35	40	●
1634SU03C-0990	✲	9,9	10	89	47	35	40	●
1634SU03C-1000	✲	10	10	89	47	35	40	●
1634SU03C-1010	✲	10,1	12	102	55	40	45	●
1634SU03C-1020	✲	10,2	12	102	55	40	45	●
1634SU03C-1025	✲	10,25	12	102	55	40	45	○
1634SU03C-1030	✲	10,3	12	102	55	40	45	●
1634SU03C-1040	✲	10,4	12	102	55	40	45	●
1634SU03C-1050	✲	10,5	12	102	55	40	45	●
1634SU03C-1060	✲	10,6	12	102	55	40	45	●
1634SU03C-1070	✲	10,7	12	102	55	40	45	●
1634SU03C-1080	✲	10,8	12	102	55	40	45	●
1634SU03C-1090	✲	10,9	12	102	55	40	45	●
1634SU03C-1100	✲	11	12	102	55	40	45	●
1634SU03C-1110	✲	11,1	12	102	55	40	45	●
1634SU03C-1120	✲	11,2	12	102	55	40	45	●
1634SU03C-1125	✲	11,25	12	102	55	40	45	○
1634SU03C-1130	✲	11,3	12	102	55	40	45	●
1634SU03C-1135	✲	11,35	12	102	55	40	45	○
1634SU03C-1140	✲	11,4	12	102	55	40	45	●
1634SU03C-1145	✲	11,45	12	102	55	40	45	○
1634SU03C-1150	✲	11,5	12	102	55	40	45	●
1634SU03C-1160	✲	11,6	12	102	55	40	45	●
1634SU03C-1170	✲	11,7	12	102	55	40	45	●
1634SU03C-1180	✲	11,8	12	102	55	40	45	●
1634SU03C-1190	✲	11,9	12	102	55	40	45	●
1634SU03C-1200	✲	12	12	102	55	40	45	●
1634SU03C-1210	✲	12,1	14	107	60	43	45	●
1634SU03C-1220	✲	12,2	14	107	60	43	45	●
1634SU03C-1225	✲	12,25	14	107	60	43	45	○

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1634SU*	✔	✔	✔			
1634SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

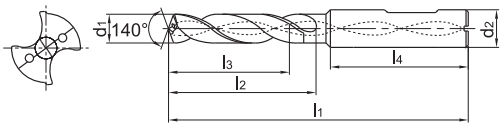
SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1634SU03C

– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1634SU03C-1230	✻	12,3	14	107	60	43	45	●
1634SU03C-1250	✻	12,5	14	107	60	43	45	●
1634SU03C-1270	✻	12,7	14	107	60	43	45	●
1634SU03C-1275	✻	12,75	14	107	60	43	45	○
1634SU03C-1280	✻	12,8	14	107	60	43	45	●
1634SU03C-1300	✻	13	14	107	60	43	45	●
1634SU03C-1310	✻	13,1	14	107	60	43	45	●
1634SU03C-1335	✻	13,35	14	107	60	43	45	○
1634SU03C-1350	✻	13,5	14	107	60	43	45	●
1634SU03C-1380	✻	13,8	14	107	60	43	45	●
1634SU03C-1400	✻	14	14	107	60	43	45	●
1634SU03C-1420	✻	14,2	16	107	60	43	45	○
1634SU03C-1425	✻	14,25	16	115	65	45	48	○
1634SU03C-1430	✻	14,3	16	115	65	45	48	○
1634SU03C-1450	✻	14,5	16	115	65	45	48	●
1634SU03C-1475	✻	14,75	16	115	65	45	48	○
1634SU03C-1480	✻	14,8	16	115	65	45	48	●
1634SU03C-1500	✻	15	16	115	65	45	48	●
1634SU03C-1510	✻	15,1	16	115	65	45	48	○
1634SU03C-1535	✻	15,35	16	115	65	45	48	○
1634SU03C-1550	✻	15,5	16	115	65	45	48	○
1634SU03C-1580	✻	15,8	16	115	65	45	48	○
1634SU03C-1600	✻	16	16	115	65	45	48	●
1634SU03C-1650	✻	16,5	18	123	73	51	48	○
1634SU03C-1675	✻	16,75	18	123	73	51	48	○
1634SU03C-1680	✻	16,8	18	123	73	51	48	○
1634SU03C-1700	✻	17	18	123	73	51	48	●
1634SU03C-1750	✻	17,5	18	123	73	51	48	●
1634SU03C-1780	✻	17,8	18	123	73	51	48	○
1634SU03C-1800	✻	18	18	123	73	51	48	●
1634SU03C-1850	✻	18,5	20	131	79	55	50	○
1634SU03C-1880	✻	18,8	20	131	79	55	50	○
1634SU03C-1900	✻	19	20	131	79	55	50	○
1634SU03C-1950	✻	19,5	20	131	79	55	50	●
1634SU03C-1980	✻	19,8	20	131	79	55	50	○
1634SU03C-2000	✻	20	20	131	79	55	50	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1634SU*	✔	✔	✔			
1634SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema C44 | Indicazioni d´uso C201 | Dati di taglio C144 | Ordine utensili speciali C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

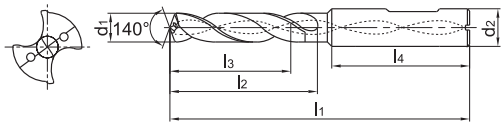
1636SU05C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1636SU05C-0300	✲	3	6	62	20	14	36	●
1636SU05C-0310	✲	3,1	6	66	28	23	36	●
1636SU05C-0320	✲	3,2	6	66	28	23	36	●
1636SU05C-0325	✲	3,25	6	66	28	23	36	○
1636SU05C-0330	✲	3,3	6	66	28	23	36	●
1636SU05C-0340	✲	3,4	6	66	28	23	36	●
1636SU05C-0350	✲	3,5	6	66	28	23	36	●
1636SU05C-0360	✲	3,6	6	66	28	23	36	●
1636SU05C-0370	✲	3,7	6	66	28	23	36	●
1636SU05C-0380	✲	3,8	6	74	36	29	36	●
1636SU05C-0390	✲	3,9	6	74	36	29	36	●
1636SU05C-0400	✲	4	6	74	36	29	36	●
1636SU05C-0410	✲	4,1	6	74	36	29	36	●
1636SU05C-0420	✲	4,2	6	74	36	29	36	●
1636SU05C-0430	✲	4,3	6	74	36	29	36	●
1636SU05C-0440	✲	4,4	6	74	36	29	36	●
1636SU05C-0450	✲	4,5	6	74	36	29	36	●
1636SU05C-0460	✲	4,6	6	74	36	29	36	●
1636SU05C-0465	✲	4,65	6	74	36	29	36	●
1636SU05C-0470	✲	4,7	6	74	36	29	36	●
1636SU05C-0480	✲	4,8	6	82	44	35	36	●
1636SU05C-0490	✲	4,9	6	82	44	35	36	●
1636SU05C-0500	✲	5	6	82	44	35	36	●
1636SU05C-0510	✲	5,1	6	82	44	35	36	●
1636SU05C-0520	✲	5,2	6	82	44	35	36	●
1636SU05C-0530	✲	5,3	6	82	44	35	36	●
1636SU05C-0540	✲	5,4	6	82	44	35	36	●
1636SU05C-0550	✲	5,5	6	82	44	35	36	●
1636SU05C-0555	✲	5,55	6	82	44	35	36	●
1636SU05C-0560	✲	5,6	6	82	44	35	36	●
1636SU05C-0570	✲	5,7	6	82	44	35	36	●
1636SU05C-0580	✲	5,8	6	82	44	35	36	●
1636SU05C-0590	✲	5,9	6	82	44	35	36	●
1636SU05C-0600	✲	6	6	82	44	35	36	●
1636SU05C-0610	✲	6,1	8	91	53	43	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1636SU*	✔	✔	✔			
1636SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

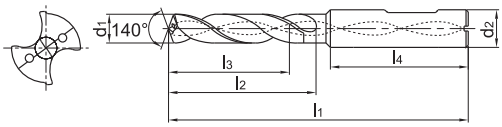
1636SU05C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1636SU05C-0620	✲	6,2	8	91	53	43	36	●
1636SU05C-0630	✲	6,3	8	91	53	43	36	●
1636SU05C-0640	✲	6,4	8	91	53	43	36	●
1636SU05C-0650	✲	6,5	8	91	53	43	36	●
1636SU05C-0660	✲	6,6	8	91	53	43	36	●
1636SU05C-0670	✲	6,7	8	91	53	43	36	●
1636SU05C-0675	✲	6,75	8	91	53	43	36	●
1636SU05C-0680	✲	6,8	8	91	53	43	36	●
1636SU05C-0690	✲	6,9	8	91	53	43	36	●
1636SU05C-0700	✲	7	8	91	53	43	36	●
1636SU05C-0710	✲	7,1	8	91	53	43	36	●
1636SU05C-0720	✲	7,2	8	91	53	43	36	●
1636SU05C-0730	✲	7,3	8	91	53	43	36	●
1636SU05C-0740	✲	7,4	8	91	53	43	36	●
1636SU05C-0745	✲	7,45	8	91	53	43	36	●
1636SU05C-0750	✲	7,5	8	91	53	43	36	●
1636SU05C-0760	✲	7,6	8	91	53	43	36	●
1636SU05C-0770	✲	7,7	8	91	53	43	36	●
1636SU05C-0780	✲	7,8	8	91	53	43	36	●
1636SU05C-0790	✲	7,9	8	91	53	43	36	●
1636SU05C-0800	✲	8	8	91	53	43	36	●
1636SU05C-0810	✲	8,1	10	103	61	49	40	●
1636SU05C-0820	✲	8,2	10	103	61	49	40	●
1636SU05C-0830	✲	8,3	10	103	61	49	40	●
1636SU05C-0840	✲	8,4	10	103	61	49	40	●
1636SU05C-0850	✲	8,5	10	103	61	49	40	●
1636SU05C-0860	✲	8,6	10	103	61	49	40	●
1636SU05C-0870	✲	8,7	10	103	61	49	40	●
1636SU05C-0880	✲	8,8	10	103	61	49	40	●
1636SU05C-0890	✲	8,9	10	103	61	49	40	●
1636SU05C-0900	✲	9	10	103	61	49	40	●
1636SU05C-0910	✲	9,1	10	103	61	49	40	●
1636SU05C-0920	✲	9,2	10	103	61	49	40	●
1636SU05C-0930	✲	9,3	10	103	61	49	40	●
1636SU05C-0935	✲	9,35	10	103	61	49	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1636SU*	✔	✔	✔			
1636SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

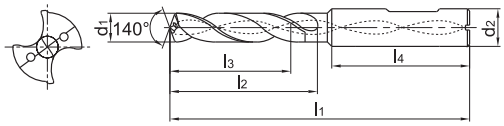
1636SU05C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1636SU05C-0940	✲	9,4	10	103	61	49	40	●
1636SU05C-0945	✲	9,45	10	103	61	49	40	○
1636SU05C-0950	✲	9,5	10	103	61	49	40	●
1636SU05C-0960	✲	9,6	10	103	61	49	40	●
1636SU05C-0970	✲	9,7	10	103	61	49	40	●
1636SU05C-0980	✲	9,8	10	103	61	49	40	●
1636SU05C-0990	✲	9,9	10	103	61	49	40	●
1636SU05C-1000	✲	10	10	103	61	49	40	●
1636SU05C-1010	✲	10,1	12	118	71	56	45	●
1636SU05C-1020	✲	10,2	12	118	71	56	45	●
1636SU05C-1025	✲	10,25	12	118	71	56	45	●
1636SU05C-1030	✲	10,3	12	118	71	56	45	●
1636SU05C-1040	✲	10,4	12	118	71	56	45	●
1636SU05C-1050	✲	10,5	12	118	71	56	45	●
1636SU05C-1060	✲	10,6	12	118	71	56	45	●
1636SU05C-1070	✲	10,7	12	118	71	56	45	●
1636SU05C-1080	✲	10,8	12	118	71	56	45	●
1636SU05C-1090	✲	10,9	12	118	71	56	45	●
1636SU05C-1100	✲	11	12	118	71	56	45	●
1636SU05C-1110	✲	11,1	12	118	71	56	45	●
1636SU05C-1120	✲	11,2	12	118	71	56	45	●
1636SU05C-1125	✲	11,25	12	118	71	56	45	○
1636SU05C-1130	✲	11,3	12	118	71	56	45	●
1636SU05C-1135	✲	11,35	12	118	71	56	45	○
1636SU05C-1140	✲	11,4	12	118	71	56	45	●
1636SU05C-1145	✲	11,45	12	118	71	56	45	○
1636SU05C-1150	✲	11,5	12	118	71	56	45	●
1636SU05C-1160	✲	11,6	12	118	71	56	45	●
1636SU05C-1170	✲	11,7	12	118	71	56	45	●
1636SU05C-1180	✲	11,8	12	118	71	56	45	●
1636SU05C-1190	✲	11,9	12	118	71	56	45	●
1636SU05C-1200	✲	12	12	118	71	56	45	●
1636SU05C-1210	✲	12,1	14	124	77	60	45	●
1636SU05C-1220	✲	12,2	14	124	77	60	45	●
1636SU05C-1225	✲	12,25	14	124	77	60	45	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1636SU*	✔	✔	✔			
1636SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

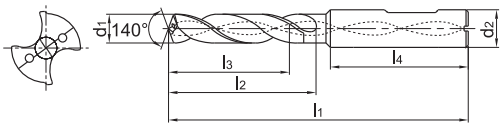
SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1636SU05C

– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1636SU05C-1230	✻	12,3	14	124	77	60	45	●
1636SU05C-1250	✻	12,5	14	124	77	60	45	●
1636SU05C-1270	✻	12,7	14	124	77	60	45	●
1636SU05C-1275	✻	12,75	14	124	77	60	45	○
1636SU05C-1280	✻	12,8	14	124	77	60	45	●
1636SU05C-1300	✻	13	14	124	77	60	45	●
1636SU05C-1310	✻	13,1	14	124	77	60	45	●
1636SU05C-1335	✻	13,35	14	124	77	60	56	○
1636SU05C-1350	✻	13,5	14	124	77	60	45	●
1636SU05C-1380	✻	13,8	14	124	77	60	45	●
1636SU05C-1400	✻	14	14	124	77	60	45	●
1636SU05C-1420	✻	14,2	16	124	77	60	45	●
1636SU05C-1425	✻	14,25	16	133	83	63	48	●
1636SU05C-1430	✻	14,3	16	133	83	63	48	●
1636SU05C-1450	✻	14,5	16	133	83	63	48	●
1636SU05C-1475	✻	14,75	16	133	83	63	48	○
1636SU05C-1480	✻	14,8	16	133	83	63	48	●
1636SU05C-1500	✻	15	16	133	83	63	48	●
1636SU05C-1510	✻	15,1	16	133	83	63	48	●
1636SU05C-1535	✻	15,35	16	133	83	63	48	○
1636SU05C-1550	✻	15,5	16	133	83	63	48	●
1636SU05C-1580	✻	15,8	16	133	83	63	48	●
1636SU05C-1600	✻	16	16	133	83	63	48	●
1636SU05C-1650	✻	16,5	18	143	93	71	48	●
1636SU05C-1675	✻	16,75	18	143	93	71	48	○
1636SU05C-1680	✻	16,8	18	143	93	71	48	●
1636SU05C-1700	✻	17	18	143	93	71	48	●
1636SU05C-1750	✻	17,5	18	143	93	71	48	●
1636SU05C-1780	✻	17,8	18	143	93	71	48	●
1636SU05C-1800	✻	18	18	143	93	71	48	●
1636SU05C-1850	✻	18,5	20	153	101	77	50	●
1636SU05C-1880	✻	18,8	20	153	101	77	50	●
1636SU05C-1900	✻	19	20	153	101	77	50	●
1636SU05C-1950	✻	19,5	20	153	101	77	50	●
1636SU05C-1980	✻	19,8	20	153	101	77	50	●
1636SU05C-2000	✻	20	20	153	101	77	50	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1636SU*	✔	✔	✔			
1636SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

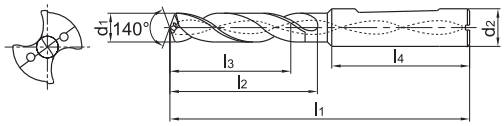
1734SU03C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1734SU03C-0300	✲	3	6	66	28	23	36	●
1734SU03C-0310	✲	3,1	6	62	20	14	36	●
1734SU03C-0320	✲	3,2	6	62	20	14	36	●
1734SU03C-0325	✲	3,25	6	62	20	14	36	○
1734SU03C-0330	✲	3,3	6	62	20	14	36	●
1734SU03C-0340	✲	3,4	6	62	20	14	36	●
1734SU03C-0350	✲	3,5	6	62	20	14	36	●
1734SU03C-0360	✲	3,6	6	62	20	14	36	●
1734SU03C-0370	✲	3,7	6	62	20	14	36	●
1734SU03C-0380	✲	3,8	6	66	24	17	36	●
1734SU03C-0390	✲	3,9	6	66	24	17	36	●
1734SU03C-0400	✲	4	6	66	24	17	36	●
1734SU03C-0410	✲	4,1	6	66	24	17	36	●
1734SU03C-0420	✲	4,2	6	66	24	17	36	●
1734SU03C-0430	✲	4,3	6	66	24	17	36	●
1734SU03C-0440	✲	4,4	6	66	24	17	36	●
1734SU03C-0450	✲	4,5	6	66	24	17	36	●
1734SU03C-0460	✲	4,6	6	66	24	17	36	●
1734SU03C-0465	✲	4,65	6	66	24	17	36	○
1734SU03C-0470	✲	4,7	6	66	24	17	36	●
1734SU03C-0480	✲	4,8	6	66	28	20	36	●
1734SU03C-0490	✲	4,9	6	66	28	20	36	●
1734SU03C-0500	✲	5	6	66	28	20	36	●
1734SU03C-0510	✲	5,1	6	66	28	20	36	●
1734SU03C-0520	✲	5,2	6	66	28	20	36	●
1734SU03C-0530	✲	5,3	6	66	28	20	36	●
1734SU03C-0540	✲	5,4	6	66	28	20	36	●
1734SU03C-0550	✲	5,5	6	66	28	20	36	●
1734SU03C-0555	✲	5,55	6	66	28	20	36	●
1734SU03C-0560	✲	5,6	6	66	28	20	36	●
1734SU03C-0570	✲	5,7	6	66	28	20	36	●
1734SU03C-0580	✲	5,8	6	66	28	20	36	●
1734SU03C-0590	✲	5,9	6	66	28	20	36	●
1734SU03C-0600	✲	6	6	66	28	20	36	●
1734SU03C-0610	✲	6,1	8	79	34	24	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1734SU*	✔	✔	✔			
1734SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

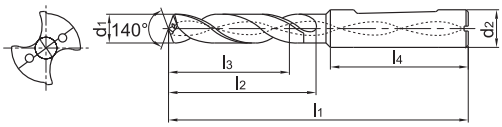
1734SU03C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1734SU03C-0620	✻	6,2	8	79	34	24	36	●
1734SU03C-0630	✻	6,3	8	79	34	24	36	●
1734SU03C-0640	✻	6,4	8	79	34	24	36	●
1734SU03C-0650	✻	6,5	8	79	34	24	36	●
1734SU03C-0660	✻	6,6	8	79	34	24	36	●
1734SU03C-0670	✻	6,7	8	79	34	24	36	●
1734SU03C-0675	✻	6,75	8	79	34	24	36	●
1734SU03C-0680	✻	6,8	8	79	34	24	36	●
1734SU03C-0690	✻	6,9	8	79	34	24	36	●
1734SU03C-0700	✻	7	8	79	34	24	36	●
1734SU03C-0710	✻	7,1	8	79	41	29	36	●
1734SU03C-0720	✻	7,2	8	79	41	29	36	●
1734SU03C-0730	✻	7,3	8	79	41	29	36	●
1734SU03C-0740	✻	7,4	8	79	41	29	36	●
1734SU03C-0745	✻	7,45	8	79	41	29	36	○
1734SU03C-0750	✻	7,5	8	79	41	29	36	●
1734SU03C-0760	✻	7,6	8	79	41	29	36	●
1734SU03C-0770	✻	7,7	8	79	41	29	36	●
1734SU03C-0780	✻	7,8	8	79	41	29	36	●
1734SU03C-0790	✻	7,9	8	79	41	29	36	●
1734SU03C-0800	✻	8	8	79	41	29	36	●
1734SU03C-0810	✻	8,1	10	89	47	35	40	●
1734SU03C-0820	✻	8,2	10	89	47	35	40	●
1734SU03C-0830	✻	8,3	10	89	47	35	40	●
1734SU03C-0840	✻	8,4	10	89	47	35	40	●
1734SU03C-0850	✻	8,5	10	89	47	35	40	●
1734SU03C-0860	✻	8,6	10	89	47	35	40	●
1734SU03C-0870	✻	8,7	10	89	47	35	40	●
1734SU03C-0880	✻	8,8	10	89	47	35	40	●
1734SU03C-0890	✻	8,9	10	89	47	35	40	●
1734SU03C-0900	✻	9	10	89	47	35	40	●
1734SU03C-0910	✻	9,1	10	89	47	35	40	●
1734SU03C-0920	✻	9,2	10	89	47	35	40	●
1734SU03C-0930	✻	9,3	10	89	47	35	40	●
1734SU03C-0935	✻	9,35	10	89	47	35	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1734SU*	✔	✔	✔			
1734SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

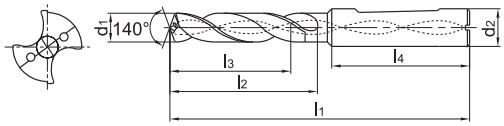
1734SU03C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1734SU03C-0940	✲	9,4	10	89	47	35	40	●
1734SU03C-0945	✲	9,45	10	89	47	35	40	○
1734SU03C-0950	✲	9,5	10	89	47	35	40	●
1734SU03C-0960	✲	9,6	10	89	47	35	40	●
1734SU03C-0970	✲	9,7	10	89	47	35	40	●
1734SU03C-0980	✲	9,8	10	89	47	35	40	●
1734SU03C-0990	✲	9,9	10	89	47	35	40	●
1734SU03C-1000	✲	10	10	89	47	35	40	●
1734SU03C-1010	✲	10,1	12	102	55	40	45	●
1734SU03C-1020	✲	10,2	12	102	55	40	45	●
1734SU03C-1025	✲	10,25	12	102	55	40	45	●
1734SU03C-1030	✲	10,3	12	102	55	40	45	●
1734SU03C-1040	✲	10,4	12	102	55	40	45	●
1734SU03C-1050	✲	10,5	12	102	55	40	45	●
1734SU03C-1060	✲	10,6	12	102	55	40	45	●
1734SU03C-1070	✲	10,7	12	102	55	40	45	●
1734SU03C-1080	✲	10,8	12	102	55	40	45	●
1734SU03C-1090	✲	10,9	12	102	55	40	45	●
1734SU03C-1100	✲	11	12	102	55	40	45	●
1734SU03C-1110	✲	11,1	12	102	55	40	45	●
1734SU03C-1120	✲	11,2	12	102	55	40	45	●
1734SU03C-1125	✲	11,25	12	102	55	40	45	○
1734SU03C-1130	✲	11,3	12	102	55	40	45	●
1734SU03C-1135	✲	11,35	12	102	55	40	45	○
1734SU03C-1140	✲	11,4	12	102	55	40	45	●
1734SU03C-1145	✲	11,45	12	102	55	40	45	○
1734SU03C-1150	✲	11,5	12	102	55	40	45	●
1734SU03C-1160	✲	11,6	12	102	55	40	45	●
1734SU03C-1170	✲	11,7	12	102	55	40	45	●
1734SU03C-1180	✲	11,8	12	102	55	40	45	●
1734SU03C-1190	✲	11,9	12	102	55	40	45	●
1734SU03C-1200	✲	12	12	102	55	40	45	●
1734SU03C-1210	✲	12,1	14	107	60	43	45	●
1734SU03C-1220	✲	12,2	14	107	60	43	45	●
1734SU03C-1225	✲	12,25	14	107	60	43	45	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1734SU*	✔	✔	✔			
1734SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 3xD | Lavorazione generica | Per ghise aggiungere K (SUK)

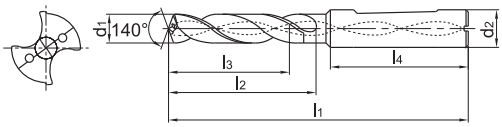
1734SU03C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1734SU03C-1230	✻	12,3	14	107	60	43	45	●
1734SU03C-1250	✻	12,5	14	107	60	43	45	●
1734SU03C-1270	✻	12,7	14	107	60	43	45	●
1734SU03C-1275	✻	12,75	14	107	60	43	45	●
1734SU03C-1280	✻	12,8	14	107	60	43	45	●
1734SU03C-1300	✻	13	14	107	60	43	45	●
1734SU03C-1310	✻	13,1	14	107	60	43	45	●
1734SU03C-1335	✻	13,35	14	107	60	43	45	○
1734SU03C-1350	✻	13,5	14	107	60	43	45	●
1734SU03C-1380	✻	13,8	14	107	60	43	45	●
1734SU03C-1400	✻	14	14	107	60	43	45	●
1734SU03C-1420	✻	14,2	16	107	60	43	45	●
1734SU03C-1425	✻	14,25	16	115	65	45	48	●
1734SU03C-1430	✻	14,3	16	115	65	45	48	●
1734SU03C-1450	✻	14,5	16	115	65	45	48	●
1734SU03C-1475	✻	14,75	16	115	65	45	48	●
1734SU03C-1480	✻	14,8	16	115	65	45	48	●
1734SU03C-1500	✻	15	16	115	65	45	48	●
1734SU03C-1510	✻	15,1	16	115	65	45	48	●
1734SU03C-1535	✻	15,35	16	115	65	45	48	○
1734SU03C-1550	✻	15,5	16	115	65	45	48	●
1734SU03C-1580	✻	15,8	16	115	65	45	48	●
1734SU03C-1600	✻	16	16	115	65	45	48	●
1734SU03C-1650	✻	16,5	18	123	73	51	48	●
1734SU03C-1675	✻	16,75	18	123	73	51	48	●
1734SU03C-1680	✻	16,8	18	123	73	51	48	●
1734SU03C-1700	✻	17	18	123	73	51	48	●
1734SU03C-1750	✻	17,5	18	123	73	51	48	●
1734SU03C-1780	✻	17,8	18	123	73	51	48	●
1734SU03C-1800	✻	18	18	123	73	51	48	●
1734SU03C-1850	✻	18,5	20	131	79	55	50	●
1734SU03C-1880	✻	18,8	20	131	79	55	50	●
1734SU03C-1900	✻	19	20	131	79	55	50	●
1734SU03C-1950	✻	19,5	20	131	79	55	50	●
1734SU03C-1980	✻	19,8	20	131	79	55	50	●
1734SU03C-2000	✻	20	20	131	79	55	50	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1734SU*	✔	✔	✔			
1734SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

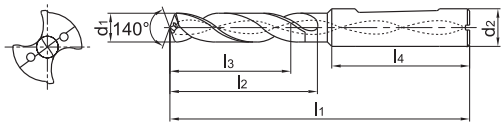
1736SU05C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1736SU05C-0300	✲	3	6	66	28	23	36	●
1736SU05C-0310	✲	3,1	6	66	28	23	36	●
1736SU05C-0320	✲	3,2	6	66	28	23	36	●
1736SU05C-0325	✲	3,25	6	66	28	23	36	○
1736SU05C-0330	✲	3,3	6	66	28	23	36	●
1736SU05C-0340	✲	3,4	6	66	28	23	36	●
1736SU05C-0350	✲	3,5	6	66	28	23	36	●
1736SU05C-0360	✲	3,6	6	66	28	23	36	●
1736SU05C-0370	✲	3,7	6	66	28	23	36	●
1736SU05C-0380	✲	3,8	6	74	36	29	36	●
1736SU05C-0390	✲	3,9	6	74	36	29	36	●
1736SU05C-0400	✲	4	6	74	36	29	36	●
1736SU05C-0410	✲	4,1	6	74	36	29	36	●
1736SU05C-0420	✲	4,2	6	74	36	29	36	●
1736SU05C-0430	✲	4,3	6	74	36	29	36	●
1736SU05C-0440	✲	4,4	6	74	36	29	36	●
1736SU05C-0450	✲	4,5	6	74	36	29	36	●
1736SU05C-0460	✲	4,6	6	74	36	29	36	●
1736SU05C-0465	✲	4,65	6	74	36	29	36	○
1736SU05C-0470	✲	4,7	6	74	36	29	36	●
1736SU05C-0480	✲	4,8	6	82	44	35	36	●
1736SU05C-0490	✲	4,9	6	82	44	35	36	●
1736SU05C-0500	✲	5	6	82	44	35	36	●
1736SU05C-0510	✲	5,1	6	82	44	35	36	●
1736SU05C-0520	✲	5,2	6	82	44	35	36	●
1736SU05C-0530	✲	5,3	6	82	44	35	36	●
1736SU05C-0540	✲	5,4	6	82	44	35	36	●
1736SU05C-0550	✲	5,5	6	82	44	35	36	●
1736SU05C-0555	✲	5,55	6	82	44	35	36	●
1736SU05C-0560	✲	5,6	6	82	44	35	36	●
1736SU05C-0570	✲	5,7	6	82	44	35	36	●
1736SU05C-0580	✲	5,8	6	82	44	35	36	●
1736SU05C-0590	✲	5,9	6	82	44	35	36	●
1736SU05C-0600	✲	6	6	82	44	35	36	●
1736SU05C-0610	✲	6,1	8	91	53	43	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1736SU*	✔	✔	✔			
1736SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

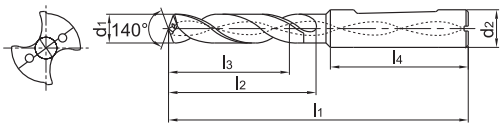
1736SU05C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1736SU05C-0620	✲	6,2	8	91	53	43	36	●
1736SU05C-0630	✲	6,3	8	91	53	43	36	●
1736SU05C-0640	✲	6,4	8	91	53	43	36	●
1736SU05C-0650	✲	6,5	8	91	53	43	36	●
1736SU05C-0660	✲	6,6	8	91	53	43	36	●
1736SU05C-0670	✲	6,7	8	91	53	43	36	●
1736SU05C-0675	✲	6,75	8	91	53	43	36	●
1736SU05C-0680	✲	6,8	8	91	53	43	36	●
1736SU05C-0690	✲	6,9	8	91	53	43	36	●
1736SU05C-0700	✲	7	8	91	53	43	36	●
1736SU05C-0710	✲	7,1	8	91	53	43	36	●
1736SU05C-0720	✲	7,2	8	91	53	43	36	●
1736SU05C-0730	✲	7,3	8	91	53	43	36	●
1736SU05C-0740	✲	7,4	8	91	53	43	36	●
1736SU05C-0745	✲	7,45	8	91	53	43	36	○
1736SU05C-0750	✲	7,5	8	91	53	43	36	●
1736SU05C-0760	✲	7,6	8	91	53	43	36	●
1736SU05C-0770	✲	7,7	8	91	53	43	36	●
1736SU05C-0780	✲	7,8	8	91	53	43	36	●
1736SU05C-0790	✲	7,9	8	91	53	43	36	●
1736SU05C-0800	✲	8	8	91	53	43	36	●
1736SU05C-0810	✲	8,1	10	103	61	49	40	●
1736SU05C-0820	✲	8,2	10	103	61	49	40	●
1736SU05C-0830	✲	8,3	10	103	61	49	40	●
1736SU05C-0840	✲	8,4	10	103	61	49	40	●
1736SU05C-0850	✲	8,5	10	103	61	49	40	●
1736SU05C-0860	✲	8,6	10	103	61	49	40	●
1736SU05C-0870	✲	8,7	10	103	61	49	40	●
1736SU05C-0880	✲	8,8	10	103	61	49	40	●
1736SU05C-0890	✲	8,9	10	103	61	49	40	●
1736SU05C-0900	✲	9	10	103	61	49	40	●
1736SU05C-0910	✲	9,1	10	103	61	49	40	●
1736SU05C-0920	✲	9,2	10	103	61	49	40	●
1736SU05C-0930	✲	9,3	10	103	61	49	40	●
1736SU05C-0935	✲	9,35	10	103	61	49	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1736SU*	✔	✔	✔			
1736SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

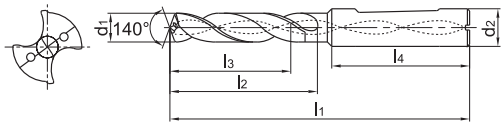
1736SU05C



– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1736SU05C-0940	✲	9,4	10	103	61	49	40	●
1736SU05C-0945	✲	9,45	10	103	61	49	40	○
1736SU05C-0950	✲	9,5	10	103	61	49	40	●
1736SU05C-0960	✲	9,6	10	103	61	49	40	●
1736SU05C-0970	✲	9,7	10	103	61	49	40	●
1736SU05C-0980	✲	9,8	10	103	61	49	40	●
1736SU05C-0990	✲	9,9	10	103	61	49	40	●
1736SU05C-1000	✲	10	10	103	61	49	40	●
1736SU05C-1010	✲	10,1	12	118	71	56	45	●
1736SU05C-1020	✲	10,2	12	118	71	56	45	●
1736SU05C-1025	✲	10,25	12	118	71	56	45	●
1736SU05C-1030	✲	10,3	12	118	71	56	45	●
1736SU05C-1040	✲	10,4	12	118	71	56	45	●
1736SU05C-1050	✲	10,5	12	118	71	56	45	●
1736SU05C-1060	✲	10,6	12	118	71	56	45	●
1736SU05C-1070	✲	10,7	12	118	71	56	45	●
1736SU05C-1080	✲	10,8	12	118	71	56	45	●
1736SU05C-1090	✲	10,9	12	118	71	56	45	●
1736SU05C-1100	✲	11	12	118	71	56	45	●
1736SU05C-1110	✲	11,1	12	118	71	56	45	●
1736SU05C-1120	✲	11,2	12	118	71	56	45	●
1736SU05C-1125	✲	11,25	12	118	71	56	45	○
1736SU05C-1130	✲	11,3	12	118	71	56	45	●
1736SU05C-1135	✲	11,35	12	118	71	56	45	○
1736SU05C-1140	✲	11,4	12	118	71	56	45	●
1736SU05C-1145	✲	11,45	12	118	71	56	45	○
1736SU05C-1150	✲	11,5	12	118	71	56	45	●
1736SU05C-1160	✲	11,6	12	118	71	56	45	●
1736SU05C-1170	✲	11,7	12	118	71	56	45	●
1736SU05C-1180	✲	11,8	12	118	71	56	45	●
1736SU05C-1190	✲	11,9	12	118	71	56	45	●
1736SU05C-1200	✲	12	12	118	71	56	45	●
1736SU05C-1210	✲	12,1	14	124	77	60	45	●
1736SU05C-1220	✲	12,2	14	124	77	60	45	●
1736SU05C-1225	✲	12,25	14	124	77	60	45	○

● In magazzino ○ Su richiesta

Tutti i prodotti SUK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1736SU*	✔	✔	✔			
1736SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

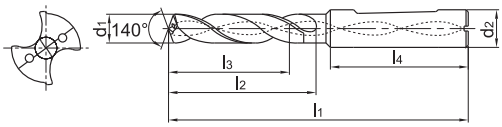
SU(K) Punta 5xD | Lavorazione generica | Per ghise aggiungere K (SUK)

1736SU05C

– Versione del codolo DIN 6535HE
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1736SU05C-1230	✻	12,3	14	124	77	60	45	●
1736SU05C-1250	✻	12,5	14	124	77	60	45	●
1736SU05C-1270	✻	12,7	14	124	77	60	45	●
1736SU05C-1275	✻	12,75	14	124	77	60	45	●
1736SU05C-1280	✻	12,8	14	124	77	60	45	●
1736SU05C-1300	✻	13	14	124	77	60	45	●
1736SU05C-1310	✻	13,1	14	124	77	60	45	●
1736SU05C-1335	✻	13,35	14	124	77	60	56	○
1736SU05C-1350	✻	13,5	14	124	77	60	45	●
1736SU05C-1380	✻	13,8	14	124	77	60	45	●
1736SU05C-1400	✻	14	14	124	77	60	45	●
1736SU05C-1420	✻	14,2	16	124	77	60	45	●
1736SU05C-1425	✻	14,25	16	133	83	63	48	●
1736SU05C-1430	✻	14,3	16	133	83	63	48	●
1736SU05C-1450	✻	14,5	16	133	83	63	48	●
1736SU05C-1475	✻	14,75	16	133	83	63	48	●
1736SU05C-1480	✻	14,8	16	133	83	63	48	●
1736SU05C-1500	✻	15	16	133	83	63	48	●
1736SU05C-1510	✻	15,1	16	133	83	63	48	●
1736SU05C-1535	✻	15,35	16	133	83	63	48	○
1736SU05C-1550	✻	15,5	16	133	83	63	48	●
1736SU05C-1580	✻	15,8	16	133	83	63	48	●
1736SU05C-1600	✻	16	16	133	83	63	48	●
1736SU05C-1650	✻	16,5	18	143	93	71	48	●
1736SU05C-1675	✻	16,75	18	143	93	71	48	●
1736SU05C-1680	✻	16,8	18	143	93	71	48	●
1736SU05C-1700	✻	17	18	143	93	71	48	●
1736SU05C-1750	✻	17,5	18	143	93	71	48	●
1736SU05C-1780	✻	17,8	18	143	93	71	48	●
1736SU05C-1800	✻	18	18	143	93	71	48	●
1736SU05C-1850	✻	18,5	20	153	101	77	50	●
1736SU05C-1880	✻	18,8	20	153	101	77	50	●
1736SU05C-1900	✻	19	20	153	101	77	50	●
1736SU05C-1950	✻	19,5	20	153	101	77	50	●
1736SU05C-1980	✻	19,8	20	153	101	77	50	●
1736SU05C-2000	✻	20	20	153	101	77	50	●

● In magazzino ○ Su richiesta
Tutti i prodotti SUK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1736SU*	✔	✔	✔			
1736SUK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SU

Punta SU - 3xD | Lavorazione generica

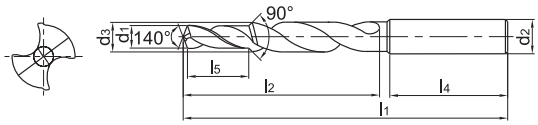
1557SU03



– Versione del codolo DIN 6535HA



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]							Grado
		d_1 (m8)	d_2 (h6)	d_3 (m7)	l_1	l_2	l_4	l_5	KDG303
1557SU03-M4		3,3	6	4,5	66	28	36	11,4	●
1557SU03-M5		4,2	6	6	66	28	36	13,6	●
1557SU03-M6		5	8	7	79	41	36	16,5	●
1557SU03-M8		6,75	10	9,5	89	47	40	21	●
1557SU03-M8x1.0		7	10	9,8	89	47	40	21	○
1557SU03-M10		8,5	12	12	102	55	45	25,5	●
1557SU03-M10x1.0		9	12	12	102	55	45	25,5	○
1557SU03-M12		10,25	14	14	107	60	45	30	●
1557SU03-M14		12	16	16	115	65	48	34,5	●
1557SU03-M16		14	18	18	123	73	48	38,5	●

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SL(K) Punta 10xD | Lavorazione generica | Per ghise aggiungere K (SLK)

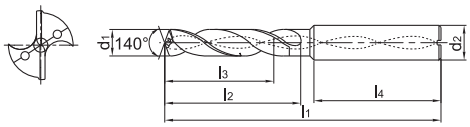
1588SL10C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL10C-0300	✻	3	6	80	43	39	36	●
1588SL10C-0310	✻	3,1	6	80	43	39	36	○
1588SL10C-0320	✻	3,2	6	80	43	39	36	●
1588SL10C-0330	✻	3,3	6	80	43	39	36	●
1588SL10C-0340	✻	3,4	6	80	43	39	36	●
1588SL10C-0350	✻	3,5	6	80	43	39	36	●
1588SL10C-0360	✻	3,6	6	80	43	39	36	●
1588SL10C-0370	✻	3,7	6	80	43	39	36	●
1588SL10C-0380	✻	3,8	6	80	43	39	36	●
1588SL10C-0390	✻	3,9	6	80	43	39	36	●
1588SL10C-0400	✻	4	6	92	55	50	36	●
1588SL10C-0410	✻	4,1	6	92	55	50	36	●
1588SL10C-0420	✻	4,2	6	92	55	50	36	●
1588SL10C-0430	✻	4,3	6	92	55	50	36	●
1588SL10C-0440	✻	4,4	6	92	55	50	36	●
1588SL10C-0450	✻	4,5	6	92	55	50	36	●
1588SL10C-0460	✻	4,6	6	92	55	50	36	●
1588SL10C-0470	✻	4,7	6	92	55	50	36	●
1588SL10C-0480	✻	4,8	6	92	55	50	36	●
1588SL10C-0490	✻	4,9	6	92	55	50	36	●
1588SL10C-0500	✻	5	6	104	68	61	36	●
1588SL10C-0510	✻	5,1	6	104	68	61	36	●
1588SL10C-0520	✻	5,2	6	104	68	61	36	●
1588SL10C-0530	✻	5,3	6	104	68	61	36	●
1588SL10C-0540	✻	5,4	6	104	68	61	36	●
1588SL10C-0550	✻	5,5	6	104	68	61	36	●
1588SL10C-0560	✻	5,6	6	104	68	61	36	●
1588SL10C-0570	✻	5,7	6	104	68	61	36	●
1588SL10C-0580	✻	5,8	6	104	68	61	36	●
1588SL10C-0590	✻	5,9	6	104	68	61	36	●
1588SL10C-0600	✻	6	6	104	68	61	36	●
1588SL10C-0610	✻	6,1	8	117	80	71	36	●
1588SL10C-0620	✻	6,2	8	117	80	71	36	●
1588SL10C-0630	✻	6,3	8	117	80	71	36	●
1588SL10C-0640	✻	6,4	8	117	80	71	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 10xD | Lavorazione generica | Per ghise aggiungere K (SLK)

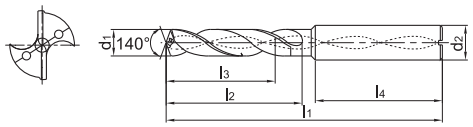
1588SL10C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL10C-0650	✲	6,5	8	117	80	71	36	●
1588SL10C-0660	✲	6,6	8	117	80	71	36	●
1588SL10C-0670	✲	6,7	8	117	80	71	36	●
1588SL10C-0680	✲	6,8	8	117	80	71	36	●
1588SL10C-0690	✲	6,9	8	117	80	71	36	●
1588SL10C-0700	✲	7	8	117	80	71	36	●
1588SL10C-0710	✲	7,1	8	130	94	84	36	●
1588SL10C-0720	✲	7,2	8	130	94	84	36	●
1588SL10C-0730	✲	7,3	8	130	94	84	36	●
1588SL10C-0740	✲	7,4	8	130	94	84	36	●
1588SL10C-0750	✲	7,5	8	130	94	84	36	●
1588SL10C-0760	✲	7,6	8	130	94	84	36	●
1588SL10C-0770	✲	7,7	8	130	94	84	36	●
1588SL10C-0780	✲	7,8	8	130	94	84	36	●
1588SL10C-0790	✲	7,9	8	130	94	84	36	●
1588SL10C-0800	✲	8	8	130	94	84	36	●
1588SL10C-0810	✲	8,1	10	148	105	94	40	●
1588SL10C-0820	✲	8,2	10	148	105	94	40	●
1588SL10C-0830	✲	8,3	10	148	105	94	40	●
1588SL10C-0840	✲	8,4	10	148	105	94	40	●
1588SL10C-0850	✲	8,5	10	148	105	94	40	●
1588SL10C-0860	✲	8,6	10	148	105	94	40	●
1588SL10C-0870	✲	8,7	10	148	105	94	40	●
1588SL10C-0880	✲	8,8	10	148	105	94	40	●
1588SL10C-0890	✲	8,9	10	148	105	94	40	●
1588SL10C-0900	✲	9	10	148	105	94	40	●
1588SL10C-0910	✲	9,1	10	158	115	103	40	●
1588SL10C-0920	✲	9,2	10	158	115	103	40	●
1588SL10C-0930	✲	9,3	10	158	115	103	40	●
1588SL10C-0940	✲	9,4	10	158	115	103	40	●
1588SL10C-0950	✲	9,5	10	158	115	103	40	●
1588SL10C-0960	✲	9,6	10	158	115	103	40	●
1588SL10C-0970	✲	9,7	10	158	115	103	40	●
1588SL10C-0980	✲	9,8	10	158	115	103	40	●
1588SL10C-0990	✲	9,9	10	158	115	103	40	●

● In magazzino ○ Su richiesta
Tutti i prodotti SLK su richiesta
✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SL(K) Punta 10xD | Lavorazione generica | Per ghise aggiungere K (SLK)

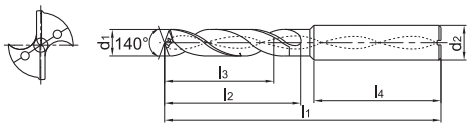
1588SL10C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL10C-1000	✻	10	10	158	115	103	40	●
1588SL10C-1010	✻	10,1	12	183	135	121	45	●
1588SL10C-1020	✻	10,2	12	183	135	121	45	●
1588SL10C-1030	✻	10,3	12	183	135	121	45	●
1588SL10C-1040	✻	10,4	12	183	135	121	45	●
1588SL10C-1050	✻	10,5	12	183	135	121	45	●
1588SL10C-1060	✻	10,6	12	183	135	121	45	●
1588SL10C-1070	✻	10,7	12	183	135	121	45	●
1588SL10C-1080	✻	10,8	12	183	135	121	45	●
1588SL10C-1090	✻	10,9	12	183	135	121	45	●
1588SL10C-1100	✻	11	12	183	135	121	45	●
1588SL10C-1110	✻	11,1	12	183	135	121	45	●
1588SL10C-1120	✻	11,2	12	183	135	121	45	●
1588SL10C-1130	✻	11,3	12	183	135	121	45	●
1588SL10C-1140	✻	11,4	12	183	135	121	45	●
1588SL10C-1150	✻	11,5	12	183	135	121	45	●
1588SL10C-1160	✻	11,6	12	183	135	121	45	●
1588SL10C-1170	✻	11,7	12	183	135	121	45	●
1588SL10C-1180	✻	11,8	12	183	135	121	45	●
1588SL10C-1190	✻	11,9	12	183	135	121	45	●
1588SL10C-1200	✻	12	12	183	135	121	45	●
1588SL10C-1225	✻	12,25	14	209	160	144	45	●
1588SL10C-1250	✻	12,5	14	209	160	144	45	●
1588SL10C-1270	✻	12,7	14	209	160	144	45	●
1588SL10C-1275	✻	12,75	14	209	160	144	45	●
1588SL10C-1280	✻	12,8	14	209	160	144	45	●
1588SL10C-1300	✻	13	14	209	160	144	45	●
1588SL10C-1310	✻	13,1	14	209	160	144	45	●
1588SL10C-1350	✻	13,5	14	209	160	144	45	●
1588SL10C-1380	✻	13,8	14	209	160	144	45	●
1588SL10C-1400	✻	14	14	209	160	144	45	●

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 12xD | Lavorazione generica | Per ghise aggiungere K (SLK)

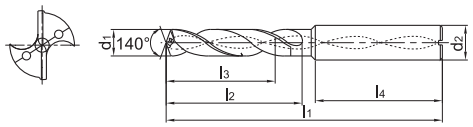
1588SL12C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL12C-0300	✲	3	6	90	50	40	36	●
1588SL12C-0310	✲	3,1	6	90	50	40	36	●
1588SL12C-0320	✲	3,2	6	90	50	40	36	●
1588SL12C-0330	✲	3,3	6	90	50	40	36	●
1588SL12C-0340	✲	3,4	6	90	50	40	36	●
1588SL12C-0350	✲	3,5	6	90	50	40	36	●
1588SL12C-0360	✲	3,6	6	90	50	40	36	●
1588SL12C-0370	✲	3,7	6	90	50	46	36	●
1588SL12C-0380	✲	3,8	6	90	50	46	36	●
1588SL12C-0390	✲	3,9	6	90	50	46	36	●
1588SL12C-0400	✲	4	6	102	64	56	36	●
1588SL12C-0410	✲	4,1	6	102	64	56	36	●
1588SL12C-0420	✲	4,2	6	102	64	56	36	●
1588SL12C-0430	✲	4,3	6	102	64	56	36	●
1588SL12C-0440	✲	4,4	6	102	64	56	36	●
1588SL12C-0450	✲	4,5	6	102	64	56	36	●
1588SL12C-0460	✲	4,6	6	102	64	56	36	●
1588SL12C-0470	✲	4,7	6	102	64	56	36	●
1588SL12C-0480	✲	4,8	6	102	64	56	36	●
1588SL12C-0490	✲	4,9	6	102	64	56	36	●
1588SL12C-0500	✲	5	6	116	78	72	36	●
1588SL12C-0510	✲	5,1	6	116	78	72	36	●
1588SL12C-0520	✲	5,2	6	116	78	72	36	●
1588SL12C-0530	✲	5,3	6	116	78	72	36	○
1588SL12C-0540	✲	5,4	6	116	78	72	36	○
1588SL12C-0550	✲	5,5	6	116	78	72	36	●
1588SL12C-0560	✲	5,6	6	116	78	72	36	●
1588SL12C-0570	✲	5,7	6	116	78	72	36	●
1588SL12C-0580	✲	5,8	6	116	78	72	36	●
1588SL12C-0590	✲	5,9	6	116	78	72	36	●
1588SL12C-0600	✲	6	6	116	78	72	36	●
1588SL12C-0610	✲	6,1	8	131	93	84	36	●
1588SL12C-0620	✲	6,2	8	131	93	84	36	●
1588SL12C-0630	✲	6,3	8	131	93	84	36	●
1588SL12C-0640	✲	6,4	8	131	93	84	36	●

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

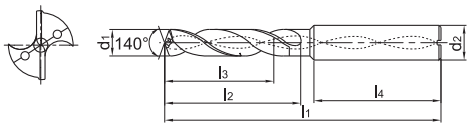
SL(K) Punta 12xD | Lavorazione generica | Per ghise aggiungere K (SLK)

1588SL12C

– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL12C-0650	✻	6,5	8	131	93	84	36	●
1588SL12C-0660	✻	6,6	8	131	93	84	36	●
1588SL12C-0670	✻	6,7	8	131	93	84	36	●
1588SL12C-0680	✻	6,8	8	131	93	84	36	●
1588SL12C-0690	✻	6,9	8	131	93	84	36	●
1588SL12C-0700	✻	7	8	131	93	84	36	●
1588SL12C-0710	✻	7,1	8	146	108	96	36	●
1588SL12C-0720	✻	7,2	8	146	108	96	36	●
1588SL12C-0730	✻	7,3	8	146	108	96	36	●
1588SL12C-0740	✻	7,4	8	146	108	96	36	●
1588SL12C-0750	✻	7,5	8	146	108	96	36	●
1588SL12C-0760	✻	7,6	8	146	108	96	36	○
1588SL12C-0770	✻	7,7	8	146	108	96	36	○
1588SL12C-0780	✻	7,8	8	146	108	96	36	●
1588SL12C-0790	✻	7,9	8	146	108	96	36	○
1588SL12C-0800	✻	8	8	146	108	96	36	●
1588SL12C-0810	✻	8,1	10	162	120	108	40	●
1588SL12C-0820	✻	8,2	10	162	120	108	40	●
1588SL12C-0830	✻	8,3	10	162	120	108	40	●
1588SL12C-0840	✻	8,4	10	162	120	108	40	●
1588SL12C-0850	✻	8,5	10	162	120	108	40	●
1588SL12C-0860	✻	8,6	10	162	120	108	40	●
1588SL12C-0870	✻	8,7	10	162	120	108	40	●
1588SL12C-0880	✻	8,8	10	162	120	108	40	●
1588SL12C-0890	✻	8,9	10	162	120	108	40	●
1588SL12C-0900	✻	9	10	162	120	108	40	●
1588SL12C-0910	✻	9,1	10	174	132	120	40	○
1588SL12C-0920	✻	9,2	10	174	132	120	40	●
1588SL12C-0930	✻	9,3	10	174	132	120	40	●
1588SL12C-0940	✻	9,4	10	174	132	120	40	●
1588SL12C-0950	✻	9,5	10	174	132	120	40	●
1588SL12C-0960	✻	9,6	10	174	132	120	40	○
1588SL12C-0970	✻	9,7	10	174	132	120	40	●
1588SL12C-0980	✻	9,8	10	174	132	120	40	●
1588SL12C-0990	✻	9,9	10	174	132	120	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 12xD | Lavorazione generica | Per ghise aggiungere K (SLK)

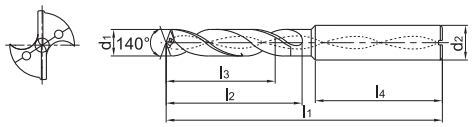
1588SL12C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL12C-1000	✲	10	10	174	132	120	40	●
1588SL12C-1010	✲	10,1	12	204	156	144	45	●
1588SL12C-1020	✲	10,2	12	204	156	144	45	●
1588SL12C-1030	✲	10,3	12	204	156	144	45	●
1588SL12C-1040	✲	10,4	12	204	156	144	45	●
1588SL12C-1050	✲	10,5	12	204	156	144	45	●
1588SL12C-1060	✲	10,6	12	204	156	144	45	●
1588SL12C-1070	✲	10,7	12	204	156	144	45	○
1588SL12C-1080	✲	10,8	12	204	156	144	45	○
1588SL12C-1090	✲	10,9	12	204	156	144	45	○
1588SL12C-1100	✲	11	12	204	156	144	45	●
1588SL12C-1110	✲	11,1	12	204	156	144	45	●
1588SL12C-1120	✲	11,2	12	204	156	144	45	●
1588SL12C-1130	✲	11,3	12	204	156	144	45	○
1588SL12C-1140	✲	11,4	12	204	156	144	45	○
1588SL12C-1150	✲	11,5	12	204	156	144	45	●
1588SL12C-1160	✲	11,6	12	204	156	144	45	○
1588SL12C-1170	✲	11,7	12	204	156	144	45	●
1588SL12C-1180	✲	11,8	12	204	156	144	45	●
1588SL12C-1190	✲	11,9	12	204	156	144	45	○
1588SL12C-1200	✲	12	12	204	156	144	45	●
1588SL12C-1250	✲	12,5	14	230	182	168	45	○
1588SL12C-1270	✲	12,7	14	230	182	168	45	○
1588SL12C-1280	✲	12,8	14	230	182	168	45	○
1588SL12C-1300	✲	13	14	230	182	168	45	○
1588SL12C-1350	✲	13,5	14	230	182	168	45	○
1588SL12C-1400	✲	14	14	230	182	168	45	○
1588SL12C-1450	✲	14,5	16	260	208	194	48	○
1588SL12C-1500	✲	15	16	260	208	194	48	○
1588SL12C-1550	✲	15,5	16	260	208	194	48	○
1588SL12C-1600	✲	16	16	260	208	194	48	○
1588SL12C-1650	✲	16,5	18	286	234	218	48	○
1588SL12C-1700	✲	17	18	286	234	218	48	○
1588SL12C-1750	✲	17,5	18	286	234	218	48	○
1588SL12C-1800	✲	18	18	286	234	218	48	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SL(K) Punta 12xD | Lavorazione generica | Per ghise aggiungere K (SLK)

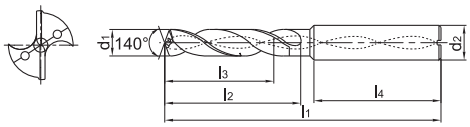
1588SL12C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL12C-1850	✲	18,5	20	310	258	240	48	○
1588SL12C-1900	✲	19	20	310	258	240	48	○
1588SL12C-1950	✲	19,5	20	310	258	240	48	○
1588SL12C-2000	✲	20	20	310	258	240	48	○
1588SL12C-2050	✲	20,5	22	310	258	240	48	○
1588SL12C-2100	✲	21	22	310	258	240	48	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 15xD | Lavorazione generica | Per ghise aggiungere K (SLK)

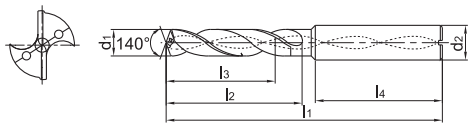
1588SL15C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL15C-0300	✲	3	6	100	60	50	36	●
1588SL15C-0310	✲	3,1	6	105	65	55	36	●
1588SL15C-0320	✲	3,2	6	105	65	55	36	○
1588SL15C-0330	✲	3,3	6	105	65	55	36	●
1588SL15C-0335		3,35	6	105	65	55	36	○
1588SL15C-0340	✲	3,4	6	105	65	55	36	●
1588SL15C-0350	✲	3,5	6	105	65	55	36	●
1588SL15C-0360	✲	3,6	6	112	72	62	36	○
1588SL15C-0370	✲	3,7	6	112	72	68	36	●
1588SL15C-0380	✲	3,8	6	112	72	68	36	●
1588SL15C-0390	✲	3,9	6	112	72	68	36	○
1588SL15C-0400	✲	4	6	112	72	64	36	●
1588SL15C-0410	✲	4,1	6	120	80	72	36	○
1588SL15C-0420	✲	4,2	6	120	80	72	36	○
1588SL15C-0430	✲	4,3	6	120	80	72	36	○
1588SL15C-0440	✲	4,4	6	120	80	72	36	○
1588SL15C-0450	✲	4,5	6	120	80	72	36	●
1588SL15C-0460	✲	4,6	6	128	88	80	36	●
1588SL15C-0470	✲	4,7	6	128	88	80	36	○
1588SL15C-0480	✲	4,8	6	128	88	80	36	●
1588SL15C-0490	✲	4,9	6	128	88	80	36	●
1588SL15C-0500	✲	5	6	128	88	82	36	●
1588SL15C-0510	✲	5,1	6	136	96	90	36	●
1588SL15C-0520	✲	5,2	6	136	96	90	36	○
1588SL15C-0530	✲	5,3	6	136	96	90	36	●
1588SL15C-0540	✲	5,4	6	136	96	90	36	○
1588SL15C-0550	✲	5,5	6	136	96	90	36	○
1588SL15C-0560	✲	5,6	6	144	104	98	36	○
1588SL15C-0570	✲	5,7	6	144	104	98	36	○
1588SL15C-0580	✲	5,8	6	144	104	98	36	○
1588SL15C-0590	✲	5,9	6	144	104	98	36	○
1588SL15C-0600	✲	6	6	144	104	98	36	○
1588SL15C-0610	✲	6,1	8	152	112	103	36	●
1588SL15C-0620	✲	6,2	8	152	112	103	36	●
1588SL15C-0630	✲	6,3	8	152	112	103	36	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

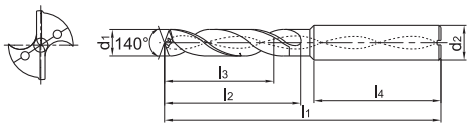
SL(K) Punta 15xD | Lavorazione generica | Per ghise aggiungere K (SLK)

1588SL15C

– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL15C-0640	✻	6,4	8	152	112	103	36	●
1588SL15C-0650	✻	6,5	8	152	112	103	36	●
1588SL15C-0660	✻	6,6	8	160	120	111	36	○
1588SL15C-0670	✻	6,7	8	160	120	111	36	●
1588SL15C-0680	✻	6,8	8	160	120	111	36	○
1588SL15C-0690	✻	6,9	8	160	120	111	36	○
1588SL15C-0700	✻	7	8	160	120	111	36	●
1588SL15C-0710	✻	7,1	8	170	130	118	36	○
1588SL15C-0720	✻	7,2	8	170	130	118	36	○
1588SL15C-0730	✻	7,3	8	170	130	118	36	○
1588SL15C-0740	✻	7,4	8	170	130	118	36	○
1588SL15C-0750	✻	7,5	8	170	130	118	36	○
1588SL15C-0760	✻	7,6	8	180	140	128	36	○
1588SL15C-0770	✻	7,7	8	180	140	128	36	○
1588SL15C-0780	✻	7,8	8	180	140	128	36	○
1588SL15C-0790	✻	7,9	8	180	140	128	36	○
1588SL15C-0800	✻	8	8	180	140	128	36	●
1588SL15C-0810	✻	8,1	10	194	150	138	40	○
1588SL15C-0820	✻	8,2	10	194	150	138	40	○
1588SL15C-0830	✻	8,3	10	194	150	138	40	○
1588SL15C-0840	✻	8,4	10	194	150	138	40	○
1588SL15C-0850	✻	8,5	10	194	150	138	40	●
1588SL15C-0860	✻	8,6	10	204	160	148	40	●
1588SL15C-0870	✻	8,7	10	204	160	148	40	○
1588SL15C-0880	✻	8,8	10	204	160	148	40	●
1588SL15C-0890	✻	8,9	10	204	160	148	40	○
1588SL15C-0900	✻	9	10	204	160	148	40	○
1588SL15C-0910	✻	9,1	10	216	172	160	40	○
1588SL15C-0920	✻	9,2	10	216	172	160	40	○
1588SL15C-0930	✻	9,3	10	216	172	160	40	○
1588SL15C-0940	✻	9,4	10	216	172	160	40	○
1588SL15C-0950	✻	9,5	10	216	172	160	40	○
1588SL15C-0960	✻	9,6	10	226	182	170	40	○
1588SL15C-0970	✻	9,7	10	226	182	170	40	○
1588SL15C-0980	✻	9,8	10	226	182	170	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 15xD | Lavorazione generica | Per ghise aggiungere K (SLK)

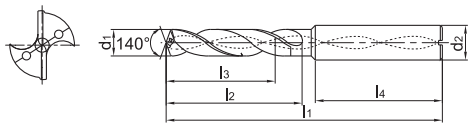
1588SL15C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL15C-0990	✲	9,9	10	226	182	170	40	○
1588SL15C-1000	✲	10	10	226	182	170	40	●
1588SL15C-1010	✲	10,1	12	240	190	178	45	○
1588SL15C-1020	✲	10,2	12	240	190	178	45	○
1588SL15C-1030	✲	10,3	12	240	190	178	45	○
1588SL15C-1040	✲	10,4	12	240	190	178	45	○
1588SL15C-1050	✲	10,5	12	240	190	178	45	○
1588SL15C-1060	✲	10,6	12	248	198	186	45	○
1588SL15C-1070	✲	10,7	12	248	198	186	45	○
1588SL15C-1080	✲	10,8	12	248	198	186	45	○
1588SL15C-1090	✲	10,9	12	248	198	186	45	○
1588SL15C-1100	✲	11	12	248	198	186	45	●
1588SL15C-1110	✲	11,1	12	262	212	200	45	○
1588SL15C-1120	✲	11,2	12	262	212	200	45	○
1588SL15C-1130	✲	11,3	12	262	212	200	45	○
1588SL15C-1140	✲	11,4	12	262	212	200	45	○
1588SL15C-1150	✲	11,5	12	262	212	200	45	●
1588SL15C-1160	✲	11,6	12	272	222	210	45	○
1588SL15C-1170	✲	11,7	12	272	222	210	45	○
1588SL15C-1180	✲	11,8	12	272	222	210	45	○
1588SL15C-1190	✲	11,9	12	272	222	210	45	○
1588SL15C-1200	✲	12	12	272	222	210	45	●

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SL(K) Punta 20xD | Lavorazione generica | Per ghise aggiungere K (SLK)

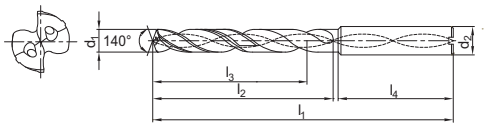
1588SL20C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL20C-0300	✲	3	6	110	70	62	36	●
1588SL20C-0310	✲	3,1	6	123	83	72	36	●
1588SL20C-0320	✲	3,2	6	123	83	72	36	●
1588SL20C-0330	✲	3,3	6	123	83	72	36	●
1588SL20C-0340	✲	3,4	6	123	83	72	36	●
1588SL20C-0350	✲	3,5	6	123	83	72	36	●
1588SL20C-0360	✲	3,6	6	136	96	84	36	●
1588SL20C-0370	✲	3,7	6	136	96	84	36	●
1588SL20C-0380	✲	3,8	6	136	96	84	36	●
1588SL20C-0390	✲	3,9	6	136	96	84	36	●
1588SL20C-0400	✲	4	6	136	96	84	36	●
1588SL20C-0410	✲	4,1	6	148	108	96	36	●
1588SL20C-0420	✲	4,2	6	148	108	96	36	●
1588SL20C-0430	✲	4,3	6	148	108	96	36	○
1588SL20C-0440	✲	4,4	6	148	108	96	36	○
1588SL20C-0450	✲	4,5	6	148	108	96	36	●
1588SL20C-0460	✲	4,6	6	158	118	106	36	○
1588SL20C-0470	✲	4,7	6	158	118	106	36	○
1588SL20C-0480	✲	4,8	6	158	118	106	36	●
1588SL20C-0490	✲	4,9	6	158	118	106	36	○
1588SL20C-0500	✲	5	6	158	118	106	36	●
1588SL20C-0510	✲	5,1	6	168	128	116	36	○
1588SL20C-0520	✲	5,2	6	168	128	116	36	●
1588SL20C-0530	✲	5,3	6	168	128	116	36	●
1588SL20C-0540	✲	5,4	6	168	128	116	36	●
1588SL20C-0550	✲	5,5	6	168	128	116	36	●
1588SL20C-0560	✲	5,6	6	180	140	126	36	○
1588SL20C-0570	✲	5,7	6	180	140	126	36	○
1588SL20C-0580	✲	5,8	6	180	140	126	36	●
1588SL20C-0590	✲	5,9	6	180	140	126	36	○
1588SL20C-0600	✲	6	6	180	140	126	36	●
1588SL20C-0610	✲	6,1	8	192	150	132	36	○
1588SL20C-0620	✲	6,2	8	192	150	132	36	○
1588SL20C-0630	✲	6,3	8	192	150	132	36	●
1588SL20C-0640	✲	6,4	8	192	150	132	36	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 20xD | Lavorazione generica | Per ghise aggiungere K (SLK)

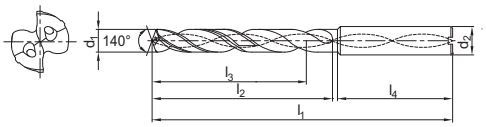
1588SL20C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL20C-0650	✲	6,5	8	192	150	132	36	●
1588SL20C-0660	✲	6,6	8	202	162	144	36	○
1588SL20C-0670	✲	6,7	8	202	162	144	36	○
1588SL20C-0680	✲	6,8	8	202	162	144	36	●
1588SL20C-0690	✲	6,9	8	202	162	144	36	○
1588SL20C-0700	✲	7	8	202	162	144	36	●
1588SL20C-0710	✲	7,1	8	213	173	155	36	○
1588SL20C-0720	✲	7,2	8	213	173	155	36	○
1588SL20C-0730	✲	7,3	8	213	173	155	36	○
1588SL20C-0740	✲	7,4	8	213	173	155	36	○
1588SL20C-0750	✲	7,5	8	213	173	155	36	●
1588SL20C-0760	✲	7,6	8	223	183	165	36	○
1588SL20C-0770	✲	7,7	8	223	183	165	36	○
1588SL20C-0780	✲	7,8	8	223	183	165	36	○
1588SL20C-0790	✲	7,9	8	223	183	165	36	○
1588SL20C-0800	✲	8	8	223	183	165	36	●
1588SL20C-0810	✲	8,1	10	239	195	176	40	○
1588SL20C-0820	✲	8,2	10	239	195	176	40	○
1588SL20C-0830	✲	8,3	10	239	195	176	40	○
1588SL20C-0840	✲	8,4	10	239	195	176	40	○
1588SL20C-0850	✲	8,5	10	239	195	176	40	●
1588SL20C-0860	✲	8,6	10	249	205	186	40	○
1588SL20C-0870	✲	8,7	10	249	205	186	40	○
1588SL20C-0880	✲	8,8	10	249	205	186	40	○
1588SL20C-0890	✲	8,9	10	249	205	186	40	○
1588SL20C-0900	✲	9	10	249	205	186	40	○
1588SL20C-0910	✲	9,1	10	262	218	196	36	○
1588SL20C-0920	✲	9,2	10	262	218	196	36	○
1588SL20C-0930	✲	9,3	10	262	218	196	36	○
1588SL20C-0940	✲	9,4	10	262	218	196	36	○
1588SL20C-0950	✲	9,5	10	262	218	196	36	○
1588SL20C-0960	✲	9,6	10	272	228	206	40	○
1588SL20C-0970	✲	9,7	10	272	228	206	40	○
1588SL20C-0980	✲	9,8	10	272	228	206	40	○
1588SL20C-0990	✲	9,9	10	272	228	206	40	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

SL(K) Punta 20xD | Lavorazione generica | Per ghise aggiungere K (SLK)

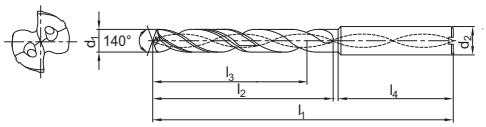
1588SL20C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL20C-1000	✲	10	10	272	228	206	40	●
1588SL20C-1010	✲	10,1	12	292	242	220	45	○
1588SL20C-1020	✲	10,2	12	292	242	220	45	○
1588SL20C-1030	✲	10,3	12	292	242	220	45	○
1588SL20C-1040	✲	10,4	12	292	242	220	45	○
1588SL20C-1050	✲	10,5	12	292	242	220	45	○
1588SL20C-1060	✲	10,6	12	300	250	228	45	○
1588SL20C-1070	✲	10,7	12	300	250	228	45	○
1588SL20C-1080	✲	10,8	12	300	250	228	45	○
1588SL20C-1090	✲	10,9	12	300	250	228	45	○
1588SL20C-1100	✲	11	12	300	250	228	45	○
1588SL20C-1110	✲	11,1	12	315	265	240	45	○
1588SL20C-1120	✲	11,2	12	315	265	240	45	○
1588SL20C-1130	✲	11,3	12	315	265	240	45	○
1588SL20C-1140	✲	11,4	12	315	265	240	45	○
1588SL20C-1150	✲	11,5	12	315	265	240	45	○
1588SL20C-1160	✲	11,6	12	325	275	250	45	○
1588SL20C-1170	✲	11,7	12	325	275	250	45	○
1588SL20C-1180	✲	11,8	12	325	275	250	45	○
1588SL20C-1190	✲	11,9	12	325	275	250	45	○
1588SL20C-1200	✲	12	12	325	275	250	45	○
1588SL20C-1250	✲	12,5	14	325	275	250	45	○
1588SL20C-1300	✲	13	14	338	290	265	45	○
1588SL20C-1350	✲	13,5	14	338	290	265	45	○
1588SL20C-1400	✲	14	14	367	318	290	45	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

SL(K) Punta 30xD | Lavorazione generica | Per ghise aggiungere K (SLK)

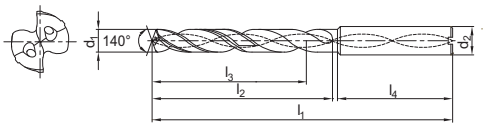
1588SL30C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL30C-0300	✲	3	6	140	100	92	36	●
1588SL30C-0310	✲	3,1	6	160	120	108	36	○
1588SL30C-0320	✲	3,2	6	160	120	108	36	●
1588SL30C-0330	✲	3,3	6	160	120	108	36	○
1588SL30C-0340	✲	3,4	6	160	120	108	36	●
1588SL30C-0350	✲	3,5	6	160	120	108	36	●
1588SL30C-0360	✲	3,6	6	176	136	124	36	○
1588SL30C-0370	✲	3,7	6	176	136	124	36	○
1588SL30C-0380	✲	3,8	6	176	136	124	36	●
1588SL30C-0390	✲	3,9	6	176	136	124	36	●
1588SL30C-0400	✲	4	6	176	136	124	36	●
1588SL30C-0410	✲	4,1	6	192	152	140	36	○
1588SL30C-0420	✲	4,2	6	192	152	140	36	○
1588SL30C-0430	✲	4,3	6	192	152	140	36	○
1588SL30C-0440	✲	4,4	6	192	152	140	36	○
1588SL30C-0450	✲	4,5	6	192	152	140	36	●
1588SL30C-0460	✲	4,6	6	208	168	156	36	○
1588SL30C-0470	✲	4,7	6	208	168	156	36	○
1588SL30C-0480	✲	4,8	6	208	168	156	36	●
1588SL30C-0490	✲	4,9	6	208	168	156	36	●
1588SL30C-0500	✲	5	6	208	168	156	36	●
1588SL30C-0510	✲	5,1	6	228	188	170	36	○
1588SL30C-0520	✲	5,2	6	228	188	170	36	●
1588SL30C-0530	✲	5,3	6	228	188	170	36	○
1588SL30C-0540	✲	5,4	6	228	188	170	36	○
1588SL30C-0550	✲	5,5	6	228	188	170	36	●
1588SL30C-0560	✲	5,6	6	240	200	182	36	○
1588SL30C-0570	✲	5,7	6	240	200	182	36	○
1588SL30C-0580	✲	5,8	6	240	200	182	36	●
1588SL30C-0590	✲	5,9	6	240	200	182	36	○
1588SL30C-0600	✲	6	6	240	200	182	36	●
1588SL30C-0610	✲	6,1	8	260	220	202	36	○
1588SL30C-0620	✲	6,2	8	260	220	202	36	○
1588SL30C-0630	✲	6,3	8	260	220	202	36	●
1588SL30C-0640	✲	6,4	8	260	220	202	36	○

● In magazzino ○ Su richiesta

Tutti i prodotti SLK su richiesta

✲ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

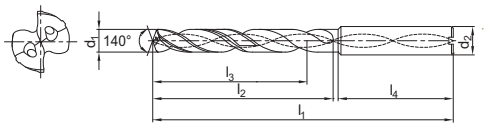
SL(K) Punta 30xD | Lavorazione generica | Per ghise aggiungere K (SLK)

1588SL30C

– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1588SL30C-0650	✻	6,5	8	260	220	202	36	●
1588SL30C-0660	✻	6,6	8	272	232	214	36	○
1588SL30C-0670	✻	6,7	8	272	232	214	36	○
1588SL30C-0680	✻	6,8	8	272	232	214	36	●
1588SL30C-0690	✻	6,9	8	272	232	214	36	○
1588SL30C-0700	✻	7	8	272	232	214	36	●
1588SL30C-0710	✻	7,1	8	290	250	232	36	○
1588SL30C-0720	✻	7,2	8	290	250	232	36	○
1588SL30C-0730	✻	7,3	8	290	250	232	36	○
1588SL30C-0740	✻	7,4	8	290	250	232	36	○
1588SL30C-0750	✻	7,5	8	290	250	232	36	○
1588SL30C-0760	✻	7,6	8	305	265	246	36	○
1588SL30C-0770	✻	7,7	8	305	265	246	36	○
1588SL30C-0780	✻	7,8	8	305	265	246	36	○
1588SL30C-0790	✻	7,9	8	305	265	246	36	○
1588SL30C-0800	✻	8	8	305	265	246	36	●
1588SL30C-0810	✻	8,1	10	330	285	265	40	○
1588SL30C-0820	✻	8,2	10	330	285	265	40	○
1588SL30C-0830	✻	8,3	10	330	285	265	40	○
1588SL30C-0840	✻	8,4	10	330	285	265	40	○
1588SL30C-0850	✻	8,5	10	330	285	265	40	●
1588SL30C-0860	✻	8,6	10	340	295	275	40	○
1588SL30C-0870	✻	8,7	10	340	295	275	40	○
1588SL30C-0880	✻	8,8	10	340	295	275	40	○
1588SL30C-0890	✻	8,9	10	340	295	275	40	○
1588SL30C-0900	✻	9	10	340	295	275	40	○
1588SL30C-0910	✻	9,1	10	360	315	292	40	○
1588SL30C-0920	✻	9,2	10	360	315	292	40	○
1588SL30C-0930	✻	9,3	10	360	315	292	40	○
1588SL30C-0940	✻	9,4	10	360	315	292	40	○
1588SL30C-0950	✻	9,5	10	360	315	292	40	○
1588SL30C-0960	✻	9,6	10	372	328	305	40	○
1588SL30C-0970	✻	9,7	10	372	328	305	40	○
1588SL30C-0980	✻	9,8	10	372	328	305	40	○
1588SL30C-0990	✻	9,9	10	372	328	305	40	○
1588SL30C-1000	✻	10	10	372	328	305	40	○

● In magazzino ○ Su richiesta
Tutti i prodotti SLK su richiesta
✻ Con raffreddamento interno

Campo di applicazione

Versione	P	M	K	N	S	H
1588SL*	✔	✔	✔	✔	✔	
1588SLK*			✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

Punta SP - 3xD Lavorazione generica

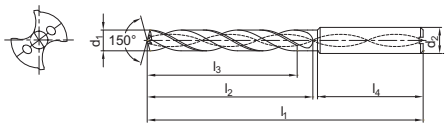
1534SP03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (h7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SP03C-0303	✲	3,03	6	62	20	14	36	●
1534SP03C-0313	✲	3,13	6	62	20	14	36	○
1534SP03C-0323	✲	3,23	6	62	20	14	36	○
1534SP03C-0333	✲	3,33	6	62	20	14	36	●
1534SP03C-0343	✲	3,43	6	62	20	14	36	●
1534SP03C-0353	✲	3,53	6	62	20	14	36	●
1534SP03C-0363	✲	3,63	6	62	20	14	36	○
1534SP03C-0373	✲	3,73	6	62	20	14	36	○
1534SP03C-0383	✲	3,83	6	66	24	17	36	○
1534SP03C-0393	✲	3,93	6	66	24	17	36	○
1534SP03C-0403	✲	4,03	6	66	24	17	36	●
1534SP03C-0413	✲	4,13	6	66	24	17	36	○
1534SP03C-0423	✲	4,23	6	66	24	17	36	○
1534SP03C-0433	✲	4,33	6	66	24	17	36	○
1534SP03C-0443	✲	4,43	6	66	24	17	36	○
1534SP03C-0453	✲	4,53	6	66	24	17	36	●
1534SP03C-0463	✲	4,63	6	66	24	17	36	○
1534SP03C-0473	✲	4,73	6	66	24	17	36	○
1534SP03C-0483	✲	4,83	6	66	28	20	36	○
1534SP03C-0493	✲	4,93	6	66	28	20	36	○
1534SP03C-0503	✲	5,03	6	66	28	20	36	●
1534SP03C-0513	✲	5,13	6	66	28	20	36	○
1534SP03C-0523	✲	5,23	6	66	28	20	36	○
1534SP03C-0533	✲	5,33	6	66	28	20	36	○
1534SP03C-0543	✲	5,43	6	66	28	20	36	○
1534SP03C-0553	✲	5,53	6	66	28	20	36	●
1534SP03C-0563	✲	5,63	6	66	28	20	36	○
1534SP03C-0573	✲	5,73	6	66	28	20	36	○
1534SP03C-0583	✲	5,83	6	66	28	20	36	○
1534SP03C-0593	✲	5,93	6	66	28	20	36	○
1534SP03C-0603	✲	6,03	6	66	28	20	36	●
1534SP03C-0613	✲	6,13	8	79	34	24	36	○
1534SP03C-0623	✲	6,23	8	79	34	24	36	○
1534SP03C-0633	✲	6,33	8	79	34	24	36	○
1534SP03C-0643	✲	6,43	8	79	34	24	36	○
1534SP03C-0653	✲	6,53	8	79	34	24	36	●
1534SP03C-0663	✲	6,63	8	79	34	24	36	○

● In magazzino ○ Su richiesta

Punta pilota Ø = Punta lunga Ø + 0,03 mm

✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta SP - 3xD | Lavorazione generica

1534SP03C

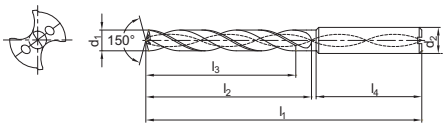


– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale





Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (h7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SP03C-0673	✻	6,73	8	79	34	24	36	○
1534SP03C-0683	✻	6,83	8	79	34	24	36	○
1534SP03C-0693	✻	6,93	8	79	34	24	36	○
1534SP03C-0703	✻	7,03	8	79	34	24	36	●
1534SP03C-0713	✻	7,13	8	79	41	29	36	○
1534SP03C-0723	✻	7,23	8	79	41	29	36	○
1534SP03C-0733	✻	7,33	8	79	41	29	36	●
1534SP03C-0743	✻	7,43	8	79	41	29	36	○
1534SP03C-0753	✻	7,53	8	79	41	29	36	●
1534SP03C-0763	✻	7,63	8	79	41	29	36	○
1534SP03C-0773	✻	7,73	8	79	41	29	36	○
1534SP03C-0783	✻	7,83	8	79	41	29	36	○
1534SP03C-0793	✻	7,93	8	79	41	29	36	○
1534SP03C-0803	✻	8,03	8	79	41	29	36	●
1534SP03C-0813	✻	8,13	10	89	47	35	40	○
1534SP03C-0823	✻	8,23	10	89	47	35	40	○
1534SP03C-0833	✻	8,33	10	89	47	35	40	●
1534SP03C-0843	✻	8,43	10	89	47	35	40	○
1534SP03C-0853	✻	8,53	10	89	47	35	40	○
1534SP03C-0863	✻	8,63	10	89	47	35	40	○
1534SP03C-0873	✻	8,73	10	89	47	35	40	○
1534SP03C-0883	✻	8,83	10	89	47	35	40	●
1534SP03C-0893	✻	8,93	10	89	47	35	40	○
1534SP03C-0903	✻	9,03	10	89	47	35	40	●
1534SP03C-0913	✻	9,13	10	89	47	35	40	○
1534SP03C-0923	✻	9,23	10	89	47	35	40	○
1534SP03C-0933	✻	9,33	10	89	47	35	40	○
1534SP03C-0943	✻	9,43	10	89	47	35	40	○
1534SP03C-0953	✻	9,53	10	89	47	35	40	●
1534SP03C-0963	✻	9,63	10	89	47	35	40	○
1534SP03C-0973	✻	9,73	10	89	47	35	40	●
1534SP03C-0983	✻	9,83	10	89	47	35	40	●
1534SP03C-0993	✻	9,93	10	89	47	35	40	○
1534SP03C-1003	✻	10,03	10	89	47	35	40	●
1534SP03C-1013	✻	10,13	12	102	55	40	45	○
1534SP03C-1023	✻	10,23	12	102	55	40	45	○
1534SP03C-1033	✻	10,33	12	102	55	40	45	○

● In magazzino ○ Su richiesta

Punta pilota Ø = Punta lunga Ø + 0,03 mm

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SL/SP

Punta SP - 3xD Lavorazione generica

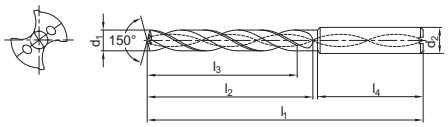
1534SP03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (h7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SP03C-1043	✲	10,43	12	102	55	40	45	○
1534SP03C-1053	✲	10,53	12	102	55	40	45	●
1534SP03C-1063	✲	10,63	12	102	55	40	45	○
1534SP03C-1073	✲	10,73	12	102	55	40	45	○
1534SP03C-1083	✲	10,83	12	102	55	40	45	●
1534SP03C-1093	✲	10,93	12	102	55	40	45	○
1534SP03C-1103	✲	11,03	12	102	55	40	45	●
1534SP03C-1113	✲	11,13	12	102	55	40	45	○
1534SP03C-1123	✲	11,23	12	102	55	40	45	○
1534SP03C-1133	✲	11,33	12	102	55	40	45	○
1534SP03C-1143	✲	11,43	12	102	55	40	45	○
1534SP03C-1153	✲	11,53	12	102	55	40	45	●
1534SP03C-1163	✲	11,63	12	102	55	40	45	○
1534SP03C-1173	✲	11,73	12	102	55	40	45	○
1534SP03C-1183	✲	11,83	12	102	55	40	45	●
1534SP03C-1193	✲	11,93	12	102	55	40	45	○
1534SP03C-1203	✲	12,03	12	102	55	40	45	●
1534SP03C-1213	✲	12,13	14	107	60	43	45	○
1534SP03C-1223	✲	12,23	14	107	60	43	45	○
1534SP03C-1233	✲	12,33	14	107	60	43	45	○
1534SP03C-1243	✲	12,43	14	107	60	43	45	○
1534SP03C-1253	✲	12,53	14	107	60	43	45	●
1534SP03C-1263	✲	12,63	14	107	60	43	45	○
1534SP03C-1273	✲	12,73	14	107	60	43	45	○
1534SP03C-1283	✲	12,83	14	107	60	43	45	○
1534SP03C-1293	✲	12,93	14	107	60	43	45	○
1534SP03C-1303	✲	13,03	14	107	60	43	45	○
1534SP03C-1353	✲	13,53	14	107	60	43	45	○
1534SP03C-1403	✲	14,03	14	107	60	43	45	○
1534SP03C-1453	✲	14,53	16	115	65	45	48	○
1534SP03C-1503	✲	15,03	16	115	65	45	48	○
1534SP03C-1553	✲	15,53	16	115	65	45	48	○
1534SP03C-1603	✲	16,03	16	115	65	45	48	○
1534SP03C-1653	✲	16,53	18	123	73	51	48	○
1534SP03C-1703	✲	17,03	18	123	73	51	48	○
1534SP03C-1753	✲	17,53	18	123	73	51	48	○
1534SP03C-1803	✲	18,03	18	123	73	51	48	○

● In magazzino ○ Su richiesta

Punta pilota Ø = Punta lunga Ø + 0,03 mm

✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta SP - 3xD — Lavorazione generica

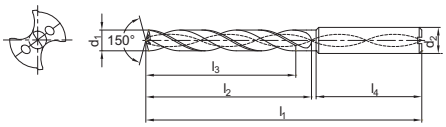
1534SP03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (h7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SP03C-1853	✻	18,53	20	131	79	55	50	○
1534SP03C-1903	✻	19,03	20	131	79	55	50	○
1534SP03C-1953	✻	19,53	20	131	79	55	50	○
1534SP03C-2003	✻	20,03	20	131	79	55	50	○

● In magazzino ○ Su richiesta

Punta pilota Ø = Punta lunga Ø + 0,03 mm

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Note

INFORMAZIONI IMPORTANTI

Raccomandazione di impiego per la **serie UD**

Calcolo per avanzamento

Gruppo ISO	Materiale	Velocità di taglio v_c (m/min)	Fattore per l' avanzamento F_m
M	Acciai inossidabili	80	0,02
S	Leghe Ni- / Co	40	0,01
S	Leghe di titanio	60	0,012

Formula:	Avanzamento per giro (F_n)	$D \times F_m$
Esempio:	Diametro punta (D)	10 mm
	Materiale	acciaio inossidabile

$$F_n = 10\ mm \times 0{,}02 = 0{,}2\ mm/g$$



Fig.: **1536UD05C**

Punte in metallo duro integrale Serie UD

Punta UD- 3xD Acciaio, acciaio inossidabile, materiali a difficile asportazione

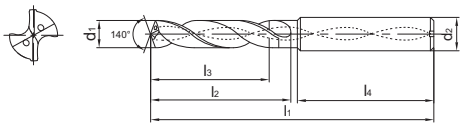
1534UD03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-0300	✲	3	6	62	20	14	36	●
1534UD03C-0310	✲	3,1	6	62	20	14	36	○
1534UD03C-0320	✲	3,2	6	62	20	14	36	○
1534UD03C-0330	✲	3,3	6	62	20	14	36	●
1534UD03C-0340	✲	3,4	6	62	20	14	36	○
1534UD03C-0350	✲	3,5	6	62	20	14	36	●
1534UD03C-0360	✲	3,6	6	62	20	14	36	○
1534UD03C-0370	✲	3,7	6	62	20	14	36	●
1534UD03C-0380	✲	3,8	6	66	24	17	36	○
1534UD03C-0390	✲	3,9	6	66	24	17	36	○
1534UD03C-0400	✲	4	6	66	24	17	36	●
1534UD03C-0410	✲	4,1	6	66	24	17	36	○
1534UD03C-0420	✲	4,2	6	66	24	17	36	●
1534UD03C-0430	✲	4,3	6	66	24	17	36	●
1534UD03C-0440	✲	4,4	6	66	24	17	36	○
1534UD03C-0450	✲	4,5	6	66	24	17	36	●
1534UD03C-0460	✲	4,6	6	66	24	17	36	○
1534UD03C-0465	✲	4,65	6	66	24	17	36	●
1534UD03C-0470	✲	4,7	6	66	24	17	36	○
1534UD03C-0480	✲	4,8	6	66	28	20	36	●
1534UD03C-0490	✲	4,9	6	66	28	20	36	○
1534UD03C-0500	✲	5	6	66	28	20	36	●
1534UD03C-0510	✲	5,1	6	66	28	20	36	○
1534UD03C-0520	✲	5,2	6	66	28	20	36	○
1534UD03C-0530	✲	5,3	6	66	28	20	36	○
1534UD03C-0540	✲	5,4	6	66	28	20	36	○
1534UD03C-0550	✲	5,5	6	66	28	20	36	●
1534UD03C-0560	✲	5,6	6	66	28	20	36	○
1534UD03C-0570	✲	5,7	6	66	28	20	36	●
1534UD03C-0580	✲	5,8	6	66	28	20	36	○
1534UD03C-0590	✲	5,9	6	66	28	20	36	●
1534UD03C-0600	✲	6	6	66	28	20	36	●
1534UD03C-0610	✲	6,1	8	79	34	24	36	○
1534UD03C-0620	✲	6,2	8	79	34	24	36	○
1534UD03C-0630	✲	6,3	8	79	34	24	36	○
1534UD03C-0640	✲	6,4	8	79	34	24	36	○
1534UD03C-0650	✲	6,5	8	79	34	24	36	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta UD- 3xD — Acciaio, acciaio inossidabile, materiali a difficile asportazione

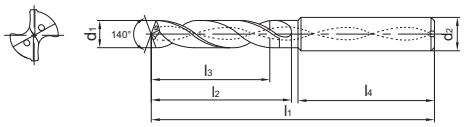
1534UD03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-0660	✻	6,6	8	79	34	24	36	○
1534UD03C-0670	✻	6,7	8	79	34	24	36	○
1534UD03C-0680	✻	6,8	8	79	34	24	36	●
1534UD03C-0690	✻	6,9	8	79	34	24	36	○
1534UD03C-0700	✻	7	8	79	34	24	36	●
1534UD03C-0710	✻	7,1	8	79	41	29	36	○
1534UD03C-0720	✻	7,2	8	79	41	29	36	○
1534UD03C-0730	✻	7,3	8	79	41	29	36	○
1534UD03C-0740	✻	7,4	8	79	41	29	36	●
1534UD03C-0750	✻	7,5	8	79	41	29	36	●
1534UD03C-0760	✻	7,6	8	79	41	29	36	○
1534UD03C-0770	✻	7,7	8	79	41	29	36	○
1534UD03C-0780	✻	7,8	8	79	41	29	36	○
1534UD03C-0790	✻	7,9	8	79	41	29	36	○
1534UD03C-0800	✻	8	8	79	41	29	36	●
1534UD03C-0810	✻	8,1	10	89	47	35	40	○
1534UD03C-0820	✻	8,2	10	89	47	35	40	○
1534UD03C-0830	✻	8,3	10	89	47	35	40	○
1534UD03C-0840	✻	8,4	10	89	47	35	40	○
1534UD03C-0850	✻	8,5	10	89	47	35	40	●
1534UD03C-0860	✻	8,6	10	89	47	35	40	○
1534UD03C-0870	✻	8,7	10	89	47	35	40	○
1534UD03C-0880	✻	8,8	10	89	47	35	40	●
1534UD03C-0890	✻	8,9	10	89	47	35	40	○
1534UD03C-0900	✻	9	10	89	47	35	40	●
1534UD03C-0910	✻	9,1	10	89	47	35	40	○
1534UD03C-0920	✻	9,2	10	89	47	35	40	○
1534UD03C-0930	✻	9,3	10	89	47	35	40	●
1534UD03C-0940	✻	9,4	10	89	47	35	40	○
1534UD03C-0950	✻	9,5	10	89	47	35	40	●
1534UD03C-0960	✻	9,6	10	89	47	35	40	○
1534UD03C-0970	✻	9,7	10	89	47	35	40	○
1534UD03C-0980	✻	9,8	10	89	47	35	40	○
1534UD03C-0990	✻	9,9	10	89	47	35	40	○
1534UD03C-1000	✻	10	10	89	47	35	40	●
1534UD03C-1020	✻	10,2	12	102	55	40	45	●
1534UD03C-1050	✻	10,5	12	102	55	40	45	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punta UD- 3xD — Acciaio, acciaio inossidabile, materiali a difficile asportazione

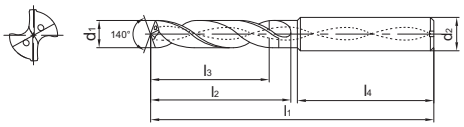
1534UD03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-1100	✲	11	12	102	55	40	45	●
1534UD03C-1150	✲	11,5	12	102	55	40	45	●
1534UD03C-1200	✲	12	12	102	55	40	45	●
1534UD03C-1250	✲	12,5	14	107	60	43	45	●
1534UD03C-1300	✲	13	14	107	60	43	45	●
1534UD03C-1350	✲	13,5	14	107	60	43	45	●
1534UD03C-1400	✲	14	14	107	60	43	45	●
1534UD03C-1450	✲	14,5	16	115	65	45	48	●
1534UD03C-1500	✲	15	16	115	65	45	48	●
1534UD03C-1550	✲	15,5	16	115	65	45	48	●
1534UD03C-1600	✲	16	16	115	65	45	48	●
1534UD03C-1650	✲	16,5	18	123	73	51	48	●
1534UD03C-1700	✲	17	18	123	73	51	48	●
1534UD03C-1750	✲	17,5	18	123	73	51	48	●
1534UD03C-1800	✲	18	18	123	73	51	48	●
1534UD03C-1850	✲	18,5	20	131	79	55	50	●
1534UD03C-1900	✲	19	20	131	79	55	50	●
1534UD03C-1950	✲	19,5	20	131	79	55	50	●
1534UD03C-2000	✲	20	20	131	79	55	50	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta UD- 5xD — Acciaio, acciaio inossidabile, materiali a difficile asportazione

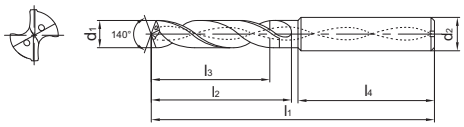
1536UD05C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-0300	✻	3	6	66	28	23	36	●
1536UD05C-0310	✻	3,1	6	66	28	23	36	●
1536UD05C-0320	✻	3,2	6	66	28	23	36	○
1536UD05C-0330	✻	3,3	6	66	28	23	36	●
1536UD05C-0340	✻	3,4	6	66	28	23	36	●
1536UD05C-0350	✻	3,5	6	66	28	23	36	●
1536UD05C-0360	✻	3,6	6	66	28	23	36	○
1536UD05C-0370	✻	3,7	6	66	28	23	36	●
1536UD05C-0380	✻	3,8	6	74	36	29	36	●
1536UD05C-0390	✻	3,9	6	74	36	29	36	○
1536UD05C-0400	✻	4	6	74	36	29	36	●
1536UD05C-0410	✻	4,1	6	74	36	29	36	○
1536UD05C-0420	✻	4,2	6	74	36	29	36	●
1536UD05C-0430	✻	4,3	6	74	36	29	36	○
1536UD05C-0440	✻	4,4	6	74	36	29	36	○
1536UD05C-0450	✻	4,5	6	74	36	29	36	●
1536UD05C-0460	✻	4,6	6	74	36	29	36	○
1536UD05C-0465	✻	4,65	6	74	36	29	36	●
1536UD05C-0470	✻	4,7	6	74	36	29	36	○
1536UD05C-0480	✻	4,8	6	82	44	35	36	○
1536UD05C-0490	✻	4,9	6	82	44	35	36	○
1536UD05C-0500	✻	5	6	82	44	35	36	●
1536UD05C-0510	✻	5,1	6	82	44	35	36	●
1536UD05C-0520	✻	5,2	6	82	44	35	36	●
1536UD05C-0530	✻	5,3	6	82	44	35	36	○
1536UD05C-0540	✻	5,4	6	82	44	35	36	○
1536UD05C-0550	✻	5,5	6	82	44	35	36	●
1536UD05C-0560	✻	5,6	6	82	44	35	36	○
1536UD05C-0570	✻	5,7	6	82	44	35	36	○
1536UD05C-0580	✻	5,8	6	82	44	35	36	●
1536UD05C-0590	✻	5,9	6	82	44	35	36	○
1536UD05C-0600	✻	6	6	82	44	35	36	●
1536UD05C-0610	✻	6,1	8	91	53	43	36	○
1536UD05C-0620	✻	6,2	8	91	53	43	36	○
1536UD05C-0630	✻	6,3	8	91	53	43	36	○
1536UD05C-0640	✻	6,4	8	91	53	43	36	○
1536UD05C-0650	✻	6,5	8	91	53	43	36	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema C44 | Indicazioni d´uso C201 | Dati di taglio C144 | Ordine utensili speciali C150

Punte in metallo duro integrale Serie UD

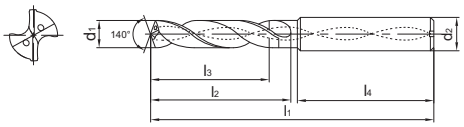
Punta UD- 5xD — Acciaio, acciaio inossidabile, materiali a difficile asportazione

1536UD05C

– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-0660	✲	6,6	8	91	53	43	36	○
1536UD05C-0670	✲	6,7	8	91	53	43	36	●
1536UD05C-0680	✲	6,8	8	91	53	43	36	●
1536UD05C-0690	✲	6,9	8	91	53	43	36	○
1536UD05C-0700	✲	7	8	91	53	43	36	●
1536UD05C-0710	✲	7,1	8	91	53	43	36	○
1536UD05C-0720	✲	7,2	8	91	53	43	36	○
1536UD05C-0730	✲	7,3	8	91	53	43	36	○
1536UD05C-0740	✲	7,4	8	91	53	43	36	●
1536UD05C-0750	✲	7,5	8	91	53	43	36	●
1536UD05C-0760	✲	7,6	8	91	53	43	36	○
1536UD05C-0770	✲	7,7	8	91	53	43	36	○
1536UD05C-0780	✲	7,8	8	91	53	43	36	○
1536UD05C-0790	✲	7,9	8	91	53	43	36	○
1536UD05C-0800	✲	8	8	91	53	43	36	●
1536UD05C-0810	✲	8,1	10	103	61	49	40	○
1536UD05C-0820	✲	8,2	10	103	61	49	40	○
1536UD05C-0830	✲	8,3	10	103	61	49	40	●
1536UD05C-0840	✲	8,4	10	103	61	49	40	●
1536UD05C-0850	✲	8,5	10	103	61	49	40	●
1536UD05C-0860	✲	8,6	10	103	61	49	40	○
1536UD05C-0870	✲	8,7	10	103	61	49	40	○
1536UD05C-0880	✲	8,8	10	103	61	49	40	○
1536UD05C-0890	✲	8,9	10	103	61	49	40	○
1536UD05C-0900	✲	9	10	103	61	49	40	●
1536UD05C-0910	✲	9,1	10	103	61	49	40	○
1536UD05C-0920	✲	9,2	10	103	61	49	40	○
1536UD05C-0930	✲	9,3	10	103	61	49	40	●
1536UD05C-0940	✲	9,4	10	103	61	49	40	○
1536UD05C-0950	✲	9,5	10	103	61	49	40	●
1536UD05C-0960	✲	9,6	10	103	61	49	40	○
1536UD05C-0970	✲	9,7	10	103	61	49	40	○
1536UD05C-0980	✲	9,8	10	103	61	49	40	○
1536UD05C-0990	✲	9,9	10	103	61	49	40	○
1536UD05C-1000	✲	10	10	103	61	49	40	●
1536UD05C-1020	✲	10,2	12	118	71	56	45	●
1536UD05C-1050	✲	10,5	12	118	71	56	45	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punta UD- 5xD — Acciaio, acciaio inossidabile, materiali a difficile asportazione

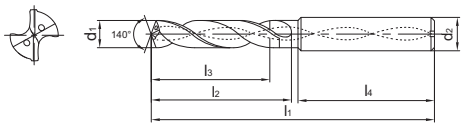
1536UD05C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-1100	✻	11	12	118	71	56	45	●
1536UD05C-1150	✻	11,5	12	118	71	56	45	●
1536UD05C-1200	✻	12	12	118	71	56	45	●
1536UD05C-1250	✻	12,5	14	124	77	60	45	●
1536UD05C-1300	✻	13	14	124	77	60	45	●
1536UD05C-1350	✻	13,5	14	124	77	60	45	●
1536UD05C-1400	✻	14	14	124	77	60	45	●
1536UD05C-1450	✻	14,5	16	133	83	63	48	●
1536UD05C-1500	✻	15	16	133	83	63	48	●
1536UD05C-1550	✻	15,5	16	133	83	63	48	●
1536UD05C-1600	✻	16	16	133	83	63	48	●
1536UD05C-1650	✻	16,5	18	143	93	71	48	●
1536UD05C-1700	✻	17	18	143	93	71	48	●
1536UD05C-1750	✻	17,5	18	143	93	71	48	●
1536UD05C-1800	✻	18	18	143	93	71	48	●
1536UD05C-1850	✻	18,5	20	153	101	77	50	●
1536UD05C-1900	✻	19	20	153	101	77	50	●
1536UD05C-1950	✻	19,5	20	153	101	77	50	●
1536UD05C-2000	✻	20	20	153	101	77	50	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔			✔	

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Note

INFORMAZIONI IMPORTANTI

Raccomandazione di impiego per la **serie GD**

Calcolo per avanzamento

Gruppo ISO	Materiale	Velocità di taglio v_c (m/min)	Fattore per l' avanzamento F_m
P	Acciaio debolmente legato	130	0,04
	Acciaio altamente legato	100	0,03
K	Ghisa	160	0,04
	Acciaio fuso	130	0,03

Formula:	Avanzamento per giro (F_n)	$D \times F_m$
Esempio:	Diametro punta (D)	10 mm
	Materiale	acciaio alto legato

F_n = 10 mm × 0,03 = 0,3 mm/g

*Le velocità di avanzamento specificate sono **valori massimi**. In caso di tensione instabile o macchine meno potenti si consiglia di ridurre la velocità di avanzamento di circa il 30 % da un diametro di foratura di Ø12 mm.



Fig.: **1536GD05C**

Punte in metallo duro integrale Serie GD

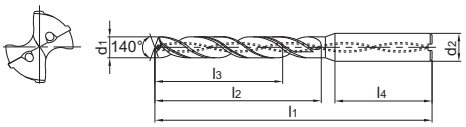
Punta GD - 3xD Acciaio, ghise

1534GD03C

– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1534GD03C-0300	✲	3	6	62	20	14	36	●
1534GD03C-0310	✲	3,1	6	62	20	14	36	●
1534GD03C-0320	✲	3,2	6	62	20	14	36	●
1534GD03C-0330	✲	3,3	6	62	20	14	36	●
1534GD03C-0340	✲	3,4	6	62	20	14	36	●
1534GD03C-0350	✲	3,5	6	62	20	14	36	●
1534GD03C-0360	✲	3,6	6	62	20	14	36	●
1534GD03C-0370	✲	3,7	6	62	20	14	36	●
1534GD03C-0380	✲	3,8	6	66	24	17	36	●
1534GD03C-0390	✲	3,9	6	66	24	17	36	●
1534GD03C-0400	✲	4	6	66	24	17	36	●
1534GD03C-0410	✲	4,1	6	66	24	17	36	●
1534GD03C-0420	✲	4,2	6	66	24	17	36	●
1534GD03C-0430	✲	4,3	6	66	24	17	36	●
1534GD03C-0440	✲	4,4	6	66	24	17	36	●
1534GD03C-0450	✲	4,5	6	66	24	17	36	●
1534GD03C-0460	✲	4,6	6	66	24	17	36	●
1534GD03C-0465	✲	4,65	6	66	24	17	36	●
1534GD03C-0470	✲	4,7	6	66	24	17	36	●
1534GD03C-0480	✲	4,8	6	66	28	20	36	●
1534GD03C-0490	✲	4,9	6	66	28	20	36	●
1534GD03C-0500	✲	5	6	66	28	20	36	●
1534GD03C-0510	✲	5,1	6	66	28	20	36	●
1534GD03C-0520	✲	5,2	6	66	28	20	36	●
1534GD03C-0530	✲	5,3	6	66	28	20	36	●
1534GD03C-0540	✲	5,4	6	66	28	20	36	●
1534GD03C-0550	✲	5,5	6	66	28	20	36	●
1534GD03C-0560	✲	5,6	6	66	28	20	36	●
1534GD03C-0570	✲	5,7	6	66	28	20	36	●
1534GD03C-0580	✲	5,8	6	66	28	20	36	●
1534GD03C-0590	✲	5,9	6	66	28	20	36	●
1534GD03C-0600	✲	6	6	66	28	20	36	●
1534GD03C-0610	✲	6,1	8	79	34	24	36	●
1534GD03C-0620	✲	6,2	8	79	34	24	36	●
1534GD03C-0630	✲	6,3	8	79	34	24	36	●
1534GD03C-0640	✲	6,4	8	79	34	24	36	●
1534GD03C-0650	✲	6,5	8	79	34	24	36	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta GD - 3xD Acciaio, ghise

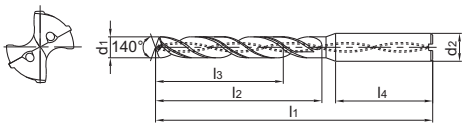
1534GD03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1534GD03C-0660	✻	6,6	8	79	34	24	36	●
1534GD03C-0670	✻	6,7	8	79	34	24	36	●
1534GD03C-0680	✻	6,8	8	79	34	24	36	●
1534GD03C-0690	✻	6,9	8	79	34	24	36	●
1534GD03C-0700	✻	7	8	79	34	24	36	●
1534GD03C-0710	✻	7,1	8	79	41	29	36	●
1534GD03C-0720	✻	7,2	8	79	41	29	36	●
1534GD03C-0730	✻	7,3	8	79	41	29	36	●
1534GD03C-0740	✻	7,4	8	79	41	29	36	●
1534GD03C-0750	✻	7,5	8	79	41	29	36	●
1534GD03C-0760	✻	7,6	8	79	41	29	36	●
1534GD03C-0770	✻	7,7	8	79	41	29	36	●
1534GD03C-0780	✻	7,8	8	79	41	29	36	●
1534GD03C-0790	✻	7,9	8	79	41	29	36	●
1534GD03C-0800	✻	8	8	79	41	29	36	●
1534GD03C-0810	✻	8,1	10	89	47	35	40	●
1534GD03C-0820	✻	8,2	10	89	47	35	40	●
1534GD03C-0830	✻	8,3	10	89	47	35	40	●
1534GD03C-0840	✻	8,4	10	89	47	35	40	●
1534GD03C-0850	✻	8,5	10	89	47	35	40	●
1534GD03C-0860	✻	8,6	10	89	47	35	40	●
1534GD03C-0870	✻	8,7	10	89	47	35	40	●
1534GD03C-0880	✻	8,8	10	89	47	35	40	●
1534GD03C-0890	✻	8,9	10	89	47	35	40	●
1534GD03C-0900	✻	9	10	89	47	35	40	●
1534GD03C-0910	✻	9,1	10	89	47	35	40	●
1534GD03C-0920	✻	9,2	10	89	47	35	40	●
1534GD03C-0930	✻	9,3	10	89	47	35	40	●
1534GD03C-0940	✻	9,4	10	89	47	35	40	●
1534GD03C-0950	✻	9,5	10	89	47	35	40	●
1534GD03C-0960	✻	9,6	10	89	47	35	40	●
1534GD03C-0970	✻	9,7	10	89	47	35	40	●
1534GD03C-0980	✻	9,8	10	89	47	35	40	●
1534GD03C-0990	✻	9,9	10	89	47	35	40	●
1534GD03C-1000	✻	10	10	89	47	35	40	●
1534GD03C-1020	✻	10,2	12	102	55	40	45	●
1534GD03C-1050	✻	10,5	12	102	55	40	45	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punte in metallo duro integrale Serie GD

Punta GD - 3xD Acciaio, ghise

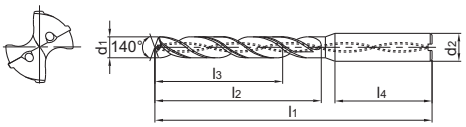
1534GD03C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1534GD03C-1100	✲	11	12	102	55	40	45	●
1534GD03C-1140	✲	11,4	12	102	55	40	45	●
1534GD03C-1150	✲	11,5	12	102	55	40	45	●
1534GD03C-1200	✲	12	12	102	55	40	45	●
1534GD03C-1250	✲	12,5	14	107	60	43	45	●
1534GD03C-1300	✲	13	14	107	60	43	45	●
1534GD03C-1350	✲	13,5	14	107	60	43	45	●
1534GD03C-1400	✲	14	14	107	60	43	45	●
1534GD03C-1450	✲	14,5	16	115	65	45	48	●
1534GD03C-1500	✲	15	16	115	65	45	48	●
1534GD03C-1550	✲	15,5	16	115	65	45	48	●
1534GD03C-1600	✲	16	16	115	65	45	48	●
1534GD03C-1650	✲	16,5	18	123	73	51	48	●
1534GD03C-1700	✲	17	18	123	73	51	48	●
1534GD03C-1750	✲	17,5	18	123	73	51	48	●
1534GD03C-1800	✲	18	18	123	73	51	48	●
1534GD03C-1850	✲	18,5	20	131	79	55	50	●
1534GD03C-1900	✲	19	20	131	79	55	50	●
1534GD03C-1950	✲	19,5	20	131	79	55	50	●
1534GD03C-2000	✲	20	20	131	79	55	50	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta GD - 5xD Acciaio, ghise

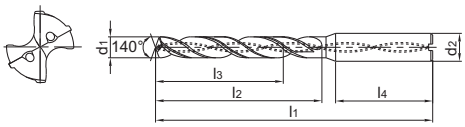
1536GD05C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-0300	✻	3	6	66	28	23	36	●
1536GD05C-0310	✻	3,1	6	66	28	23	36	●
1536GD05C-0320	✻	3,2	6	66	28	23	36	●
1536GD05C-0330	✻	3,3	6	66	28	23	36	●
1536GD05C-0340	✻	3,4	6	66	28	23	36	●
1536GD05C-0350	✻	3,5	6	66	28	23	36	●
1536GD05C-0360	✻	3,6	6	66	28	23	36	●
1536GD05C-0370	✻	3,7	6	66	28	23	36	●
1536GD05C-0380	✻	3,8	6	74	36	29	36	●
1536GD05C-0390	✻	3,9	6	74	36	29	36	●
1536GD05C-0400	✻	4	6	74	36	29	36	●
1536GD05C-0410	✻	4,1	6	74	36	29	36	●
1536GD05C-0420	✻	4,2	6	74	36	29	36	●
1536GD05C-0430	✻	4,3	6	74	36	29	36	●
1536GD05C-0440	✻	4,4	6	74	36	29	36	●
1536GD05C-0450	✻	4,5	6	74	36	29	36	●
1536GD05C-0460	✻	4,6	6	74	36	29	36	●
1536GD05C-0465	✻	4,65	6	74	36	29	36	●
1536GD05C-0470	✻	4,7	6	74	36	29	36	●
1536GD05C-0480	✻	4,8	6	82	44	35	36	●
1536GD05C-0490	✻	4,9	6	82	44	35	36	●
1536GD05C-0500	✻	5	6	82	44	35	36	●
1536GD05C-0508	✻	5,08	6	82	44	35	36	○
1536GD05C-0510	✻	5,1	6	82	44	35	36	●
1536GD05C-0520	✻	5,2	6	82	44	35	36	●
1536GD05C-0530	✻	5,3	6	82	44	35	36	●
1536GD05C-0540	✻	5,4	6	82	44	35	36	●
1536GD05C-0550	✻	5,5	6	82	44	35	36	●
1536GD05C-0560	✻	5,6	6	82	44	35	36	●
1536GD05C-0570	✻	5,7	6	82	44	35	36	●
1536GD05C-0580	✻	5,8	6	82	44	35	36	●
1536GD05C-0590	✻	5,9	6	82	44	35	36	●
1536GD05C-0600	✻	6	6	82	44	35	36	●
1536GD05C-0610	✻	6,1	8	91	53	43	36	●
1536GD05C-0620	✻	6,2	8	91	53	43	36	●
1536GD05C-0630	✻	6,3	8	91	53	43	36	●
1536GD05C-0640	✻	6,4	8	91	53	43	36	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punte in metallo duro integrale Serie GD

Punta GD - 5xD Acciaio, ghise

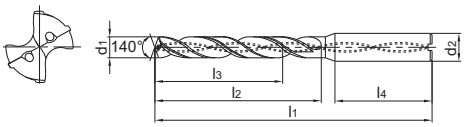
1536GD05C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-0650	✲	6,5	8	91	53	43	36	●
1536GD05C-0660	✲	6,6	8	91	53	43	36	●
1536GD05C-0670	✲	6,7	8	91	53	43	36	●
1536GD05C-0680	✲	6,8	8	91	53	43	36	●
1536GD05C-0690	✲	6,9	8	91	53	43	36	●
1536GD05C-0700	✲	7	8	91	53	43	36	●
1536GD05C-0710	✲	7,1	8	91	53	43	36	●
1536GD05C-0720	✲	7,2	8	91	53	43	36	●
1536GD05C-0730	✲	7,3	8	91	53	43	36	●
1536GD05C-0740	✲	7,4	8	91	53	43	36	●
1536GD05C-0750	✲	7,5	8	91	53	43	36	●
1536GD05C-0760	✲	7,6	8	91	53	43	36	●
1536GD05C-0770	✲	7,7	8	91	53	43	36	●
1536GD05C-0780	✲	7,8	8	91	53	43	36	●
1536GD05C-0790	✲	7,9	8	91	53	43	36	●
1536GD05C-0800	✲	8	8	91	53	43	36	●
1536GD05C-0810	✲	8,1	10	103	61	49	40	●
1536GD05C-0820	✲	8,2	10	103	61	49	40	●
1536GD05C-0830	✲	8,3	10	103	61	49	40	●
1536GD05C-0840	✲	8,4	10	103	61	49	40	●
1536GD05C-0850	✲	8,5	10	103	61	49	40	●
1536GD05C-0860	✲	8,6	10	103	61	49	40	●
1536GD05C-0870	✲	8,7	10	103	61	49	40	●
1536GD05C-0880	✲	8,8	10	103	61	49	40	●
1536GD05C-0890	✲	8,9	10	103	61	49	40	●
1536GD05C-0900	✲	9	10	103	61	49	40	●
1536GD05C-0910	✲	9,1	10	103	61	49	40	●
1536GD05C-0920	✲	9,2	10	103	61	49	40	●
1536GD05C-0930	✲	9,3	10	103	61	49	40	●
1536GD05C-0940	✲	9,4	10	103	61	49	40	●
1536GD05C-0950	✲	9,5	10	103	61	49	40	●
1536GD05C-0960	✲	9,6	10	103	61	49	40	●
1536GD05C-0970	✲	9,7	10	103	61	49	40	●
1536GD05C-0980	✲	9,8	10	103	61	49	40	●
1536GD05C-0990	✲	9,9	10	103	61	49	40	●
1536GD05C-1000	✲	10	10	103	61	49	40	●
1536GD05C-1010	✲	10,1	12	118	71	56	45	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta GD - 5xD

Acciaio, ghise

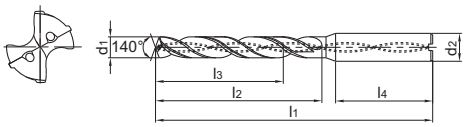
1536GD05C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-1020	✻	10,2	12	118	71	56	45	●
1536GD05C-1030	✻	10,3	12	118	71	56	45	●
1536GD05C-1040	✻	10,4	12	118	71	56	45	●
1536GD05C-1050	✻	10,5	12	118	71	56	45	●
1536GD05C-1060	✻	10,6	12	118	71	56	45	●
1536GD05C-1070	✻	10,7	12	118	71	56	45	●
1536GD05C-1080	✻	10,8	12	118	71	56	45	●
1536GD05C-1090	✻	10,9	12	118	71	56	45	●
1536GD05C-1100	✻	11	12	118	71	56	45	●
1536GD05C-1130	✻	11,3	12	118	71	56	45	●
1536GD05C-1140	✻	11,4	12	118	71	56	45	●
1536GD05C-1150	✻	11,5	12	118	71	56	45	●
1536GD05C-1200	✻	12	12	118	71	56	45	●
1536GD05C-1250	✻	12,5	14	124	77	60	45	●
1536GD05C-1280	✻	12,8	14	124	77	60	45	●
1536GD05C-1300	✻	13	14	124	77	60	45	●
1536GD05C-1350	✻	13,5	14	124	77	60	45	●
1536GD05C-1380	✻	13,8	14	124	77	60	45	○
1536GD05C-1400	✻	14	14	124	77	60	45	●
1536GD05C-1450	✻	14,5	16	133	83	63	48	●
1536GD05C-1500	✻	15	16	133	83	63	48	●
1536GD05C-1510	✻	15,1	16	133	83	63	48	○
1536GD05C-1550	✻	15,5	16	133	83	63	48	●
1536GD05C-1600	✻	16	16	133	83	63	48	●
1536GD05C-1650	✻	16,5	18	143	93	71	48	●
1536GD05C-1700	✻	17	18	143	93	71	48	●
1536GD05C-1750	✻	17,5	18	143	93	71	48	●
1536GD05C-1800	✻	18	18	143	93	71	48	●
1536GD05C-1850	✻	18,5	20	153	101	77	50	●
1536GD05C-1900	✻	19	20	153	101	77	50	●
1536GD05C-1950	✻	19,5	20	153	101	77	50	●
1536GD05C-2000	✻	20	20	153	101	77	50	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie GD

Punta GD - 5xD Acciaio, ghise

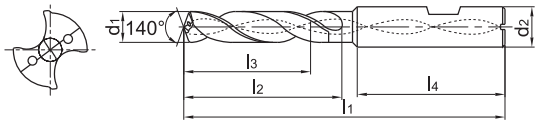
1636GD05C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1636GD05C-0500	✲	5	6	82	44	35	36	●
1636GD05C-0550	✲	5,5	6	82	44	35	36	●
1636GD05C-0600	✲	6	6	82	44	35	36	●
1636GD05C-0650	✲	6,5	8	91	53	43	36	●
1636GD05C-0680	✲	6,8	8	91	53	43	36	●
1636GD05C-0700	✲	7	8	91	53	43	36	●
1636GD05C-0740	✲	7,4	8	91	53	43	36	●
1636GD05C-0750	✲	7,5	8	91	53	43	36	●
1636GD05C-0780	✲	7,8	8	91	53	43	36	●
1636GD05C-0800	✲	8	8	91	53	43	36	●
1636GD05C-0850	✲	8,5	10	103	61	49	40	●
1636GD05C-0880	✲	8,8	10	103	61	49	40	●
1636GD05C-0900	✲	9	10	103	61	49	40	●
1636GD05C-0930	✲	9,3	10	103	61	49	40	●
1636GD05C-0950	✲	9,5	10	103	61	49	40	●
1636GD05C-0980	✲	9,8	10	103	61	49	40	●
1636GD05C-1000	✲	10	10	103	61	49	40	●
1636GD05C-1020	✲	10,2	12	118	71	56	45	●
1636GD05C-1050	✲	10,5	12	118	71	56	45	●
1636GD05C-1080	✲	10,8	12	118	71	56	45	●
1636GD05C-1100	✲	11	12	118	71	56	45	●
1636GD05C-1150	✲	11,5	12	118	71	56	45	●
1636GD05C-1180	✲	11,8	12	118	71	56	45	●
1636GD05C-1200	✲	12	12	118	71	56	45	●
1636GD05C-1250	✲	12,5	14	124	77	60	45	●
1636GD05C-1280	✲	12,8	14	124	77	60	45	○
1636GD05C-1300	✲	13	14	124	77	60	45	●
1636GD05C-1350	✲	13,5	14	124	77	60	45	●
1636GD05C-1380	✲	13,8	14	124	77	60	45	●
1636GD05C-1400	✲	14	14	124	77	60	45	●
1636GD05C-1450	✲	14,5	16	133	83	63	48	●
1636GD05C-1480	✲	14,8	16	133	83	63	48	●
1636GD05C-1500	✲	15	16	133	83	63	48	●
1636GD05C-1550	✲	15,5	16	133	83	63	48	●
1636GD05C-1580	✲	15,8	16	133	83	63	48	●
1636GD05C-1600	✲	16	16	133	83	63	48	●
1636GD05C-1650	✲	16,5	18	143	93	71	48	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta GD - 5xD Acciaio, ghise

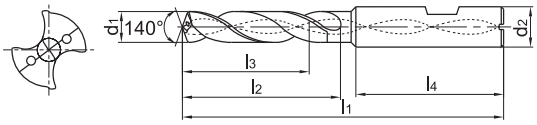
1636GD05C



– Versione del codolo DIN 6535HB
– Uscita refrigerante assiale



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1636GD05C-1680	✻	16,8	18	143	93	71	48	○
1636GD05C-1700	✻	17	18	143	93	71	48	●
1636GD05C-1750	✻	17,5	18	143	93	71	48	●
1636GD05C-1780	✻	17,8	18	143	93	71	48	●
1636GD05C-1800	✻	18	18	143	93	71	48	●
1636GD05C-1850	✻	18,5	20	153	101	77	50	●
1636GD05C-1880	✻	18,8	20	153	101	77	50	○
1636GD05C-1900	✻	19	20	153	101	77	50	●
1636GD05C-1950	✻	19,5	20	153	101	77	50	●
1636GD05C-1980	✻	19,8	20	153	101	77	50	●
1636GD05C-2000	✻	20	20	153	101	77	50	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Note

Punta SH - 3xD | Materiali ad elevata durezza

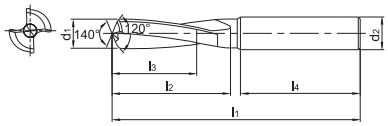
1534SH03



– Versione del codolo DIN 6535HA



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SH03-0300		3	6	62	20	14	36	○
1534SH03-0330		3,3	6	62	20	14	36	●
1534SH03-0400		4	6	66	24	17	36	○
1534SH03-0420		4,2	6	66	24	17	36	●
1534SH03-0500		5	6	66	28	20	36	○
1534SH03-0600		6	6	66	28	20	36	○
1534SH03-0675		6,75	8	79	34	24	36	○
1534SH03-0700		7	8	79	34	24	36	○
1534SH03-0800		8	8	79	41	29	36	○
1534SH03-0850		8,5	10	89	47	35	40	○
1534SH03-0900		9	10	89	47	35	40	○
1534SH03-1000		10	10	89	47	35	40	○
1534SH03-1025		10,25	12	102	55	40	45	○
1534SH03-1050		10,5	12	102	55	40	45	○
1534SH03-1200		12	12	102	55	40	45	○
1534SH03-1250		12,5	14	107	60	43	45	○
1534SH03-1400		14	14	107	60	43	45	○
1534SH03-1450		14,5	16	115	65	45	48	○
1534SH03-1600		16	16	115	65	45	48	○
1534SH03-2000		20	20	131	79	53	50	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
					✔

✔ Molto adatto

✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Note

Punta SC - 3xD — Metalli non ferrosi

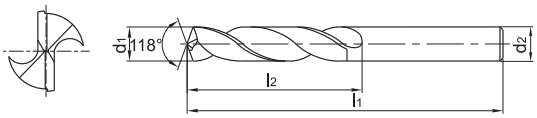
1105SC03



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1105SC03-0200		2	2	38	12	○
1105SC03-0250		2,5	2,5	43	14	○
1105SC03-0280		2,8	2,8	46	16	○
1105SC03-0300		3	3	46	16	○
1105SC03-0310		3,1	3,1	49	18	○
1105SC03-0320		3,2	3,2	49	18	○
1105SC03-0330		3,3	3,3	49	18	○
1105SC03-0340		3,4	3,4	52	20	○
1105SC03-0350		3,5	3,5	52	20	○
1105SC03-0360		3,6	3,6	52	20	○
1105SC03-0370		3,7	3,7	52	20	○
1105SC03-0380		3,8	3,8	55	22	○
1105SC03-0390		3,9	3,9	55	22	○
1105SC03-0400		4	4	55	22	○
1105SC03-0410		4,1	4,1	55	22	○
1105SC03-0420		4,2	4,2	55	22	○
1105SC03-0430		4,3	4,3	58	24	○
1105SC03-0440		4,4	4,4	58	24	○
1105SC03-0450		4,5	4,5	58	24	○
1105SC03-0460		4,6	4,6	58	24	○
1105SC03-0470		4,7	4,7	58	24	○
1105SC03-0480		4,8	4,8	62	26	○
1105SC03-0490		4,9	4,9	62	26	○
1105SC03-0500		5	5	62	26	○
1105SC03-0510		5,1	5,1	62	26	○
1105SC03-0520		5,2	5,2	62	26	○
1105SC03-0530		5,3	5,3	62	26	○
1105SC03-0540		5,4	5,4	66	28	○
1105SC03-0550		5,5	5,5	66	28	○
1105SC03-0560		5,6	5,6	66	28	○
1105SC03-0570		5,7	5,7	66	28	○
1105SC03-0580		5,8	5,8	66	28	○
1105SC03-0590		5,9	5,9	66	28	○
1105SC03-0600		6	6	66	28	○
1105SC03-0610		6,1	6,1	70	31	○
1105SC03-0620		6,2	6,2	70	31	○
1105SC03-0630		6,3	6,3	70	31	○
1105SC03-0640		6,4	6,4	70	31	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SC

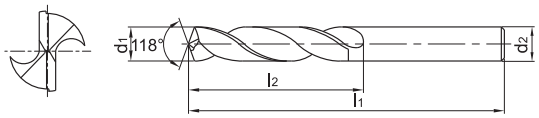
Punta SC - 3xD Metalli non ferrosi

1105SC03

– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1105SC03-0650		6,5	6,5	70	31	○
1105SC03-0660		6,6	6,6	70	31	○
1105SC03-0670		6,7	6,7	70	31	○
1105SC03-0680		6,8	6,8	74	34	○
1105SC03-0690		6,9	6,9	74	34	○
1105SC03-0700		7	7	74	34	○
1105SC03-0710		7,1	7,1	74	34	○
1105SC03-0720		7,2	7,2	74	34	○
1105SC03-0730		7,3	7,3	74	34	○
1105SC03-0740		7,4	7,4	74	34	○
1105SC03-0750		7,5	7,5	74	34	○
1105SC03-0760		7,6	7,6	79	37	○
1105SC03-0770		7,7	7,7	79	37	○
1105SC03-0780		7,8	7,8	79	37	○
1105SC03-0790		7,9	7,9	79	37	○
1105SC03-0800		8	8	79	37	○
1105SC03-0810		8,1	8,1	79	37	○
1105SC03-0820		8,2	8,2	79	37	○
1105SC03-0830		8,3	8,3	79	37	○
1105SC03-0840		8,4	8,4	79	37	○
1105SC03-0850		8,5	8,5	79	37	○
1105SC03-0860		8,6	8,6	84	40	○
1105SC03-0870		8,7	8,7	84	40	○
1105SC03-0880		8,8	8,8	84	40	○
1105SC03-0890		8,9	8,9	84	40	○
1105SC03-0900		9	9	84	40	○
1105SC03-0910		9,1	9,1	84	40	○
1105SC03-0920		9,2	9,2	84	40	○
1105SC03-0930		9,3	9,3	84	40	○
1105SC03-0940		9,4	9,4	84	40	○
1105SC03-0950		9,5	9,5	84	40	○
1105SC03-0960		9,6	9,6	89	43	○
1105SC03-0970		9,7	9,7	89	43	○
1105SC03-0980		9,8	9,8	89	43	○
1105SC03-0990		9,9	9,9	89	43	○
1105SC03-1000		10	10	89	43	○
1105SC03-1010		10,1	10,1	89	43	○
1105SC03-1020		10,2	10,2	89	43	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta SC - 3xD Metalli non ferrosi

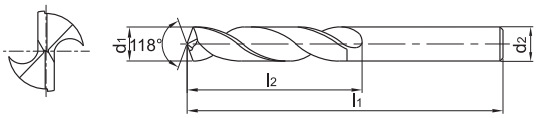
1105SC03



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1105SC03-1040		10,4	10,4	89	43	○
1105SC03-1050		10,5	10,5	89	43	○
1105SC03-1070		10,7	10,7	95	47	○
1105SC03-1080		10,8	10,8	95	47	○
1105SC03-1100		11	11	95	47	○
1105SC03-1150		11,5	11,5	95	47	○
1105SC03-1200		12	12	102	51	○
1105SC03-1250		12,5	12,5	102	51	○
1105SC03-1280		12,8	12,8	102	51	○
1105SC03-1300		13	13	102	51	○
1105SC03-1310		13,1	13,1	102	51	○
1105SC03-1350		13,5	13,5	107	54	○
1105SC03-1400		14	14	107	54	○
1105SC03-1430		14,3	14,3	111	56	○
1105SC03-1450		14,5	14,5	111	56	○
1105SC03-1500		15	15	111	56	○
1105SC03-1600		16	16	115	58	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie SC

Punta SC - 5xD **Metalli non ferrosi**

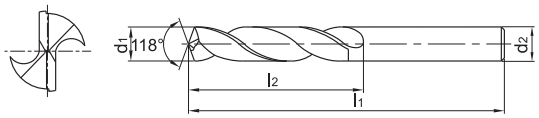
1101SC05



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1101SC05-0200		2	2	49	24	○
1101SC05-0250		2,5	2,5	57	30	○
1101SC05-0280		2,8	2,8	61	33	○
1101SC05-0300		3	3	61	33	○
1101SC05-0350		3,5	3,5	70	39	○
1101SC05-0380		3,8	3,8	75	43	○
1101SC05-0400		4	4	75	43	○
1101SC05-0420		4,2	4,2	75	43	○
1101SC05-0450		4,5	4,5	80	47	○
1101SC05-0480		4,8	4,8	86	52	○
1101SC05-0500		5	5	86	52	○
1101SC05-0550		5,5	5,5	93	57	○
1101SC05-0580		5,8	5,8	93	57	○
1101SC05-0600		6	6	93	57	○
1101SC05-0650		6,5	6,5	101	63	○
1101SC05-0680		6,8	6,8	109	69	○
1101SC05-0700		7	7	109	69	○
1101SC05-0750		7,5	7,5	109	69	○
1101SC05-0780		7,8	7,8	117	75	○
1101SC05-0800		8	8	117	75	○
1101SC05-0850		8,5	8,5	117	75	○
1101SC05-0880		8,8	8,8	125	81	○
1101SC05-0900		9	9	125	81	○
1101SC05-0950		9,5	9,5	125	81	○
1101SC05-0980		9,8	9,8	133	87	○
1101SC05-1000		10	10	133	87	○
1101SC05-1050		10,5	10,5	133	87	○
1101SC05-1080		10,8	10,8	142	94	○
1101SC05-1100		11	11	142	94	○
1101SC05-1150		11,5	11,5	142	94	○
1101SC05-1200		12	12	151	101	○
1101SC05-1250		12,5	12,5	151	101	○
1101SC05-1300		13	13	151	101	○
1101SC05-1350		13,5	13,5	160	108	○
1101SC05-1400		14	14	160	108	○
1101SC05-1450		14,5	14,5	169	114	○
1101SC05-1500		15	15	169	114	○
1101SC05-1550		15,5	15,5	178	120	○
1101SC05-1600		16	16	178	120	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punta PA - 3xD Metalli non ferrosi

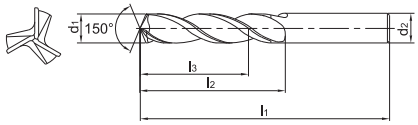
1165PA03



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]					Grado	
		d_1 (h7)	d_2 (h7)	l_1	l_2	l_3	KDG303	YK30F
1165PA03-0300		3	3	46	16	12	●	●
1165PA03-0310		3,1	3,1	49	18	14	○	○
1165PA03-0320		3,2	3,2	49	18	14	○	●
1165PA03-0330		3,3	3,3	49	18	14	○	○
1165PA03-0340		3,4	3,4	52	20	15	○	●
1165PA03-0350		3,5	3,5	52	20	15	○	○
1165PA03-0360		3,6	3,6	52	20	15	○	○
1165PA03-0370		3,7	3,7	52	20	15	○	○
1165PA03-0380		3,8	3,8	55	22	17	○	○
1165PA03-0390		3,9	3,9	55	22	17	○	○
1165PA03-0400		4	4	55	22	17	○	○
1165PA03-0410		4,1	4,1	55	22	17	○	○
1165PA03-0420		4,2	4,2	55	22	17	○	○
1165PA03-0430		4,3	4,3	58	24	18	○	○
1165PA03-0440		4,4	4,4	58	24	18	○	○
1165PA03-0450		4,5	4,5	58	24	18	○	○
1165PA03-0460		4,6	4,6	58	24	18	○	○
1165PA03-0470		4,7	4,7	58	24	18	○	○
1165PA03-0480		4,8	4,8	62	26	20	○	○
1165PA03-0490		4,9	4,9	62	26	20	○	○
1165PA03-0500		5	5	62	26	20	○	○
1165PA03-0510		5,1	5,1	62	26	20	○	○
1165PA03-0520		5,2	5,2	62	26	20	○	○
1165PA03-0530		5,3	5,3	62	26	20	○	○
1165PA03-0540		5,4	5,4	66	28	21	○	○
1165PA03-0550		5,5	5,5	66	28	21	○	○
1165PA03-0560		5,6	5,6	66	28	21	○	○
1165PA03-0570		5,7	5,7	66	28	21	○	○
1165PA03-0580		5,8	5,8	66	28	21	○	○
1165PA03-0590		5,9	5,9	66	28	21	○	○
1165PA03-0600		6	6	66	28	21	○	○
1165PA03-0610		6,1	6,1	70	31	23	○	○
1165PA03-0620		6,2	6,2	70	31	23	○	○
1165PA03-0630		6,3	6,3	70	31	23	○	○
1165PA03-0640		6,4	6,4	70	31	23	○	○
1165PA03-0650		6,5	6,5	70	31	23	○	○
1165PA03-0660		6,6	6,6	70	31	23	○	●
1165PA03-0670		6,7	6,7	70	31	23	○	●

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punte in metallo duro integrale Serie PA

Punta PA - 3xD — Metalli non ferrosi

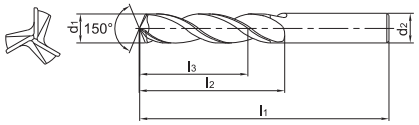
1165PA03



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]					Grado	
		d_1 (h7)	d_2 (h7)	l_1	l_2	l_3	KDG303	YK30F
1165PA03-0680		6,8	6,8	74	34	25	○	○
1165PA03-0690		6,9	6,9	74	34	25	○	○
1165PA03-0700		7	7	74	34	25	○	○
1165PA03-0710		7,1	7,1	74	34	25	○	○
1165PA03-0720		7,2	7,2	74	34	25	○	○
1165PA03-0730		7,3	7,3	74	34	25	○	○
1165PA03-0740		7,4	7,4	74	34	25	○	○
1165PA03-0750		7,5	7,5	74	34	25	○	○
1165PA03-0760		7,6	7,6	79	37	27	○	○
1165PA03-0770		7,7	7,7	79	37	27	○	○
1165PA03-0780		7,8	7,8	79	37	27	○	○
1165PA03-0790		7,9	7,9	79	37	27	○	○
1165PA03-0800		8	8	79	37	27	○	○
1165PA03-0810		8,1	8,1	79	37	27	○	○
1165PA03-0820		8,2	8,2	79	37	27	○	○
1165PA03-0830		8,3	8,3	79	37	27	○	○
1165PA03-0840		8,4	8,4	79	37	27	○	○
1165PA03-0850		8,5	8,5	79	37	27	○	○
1165PA03-0860		8,6	8,6	84	40	29	○	●
1165PA03-0870		8,7	8,7	84	40	29	○	○
1165PA03-0880		8,8	8,8	84	40	29	○	○
1165PA03-0890		8,9	8,9	84	40	29	○	○
1165PA03-0900		9	9	84	40	29	○	○
1165PA03-0910		9,1	9,1	84	40	29	○	○
1165PA03-0920		9,2	9,2	84	40	29	○	○
1165PA03-0930		9,3	9,3	84	40	29	○	○
1165PA03-0940		9,4	9,4	84	40	29	○	○
1165PA03-0950		9,5	9,5	84	40	29	○	○
1165PA03-0960		9,6	9,6	89	43	31	○	○
1165PA03-0970		9,7	9,7	89	43	31	○	○
1165PA03-0980		9,8	9,8	89	43	31	○	○
1165PA03-0990		9,9	9,9	89	43	31	○	○
1165PA03-1000		10	10	89	43	31	○	○
1165PA03-1010		10,1	10,1	89	43	31	○	○
1165PA03-1020		10,2	10,2	89	43	31	○	○
1165PA03-1030		10,3	10,3	89	43	31	○	○
1165PA03-1050		10,5	10,5	89	43	31	○	○
1165PA03-1100		11	11	95	47	33	○	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Punta PA - 3xD Metalli non ferrosi

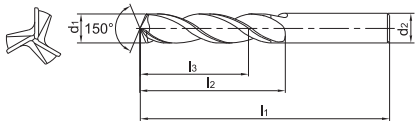
1165PA03



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]					Grado	
		d_1 (h7)	d_2 (h7)	l_1	l_2	l_3	KDG303	YK30F
1165PA03-1120		11,2	11,2	95	47	33	○	○
1165PA03-1150		11,5	11,5	95	47	33	○	○
1165PA03-1180		11,8	11,8	95	47	33	○	○
1165PA03-1200		12	12	102	51	35	○	○
1165PA03-1210		12,1	12,1	102	51	35	○	○
1165PA03-1250		12,5	12,5	102	51	35	○	○
1165PA03-1300		13	13	102	51	35	○	○
1165PA03-1350		13,5	13,5	107	54	37	○	○
1165PA03-1400		14	14	107	54	37	○	○
1165PA03-1450		14,5	14,5	111	56	38	○	○
1165PA03-1500		15	15	111	56	38	○	○
1165PA03-1550		15,5	15,5	115	58	38	○	○
1165PA03-1600		16	16	115	58	38	○	○
1165PA03-1650		16,5	16,5	119	60	39	○	○
1165PA03-1700		17	17	119	60	39	○	○
1165PA03-1750		17,5	17,5	123	62	40	○	○
1165PA03-1800		18	18	123	62	40	○	○
1165PA03-1850		18,5	18,5	127	64	41	○	○
1165PA03-1900		19	19	127	64	41	○	○
1165PA03-1950		19,5	19,5	131	66	42	○	○
1165PA03-2000		20	20	131	66	42	○	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Note

Punta PC - 5xD Ghisa

1576PC05/1576PC05C



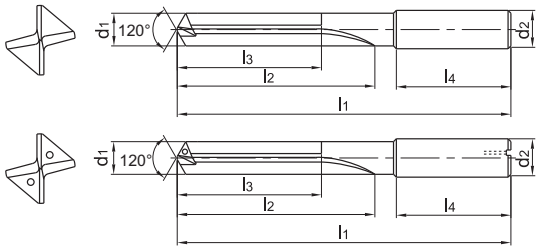
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✻	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	YK20F
1576PC05-0400		4	6	74	36	29	36	○
1576PC05C-0400	✻	4	6	74	36	29	36	●
1576PC05-0420		4,2	6	74	36	29	36	○
1576PC05C-0420	✻	4,2	6	74	36	29	36	●
1576PC05-0500		5	6	82	44	35	36	○
1576PC05C-0500	✻	5	6	82	44	35	36	●
1576PC05-0600		6	6	82	44	35	36	○
1576PC05C-0600	✻	6	6	82	44	35	36	●
1576PC05-0675		6,75	8	91	53	43	36	○
1576PC05C-0675	✻	6,75	8	91	53	43	36	●
1576PC05-0700		7	8	91	53	43	36	○
1576PC05C-0700	✻	7	8	91	53	43	36	●
1576PC05-0800		8	8	91	53	43	36	○
1576PC05C-0800	✻	8	8	91	53	43	36	●
1576PC05-0850		8,5	10	103	61	49	40	○
1576PC05C-0850	✻	8,5	10	103	61	49	40	●
1576PC05-0900		9	10	103	61	49	40	○
1576PC05C-0900	✻	9	10	103	61	49	40	●
1576PC05-1000		10	10	103	61	49	40	○
1576PC05C-1000	✻	10	10	103	61	49	40	●
1576PC05-1025		10,25	12	118	71	56	45	○
1576PC05C-1025	✻	10,25	12	118	71	56	45	●
1576PC05-1100		11	12	118	71	56	45	○
1576PC05C-1100	✻	11	12	118	71	56	45	●
1576PC05-1200		12	12	118	71	56	45	○
1576PC05C-1200	✻	12	12	118	71	56	45	●
1576PC05-1300		13	14	124	77	60	45	○
1576PC05C-1300	✻	13	14	124	77	60	45	●
1576PC05-1400		14	14	124	77	60	45	○
1576PC05C-1400	✻	14	14	124	77	60	45	●
1576PC05-1500		15	16	133	83	63	48	○
1576PC05C-1500	✻	15	16	133	83	63	48	○
1576PC05-1550		15,5	16	133	83	63	48	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punte in metallo duro integrale Serie PC

Punta PC - 5xD Ghisa

1576PC05/1576PC05C

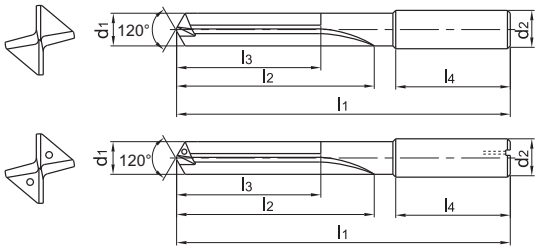
– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento esterno



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	YK20F
1576PC05C-1550	✲	15,5	16	133	83	63	48	○
1576PC05-1600		16	16	133	83	63	48	○
1576PC05C-1600	✲	16	16	133	83	63	48	○
1576PC05-1700		17	18	143	93	71	48	○
1576PC05C-1700	✲	17	18	143	93	71	48	○
1576PC05-1750		17,5	18	143	93	71	48	○
1576PC05C-1750	✲	17,5	18	143	93	71	48	○
1576PC05-1800		18	18	143	93	71	48	○
1576PC05C-1800	✲	18	18	143	93	71	48	●
1576PC05-1950		19,5	20	153	101	77	50	○
1576PC05C-1950	✲	19,5	20	153	101	77	50	○
1576PC05-2000		20	20	153	101	77	50	○
1576PC05C-2000	✲	20	20	153	101	77	50	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta PC - 15xD **Ghisa**

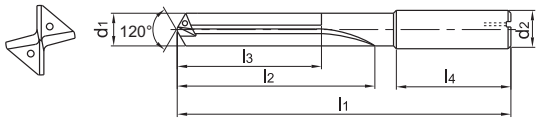
1579PC15C



– Versione del codolo DIN 6535HA
– Uscita refrigerante assiale



Raffreddamento interno



Articolo	✲	Dimensioni [mm]						Grado
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	YK20F
1579PC15C-0500	✲	5	6	145	105	96	36	○
1579PC15C-0600	✲	6	6	145	105	96	36	○
1579PC15C-0800	✲	8	8	180	137	127	36	○
1579PC15C-0900	✲	9	10	217	170	158	40	○
1579PC15C-1000	✲	10	10	217	170	158	40	○
1579PC15C-1100	✲	11	12	258	205	190	45	○
1579PC15C-1200	✲	12	12	258	205	190	45	○
1579PC15C-1400	✲	14	14	290	236	219	45	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C44 | Indicazioni d´uso > C201 | Dati di taglio > C144 | Ordine utensili speciali > C150

Note

Punta SC - Centrino NC 90° Lavorazione generica

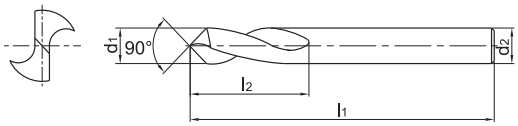
1143SC90



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado	
		d_1 (h6)	d_2 (h6)	l_1	l_2	KDG303	YK30F
1143SC90-0500		5	5	62	10	●	
1143SC90-0600		6	6	66	15	●	
1143SC90-0800		8	8	79	17	●	
1143SC90-1000		10	10	89	20	●	
1143SC90-1200		12	12	102	25	●	
1143SC90-1400		14	14	107	30	●	
1143SC90-1600		16	16	115	35	●	
1143SC90-2000		20	20	131	40	●	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta SC - Centrino NC 120° Lavorazione generica

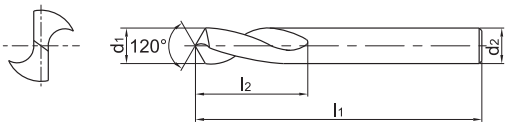
1143SC120



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado
		d_1 (h6)	d_2 (h6)	l_1	l_2	KDG303
1143SC120-0400		4	4	62	10	○
1143SC120-0500		5	5	62	10	●
1143SC120-0600		6	6	66	15	●
1143SC120-0800		8	8	79	17	●
1143SC120-1000		10	10	89	20	●
1143SC120-1200		12	12	102	25	●
1143SC120-1400		14	14	107	30	●
1143SC120-1600		16	16	115	35	●
1143SC120-2000		20	20	131	42	●

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto
✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punta SC - Centrino NC 142° Lavorazione generica

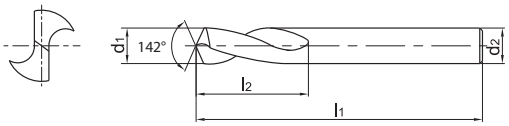


1143SC142

– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT



Raffreddamento esterno



Articolo	✻	Dimensioni [mm]				Grado
		d_1 (h6)	d_2 (h6)	l_1	l_2	KDG303
1143SC142-0500		5	5	62	10	●
1143SC142-0600		6	6	66	15	●
1143SC142-0800		8	8	79	17	●
1143SC142-1000		10	10	89	20	●
1143SC142-1200		12	12	102	25	●
1143SC142-1400		14	14	107	30	●
1143SC142-1600		16	16	115	35	●
1143SC142-2000		20	20	131	42	●

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C44 Indicazioni d´uso > C201 Dati di taglio > C144 Ordine utensili speciali > C150

Punte in metallo duro integrale Dati di taglio consigliati

Principi guida per i dati di taglio consigliati – Punte in metallo duro integrale

Solid carbide drills

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						SU Series			SU-Drill			SU Step Drill		
						3-5xD			8xD			3xD		
						KDG 303			KDG 303			KDG 303		
						Coolant								
						internal	external	f-group	internal	external	f-group	internal	external	f-group
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1	150	135	8	135	125	7	150	135	8
		ca. 0,45 % C	annealed	190	2	130	120	8	120	110	7	130	120	8
		ca. 0,45 % C	tempered	250	3	120	110	6	110	100	5	120	110	6
		ca. 0,75 % C	annealed	270	4	110	100	6	100	90	5	110	100	6
		ca. 0,75 % C	tempered	300	5	100	90	6	90	85	5	100	90	6
	Low-alloyed steel		annealed	180	6	130	120	8	120	110	7	130	120	8
			tempered	275	7	110	100	6	100	90	5	110	100	6
			tempered	300	8	100	90	6	90	85	5	100	90	6
			tempered	350	9	90	85	6	85	80	5	90	85	6
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	120	110	8	110	100	7	120	110	8
			hardened and tempered	325	11	100	90	6	90	85	5	100	90	6
M	Stainless steel	ferritic/martensitic	annealed	200	12	80	75	5	75	70	5	80	75	5
		martensitic	tempered	240	13	55	50	5	50	45	5	55	50	5
		austenitic	quench hardened	180	14	60	55	5	55	50	5	60	55	5
		austenitic-ferritic		230	15	50	45	5	45	45	5	50	45	5
K	Grey cast iron	perlitic/ferritic		180	16	135	125	8	125	115	7	135	125	8
		perlitic (martensitic)		260	17	110	100	8	100	90	7	110	100	8
	Cast iron with spheroidal graphite	ferritic		160	18	120	110	8	110	100	7	120	110	8
		perlitic		250	19	80	75	8	75	70	7	80	75	8
	Malleable cast iron	ferritic		130	20	130	120	8	120	110	7	130	120	8
		perlitic		230	21	80	75	8	75	70	7	80	75	8
N	Aluminium wrought alloys	cannot be hardened		60	22									
		hardenable	hardened	100	23									
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	24									
		≤ 12% Si, hardenable	hardened	90	25									
		> 12% Si, cannot be hardened		130	26									
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27									
		CuZn, CuSnZn		90	28									
		CuSn, Pb-free copper, electrolytic copper		100	29									
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32									
			hardened	350	33									
			cast	320	34									
	Titanium alloys	pure titanium		R_m 400	35									
		α and β alloys	hardened	R_m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplasts			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
With hole depths of 5xD adjust the cutting data accordingly to the application.
f-group = feed rate recommendations on page C126.
For examples of material for cutting tool groups view page D22.

Recommend feed rate

Solid carbide drilling

f-group	Feed rate [mm]																			
4	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

5

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Selezionare la famiglia di prodotti adatta.
2. Determinare il rapporto di contatto.
3. Selezionare il materiale utilizzato e ricavare la velocità di taglio.
4. Determinare il gruppo di avanzamento e consultare i dati di avanzamento consigliati.
5. Selezionare il diametro dell'utensile e il rapporto di contatto.

Punte in metallo duro integrale Dati di taglio consigliati

Punte in metallo duro integrale

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						Punta SL		Punta SL		Punta SP		Punta ST	
						12-15xD		20-30xD		3xD		3-5xD	
						KDG 303		KDG 303		KDG 303		KDG 303	
						Alimentazione refrigerante							
						Interna	Gruppo f	Interna	Gruppo f	Interna	Gruppo f	Interna	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1	130	7	95	7	165	8	150	8
		ca. 0,45 % C	Temprato	190	2	110	7	80	7	145	8	130	8
		ca. 0,45 % C	pre-temprato	250	3	100	5	70	5	135	6	120	6
		ca. 0,75 % C	Temprato	270	4	85	5	60	5	125	6	110	6
		ca. 0,75 % C	pre-temprato	300	5	75	5	55	5	110	6	100	6
	Acciaio al carbonio		Temprato	180	6	110	7	80	7	145	8	130	8
			pre-temprato	275	7	85	5	60	5	125	6	110	6
			pre-temprato	300	8	75	5	55	5	110	6	100	6
			pre-temprato	350	9	65	5	50	5	100	6	90	6
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10	100	7	70	7	135	8	120	8
			temprato e rinvenuto	325	11	75	5	55	5	110	6	100	6
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12	60	4	55	4	90	5	80	5
		martensitico	pre-temprato	240	13	35	4	30	4	65	5	55	5
		austenitico	quencing	180	14	40	4	35	4	70	5	60	5
		austenitico-ferritico		230	15	35	4	35	4	55	5	50	5
K	Ghisa grigia	perlitico/ferritico		180	16	125	7	90	7	150	8		
		perlitico (martensitico)		260	17	100	7	70	7	125	8		
	Ghisa sferodale	ferritico		160	18	110	7	80	7	135	8		
		perlitico		250	19	70	7	50	7	90	8		
	Ghisa malleabile	ferritico		130	20	120	7	85	7	145	8		
		perlitico		230	21	70	7	50	7	90	8		
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	150	8	105	8	170	8		
		invecchiabile	indurito	100	23	150	8	105	8	170	8		
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	150	8	105	8	170	8		
		≤ 12 % Si, invecchiabile	indurito	90	25	150	8	105	8	170	8		
		> 12 % Si, non invecchiabile		130	26	150	8	105	8	170	8		
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	150	8	105	8	170	8		
		CuZn, CuSnZn		90	28	150	8	105	8	170	8		
		CuSn, rame senza piombo e rame elettrolitico		100	29	150	8	105	8	170	8		
S	Leghe resistenti al calore	Base Fe	Temprato	200	30	30	4	20	4	30	5	30	5
			indurito	280	31	35	4	25	4	35	5	35	5
		Base Ni o Co	Temprato	250	32	35	4	25	4	35	5	35	5
			indurito	350	33	15	4	10	4	15	5	15	5
			fuso	320	34	15	4	10	4	15	5	15	5
	Leghe di titanio	Titanio puro		R_m 400	35	30	4	20	4	30	5	30	5
		Leghe Alpha + Beta	indurito	R_m 1050	36	30	4	20	4	30	5	30	5
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio CFK			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Per profondità di foratura di 5xD, i dati di taglio devono essere adattati al corrispondente campo di applicazione.
Gruppo f = i valori di avanzamento consigliati sono consultabili a pagina C148.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

	Velocità di taglio v_c [m/min]																					
	Punta SH		Punta SC		Punta PA		Punta PC		Punta PC		Punta SC											
	3xD		3 -5xD		3xD		3-5xD		15xD		Centrino											
	KDG 303		YK20F		YK 30F		YK20F		YK20F		KDG 303											
	Alimentazione refrigerante																					
	Esterna	Gruppo f	Esterna	Gruppo f	Esterna	Gruppo f	Esterna	Gruppo f	Interna	Gruppo f	Esterna	Gruppo f										
											135	8										
											120	8										
											110	6										
											100	6										
											90	6										
											120	8										
											100	6										
											90	6										
											85	6										
											110	8										
											90	6										
											75	5										
											50	5										
											55	5										
											45	5										
							120	8	100	7	120	8										
							100	8	80	7	100	8										
							100	8	80	7	100	8										
							80	8	65	7	80	8										
							120	8	100	7	120	8										
							90	8	75	7	90	8										
			180	9	180	9					180	9										
			180	9	180	9					180	9										
			130	9	130	9					130	9										
			130	9	130	9					130	9										
			120	9	120	9					120	9										
			130	9	130	9					130	9										
			130	9	130	9					130	9										
			130	9	130	9					130	9										
	25	2																				
	20	1																				
	50	3																				
	25	2																				

Dati di avanzamento consigliato

Punte in metallo duro integrale

Gruppo f	Avanzamento [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

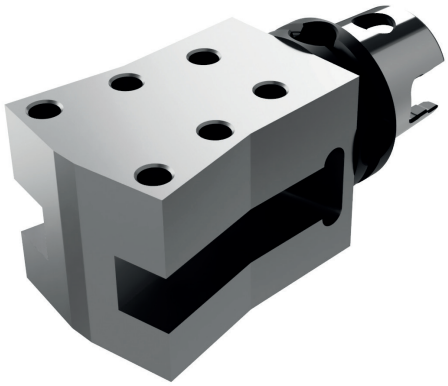
Note

Utensili speciali: il vostro utensile ottimizzato vi aspetta

Applicazioni speciali richiedono soluzioni speciali e ottimizzate. In ogni settore industriale, gli utensili speciali possono offrire vantaggi sul piano economico, tecnico o di processo rispetto alle soluzioni tradizionali. Per ogni singolo caso, collaboriamo insieme a voi per determinare l'esatto potenziale dei benefici considerando anche tutte le condizioni specifiche dei vostri cicli operativi. Nella nostra sede centrale europea di Düsseldorf, il Reparto ricerca e sviluppo di ZCC Cutting Tools Europe realizza per voi la soluzione su misura ideale per una lavorazione particolarmente economica.

Perché scegliere gli utensili speciali di ZCC Cutting Tools?

Sviluppiamo soluzioni per utensili su misura per voi e adatte alle più disparate tipologie di lavorazione. Collaborando a stretto contatto con voi sin dalle prime fasi, riusciamo a costruire gli utensili ottimizzati che soddisfano esattamente le vostre esigenze e le vostre priorità. Il nostro know-how pluriennale spazia dalla progettazione alla fabbricazione, sino ad arrivare alla logistica. Sfruttate le nostre competenze specialistiche per un successo nel lungo termine.



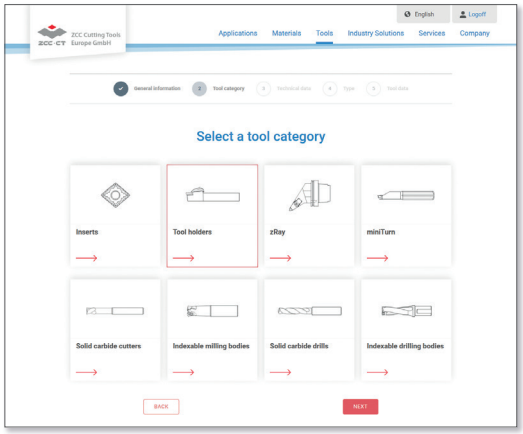
Esempio di supporto speciale



Esempio di punta speciale a gradino in metallo duro integrale

Il vostro utensile speciale personalizzato è a portata di mano

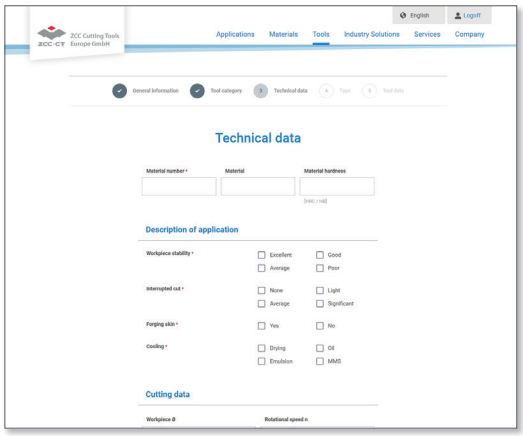
Lavorate con applicazioni per cui è possibile ottenere vantaggi in termini commerciali, tecnici o logistici impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (www.zccct-europe.com).



Home page "Strumento online per utensili speciali" con Selezione della categoria dell'utensile

Selezione della categoria dell'utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell'utensile

Definizione dei parametri dell'utensile

Successivamente potete seguire comodamente la procedura. Potete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

L'accesso rapido e diretto agli utensili speciali di ZCC Cutting Tools Europe.

Effettuate subito l'accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.

ALESATORI IN METALLO DURO INTEGRALE



Alesatori in metallo duro integrale

Panoramica prodotti	**C154**
Panoramica gradi	**C155**
Codice sistema – Alesatori in metallo duro integrale	**C156**
Alesatori in metallo duro integrale	**C157-C163**
Dati di taglio consigliati	**C164-C169**
Misure per la risoluzione dei problemi	**C206**
Informazioni tecniche	**C210**
Gli utensili speciali	**C170-C171**

C

Alesatori in metallo duro integrale Panoramica prodotti

Prodotti	Alesatori in metallo duro integrale	Ø	Applicazione						Versione	Pagina
			P	M	K	N	S	H		
3101H7		4-20			✔	✔			Scanalatura elicoidale destra	C157
3102H7		4-20			✔	✔			Scanalatura diritta	C158
3112H7		4-20	✔		✔				Scanalatura diritta con foro interno	C159
3103H7		4-20			✔	✔			Scanalatura elicoidale sinistra	C163

✔ Molto adatto ✔ Adatto

Alesatori in metallo duro integrale

Metallo duro rivestito PVD

Grado	Descrizione gradi
KRG102	Grado di metallo duro con rivestimento in PVD P10–P20/K10–K20 per la lavorazione di acciaio e materiali in ghisa.

Metallo duro non rivestito

Grado	Descrizione gradi
YK10F	Substrato in metallo duro non rivestito K10 / N10 per l´asportazione di materiali in ghisa e metalli non ferrosi.

Alesatori in metallo duro integrale

Codice sistema – alesatori in metallo duro integrale

3	1	0	1	H7	–	0850
1	2	3	4	5		6

Versione	
Code	Descrizione
3	Alesatore

1

Versione del codolo	
Code	Descrizione
1	Codolo cilindrico
2	Codolo cilindrico DIN10
5	Codolo cilindrico DIN 6535 HA
9	Stelo a conicità Morse

2

Alimentazione refrigerante	
Code	Descrizione
0	Esterna
1	Interna

3

Scanalatura truciolo	
Code	Descrizione
1	Elicoidale destra
2	Scanalatura diritta
3	Elicoidale sinistra

4

Grado di tolleranza	
Code	Descrizione
H7	La classe di tolleranza del foro alesato corrisponde a H7 (GB/T1800-1804)

5

Diametro [mm]	
Code	Descrizione
0850	8,5
...	

6



a Alesatura

Alesatori in metallo duro integrale

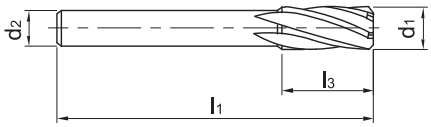
Alesatore, scanalatura elicoidale destra — Ghisa, metalli non ferrosi

3101H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT





Articolo	✻	Dimensioni [mm]				Denti	Grado
		d_1	d_2 (h6)	l_1	l_3		YK10F
3101H7-0400		4	3,55	56	20	4	●
3101H7-0500		5	4	63	22	6	○
3101H7-0600		6	5	63	22	6	○
3101H7-0700		7	6,3	71	25	6	○
3101H7-0800		8	6,3	71	25	6	○
3101H7-0900		9	8	71	25	6	○
3101H7-1000		10	8	71	25	6	○
3101H7-1200		12	10	80	28	6	○
3101H7-1300		13	10	80	28	6	○
3101H7-1450		14,5	12,5	90	32	6	○
3101H7-1600		16	12,5	90	32	6	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔	✔		

✔ Molto adatto

✔ Adatto

Codice sistema C156 | Indicazioni d´uso C201 | Dati di taglio C164 | Ordine utensili speciali C170

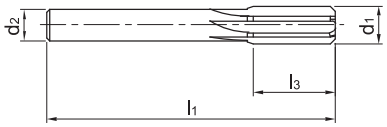
Alesatore, scanalatura elicoidale diritta — Ghisa, metalli non ferrosi

3102H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT





Articolo	✻	Dimensioni [mm]				Denti	Grado
		d_1	d_2 (h6)	l_1	l_3		YK10F
3102H7-0400		4	3,55	56	20	4	○
3102H7-0500		5	4	63	22	6	○
3102H7-0600		6	5	63	22	6	○
3102H7-1000		10	8	71	25	6	○
3102H7-1050		10,5	8	71	25	6	○
3102H7-1100		11	10	80	28	6	○
3102H7-1300		13	10	80	28	6	○
3102H7-1400		14	12,5	90	32	6	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔	✔		

✔ Molto adatto

✔ Adatto

Codice sistema > C156 Indicazioni d´uso > C201 Dati di taglio > C164 Ordine utensili speciali > C170

Alesatori in metallo duro integrale

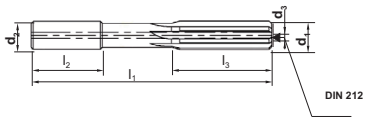
Alesatore, scanalatura elicoidale diritta — Acciaio, ghise

3112H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]						Denti	Grado
		d_1	d_2 (h6)	d_3 (m7)	l_1	l_2	l_3		KRG102
3112H7-0295	✻	2,95	4	0,6	70	28	20	4	○
3112H7-0296	✻	2,96	4	0,6	70	28	20	4	○
3112H7-0297	✻	2,97	4	0,6	70	28	20	4	○
3112H7-0298	✻	2,98	4	0,6	70	28	20	4	○
3112H7-0299	✻	2,99	4	0,6	70	28	20	4	○
3112H7-0300	✻	3	3,5	0,6	70	28	20	4	●
3112H7-0301	✻	3,01	4	0,6	70	28	20	4	●
3112H7-0302	✻	3,02	4	0,6	70	28	20	4	●
3112H7-0303	✻	3,03	4	0,6	70	28	20	4	●
3112H7-0318	✻	3,18	4	0,6	70	28	20	4	○
3112H7-0348	✻	3,48	4	0,6	70	28	20	4	○
3112H7-0350	✻	3,5	4	0,6	70	28	20	4	○
3112H7-0395	✻	3,95	4	0,6	70	28	20	4	○
3112H7-0396	✻	3,96	4	0,6	70	28	20	4	○
3112H7-0397	✻	3,97	4	0,6	70	28	20	4	○
3112H7-0398	✻	3,98	4	0,6	70	28	20	4	○
3112H7-0399	✻	3,99	4	0,6	70	28	20	4	○
3112H7-0400	✻	4	4	0,6	70	28	20	6	●
3112H7-0401	✻	4,01	4	1	70	28	20	4	●
3112H7-0402	✻	4,02	4	1	70	28	20	4	●
3112H7-0403	✻	4,03	4	1	70	28	20	4	●
3112H7-0404	✻	4,04	4	1	70	28	20	4	○
3112H7-0405	✻	4,05	4	1	70	28	20	4	○
3112H7-0407	✻	4,07	4	1	70	28	20	4	○
3112H7-0408	✻	4,08	4	1	70	28	20	4	●
3112H7-0450	✻	4,5	5	1	70	28	20	4	○
3112H7-0452	✻	4,52	5	1	70	28	20	4	○
3112H7-0457	✻	4,57	5	1	70	28	20	4	○
3112H7-0495	✻	4,95	5	1	70	28	22	6	○
3112H7-0496	✻	4,96	5	1	70	28	22	6	○
3112H7-0497	✻	4,97	5	1	70	28	22	6	○
3112H7-0498	✻	4,98	5	1	70	28	22	6	○
3112H7-0499	✻	4,99	5	1	70	28	22	6	○
3112H7-0500	✻	5	5	1	70	28	22	6	●
3112H7-0501	✻	5,01	5	1	70	28	22	6	●
3112H7-0502	✻	5,02	5	1	70	28	22	6	●
3112H7-0503	✻	5,03	5	1	70	28	22	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema C156 | Indicazioni d´uso C201 | Dati di taglio C164 | Ordine utensili speciali C170

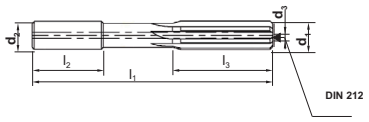
Alesatore, scanalatura elicoidale diritta — Acciaio, ghise

3112H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Uscita refrigerante assiale





Articolo	✲	Dimensioni [mm]						Denti	Grado
		d_1	d_2 (h6)	d_3 (m7)	l_1	l_2	l_3		KRG102
3112H7-0504	✲	5,04	5	1	70	28	22	6	○
3112H7-0505	✲	5,05	5	1	70	28	22	6	○
3112H7-0550	✲	5,5	6	1	70	28	22	6	○
3112H7-0553	✲	5,53	6	1	70	28	22	6	○
3112H7-0561	✲	5,61	6	1	70	28	22	6	○
3112H7-0593	✲	5,93	6	1	70	28	22	6	○
3112H7-0595	✲	5,95	6	1	100	36	22	6	●
3112H7-0596	✲	5,96	6	1	100	36	22	6	●
3112H7-0597	✲	5,97	6	1	100	36	22	6	●
3112H7-0598	✲	5,98	6	1	100	36	22	6	●
3112H7-0599	✲	5,99	6	1	100	36	22	6	●
3112H7-0600	✲	6	6	1	100	36	22	6	●
3112H7-0601	✲	6,01	6	1,3	100	36	22	6	●
3112H7-0602	✲	6,02	6	1,3	100	36	22	6	●
3112H7-0603	✲	6,03	6	1,3	100	36	22	6	●
3112H7-0635	✲	6,35	8	1,3	100	36	22	6	○
3112H7-0650	✲	6,5	8	1,3	100	36	22	6	○
3112H7-0655	✲	6,55	8	1,3	100	36	22	6	○
3112H7-0693	✲	6,93	8	1,3	100	36	22	6	○
3112H7-0695	✲	6,95	8	1,3	110	42	25	6	○
3112H7-0696	✲	6,96	8	1,3	110	42	25	6	○
3112H7-0697	✲	6,97	8	1,3	110	42	25	6	○
3112H7-0698	✲	6,98	8	1,3	110	42	25	6	○
3112H7-0699	✲	6,99	8	1,3	110	42	25	6	○
3112H7-0700	✲	7	8	1,3	110	42	25	6	●
3112H7-0701	✲	7,01	8	1,3	110	42	25	6	●
3112H7-0702	✲	7,02	8	1,3	110	42	25	6	●
3112H7-0703	✲	7,03	8	1,3	110	42	25	6	●
3112H7-0750	✲	7,5	8	1,3	110	42	25	6	○
3112H7-0770	✲	7,7	8	1,3	110	42	25	6	○
3112H7-0793	✲	7,93	8	1,3	110	42	25	6	○
3112H7-0795	✲	7,95	8	1,3	110	42	25	6	○
3112H7-0796	✲	7,96	8	1,3	110	42	25	6	○
3112H7-0797	✲	7,97	8	1,3	110	42	25	6	○
3112H7-0798	✲	7,98	8	1,3	110	42	25	6	○
3112H7-0799	✲	7,99	8	1,3	110	42	25	6	○
3112H7-0800	✲	8	8	1,3	110	42	25	6	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C156 | Indicazioni d´uso > C201 | Dati di taglio > C164 | Ordine utensili speciali > C170

Alesatori in metallo duro integrale

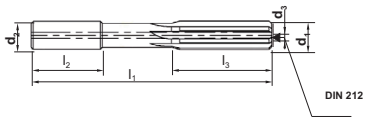
Alesatore, scanalatura elicoidale diritta — Acciaio, ghise

3112H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]						Denti	Grado
		d_1	d_2 (h6)	d_3 (m7)	l_1	l_2	l_3		KRG102
3112H7-0801	✻	8,01	8	2	110	42	25	6	●
3112H7-0802	✻	8,02	8	2	110	42	25	6	●
3112H7-0803	✻	8,03	8	2	110	42	25	6	●
3112H7-0880	✻	8,8	10	2	110	42	25	6	○
3112H7-0885	✻	8,85	10	2	110	42	25	6	○
3112H7-0900	✻	9	10	2	110	42	25	6	●
3112H7-0901	✻	9,01	10	2	110	42	25	6	●
3112H7-0902	✻	9,02	10	2	110	42	25	6	○
3112H7-0903	✻	9,03	10	2	110	42	25	6	●
3112H7-0920	✻	9,2	10	2	110	42	25	6	○
3112H7-0930	✻	9,3	10	2	110	42	25	6	○
3112H7-0993	✻	9,93	10	2	110	42	25	6	○
3112H7-0995	✻	9,95	10	2	110	38	25	6	○
3112H7-0996	✻	9,96	10	2	110	38	25	6	○
3112H7-0997	✻	9,97	10	2	110	38	25	6	○
3112H7-0998	✻	9,98	10	2	110	38	25	6	○
3112H7-0999	✻	9,99	10	2	110	38	25	6	○
3112H7-1000	✻	10	10	2	110	38	25	6	●
3112H7-1001	✻	10,01	10	2	110	38	25	6	●
3112H7-1002	✻	10,02	10	2	110	38	25	6	●
3112H7-1003	✻	10,03	10	2	110	38	25	6	●
3112H7-1024	✻	10,24	10	2	110	38	24	6	○
3112H7-1100	✻	11	12	2	110	38	28	6	●
3112H7-1101	✻	11,01	10	2	110	38	24	6	●
3112H7-1102	✻	11,02	10	2	110	38	24	6	○
3112H7-1103	✻	11,03	10	2	110	38	24	6	●
3112H7-1155	✻	11,55	12	2	110	38	28	6	○
3112H7-1195	✻	11,95	12	2	110	38	28	6	○
3112H7-1196	✻	11,96	12	2	110	38	28	6	○
3112H7-1197	✻	11,97	12	2	110	38	28	6	○
3112H7-1198	✻	11,98	12	2	110	38	28	6	○
3112H7-1199	✻	11,99	12	2	110	38	28	6	○
3112H7-1200	✻	12	12	2	110	38	28	6	●
3112H7-1201	✻	12,01	12	2	110	38	28	6	●
3112H7-1202	✻	12,02	12	2	110	38	28	6	●
3112H7-1203	✻	12,03	12	2	110	38	28	6	●
3112H7-1300	✻	13	14	2	110	38	28	6	●

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema C156 | Indicazioni d´uso C201 | Dati di taglio C164 | Ordine utensili speciali C170

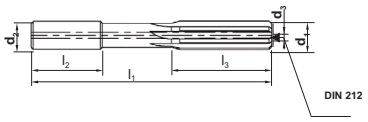
Alesatore, scanalatura elicoidale diritta — Acciaio, ghise

3112H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT
– Uscita refrigerante assiale





Articolo	✲	Dimensioni [mm]						Denti	Grado
		d_1	d_2 (h6)	d_3 (m7)	l_1	l_2	l_3		KRG102
3112H7-1301	✲	13,01	14	2	110	38	28	6	●
3112H7-1302	✲	13,02	14	2	110	38	28	6	●
3112H7-1303	✲	13,03	14	2	110	38	28	6	●
3112H7-1394	✲	13,94	14	2	110	38	28	6	○
3112H7-1400	✲	14	14	2	110	38	32	6	●
3112H7-1401	✲	14,01	14	2	110	38	28	6	●
3112H7-1402	✲	14,02	14	2	110	38	28	6	●
3112H7-1403	✲	14,03	14	2	110	38	28	6	●
3112H7-1500	✲	15	16	2	110	38	32	6	●
3112H7-1501	✲	15,01	16	2	110	38	28	6	●
3112H7-1502	✲	15,02	16	2	110	38	28	6	○
3112H7-1503	✲	15,03	16	2	110	38	28	6	●
3112H7-1565	✲	15,65	16	2	110	38	28	6	○
3112H7-1593	✲	15,93	16	2	110	38	28	6	○
3112H7-1595	✲	15,95	16	2	150	52	32	6	○
3112H7-1596	✲	15,96	16	2	150	52	32	6	○
3112H7-1597	✲	15,97	16	2	150	52	32	6	○
3112H7-1598	✲	15,98	16	2	150	52	32	6	○
3112H7-1599	✲	15,99	16	2	150	52	32	6	○
3112H7-1600	✲	16	16	2	150	52	32	6	●
3112H7-1601	✲	16,01	16	3	150	52	32	6	●
3112H7-1602	✲	16,02	16	3	150	52	32	6	○
3112H7-1603	✲	16,03	16	3	150	52	32	6	●
3112H7-1800	✲	18	18	3	150	52	36	6	●
3112H7-2000	✲	20	20	3	150	50	36	6	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C156 | Indicazioni d´uso > C201 | Dati di taglio > C164 | Ordine utensili speciali > C170

Alesatori in metallo duro integrale

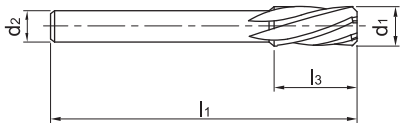
Alesatore, scanalatura elicoidale sinistra — Ghisa, metalli non ferrosi

3103H7



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT





Articolo	✻	Dimensioni [mm]				Denti	Grado
		d_1	d_2 (h6)	l_1	l_3		YK10F
3103H7-0400		4	3,55	56	20	4	○
3103H7-0500		5	4	63	22	6	○
3103H7-0600		6	5	63	22	6	○
3103H7-0800		8	6,3	71	25	6	○
3103H7-0950		9,5	8	71	25	6	○
3103H7-1000		10	8	71	25	6	○
3103H7-1150		11,5	10	80	28	6	○
3103H7-1200		12	10	80	28	6	○
3103H7-1600		16	12,5	90	32	6	○
3103H7-1800		18	16	100	36	6	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔	✔		

✔ Molto adatto

✔ Adatto

Codice sistema C156 | Indicazioni d´uso C201 | Dati di taglio C164 | Ordine utensili speciali C170

Principi guida per i dati di taglio consigliati – Alesatori in metallo duro integrale

Solid carbide reamers

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]							
						3101H7		3102H7		3112H7		3103H7	
						YK10F		YK10F		KRG102		YK10F	
						Coolant							
						external	f-group	external	f-group	internal	f-group	external	f-group
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1					85	5		
		ca. 0,45 % C	annealed	190	2					75	5		
		ca. 0,45 % C	tempered	250	3					70	5		
		ca. 0,75 % C	annealed	270	4					60	5		
		ca. 0,75 % C	tempered	300	5					55	5		
	Low-alloyed steel		annealed	180	6					75	5		
			tempered	275	7					60	5		
			tempered	300	8					55	5		
			tempered	350	9					55	5		
	High-alloyed steel and high-alloyed tool steel		annealed	200	10					70	5		
			hardened and tempered	325	11					55	5		
M	Stainless steel	ferritic/martensitic	annealed	200	12								
		martensitic	tempered	240	13								
		austenitic	quench hardened	180	14								
		austenitic-ferritic		230	15								
K	Grey cast iron	perlitic/ferritic		180	16	23	5	23	5	75	5	23	5
		perlitic (martensitic)		260	17	19	5	19	5	60	5	19	5
	Cast iron with spheroidal graphite	ferritic		160	18	19	5	19	5	60	5	19	5
		perlitic		250	19	17	5	17	5	50	5	17	5
	Malleable cast iron	ferritic		130	20	23	5	23	5	75	5	23	5
		perlitic		230	21	14	5	14	5	55	5	14	5
N	Aluminium wrought alloys	cannot be hardened		60	22	45	6	45	6			45	6
		hardenable	hardened	100	23	40	6	40	6			40	6
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	24	37	6	37	6			37	6
		≤ 12% Si, hardenable	hardened	90	25	35	6	35	6			35	6
		> 12% Si, cannot be hardened		130	26	32	6	32	6			32	6
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	37	6	37	6			37	6
		CuZn, CuSnZn		90	28	34	6	34	6			34	6
		CuSn, Pb-free copper, electrolytic copper		100	29	37	6	37	6			37	6
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30								
			hardened	280	31								
		Ni or Co bass	annealed	250	32								
			hardened	350	33								
			cast	320	34								
	Titanium alloys	pure titanium		R_m 400	35								
		α and β alloys	hardened	R_m 1050	36								
H	Hardened steel		hardened and tempered	55 HRC	37								
			hardened and tempered	60 HRC	38								
	Hard cast iron		cast	400	39								
	Hardened cast iron		hardened and tempered	55 HRC	40								
X	Non-metallic materials	Thermoplasts			41								
		Thermosetting plastics			42								
		Plastic, glass-fibre reinforced GFRP			43								
		Plastic, carbon fibre reinforced CFRP			44								
		Graphite			45								
		Wood			46								

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
With hole depths of 5xD adjust the cutting data accordingly to the application.
f-group = feed rate recommendations on page C140.
For examples of material for cutting tool groups view page D22.

Recommend feed rate

Solid carbide reamers

f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Selezionare la famiglia di prodotti adatta.
2. Determinare il rapporto di contatto.
3. Selezionare il materiale utilizzato e ricavare la velocità di taglio.
4. Determinare il gruppo di avanzamento e consultare i dati di avanzamento consigliati.
5. Selezionare il diametro dell'utensile e il rapporto di contatto.

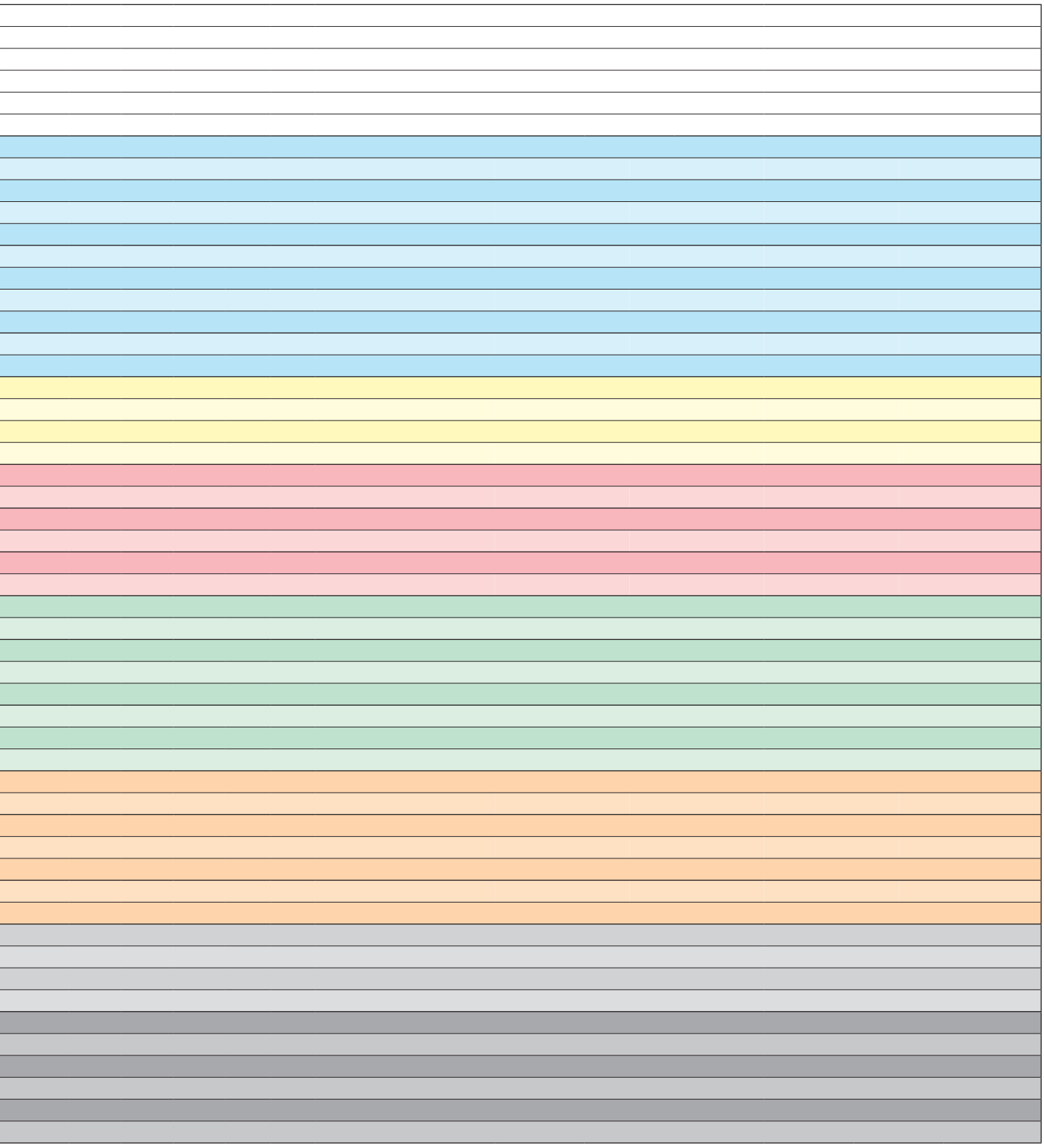
Alesatori in metallo duro integrale Dati di taglio consigliati

Alesatori in metallo duro integrale

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						3101H7		3102H7		3112H7		3103H7	
						YK10F		YK10F		KRG102		YK10F	
						Alimentazione refrigerante							
						Esterna	Gruppo f	Esterna	Gruppo f	Interna	Gruppo f	Esterna	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1					85	5		
		ca. 0,45 % C	Temprato	190	2					75	5		
		ca. 0,45 % C	pre-temprato	250	3					70	5		
		ca. 0,75 % C	Temprato	270	4					60	5		
		ca. 0,75 % C	pre-temprato	300	5					55	5		
	Acciaio al carbonio		Temprato	180	6					75	5		
			pre-temprato	275	7					60	5		
			pre-temprato	300	8					55	5		
			pre-temprato	350	9					55	5		
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10					70	5		
			temprato e rinvenuto	325	11					55	5		
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12								
		martensitico	pre-temprato	240	13								
		austenitico	quencing	180	14								
		austenitico-ferritico		230	15								
K	Ghisa grigia	perlitico/ferritico		180	16	23	5	23	5	75	5	23	5
		perlitico (martensitico)		260	17	19	5	19	5	60	5	19	5
	Ghisa sferodale	ferritico		160	18	19	5	19	5	60	5	19	5
		perlitico		250	19	17	5	17	5	50	5	17	5
	Ghisa malleabile	ferritico		130	20	23	5	23	5	75	5	23	5
		perlitico		230	21	14	5	14	5	55	5	14	5
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22	45	6	45	6			45	6
		invecchiabile	indurito	100	23	40	6	40	6			40	6
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	37	6	37	6			37	6
		≤ 12 % Si, invecchiabile	indurito	90	25	35	6	35	6			35	6
		> 12 % Si, non invecchiabile		130	26	32	6	32	6			32	6
	Rame e leghe di rame (bronzo/ ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27	37	6	37	6			37	6
		CuZn, CuSnZn		90	28	34	6	34	6			34	6
		CuSn, rame senza piombo e rame elettrolitico		100	29	37	6	37	6			37	6
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio CFK			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Per profondità di foratura di 5xD, i dati di taglio devono essere adattati al corrispondente campo di applicazione.
Gruppo f = i valori di avanzamento consigliati sono consultabili a pagina C168.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Alesatori in metallo duro integrale



Dati di avanzamento consigliato

Alesatori in metallo duro integrale

Gruppo f	Avanzamento [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

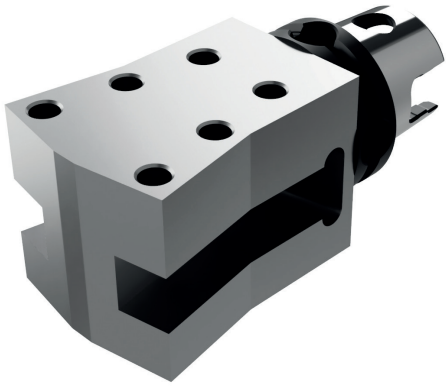
Note

Utensili speciali: il vostro utensile ottimizzato vi aspetta

Applicazioni speciali richiedono soluzioni speciali e ottimizzate. In ogni settore industriale, gli utensili speciali possono offrire vantaggi sul piano economico, tecnico o di processo rispetto alle soluzioni tradizionali. Per ogni singolo caso, collaboriamo insieme a voi per determinare l'esatto potenziale dei benefici considerando anche tutte le condizioni specifiche dei vostri cicli operativi. Nella nostra sede centrale europea di Düsseldorf, il Reparto ricerca e sviluppo di ZCC Cutting Tools Europe realizza per voi la soluzione su misura ideale per una lavorazione particolarmente economica.

Perché scegliere gli utensili speciali di ZCC Cutting Tools?

Sviluppiamo soluzioni per utensili su misura per voi e adatte alle più disparate tipologie di lavorazione. Collaborando a stretto contatto con voi sin dalle prime fasi, riusciamo a costruire gli utensili ottimizzati che soddisfano esattamente le vostre esigenze e le vostre priorità. Il nostro know-how pluriennale spazia dalla progettazione alla fabbricazione, sino ad arrivare alla logistica. Sfruttate le nostre competenze specialistiche per un successo nel lungo termine.



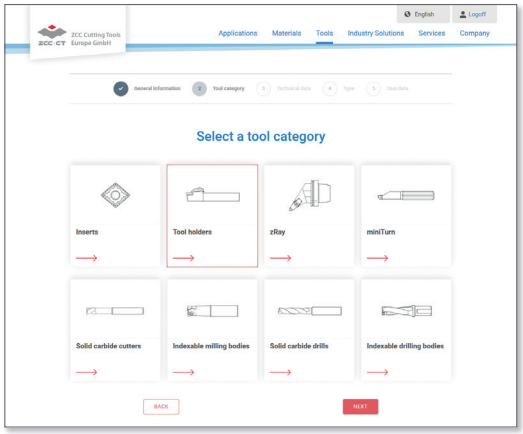
Esempio di supporto speciale



Esempio di punta speciale a gradino in metallo duro integrale

Il vostro utensile speciale personalizzato è a portata di mano

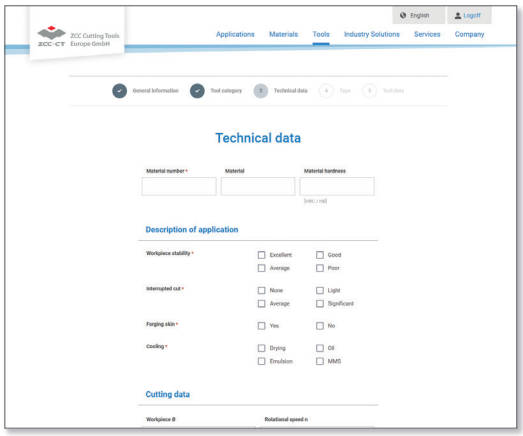
Lavorate con applicazioni per cui è possibile ottenere vantaggi in termini commerciali, tecnici o logistici impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (www.zccct-europe.com).



Home page "Strumento online per utensili speciali" con Selezione della categoria dell'utensile

Selezione della categoria dell'utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell'utensile

Definizione dei parametri dell'utensile

Successivamente potete seguire comodamente la procedura. Potete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

L'accesso rapido e diretto agli utensili speciali di ZCC Cutting Tools Europe.

Effettuate subito l'accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.

UTENSILI PER FILETTATURA IN METALLO DURO INTEGRALE



Utensili per filettatura in M. D. integrale

Panoramica prodotti	**C174**
Panoramica gradi	**C175**
Codice sistema – Utensili filettatura md integrale	**C176**
Maschi a rullare in M.D. integrale	**C177-C182**
Maschiatori in M.D. integrale	**C183-C190**
Frese a filettare inin M.D. integrale	**C191**
Dati di taglio consigliati	**C192-C197**
Informazioni tecniche	**C211-C213**
Gli utensili speciali	**C198-C199**

C

Utensili per filettatura in M. D. integrale

Panoramica prodotti

Prodotti	Utensili per filettatura in M. D. integrale	Ø	Applicazione						Versione	Pagina
			P	M	K	N	S	H		
4122A		M1-M2,5				✔			Maschi a rullare in metallo duro integrale	C177
4222A		M3-M16				✔			Maschi a rullare in metallo duro integrale	C178
4122M		M1-M2,5	✔	✔					Maschi a rullare in metallo duro integrale	C180
4222M		M3-M16	✔	✔					Maschi a rullare in metallo duro integrale	C181
4201C		M3-M16			✔				Maschiatori in md integrale, destro	C183
4202C		M3-M16			✔				Maschiatori in md integrale, diritto	C185
4201A		M3-M16				✔			Maschiatori in md integrale, destro	C187
4202A		M3-M16				✔			Maschiatori in md integrale, diritto	C189
4111		M3-M20	✔		✔	✔			Frese a filettare in metallo duro integrale	C191

✔ Molto adatto ✔ Adatto

Utensili per filettatura in M. D. integrale

Metallo duro rivestito PVD

Grado	Descrizione gradi
KTG402	Grado di metallo duro con rivestimento in PVD P20–M30/M20–P30 per la lavorazione di acciaio e acciaio inossidabile. Particolarmente adatta per utensili per filettatura.
KTG4015	Grado di metallo duro con rivestimento in PVD P20–M30/K20–K30 per la lavorazione di acciaio e materiali in ghisa. Particolarmente adatta per utensili per filettatura.

Metallo duro non rivestito

Grado	Descrizione gradi
YK40F	Substrato in metallo duro non rivestito K20-K30 / N20-N30 per l´asportazione di materiali in ghisa e metalli non ferrosi.

Frese a filettare in metallo duro

Codice sistema – utensili a filettare in metallo duro

4	2	0	1	A	(C)	(S)	– M5x0.8 –	6H
1	2	3	4	5	6	7	8	9

Versione	
Code	Descrizione
4	Utensili per filettatura

1

Versione del codolo	
Code	Descrizione
1	Codolo cilindrico
2	Codolo cilindrico DIN10
5	Codolo cilindrico DIN 6535 HA
9	Codolo conico

2

Tipologia utensile	
Code	Descrizione
0	Maschiatore
1	Fresa a filettare
2	Maschiatori a rullare

3

Scanalatura truciolo	
Code	Descrizione
1	Elicoidale destra
2	Scanalatura diritta
3	Elicoidale sinistra

4

Pezzo da lavorare	
Code	Descrizione
A	Lega di alluminio
C	Ghisa
M	Acciaio inossidabile
P	Acciaio
H	Materiali ad elevata durezza

5

Alimentazione refrigerante	
Code	Descrizione
C	Interna

6

Foro cieco	
Code	Descrizione
S	Foro cieco

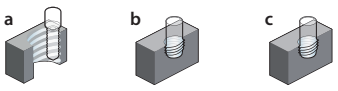
7

Versione filettatura [mm]	
Code	Descrizione
M5x0.8	Diametro x Passo
...	

8

Classe di precisione	
Code	Descrizione
6H	Tolleranza standard
6HX	Tolleranza finitura maggiore

9



a Fresatura a filettare **b** Maschiatura **c** Maschiatura a rullare

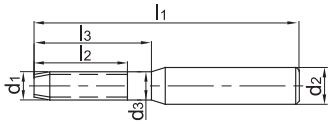
Maschiatori a rullare — Metalli non ferrosi

4122A



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT





Articolo	✲	Dimensioni [mm]								Denti	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3		d	YK40F
4122AS-M1*0.25-6H		1,5P	M1	0,25	3	1	40	5	6	3	0,9	○
4122AS-M1.2*0.25-6H		1,5P	M1,2	0,25	3	1,2	40	5	6	3	1,1	○
4122A-M1.6*0.35-6H		3P	M1,6	0,35	3	1,1	40	5	11	3	1,47	●
4122AS-M1.6*0.35-6H		1,5P	M1,6	0,35	3	1,1	40	5	11	3	1,47	●
4122A-M2*0.4-6H		3P	M2	0,4	3	1,5	45	6	12	3	1,85	●
4122AS-M2*0.4-6H		1,5P	M2	0,4	3	1,5	45	6	12	3	1,85	●
4122A-M2.5*0.45-6H		3P	M2,5	0,45	3	1,9	50	6	14	3	2,33	○
4122AS-M2.5*0.45-6H		1,5P	M2,5	0,45	3	1,9	50	6	14	3	2,33	●

● In magazzino ○ Su richiesta

✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto

✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

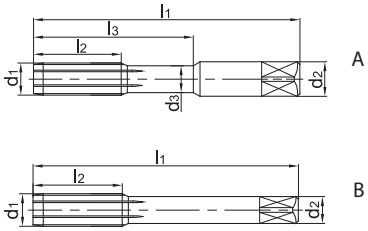
Maschiatori a rullare — Metalli non ferrosi

4222A



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	*	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4222A-M3*0.5-6H		3P	M3	0,5	3,5	2,3	56	6	18	4	A	2,8	○
4222AS-M3*0.5-6H		1,5P	M3	0,5	3,5	2,3	56	6	18	4	A	2,8	●
4222A-M4*0.5-6H		3P	M4	0,5	4,5	3,1	63	8	21	4	A	3,8	○
4222AS-M4*0.5-6H		1,5P	M4	0,5	4,5	3,1	63	8	21	4	A	3,8	○
4222A-M4*0.7-6H		3P	M4	0,7	4,5	3,1	63	8	21	4	A	3,7	○
4222AS-M4*0.7-6H		1,5P	M4	0,7	4,5	3,1	63	8	21	4	A	3,7	○
4222A-M5*0.5-6H		3P	M5	0,5	6	4,3	70	10	25	4	A	4,8	○
4222AS-M5*0.5-6H		1,5P	M5	0,5	6	4,3	70	10	25	4	A	4,8	○
4222A-M5*0.8-6H		3P	M5	0,8	6	4	70	10	25	4	A	4,65	○
4222AS-M5*0.8-6H		1,5P	M5	0,8	6	4	70	10	25	4	A	4,65	○
4222A-M6*0.75-6H		3P	M6	0,75	6	5	80	12	30	4	A	5,7	○
4222AS-M6*0.75-6H		1,5P	M6	0,75	6	5	80	12	30	4	A	5,7	○
4222A-M6*1-6H		3P	M6	1	6	4,7	80	12	30	4	A	5,6	○
4222AS-M6*1-6H		1,5P	M6	1	6	4,7	80	12	30	4	A	5,6	○
4222A-M7*1.0-6H		3P	M7	1	7	5,7	80	14	30	4	A	6,6	○
4222AS-M7*1.0-6H		1,5P	M7	1	7	5,7	80	14	30	4	A	6,6	○
4222A-M8*1.0-6H		3P	M8	1	8	6,7	90	16	35	4	A	7,6	○
4222AS-M8*1-6H		1,5P	M8	1	8	6,7	90	16	35	4	A	7,6	○
4222A-M8*1.25-6H		3P	M8	1,25	8	6,4	90	16	35	4	A	7,45	○
4222AS-M8*1.25-6H		1,5P	M8	1,25	8	6,4	90	16	35	4	A	7,45	○
4222A-M10*1-6H		3P	M10	1	10	8,7	100	20	39	5	A	9,6	○
4222AS-M10*1-6H		1,5P	M10	1	10	8,7	100	20	39	5	A	9,6	○
4222A-M10*1.25-6H		3P	M10	1,25	10	8,4	100	20	39	5	A	9,45	○
4222AS-M10*1.25-6H		1,5P	M10	1,25	10	8,4	100	20	39	5	A	9,45	○
4222A-M10*1.5-6H		3P	M10	1,5	10	8,1	100	20	39	5	A	9,35	○
4222AC-M10*1.5-6H	*	3P	M10	1,5	10	8,1	100	20	39	5	A	9,35	○
4222AS-M10*1.5-6H		1,5P	M10	1,5	10	8,1	100	20	39	5	A	9,35	○
4222ACS-M10*1.5-6H	*	1,5P	M10	1,5	10	8,1	100	20	39	5	A	9,35	○
4222A-M12*1.25-6H		3P	M12	1,25	9		110	24		5	B	11,45	○
4222AS-M12*1.25-6H		1,5P	M12	1,25	9		110	24		5	B	11,45	○
4222A-M12*1.5-6H		3P	M12	1,5	9		110	24		5	B	11,35	○
4222AS-M12*1.5-6H		1,5P	M12	1,5	9		110	24		5	B	11,35	○
4222A-M12*1.75-6H		3P	M12	1,75	9		110	24		5	B	11,25	○

● In magazzino ○ Su richiesta
* Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > C176 | Indicazioni d´uso > C201 | Dati di taglio > C192 | Ordine utensili speciali > C198

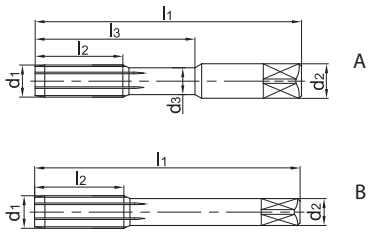
Maschiatori a rullare — Metalli non ferrosi

4222A



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✲	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4222AC-M12*1.75-6H	✲	3P	M12	1,75	9		110	24		5	B	11,25	○
4222AS-M12*1.75-6H		1,5P	M12	1,75	9		110	24		5	B	11,25	○
4222ACS-M12*1.75-6H	✲	1,5P	M12	1,75	9		110	24		5	B	11,25	○
4222A-M14*1.5-6H		3P	M14	1,5	11		110	26		6	B	13,35	○
4222AS-M14*1.5-6H		1,5P	M14	1,5	11		110	26		6	B	13,35	○
4222A-M14*2-6H		3P	M14	2	11		110	26		6	B	13,1	○
4222A-M16*1.5-6H		3P	M16	1,5	12		110	27		6	B	15,35	○
4222AS-M16*1.5-6H		1,5P	M16	1,5	12		110	27		6	B	15,35	○
4222A-M16*2-6H		3P	M16	2	12		110	27		6	B	15,1	○
4222AC-M16*2.0-6H	✲	3P	M16	2	12		110	27		6	B	15,1	○
4222AS-M16*2.0-6H		1,5P	M16	2	12		110	27		6	B	15,1	○
4222ACS-M16*2.0-6H	✲	1,5P	M16	2	12		110	27		6	B	15,1	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

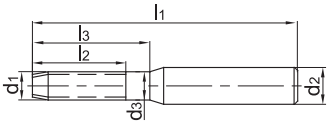
Maschiatori a rullare — Acciaio, acciaio inossidabile

4122M



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT





Articolo	✻	Dimensioni [mm]								Denti	Carotatrice	Grado	
			d_1	P	d_2	d_3	l_1	l_2	l_3		d	KTG402	YK40F
4122M-M1*0.25-6H		3P	M1	0,25	3		40	5	6	4	0,9	●	○
4122MS-M1*0.25-6H		2P	M1	0,25	3		40	5	6	4	0,9	●	○
4122M-M1.2*0.25-6H		3P	M1,2	0,25	3		40	5	6	4	1,1	○	○
4122MS-M1.2*0.25-6H		2P	M1,2	0,25	3		40	5	6	4	1,1	○	○
4122M-M1.6*0.35-6H		3P	M1,6	0,35	3	1,1	40	5	11	4	1,47	○	○
4122MS-M1.6*0.35-6H		2P	M1,6	0,35	3	1,1	40	5	11	4	1,47	○	○
4122M-M2*0.4-6H		3P	M2	0,4	3	1,5	45	6	12	4	1,85	●	○
4122MS-M2*0.4-6H		2P	M2	0,4	3	1,5	45	6	12	4	1,85	●	○
4122M-M2.5*0.45-6H		3P	M2,5	0,45	3	1,9	50	6	14	4	2,33	○	○
4122MS-M2.5*0.45-6H		2P	M2,5	0,45	3	1,9	50	6	14	4	2,33	●	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔				

✔ Molto adatto
✔ Adatto

Codice sistema > C176 | Indicazioni d´uso > C201 | Dati di taglio > C192 | Ordine utensili speciali > C198

Maschiatori a rullare

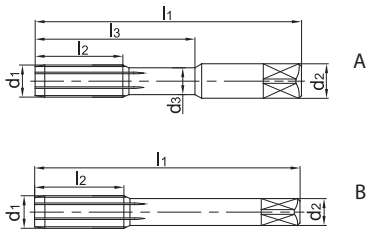
Acciaio, acciaio inossidabile

4222M



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado	
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	KTG402	YK40F
4222M-M3*0.5-6H		3P	M3	0,5	3,5	2,3	56	6	18	4	A	2,8	●	○
4222MS-M3*0.5-6H		2P	M3	0,5	3,5	2,3	56	6	18	4	A	2,8	○	○
4222M-M4*0.5-6H		3P	M4	0,5	4,5	3,1	63	8	21	4	A	3,8	●	○
4222MS-M4*0.5-6H		2P	M4	0,5	4,5	3,1	63	8	21	4	A	3,8	○	○
4222M-M4*0.7-6H		3P	M4	0,7	4,5	3,1	63	8	21	4	A	3,7	●	○
4222MS-M4*0.7-6H		2P	M4	0,7	4,5	3,1	63	8	21	4	A	3,7	●	○
4222M-M5*0.5-6H		3P	M5	0,5	6	4,3	70	10	25	4	A	4,8	●	○
4222MS-M5*0.5-6H		2P	M5	0,5	6	4,3	70	10	25	4	A	4,8	●	○
4222M-M5*0.8-6H		3P	M5	0,8	6	4	70	10	25	4	A	4,65	●	○
4222MS-M5*0.8-6H		2P	M5	0,8	6	4	70	10	25	4	A	4,65	●	○
4222M-M6*0.75-6H		3P	M6	0,75	6	5	80	12	30	4	A	5,7	●	○
4222MS-M6*0.75-6H		2P	M6	0,75	6	5	80	12	30	4	A	5,7	●	○
4222M-M6*1.0-6H		3P	M6	1	6	4,7	80	12	30	4	A	5,6	●	○
4222MS-M6*1.0-6H		2P	M6	1	6	4,7	80	12	30	4	A	5,6	●	○
4222M-M7*1.0-6H		3P	M7	1	7	5,7	80	14	30	4	A	6,6	○	○
4222MS-M7*1.0-6H		2P	M7	1	7	5,7	80	14	30	4	A	6,6	○	○
4222M-M8*1.0-6H		3P	M8	1	8	6,7	90	16	35	4	A	7,6	●	○
4222MS-M8*1.0-6H		2P	M8	1	8	6,7	90	16	35	4	A	7,6	○	○
4222M-M8*1.25-6H		3P	M8	1,25	8	6,4	90	16	35	4	A	7,45	●	○
4222MS-M8*1.25-6H		2P	M8	1,25	8	6,4	90	16	35	4	A	7,45	●	○
4222M-M10*1.0-6H		3P	M10	1	10	8,7	100	20	39	5	A	9,6	○	○
4222MS-M10*1.0-6H		2P	M10	1	10	8,7	100	20	39	5	A	9,6	○	○
4222M-M10*1.25-6H		3P	M10	1,25	10	8,4	100	20	39	5	A	9,45	○	○
4222MS-M10*1.25-6H		2P	M10	1,25	10	8,4	100	20	39	5	A	9,45	●	○
4222M-M10*1.5-6H		3P	M10	1,5	10	8,1	100	20	39	5	A	9,35	●	○
4222MC-M10*1.5-6H	✻	3P	M10	1,5	10	8,1	100	20	39	5	A	9,35	●	○
4222MS-M10*1.5-6H		2P	M10	1,5	10	8,1	100	20	39	5	A	9,35	●	○
4222MCS-M10*1.5-6H	✻	2P	M10	1,5	10	8,1	100	20	39	5	A	9,35	●	○
4222M-M12*1.25-6H		3P	M12	1,25	9		110	24		5	B	11,45	●	○
4222MS-M12*1.25-6H		2P	M12	1,25	9		110	24		5	B	11,45	●	○
4222M-M12*1.5-6H		3P	M12	1,5	9		110	24		5	B	11,35	○	○
4222MS-M12*1.5-6H		2P	M12	1,5	9		110	24		5	B	11,35	○	○
4222M-M12*1.75-6H		3P	M12	1,75	9		110	24		5	B	11,25	○	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔				

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

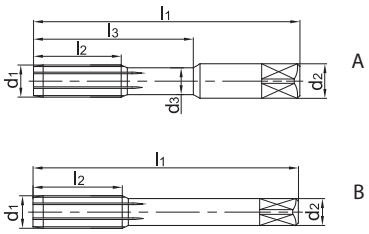
Maschiatori a rullare — Acciaio, acciaio inossidabile

4222M



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado	
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	KTG402	YK40F
4222MC-M12*1.75-6H	✻	3P	M12	1,75	9		110	24		5	B	11,25	○	○
4222MS-M12*1.75-6H		2P	M12	1,75	9		110	24		5	B	11,25	●	○
4222MCS-M12*1.75-6H	✻	2P	M12	1,75	9		110	24		5	B	11,25	○	○
4222M-M14*1.5-6H		3P	M14	1,5	11		110	26		6	B	13,35	●	○
4222MS-M14*1.5-6H		2P	M14	1,5	11		110	26		6	B	13,35	○	○
4222M-M14*2.0-6H		3P	M14	2	11		110	26		6	B	13,1	○	
4222MS-M14*2.0-6H		2P	M14	2	11		110	26		6	B	13,1	○	○
4222M-M16*1.5-6H		3P	M16	1,5	12		110	27		6	B	15,35	●	○
4222MS-M16*1.5-6H		2P	M16	1,5	12		110	27		6	B	15,35	○	○
4222M-M16*2.0-6H		3P	M16	2	12		110	27		6	B	15,1	○	○
4222MC-M16*2.0-6H	✻	3P	M16	2	12		110	27		6	B	15,1	○	○
4222MS-M16*2.0-6H		2P	M16	2	12		110	27		6	B	15,1	○	○
4222MCS-M16*2.0-6H	✻	2P	M16	2	12		110	27		6	B	15,1	●	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔	✔				

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

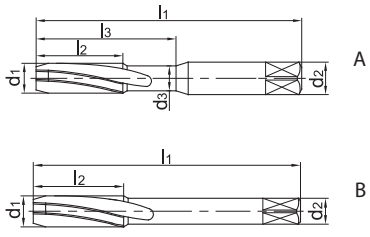
Maschiatori, scanalatura elicoidale destra — Ghisa

4201C



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4201C-M3*0.5-6H		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	●
4201C-M3*0.5-6HX		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	●
4201CS-M3*0.5-6H		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	●
4201CS-M3*0.5-6HX		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	●
4201C-M4*0.7-6H		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4201C-M4*0.7-6HX		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4201CS-M4*0.7-6H		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4201CS-M4*0.7-6HX		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4201C-M5*0.8-6H		3P	M5	0,8	6	4	70	16	25	3	A	4,2	●
4201C-M5*0.8-6HX		3P	M5	0,8	6	4	70	16	25	3	A	4,2	●
4201CS-M5*0.8-6H		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	●
4201CS-M5*0.8-6HX		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	●
4201C-M6*0.75-6H		3P	M6	0,75	6	5	80	19	30	3	A	5,25	●
4201C-M6*0.75-6HX		3P	M6	0,75	6	5	80	19	30	3	A	5,25	●
4201CS-M6*0.75-6H		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	●
4201CS-M6*0.75-6HX		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	●
4201C-M6*1-6H		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4201CC-M6*1-6H	✻	3P	M6	1	6	4,7	80	19	30	3	A	5	○
4201C-M6*1-6HX		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4201CS-M6*1.0-6H		1,5P	M6	1	6	4,7	80	19	30	3	A	5	●
4201CCS-M6*1-6H	✻	1,5P	M6	1	6	4,7	80	19	30	3	A	5	●
4201CS-M6*1.0-6HX		1,5P	M6	1	6	4,7	80	19	30	3	A	5	●
4201C-M7*1-6H		3P	M7	1	7	5,7	80	19	30	3	A	6	○
4201CS-M7*1.0-6H		1,5P	M7	1	7	5,7	80	19	30	3	A	6	●
4201C-M8*1-6H		3P	M8	1	8	6,7	90	20	35	3	A	7	○
4201CS-M8*1.0-6H		1,5P	M8	1	8	6,7	90	20	35	3	A	7	●
4201C-M8*1.25-6H		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	●
4201CC-M8*1.25-6H	✻	3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	●
4201C-M8*1.25-6HX		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	●
4201CS-M8*1.25-6H		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4201CCS-M8*1.25-6H	✻	1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4201CS-M8*1.25-6HX		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4201C-M10*1-6H		3P	M10	1	10	8,7	100	20	39	4	A	9	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

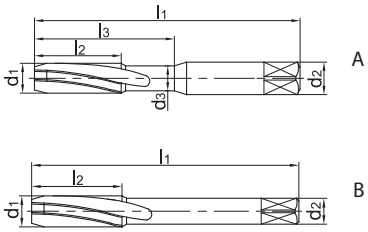
Maschiatori, scanalatura elicoidale destra — Ghisa

4201C



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✲	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4201CS-M10*1-6H		1,5P	M10	1	10	8,7	100	20	39	4	A	9	○
4201C-M10*1.25-6H		3P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4201CS-M10*1.25-6H		1,5P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4201C-M10*1.5-6H		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201CC-M10*1.5-6H	✲	3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201C-M10*1.5-6HX		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201CS-M10*1.5-6H		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201CCS-M10*1.5-6H	✲	1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	●
4201CS-M10*1.5-6HX		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201C-M12*1.25-6H		3P	M12	1,25	9		110	29		4	B	10,75	○
4201CS-M12*1.25-6H		1,5P	M12	1,25	9		110	29		4	B	10,75	○
4201C-M12*1.5-6H		3P	M12	1,5	9		110	29		4	B	10,5	○
4201CS-M12*1.5-6H		1,5P	M12	1,5	9		110	29		4	B	10,5	○
4201C-M12*1.75-6H		3P	M12	1,75	9		110	29		4	B	10,25	○
4201CC-M12*1.75-6H	✲	3P	M12	1,75	9		110	29		4	B	10,25	●
4201C-M12*1.75-6HX		3P	M12	1,75	9		110	29		4	B	10,25	○
4201CS-M12*1.75-6H		1,5P	M12	1,75	9		110	29		4	B	10,25	○
4201CCS-M12*1.75-6H	✲	1,5P	M12	1,75	9		110	29		4	B	10,25	○
4201CS-M12*1.75-6HX		1,5P	M12	1,75	9		110	29		4	B	10,25	○
4201C-M14*1.5-6H		3P	M14	1,5	11		110	30		4	B	12,5	○
4201CS-M14*1.5-6H		1,5P	M14	1,5	11		110	30		4	B	12,5	○
4201C-M14*2-6H		3P	M14	2	11		110	30		4	B	12	○
4201CS-M14*2-6H		1,5P	M14	2	11		110	30		4	B	12	○
4201C-M16*1.5-6H		3P	M16	1,5	12		110	32		4	B	14,5	○
4201CS-M16*1.5-6H		1,5P	M16	1,5	12		110	32		4	B	14,5	○
4201C-M16*2-6H		3P	M16	2	12		110	32		4	B	14	○
4201C-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	○
4201CS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	○
4201CS-M16*2.0-6HX		1,5P	M16	2	12		110	32		4	B	14	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C176 Indicazioni d´uso > C201 Dati di taglio > C192 Ordine utensili speciali > C198

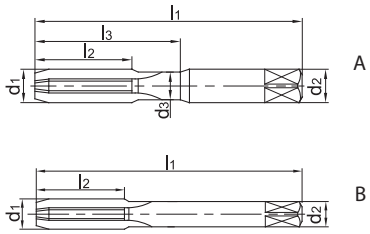
Maschiatori, scanalatura elicoidale diritta — Ghisa

4202C



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4202C-M3*0.5-6H		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202C-M3*0.5-6HX		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202CS-M3*0.5-6H		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202CS-M3*0.5-6HX		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202C-M4*0.7-6H		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4202C-M4*0.7-6HX		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202CS-M4*0.7-6H		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202CS-M4*0.7-6HX		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202C-M5*0.8-6H		3P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202C-M5*0.8-6HX		3P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202CS-M5*0.8-6H		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202CS-M5*0.8-6HX		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202C-M6*0.75-6H		3P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202C-M6*0.75-6HX		3P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202CS-M6*0.75-6H		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202CS-M6*0.75-6HX		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202C-M6*1.0-6H		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4202CC-M6*1.0-6H	✻	3P	M6	1	6	4,7	80	19	30	3	A	5	○
4202C-M6*1.0-6HX		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4202CS-M6*1.0-6H		1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4202CCS-M6*1.0-6H	✻	1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4202CS-M6*1.0-6HX		1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4202C-M7*1.0-6H		3P	M7	1	7	5,7	80	19	30	3	A	6	○
4202CS-M7*1.0-6H		1,5P	M7	1	7	5,7	80	19	30	3	A	6	○
4202C-M8*1-6H		3P	M8	1	8	6,7	90	20	35	3	A	7	○
4202CS-M8*1.0-6H		1,5P	M8	1	8	6,7	90	20	35	3	A	7	○
4202C-M8*1.25-6H		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202CC-M8*1.25-6H	✻	3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202C-M8*1.25-6HX		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202CS-M8*1.25-6H		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202CCS-M8*1.25-6H	✻	1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202CS-M8*1.25-6HX		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202C-M10*1.0-6H		3P	M10	1	10	8,7	100	20	39	4	A	9	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

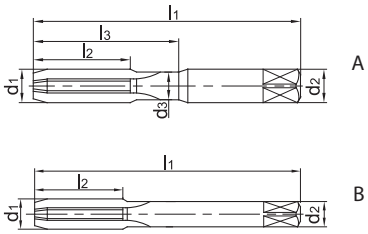
Maschiatori, scanalatura elicoidale diritta — Ghisa

4202C



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	*	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4202CS-M10*1.0-6H		1,5P	M10	1	10	8,7	100	20	39	4	A	9	○
4202C-M10*1.25-6H		3P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4202CS-M10*1.25-6H		1,5P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4202C-M10*1.5-6H		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202CC-M10*1.5-6H	✲	3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202C-M10*1.5-6HX		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202CS-M10*1.5-6H		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202CCS-M10*1.5-6H	✲	1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202CS-M10*1.5-6HX		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202C-M12*1.25-6H		3P	M12	1,25	9		110	29		4	B	10,75	○
4202CS-M12*1.25-6H		1,5P	M12	1,25	9		110	29		4	B	10,75	○
4202C-M12*1.5-6H		3P	M12	1,5	9		110	29		4	B	10,5	○
4202CS-M12*1.5-6H		1,5P	M12	1,5	9		110	29		4	B	10,5	○
4202C-M12*1.75-6H		3P	M12	1,75	9		110	29		4	B	10,25	○
4202CC-M12*1.75-6H	✲	3P	M12	1,75	9		110	29		4	B	10,25	○
4202C-M12*1.75-6HX		3P	M12	1,75	9		110	29		4	B	10,25	○
4202CS-M12*1.75-6H		1,5P	M12	1,75	9		110	29		4	B	10,25	○
4202CCS-M12*1.75-6H	✲	1,5P	M12	1,75	9		110	29		4	B	10,25	○
4202CS-M12*1.75-6HX		1,5P	M12	1,75	9		110	29		4	B	10,25	○
4202C-M14*1.5-6H		3P	M14	1,5	11		110	30		4	B	12,5	○
4202CS-M14*1.5-6H		1,5P	M14	1,5	11		110	30		4	B	12,5	○
4202C-M14*2.0-6H		3P	M14	2	11		110	30		4	B	12	○
4202CS-M14*2.0-6H		1,5P	M14	2	11		110	30		4	B	12	○
4202C-M16*1.5-6H		3P	M16	1,5	12		110	32		4	B	14,5	○
4202CS-M16*1.5-6H		1,5P	M16	1,5	12		110	32		4	B	14,5	○
4202C-M16*2-6H		3P	M16	2	12		110	32		4	B	14	○
4202C-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	○
4202CS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	○
4202CS-M16*2.0-6HX		1,5P	M16	2	12		110	32		4	B	14	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
		✔			

✔ Molto adatto
✔ Adatto

Codice sistema > C176 | Indicazioni d´uso > C201 | Dati di taglio > C192 | Ordine utensili speciali > C198

Utensili per filettatura in M. D. integrale

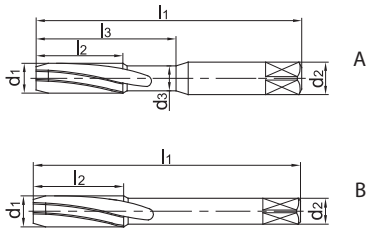
Maschiatori, scanalatura elicoidale destra — Metalli non ferrosi

4201A



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✲	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4201A-M3*0.5-6H		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	●
4201A-M3*0.5-6HX		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4201AS-M3*0.5-6H		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	●
4201AS-M3*0.5-6HX		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4201A-M4*0.7-6H		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4201A-M4*0.7-6HX		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4201AS-M4*0.7-6H		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	●
4201AS-M4*0.7-6HX		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4201A-M5*0.8-6H		3P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4201A-M5*0.8-6HX		3P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4201AS-M5*0.8-6H		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	●
4201AS-M5*0.8-6HX		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4201A-M6*0.75-6H		3P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4201A-M6*0.75-6HX		3P	M6	0,75	6	5	80	19	30	3	A	5,25	●
4201AS-M6*0.75-6H		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	●
4201AS-M6*0.75-6HX		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4201A-M6*1-6H		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4201AC-M6*1-6H	✲	3P	M6	1	6	4,7	80	19	30	3	A	5	○
4201A-M6*1-6HX		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4201AS-M6*1-6H		1,5P	M6	1	6	4,7	80	19	30	3	A	5	●
4201ACS-M6*1-6H	✲	1,5P	M6	1	6	4,7	80	19	30	3	A	5	●
4201AS-M6*1-6HX		1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4201A-M7*1-6H		3P	M7	1	7	5,7	80	19	30	3	A	6	○
4201AS-M7*1-6H		1,5P	M7	1	7	5,7	80	19	30	3	A	6	○
4201A-M8*1-6H		3P	M8	1	8	6,7	90	20	35	3	A	7	○
4201AS-M8*1-6H		1,5P	M8	1	8	6,7	90	20	35	3	A	7	●
4201A-M8*1.25-6H		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4201AC-M8*1.25-6H	✲	3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	●
4201A-M8*1.25-6HX		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4201AS-M8*1.25-6H		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	●
4201ACS-M8*1.25-6H	✲	1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	●
4201AS-M8*1.25-6HX		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4201A-M10*1-6H		3P	M10	1	10	8,7	100	20	39	4	A	9	●

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

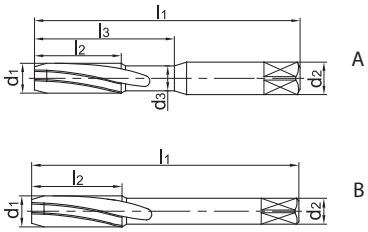
Maschiatori, scanalatura elicoidale destra — Metalli non ferrosi

4201A



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	*	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4201AS-M10*1-6H		1,5P	M10	1	10	8,7	100	20	39	4	A	9	●
4201A-M10*1.25-6H		3P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4201AS-M10*1.25-6H		1,5P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4201A-M10*1.5-6H		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201AC-M10*1.5-6H	*	3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	●
4201A-M10*1.5-6HX		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201AS-M10*1.5-6H		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	●
4201ACS-M10*1.5-6H	*	1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201AS-M10*1.5-6HX		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4201A-M12*1.25-6H		3P	M12	1,25	9		110	29		4	B	10,75	○
4201AS-M12*1.25-6H		1,5P	M12	1,25	9		110	29		4	B	10,75	○
4201A-M12*1.5-6H		3P	M12	1,5	9		110	29		4	B	10,5	○
4201AS-M12*1.5-6H		1,5P	M12	1,5	9		110	29		4	B	10,5	○
4201A-M12*1.75-6H		3P	M12	1,75	9		110	29		4	B	10,25	○
4201AC-M12*1.75-6H	*	3P	M12	1,75	9		110	29		4	B	10,25	○
4201A-M12*1.75-6HX		3P	M12	1,75	9		110	29		4	B	10,25	○
4201AS-M12*1.75-6H		1,5P	M12	1,75	9		110	29		4	B	10,25	●
4201ACS-M12*1.75-6H	*	1,5P	M12	1,75	9		110	29		4	B	10,25	○
4201AS-M12*1.75-6HX		1,5P	M12	1,75	9		110	29		4	B	10,25	○
4201A-M14*1.5-6H		3P	M14	1,5	11		110	30		4	B	12,5	○
4201AS-M14*1.5-6H		1,5P	M14	1,5	11		110	30		4	B	12,5	○
4201A-M14*2-6H		3P	M14	2	11		110	30		4	B	12	○
4201AS-M14*2-6H		1,5P	M14	2	11		110	30		4	B	12	○
4201A-M16*1.5-6H		3P	M16	1,5	12		110	32		4	B	14,5	○
4201AS-M16*1.5-6H		1,5P	M16	1,5	12		110	32		4	B	14,5	○
4201A-M16*2-6H		3P	M16	2	12		110	32		4	B	14	○
4201A-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	○
4201AS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	○
4201AS-M16*2-6HX		1,5P	M16	2	12		110	32		4	B	14	○

● In magazzino ○ Su richiesta
* Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema > C176 Indicazioni d´uso > C201 Dati di taglio > C192 Ordine utensili speciali > C198

Utensili per filettatura in M. D. integrale

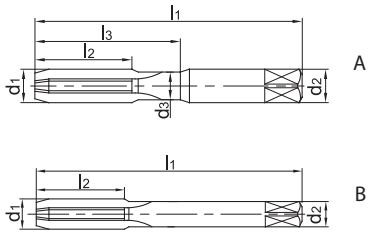
Maschiatori, scanalatura elicoidale diritta — Metalli non ferrosi

4202A



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	✻	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4202A-M3*0.5-6H		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202A-M3*0.5-6HX		3P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202AS-M3*0.5-6H		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202AS-M3*0.5-6HX		1,5P	M3	0,5	3,5	2,3	56	11	18	3	A	2,5	○
4202A-M4*0.7-6H		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202A-M4*0.7-6HX		3P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202AS-M4*0.7-6H		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202AS-M4*0.7-6HX		1,5P	M4	0,7	4,5	3,1	63	13	21	3	A	3,3	○
4202A-M5*0.8-6H		3P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202A-M5*0.8-6HX		3P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202AS-M5*0.8-6H		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202AS-M5*0.8-6HX		1,5P	M5	0,8	6	4	70	16	25	3	A	4,2	○
4202A-M6*0.75-6H		3P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202A-M6*0.75-6HX		3P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202AS-M6*0.75-6H		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202AS-M6*0.75-6HX		1,5P	M6	0,75	6	5	80	19	30	3	A	5,25	○
4202A-M6*1-6H		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4202AC-M6*1.0-6H	✻	3P	M6	1	6	4,7	80	19	30	3	A	5	○
4202A-M6*1-6HX		3P	M6	1	6	4,7	80	19	30	3	A	5	○
4202AS-M6*1.0-6H		1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4202ACS-M6*1-6H	✻	1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4202AS-M6*1.0-6HX		1,5P	M6	1	6	4,7	80	19	30	3	A	5	○
4202A-M7*1-6H		3P	M7	1	7	5,7	80	19	30	3	A	6	○
4202AS-M7*1.0-6H		1,5P	M7	1	7	5,7	80	19	30	3	A	6	○
4202A-M8*1-6H		3P	M8	1	8	6,7	90	20	35	3	A	7	○
4202AS-M8*1.0-6H		1,5P	M8	1	8	6,7	90	20	35	3	A	7	○
4202A-M8*1.25-6H		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202AC-M8*1.25-6H	✻	3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202A-M8*1.25-6HX		3P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202AS-M8*1.25-6H		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202ACS-M8*1.25-6H	✻	1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202AS-M8*1.25-6HX		1,5P	M8	1,25	8	6,4	90	22	35	3	A	6,75	○
4202A-M10*1-6H		3P	M10	1	10	8,7	100	20	39	4	A	9	○

● In magazzino ○ Su richiesta
✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

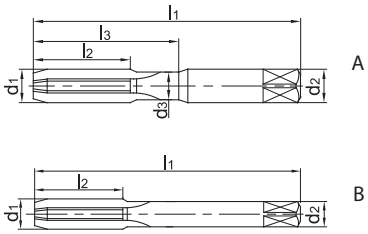
Maschiatori, scanalatura elicoidale diritta — Metalli non ferrosi

4202A



– Versione del codolo DIN 10
– Uscita refrigerante assiale





Articolo	*	Dimensioni [mm]								Denti	Geometria	Carotatrice	Grado
			d_1	P	d_2	d_3	l_1	l_2	l_3			d	YK40F
4202AS-M10*1.0-6H		1,5P	M10	1	10	8,7	100	20	39	4	A	9	○
4202A-M10*1.25-6H		3P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4202AS-M10*1.25-6H		1,5P	M10	1,25	10	8,4	100	24	39	4	A	8,75	○
4202A-M10*1.5-6H		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202AC-M10*1.5-6H	✲	3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202A-M10*1.5-6HX		3P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202AS-M10*1.5-6H		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202ACS-M10*1.5-6H	✲	1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202AS-M10*1.5-6HX		1,5P	M10	1,5	10	8,1	100	24	39	4	A	8,5	○
4202A-M12*1.25-6H		3P	M12	1,25	9		110	29		4	B	10,75	○
4202AS-M12*1.25-6H		1,5P	M12	1,25	9		110	29		4	B	10,75	○
4202A-M12*1.5-6H		3P	M12	1,5	9		110	29		4	B	10,5	○
4202AS-M12*1.5-6H		1,5P	M12	1,5	9		110	29		4	B	10,5	○
4202A-M12*1.75-6H		3P	M12	1,75	9		110	29		4	B	10,25	○
4202AC-M12*1.75-6H	✲	3P	M12	1,75	9		110	29		4	B	10,25	○
4202A-M12*1.75-6HX		3P	M12	1,75	9		110	29		4	B	10,25	○
4202AS-M12*1.75-6H		1,5P	M12	1,75	9		110	29		4	B	10,25	●
4202ACS-M12*1.75-6H	✲	1,5P	M12	1,75	9		110	29		4	B	10,25	○
4202AS-M12*1.75-6HX		1,5P	M12	1,75	9		110	29		4	B	10,25	○
4202A-M14*1.5-6H		3P	M14	1,5	11		110	30		4	B	12,5	○
4202AS-M14*1.5-6H		1,5P	M14	1,5	11		110	30		4	B	12,5	○
4202A-M14*2-6H		3P	M14	2	11		110	30		4	B	12	○
4202AS-M14*2.0-6H		1,5P	M14	2	11		110	30		4	B	12	○
4202A-M16*1.5-6H		3P	M16	1,5	12		110	32		4	B	14,5	○
4202AS-M16*1.5-6H		1,5P	M16	1,5	12		110	32		4	B	14,5	○
4202A-M16*2-6H		3P	M16	2	12		110	32		4	B	14	○
4202A-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	○
4202AS-M16*2.0-6H		1,5P	M16	2	12		110	32		4	B	14	○
4202AS-M16*2.0-6HX		1,5P	M16	2	12		110	32		4	B	14	○

● In magazzino ○ Su richiesta
✲ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
			✔		

✔ Molto adatto
✔ Adatto

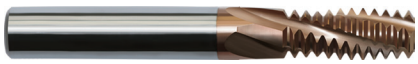
Codice sistema > C176 Indicazioni d´uso > C201 Dati di taglio > C192 Ordine utensili speciali > C198

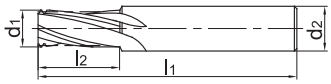
Frese a filettare, rivestita — Acciaio, ghise, metalli non ferrosi

4111



– Versione del codolo Codolo cilindrico standard di fabbrica ZCC-CT





Articolo	✻	Dimensioni [mm]						Denti	Carotatrice	Grado	
		D	d_1	P	d_2	l_1	l_2		d	KTG4015	YK40F
4111-M3*0.5		M3	2,35	0,5	4	50	6	3	2,5	●	●
4111-M4*0.7		M4	3,15	0,7	4	50	8	3	3,3	●	○
4111-M5*0.8		M5	4	0,8	6	50	10	3	4,2	●	○
4111-M5*0.5		M5	4,3	0,5	6	50	10	3	4,5	●	○
4111-M6*1		M6	4,75	1	6	60	12	4	5	●	●
4111-M6*0.75		M6	5	0,75	6	60	12	4	5,25	●	○
4111-M8*1.25		M8	6,45	1,25	8	60	16	4	6,75	●	●
4111-M8*1		M8	6,65	1	8	60	16	4	7	●	○
4111-M10*1.5		M10	8,1	1,5	10	75	20	4	8,5	●	○
4111-M10*1		M10	8,55	1	10	75	20	4	9	●	○
4111-M12*1.75		M12	9,75	1,75	12	75	24	4	10,25	●	○
4111-M12*1.25		M12	10,25	1,25	12	75	24	4	10,75	●	○
4111-M14*2		M14	11,4	2	14	75	28	4	12	●	○
4111-M14*1.5		M14	11,9	1,5	14	75	28	4	12,5	●	○
4111-M14*1		M14	12,35	1	14	75	20	4	13	●	○
4111-M16*2		M16	13,3	2	16	90	32	6	14	●	○
4111-M18*2.5		M18	14,75	2,5	18	90	36	6	15,5	●	○
4111-M18*1		M18	16,15	1	18	90	20	6	17	●	○
4111-M20*2.5		M20	16,65	2,5	18	100	40	6	17,5	●	○
4111-M20*2		M20	17,1	2	18	100	40	6	18	●	○

● In magazzino ○ Su richiesta

✻ Con raffreddamento interno

Campo di applicazione

P	M	K	N	S	H
✔		✔	✔		

✔ Molto adatto

✔ Adatto

Codice sistema C176 | Indicazioni d´uso C201 | Dati di taglio C192 | Ordine utensili speciali C198

Principi guida per i dati di taglio consigliati – Utensili per filettatura in metallo duro integrale

Solid carbide threading tools

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]							
						Thread former		Thread former				Thread former	
						4122A 4222A	4122M 4222M	4201C	4201A	4202C	4202A		
						YK40F	YK40F	YK40F	YK40F	YK40F	YK40F	KTG40115	
						Coolan:							
						external	external	external	external	external	external	external	f-group
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1		20					100	1
		ca. 0,45 % C	annealed	190	2		20					90	1
		ca. 0,45 % C	tempered	250	3		20					80	1
		ca. 0,75 % C	annealed	270	4		20					70	1
		ca. 0,75 % C	tempered	300	5		20					70	1
	Low-alloyed steel		annealed	180	6		20					90	1
			tempered	275	7		20					70	1
			tempered	300	8		20					60	1
			tempered	350	9		20					55	1
	High-alloyed steel and high-alloyed tool steel		annealed	200	10		20					80	1
			hardened and tempered	325	11		20					50	1
M	Stainless steel	ferritic/martensitic	annealed	200	12		20						
		martensitic	tempered	240	13		20						
		austenitic	quench hardened	180	14		20						
		austenitic-ferritic		230	15		20						
K	Grey cast iron	perlitic/ferritic		180	16			20		20		80	1
		perlitic (martensitic)		260	17			20		20		60	1
	Cast iron with spheroidal graphite	ferritic		160	18			15		15		80	1
		perlitic		250	19			15		15		60	1
	Malleable cast iron	ferritic		130	20			20		20		60	1
		perlitic		230	21			20		20		80	1
N	Aluminium wrought alloys	cannot be hardened		60	22							180	1
		hardenable	hardened	100	23							150	1
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	30	30		30		30	150	1
		≤ 12 % Si, hardenable	hardened	90	25	25	25		25		25	150	1
		> 12 % Si, cannot be hardened		130	26							150	1
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27							150	1
		CuZn, CuSnZn		90	28							150	1
		CuSn, Pb-free copper, electrolytic copper		100	29							150	1
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30								
			hardened	280	31								
		Ni or Co bass	annealed	250	32								
			hardened	350	33								
			cast	320	34								
	Titanium alloys	pure titanium		R_m 400	35								
		α and β alloys	hardened	R_m 1050	36								
H	Hardened steel		hardened and tempered	55 HRC	37								
			hardened and tempered	60 HRC	38								
	Hard cast iron		cast	400	39								
	Hardened cast iron		hardened and tempered	55 HRC	40								
X	Non-metallic materials	Thermoplasts			41								
		Thermosetting plastics			42								
		Plastic, glass-fibre reinforced GFRP			43								
		Plastic, carbon fibre reinforced CFRP			44								
		Graphite			45								
		Wood			46								

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
With hole depths of 5xD adjust the cutting data accordingly to the application.
f-group = feed rate recommendations on page C164.
For examples of material for cutting tool groups view page D22.

Recommend feed rate

Solid carbide threading tools

4

5

f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Selezionare la famiglia di prodotti adatta.
2. Determinare il rapporto di contatto.
3. Selezionare il materiale utilizzato e ricavare la velocità di taglio.
4. Determinare il gruppo di avanzamento e consultare i dati di avanzamento consigliati.
5. Selezionare il diametro dell'utensile e il rapporto di contatto.

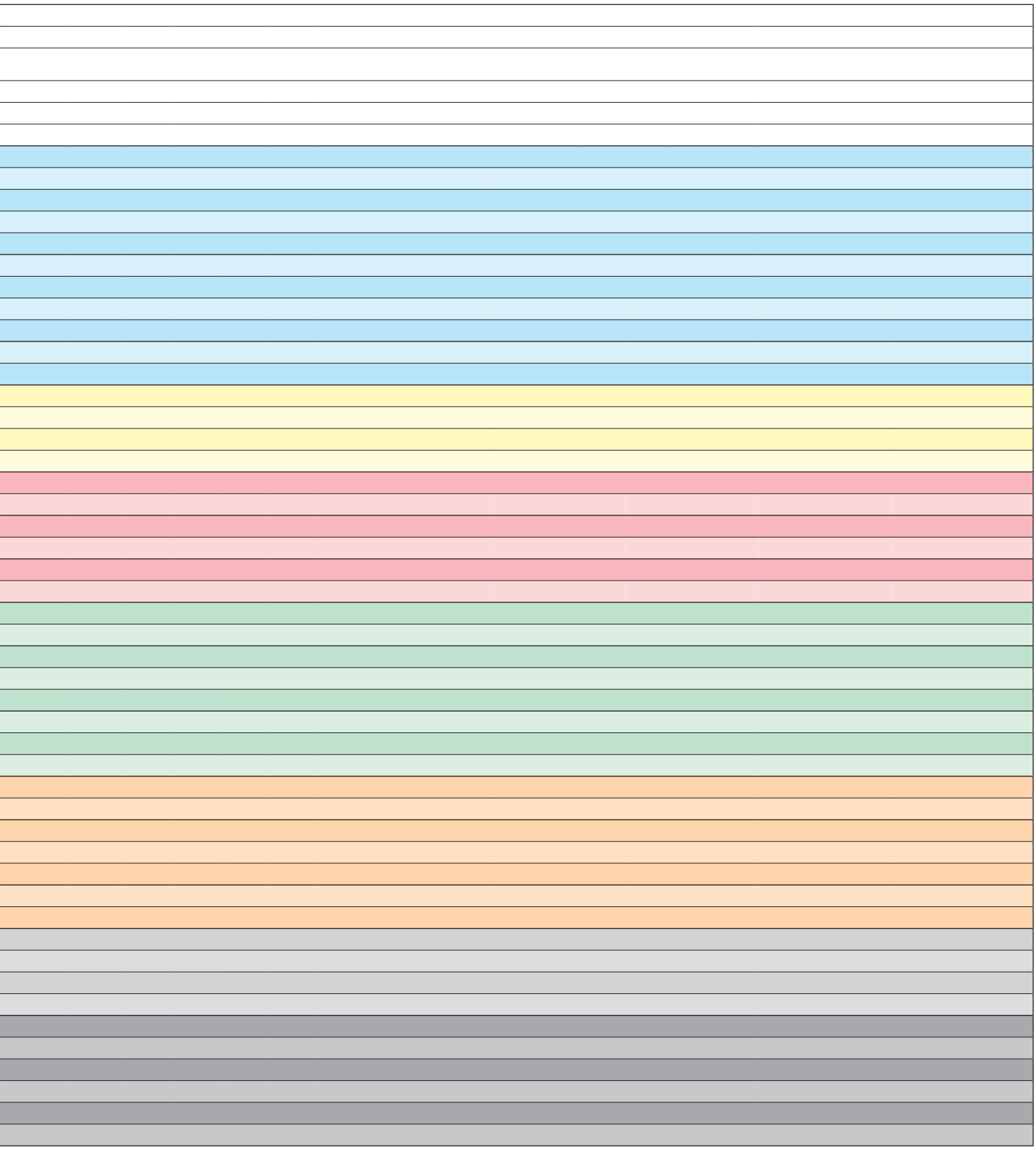
Utensili per filettatura in metallo duro integrale Dati di taglio consigliati

Utensili per filettatura in metallo duro integrale

Gruppo materiali		Composizione/Struttura/Trattamento termico		Durezza HB Brinell	Gruppo di sgrossatura	Velocità di taglio v_c [m/min]							
						Maschiatori a rullare		Maschiatore				Fresa a filettare	
						4122A 4222A	4122M 4222M	4201C	4201A	4202C	4202A	4111	
						YK40F	YK40F	YK40F	YK40F	YK40F	YK40F	KTG4015	
						Alimentazione refrigerante							
						Esterna	Esterna	Esterna	Esterna	Esterna	Esterna	Esterna	Gruppo f
P	Acciaio non legato	ca. 0,15 % C	Temprato	125	1		20					100	1
		ca. 0,45 % C	Temprato	190	2		20					90	1
		ca. 0,45 % C	pre-temprato	250	3		20					80	1
		ca. 0,75 % C	Temprato	270	4		20					70	1
		ca. 0,75 % C	pre-temprato	300	5		20					70	1
	Acciaio al carbonio		Temprato	180	6		20					90	1
			pre-temprato	275	7		20					70	1
			pre-temprato	300	8		20					60	1
			pre-temprato	350	9		20					55	1
	Acciaio alto legato e acciaio alto legato per utensili		Temprato	200	10		20					80	1
			temprato e rinvenuto	325	11		20					50	1
M	Acciaio inossidabile	ferritico/martensitico	Temprato	200	12		20						
		martensitico	pre-temprato	240	13		20						
		austenitico	quencing	180	14		20						
		austenitico-ferritico		230	15		20						
K	Ghisa grigia	perlitico/ferritico		180	16			20		20		80	1
		perlitico (martensitico)		260	17			20		20		60	1
	Ghisa sferodale	ferritico		160	18			15		15		80	1
		perlitico		250	19			15		15		60	1
	Ghisa malleabile	ferritico		130	20			20		20		60	1
		perlitico		230	21			20		20		80	1
N	Lavorazioni plastiche di leghe di alluminio	non invecchiabile		60	22							180	1
		invecchiabile	indurito	100	23							150	1
	Leghe di alluminio fuso	≤ 12 % Si, non invecchiabile		75	24	30	30		30		30	150	1
		≤ 12 % Si, invecchiabile	indurito	90	25	25	25		25		25	150	1
		> 12 % Si, non invecchiabile		130	26							150	1
	Rame e leghe di rame (bronzo/ottone)	Leghe per macchine di tipo multiplo, PB > 1 %		110	27							150	1
		CuZn, CuSnZn		90	28							150	1
		CuSn, rame senza piombo e rame elettrolitico		100	29							150	1
S	Leghe resistenti al calore	Base Fe	Temprato	200	30								
			indurito	280	31								
		Base Ni o Co	Temprato	250	32								
			indurito	350	33								
			fuso	320	34								
	Leghe di titanio	Titanio puro		R_m 400	35								
		Leghe Alpha + Beta	indurito	R_m 1050	36								
H	Acciaio temprato		temprato e rinvenuto	55 HRC	37								
			temprato e rinvenuto	60 HRC	38								
	Ghisa dura		fuso	400	39								
	Ghise temprate		temprato e rinvenuto	55 HRC	40								
X	Materiali non metallici	Termoplastiche			41								
		Termoindurenti			42								
		Vetroresina VTR			43								
		Plastica rinforzata in fibra di carbonio CFK			44								
		Grafite			45								
		Legno			46								

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.
Per profondità di foratura di 5xD, i dati di taglio devono essere adattati al corrispondente campo di applicazione.
Gruppo f = i valori di avanzamento consigliati sono consultabili a pagina C196.
Esempi di materiali per gruppi di taglio sono disponibili a pagina D11.

Utensili per filettatura in metallo duro integrale



Dati di avanzamento consigliato

Utensili per filettatura in metallo duro integrale

Gruppo f	Avanzamento [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: I dati di taglio dati sono valori guida, che sono stati determinati in condizioni ideali.
A seconda dell'applicazione, devono essere adattati individualmente.

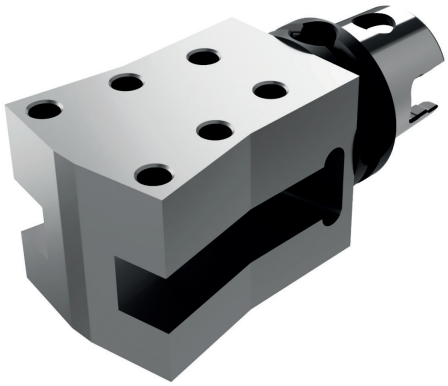
Note

Utensili speciali: il vostro utensile ottimizzato vi aspetta

Applicazioni speciali richiedono soluzioni speciali e ottimizzate. In ogni settore industriale, gli utensili speciali possono offrire vantaggi sul piano economico, tecnico o di processo rispetto alle soluzioni tradizionali. Per ogni singolo caso, collaboriamo insieme a voi per determinare l'esatto potenziale dei benefici considerando anche tutte le condizioni specifiche dei vostri cicli operativi. Nella nostra sede centrale europea di Düsseldorf, il Reparto ricerca e sviluppo di ZCC Cutting Tools Europe realizza per voi la soluzione su misura ideale per una lavorazione particolarmente economica.

Perché scegliere gli utensili speciali di ZCC Cutting Tools?

Sviluppiamo soluzioni per utensili su misura per voi e adatte alle più disparate tipologie di lavorazione. Collaborando a stretto contatto con voi sin dalle prime fasi, riusciamo a costruire gli utensili ottimizzati che soddisfano esattamente le vostre esigenze e le vostre priorità. Il nostro know-how pluriennale spazia dalla progettazione alla fabbricazione, sino ad arrivare alla logistica. Sfruttate le nostre competenze specialistiche per un successo nel lungo termine.



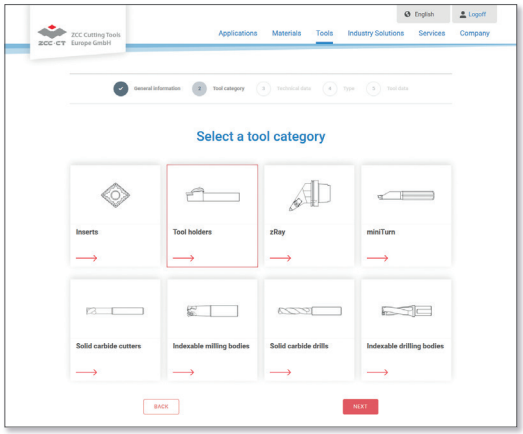
Esempio di supporto speciale



Esempio di punta speciale a gradino in metallo duro integrale

Il vostro utensile speciale personalizzato è a portata di mano

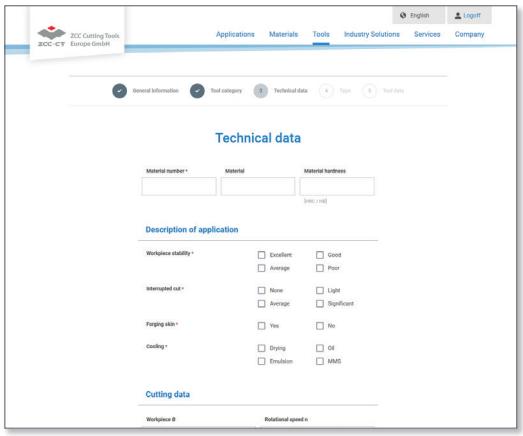
Lavorate con applicazioni per cui è possibile ottenere vantaggi in termini commerciali, tecnici o logistici impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (www.zccct-europe.com).



Home page "Strumento online per utensili speciali" con Selezione della categoria dell'utensile

Selezione della categoria dell'utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell'utensile

Definizione dei parametri dell'utensile

Successivamente potete seguire comodamente la procedura. Potete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

L'accesso rapido e diretto agli utensili speciali di ZCC Cutting Tools Europe.

Effettuate subito l'accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.

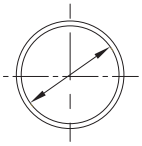
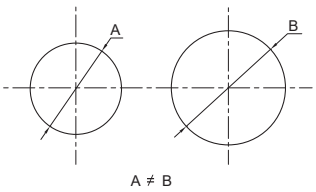
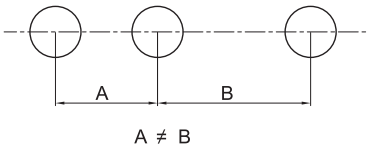
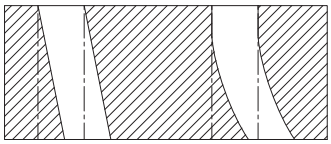
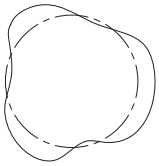
Note

Informazioni tecniche

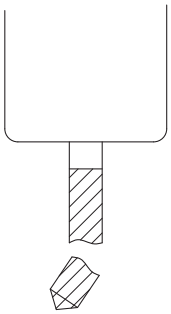
Misure per la risoluzione dei problemi – Foratura	**C202-C206**
Informazioni tecniche – Foratura	**C207-C213**
Gli utensili speciali – foratura	**C214**

C

Misure per la risoluzione dei problemi – punte in metallo duro integrale

Difetto	Causa	Soluzione
Foro troppo grande 	– Bloccaggio del pezzo o dell'utensile insufficiente – Errore di concentricità – Mandrino decentrato	– Utilizzare bloccaggio di precisione – Diminuire il gioco del mandrino – Controllare la condizione di serraggio della punta e regolarla
	– Angolo di punta non simmetrico – Errore di concentricità – Mandrino decentrato	– Riaffilare la punta – Controllare la riaffilatura
Dimensioni del foro irregolari 	– Angolo di punta non simmetrico – Errore di concentricità – Mandrino decentrato – Usura elevata	– Utilizzare bloccaggio di precisione – Diminuire il gioco del mandrino – Controllare la condizione di serraggio della punta e regolarla
	– Bloccaggio del pezzo o dell'utensile insufficiente – Errore di concentricità – Mandrino decentrato – Usura elevata	– Utilizzare bloccaggio di precisione – Diminuire il gioco del mandrino – Controllare la condizione di serraggio della punta e regolarla
	– Velocità di avanzamento troppo alta	– Ridurre la velocità di avanzamento
	– Refrigerante insufficiente	– Aumentare o modificare l'alimentazione del refrigerante
Posizionamento errato della punta 	– Serraggio insufficiente e posizionamento del mandrino – Errore di concentricità del mandrino elevato	– Migliorare il posizionamento della macchina – Utilizzare bloccaggio di precisione – Calibrare il mandrino – Controllare la condizione di serraggio della punta e regolarla
	– La direzione di avanzamento non è perpendicolare alla superficie del pezzo	– Impostare la direzione di avanzamento in maniera da risultare verticale rispetto alla superficie del pezzo
	– Il centro utensile non è allineato con il centro del mandrino (tornio)	– Allineare il centro dell'utensile
Percorso di foratura di scarsa qualità 	– Elevata usura dell'utensile	– Rettificare
	– Scarsa precisione di foratura	– Migliorare la posizione della punta
	– Angolo di punta non simmetrico – Errore di concentricità – Mandrino decentrato	– Riaffilare la punta – Controllare la riaffilatura
	– Stabilità della punta insufficiente	– Migliorare la stabilità della punta
	– Superficie del pezzo irregolare – Il centro utensile non è allineato con il centro del mandrino (torni)	– Il pezzo deve essere allineato orizzontalmente o pre-lavorato prima della foratura
Foro impreciso (rotondità) 	– Angolo di punta non simmetrico – Errore di concentricità – Centro di taglio decentrato – Usura elevata	– Riaffilare la punta – Controllare la riaffilatura
	– Serraggio insufficiente (pezzo, utensile) – Errore di concentricità del mandrino elevato	– Utilizzare bloccaggio di precisione – Calibrare il mandrino – Controllare la condizione di serraggio della punta e regolarla
	– Angolo di spoglia inferiore troppo grande	– Riaffilare la punta
	– Stabilità della punta insufficiente	– Migliorare la stabilità della punta

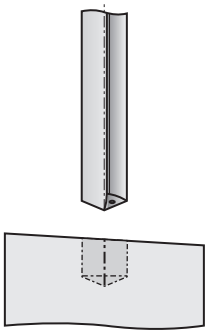
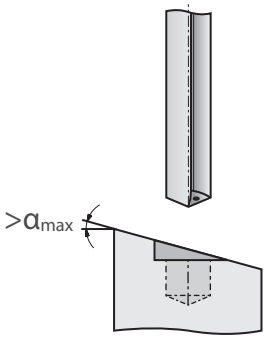
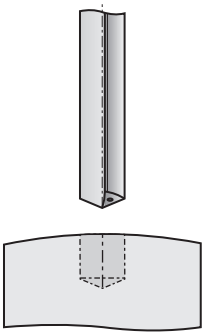
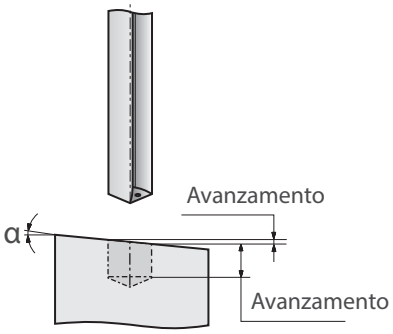
Misure per la risoluzione dei problemi – punte in metallo duro integrale

Difetto	Causa	Soluzione
Pessima finitura superficiale	– Scarsa riaffilatura della punta	– Migliorare la riaffilatura
	– Quantità di liquido refrigerante insufficiente o metodo errato	– Cambiare il metodo di alimentazione del refrigerante – Aumentare la quantità di refrigerante
	– Serraggio insufficiente – Grande errore di concentricità	– Utilizzare bloccaggio di precisione – Calibrare il mandrino
	– Velocità di avanzamento troppo alta	– Diminuire l'avanzamento
	– Elevata usura del tagliente – Elevata formazione di tagliente di riporto	– Riaffilare la punta – Utilizzare punte con rivestimento
	– Scarso deflusso del truciolo	– Selezionare una punta idonea (con scanalatura adeguata, angolo elicoidale, ecc) – Regolare la velocità di taglio (ridurre l'avanzamento ecc.)
Scarsa cilindricità 	– Angolo di punta non simmetrico – Errore di concentricità (foratura) – Centro di taglio decentrato – Elevata usura del tagliente – Velocità di avanzamento troppo bassa	– Riaffilare la punta – Controllare la riaffilatura – Aumentare l'avanzamento
Rottura della punta 	– Serraggio dell'utensile e/o del pezzo insufficiente	– Migliorare la stabilità o il serraggio dell'utensile o del pezzo
	– Angolo di spoglia inferiore troppo piccolo	– Utilizzare una punta con un angolo di spoglia inferiore più grande o riaffilare
	– Velocità di avanzamento troppo alta	– Diminuire l'avanzamento
	– Usura elevata	– Riaffilare la punta
	– Intasamento dei trucioli	– Selezionare una punta idonea (con scanalatura adeguata, angolo elicoidale, ecc) – Regolare la velocità di taglio – Diminuire l'avanzamento
	– Foratura su superfici irregolari	– Migliorare la stabilità dell'utensile o il serraggio della macchina o del pezzo – Punta con tagliente centrale affilato – Realizzare un pre-foro – Creare una superficie diritta (ad es. con frese in metallo duro integrale) – Utilizzo di una guida di riferimento o un inserto di riferimento
Scheggiatura della punta 	– Superficie dura o spazi vuoti	– Controllare il materiale e selezionare il grado corretto – Cambiare le condizioni di taglio (velocità di taglio, avanzamento o metodo di lavorazione)
	– Velocità di avanzamento troppo alta	– Diminuire l'avanzamento
	– Refrigerante insufficiente	– Migliorare/aumentare l'alimentazione di refrigerante
Scheggiatura sul tagliente 	– Bloccaggio errato – Grande errore di concentricità	– Utilizzare uno strumento di serraggio con precisione superiore – Allineare di nuovo il mandrino
	– Velocità di taglio e avanzamento troppo elevati	– Ridurre la velocità di taglio e l'avanzamento
	– Angolo di spoglia inferiore troppo grande	– Utilizzare una punta con un angolo di spoglia inferiore più grande o riaffilare

Misure per la risoluzione dei problemi – punte in metallo duro integrale

Difetto	Causa	Soluzione
Usura eccessiva 	– Mancata riaffilatura	– Eseguire la riaffilatura in tempo
	– La parte terminale della punta non è centrata	– Allineare la punta con il centro del mandrino
	– Velocità di taglio troppo elevata	– Ridurre la velocità di taglio
	– Angolo del tagliente non adatto	– Selezionare l'angolo del tagliente corretto
	– Grado tagliente non adatto	– Selezionare un materiale del tagliente adatto
	– Raffreddamento insufficiente	– Utilizzare una quantità di refrigerante sufficiente
Usura e scheggiature sul tagliente trasversale	– Velocità di avanzamento troppo alta	– Ridurre la velocità di avanzamento
	– Angolo del tagliente non adatto	– Selezionare l'angolo del tagliente corretto
	– Grado tagliente non adatto	– Selezionare un materiale del tagliente adatto
	– Angolo di spoglia inferiore troppo piccolo	– Riaffilare la punta
Rottura della fase di guida	– Guida di riferimento troppo grande	– Sostituire la guida di riferimento
Formazione di saldature in corrispondenza della fase di guida	– Elevata usura e produzione di calore	– Riaffilare la punta
	– Raffreddamento insufficiente	– Cambiare il metodo di alimentazione del refrigerante
	– Refrigerante errato	– Cambiare il tipo di refrigerante
	– Materiale difficile da sgrossare	– Selezionare punta con angolo di spoglia inferiore più piccolo
Vibrazioni elevate	– Angolo di spoglia inferiore troppo grande	– Riaffilare la punta
	– Stabilità della punta troppo bassa	– Migliorare la stabilità
Senza spira	– Trucioli lunghi – Asportazione insufficiente	– Ottimizzare i dati di taglio – Eventualmente cambiare la punta o regolare nuovamente la macchina
Usura su un solo lato	– La parte terminale della punta non è centrata	– Allineare la punta con il centro del mandrino
	– Bloccaggio errato	– Migliorare il serraggio della punta – Controllare la concentricità

Misure per la risoluzione dei problemi – serie PC

Lavorazione	Raccomandato
Foratura di superfici inclinate 	– Durante la foratura di superfici inclinate molto grandi, è consigliato un pre-trattamento (smussatura). 
Foratura di superfici convesse 	– Per superfici convesse ridurre la velocità di avanzamento conformemente. 

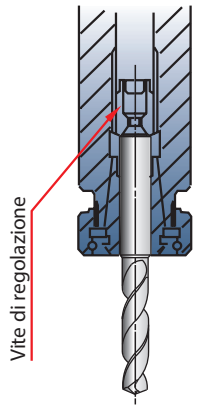
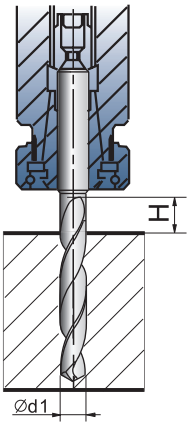
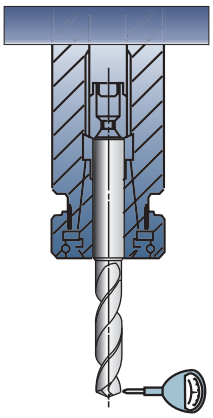
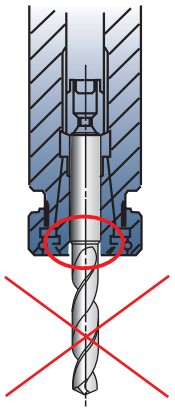
Angolo d'inclinazione	Max. avanzamento
1°	80 %
2°	50 %
3°	30 %

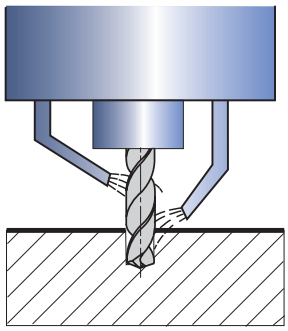
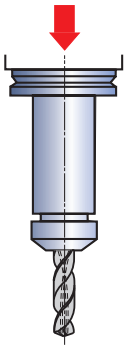
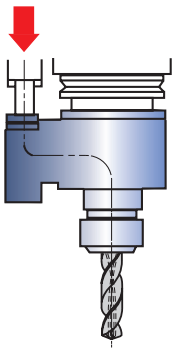
Misure per la risoluzione dei problemi – alesatori in metallo duro integrale

Difetto	Soluzioni
Foro troppo grande	– Diminuire il diametro dell'alesatore. – Controllare la concentricità dell'alesatore e del foro. – Controllare la concentricità dell'alesatore. – Verificare la presenza di graffi o danni sullo codolo dell'alesatore. – Utilizzare il refrigerante corretto. – Regolare i dati di taglio.
Foro troppo piccolo	– Aumentare il diametro dell'alesatore. – Ridurre la velocità di taglio. – Diminuire il margine. – Rettificare o sostituire l'alesatore. – Assicurare un adeguato raffreddamento.
Scarsa rotondità e rettilineità del foro	– Controllare la concentricità dell'alesatore. – Ridurre la sporgenza. – Controllare la concentricità dell'alesatore in condizione di serraggio. – Regolare la concentricità dell'alesatore e del foro. – Garantire l'uguaglianza dei margini di alesaggio.
Pessima finitura superficiale	– Ridurre la velocità di taglio. – Assicurare un corretto margine dell'alesatore. – Verificare l'usura o la formazione di saldature della fase di rastrematura dell'alesatore. – Assicurare la stabilità della macchina, dell'alloggiamento e dell'alesatore . – Verificare la corretta scelta dell'alesatore per l'impiego relativo. – Verificare il margine di foratura.
Bassa qualità del foro	– Estrarre l'alesatore nella direzione di taglio. – Ridurre la velocità di taglio – Impiegare alesatori a più taglienti. – Verificare la centricità e la concentricità. – Migliorare l'apporto di refrigerante. – Scelta della tipologia ottimale di refrigerante.
Rottura dell'alesatore e deformazione termica	– La qualità del foro guida è insufficiente. Verificare la punta e l'asse di foratura. – Assicurare l'apporto di una quantità di refrigerante sufficiente. – Assicurare l'apporto di una quantità di refrigerante sufficiente. – Impostare velocità di taglio e avanzamenti adeguati. – Migliorare la stabilità della macchina, dell'attacco o dell'utensile. – In caso di usura elevata del tagliente sostituire o riaffilare l'utensile.
Danneggiamento del codolo dell'alesatore	– Verificare la presenza di danni al manicotto e al portautensili.
Durata breve dell'utensile	– Verificare l'apporto di refrigerante. – Passare da alesatori con scanalatura diritta a quelli con scanalatura elicoidale. – Controllare i fattori che influenzano la precisione di lavorazione.
Superfici di foratura graffiate	– Esaminare il tagliente alla ricerca di eventuali formazioni di saldature e se necessario correggere i dati di taglio. – Migliorare il bloccaggio del pezzo.
Area di ingresso del foro troppo grande	– Migliorare il bloccaggio del pezzo. – Controllare la concentricità dell'alesatore nello stato bloccato. – Il centro dell'utensile non è allineato con il centro del foro. Regolare la concentricità.

Punte in metallo duro integrale

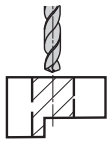
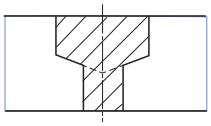
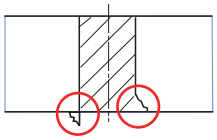
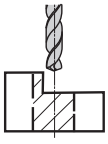
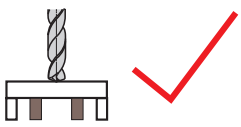
Avvertenze per l'utilizzo

Fissaggio corretto della punta	Lunghezza punta	Misurazione della tolleranza di concentricità	Fissaggio errato della punta
			
Utilizzare pinze di serraggio di precisione	H = 1,5 x d1	Errore di concentricità < 0,02 mm	Non bloccare sul tagliente

Alimentazione esterna di refrigerante	Alimentazione interna di refrigerante	
		
Sono ideali due linee di refrigerante (nella parte iniziale e terminale della punta, come mostrato nella figura sopra)	La pressione del refrigerante è di circa 0,5-1 mPa (per diametri inferiori a 5 mm, aumentare la pressione del refrigerante a 2 – 3 mPa). Flusso di liquido refrigerante: 1,5 – 4 L / min	

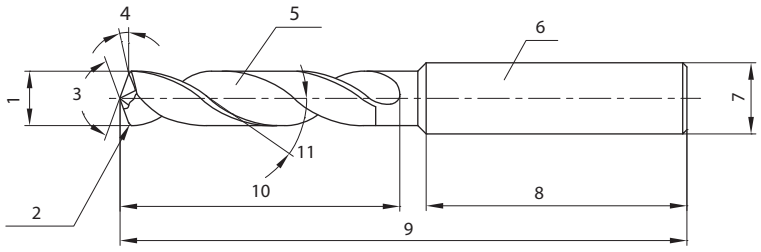
Utilizzo del refrigerante:

1. Piccole particelle possono ostruire i fori di refrigerazione. Pertanto, si prega di utilizzare un filtro per il refrigerante.
2. Un refrigerante molto sporco riduce il flusso dei trucioli. E' consigliabile sostituire regolarmente il refrigerante. Si prega di controllare che l'alimentazione del refrigerante non sia ostruita.

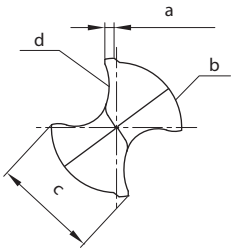
Lavorazione interrotta	Pezzi sottili	Foratura a gradino	Formazione di bave o scheggiature durante l'estrazione della punta
 Ridurre la velocità di avanzamento al punto di interruzione.		 – Praticare il foro più grande prima, poi quello più piccolo. – Su richiesta, offriamo inoltre punte a gradino in grado di praticare fori a gradino in un unico processo.	 – Ridurre l'avanzamento di circa la metà durante l'estrazione. – Utilizzare una punta con un altro angolo della punta.
 Spianare la superficie in anticipo con una fresa.	 Se i pezzi sottili si curvano, usare strumenti di supporto.		

Punte in metallo duro integrale

Spiegazione dei termini

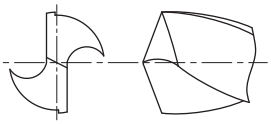
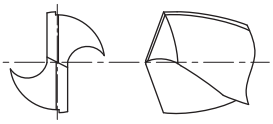
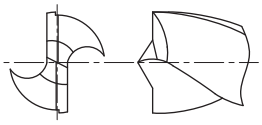


1. Diametro di foratura
2. Smusso
3. Angolo della punta
4. Angolo di spoglia inferiore
5. Tasca del truciolo
6. Codolo
7. Diametro stelo
8. Lunghezza stelo
9. Lunghezza totale
10. Lunghezza tagliente
11. Angolo di inclinazione dell'elica



a. Larghezza fase
b. Scanalatura del corpo
c. Larghezza fase primaria
d. Tagliente principale

Versione taglienti

Versione taglienti	 (conico)	 (piatto)	 (centrante)
Caratteristiche	– Il fianco è conico e l'angolo di spoglia inferiore aumenta verso il centro della punta. – Forma comune per materiali morbidi e duri.	– Fianco piatto per la sgrossatura leggera. – Questa forma è adatta per punte di piccolo diametro.	– Questa forma ha due punti angolari, per una migliore centratura e la riduzione di bave. – Adatto per la lavorazione di strutture in acciaio e lamiere.

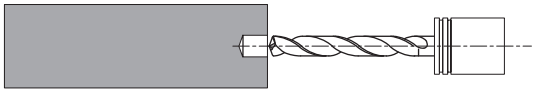
Punte in metallo duro integrale

Specifiche punte e dati di taglio

Scanalatura truciolo	Durante la foratura ,attraverso la tasca del truciolo, vengono asportati i trucioli.
Angolo di inclinazione dell'elica	L'angolo elicoidale individua il passo della scanalatura. Viene selezionato a seconda del materiale da lavorare. Materiale ad elevata durezza — piccolo ← angolo elicoidale → grande — Materiale morbido
Lunghezza tagliente e lunghezza elicoide	La lunghezza del tagliente deve tener conto della profondità del foro, della lunghezza della guida di riferimento e della lunghezza totale di riaffilatura. Più lunga è l'angolo di inclinazione dell'elica, minore è la stabilità della punta. Come risultato, la durata viene fortemente influenzata. È necessario mantenerla al valore più piccolo possibile. La lunghezza minima consigliata dell'elicoide dovrebbe essere la profondità del foro +1,5 x diametro.
Angolo della punta	L'angolo della punta normalmente è di 140°, per applicazioni speciali è consigliabili scegliere un utensile con un altro angolo. Materiale morbido, facile da lavorare — piccolo ← Angolo della punta → grande — Materiale temprato e foratura ad alte prestazioni
Diametro interno	Il diametro del nucleo è un fattore importante e influenza la stabilità e il controllo della truciolo. Bassa forza assiale, Bassa stabilità, Per materiali facili da sgrossare — piccolo ← diametro interno → grande — Elevata forza assiale, Alta stabilità, Per materiali temprati o forature trasversali
Larghezza di onatura	La larghezza della fase influenza la gestione e l'attrito della punta durante la lavorazione. Basso attrito e scarsa guida di foratura — piccolo ← Larghezza di onatura → grande — Alto attrito e buona guida di foratura
Sottosquadra	Per ridurre l'attrito durante la lavorazione, il diametro della punta del tagliente è leggermente ridotto fino allo codolo.
Scanalatura del corpo	Descrive la punta dietro la larghezza della fase. La scanalatura è necessaria al fine di ridurre l'attrito della punta durante la lavorazione.

Foratura profonda

1 Realizzazione di un foro pilota con 1534SP03C *



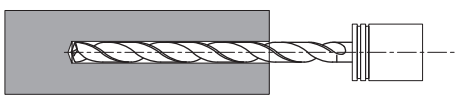
– L'angolo di punto della punta pilota deve essere maggiore rispetto a quello della punta SL.
– Il diametro della punta pilota deve essere 0,01-0,04 mm maggiore rispetto a quello della punta SL.
– La profondità del foro pilota deve essere 1–3×D

2 Inserimento della punta SL nel foro pilota



– Inserire la punta SL con una velocità di rotazione ridotta nel foro pilota. (V_C: 20–30 m/min)
– Fermarsi 1-3 mm prima della fine del foro. ($V_f = 0$)
– Aumentare la velocità di taglio ai parametri raccomandati e solo allora iniziare con l'avanzamento

3 Esecuzione del foro in profondità



– Forare con velocità e avanzamento di taglio adeguati.
– Per le forature trasversali ridurre l'avanzamento a 0.05 mm/u.

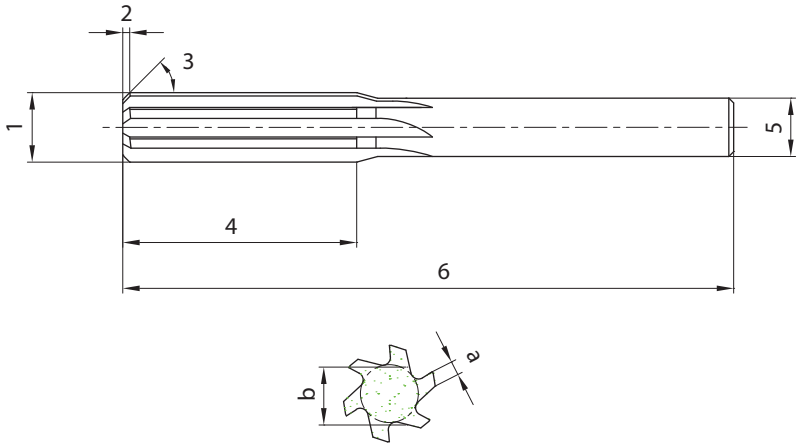
4 Estrazione della punta



– Dopo il raggiungimento della profondità di foratura desiderata, ridurre la velocità di taglio (V_C: 20–30 m/min) ed estrarre la punta con un avanzamento (V_f: 2000 mm/min)

Alesatori in metallo duro integrale

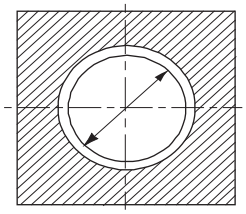
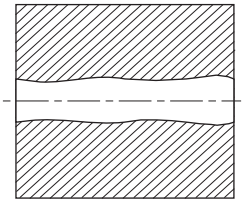
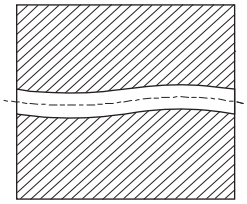
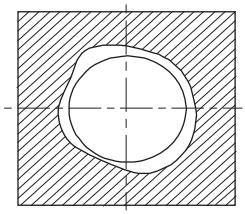
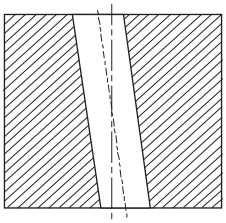
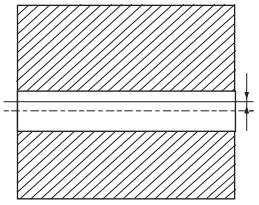
Spiegazione dei termini



1. Diametro nominale
2. Lunghezza smusso
3. Angolo di attacco
4. Lunghezza tagliente
5. Diametro stelo
6. Lunghezza totale

a. Durezza del tagliente
b. Diametro del nucleo

Per alesatura s'intendono le lavorazioni preliminari e di finitura di un foro preesistente entro una tolleranza determinata, con elevata qualità superficiale, concentricità perfetta, cilindricità ecc.
Per ottenere un foro perfetto mediante alesaggio, è importante selezionare correttamente l'alesatore e il diametro dello stesso. Inoltre è necessario tenere in considerazione le tolleranze di foratura, il materiale del pezzo e le condizioni della macchina. La qualità di foratura è inoltre fortemente influenzata dalla concentricità dell'utensile.

 Tolleranza/margine diametro	 Cilindricità	 Rettilineità
 Rotondità	 Deviazione verticale	 Decentraggio

Maschi a rullare in metallo duro integrale

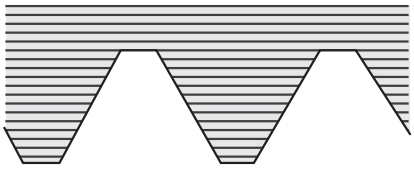
Cosa è la maschiatura a rullare?

Le fibre del materiale non vengono tagliate ma compresse sul fondo della filettatura. In contrapposizione al taglio, non viene perso alcun materiale, ma viene completamente conservato attraverso il rimodellamento.

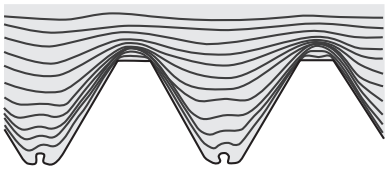
Vantaggi della maschiatura a rullare:
- La filettatura realizzata è molto più precisa.
- I filetti sono più resistenti alla trazione.
- I filetti hanno una superficie molto liscia.
- Sono possibili velocità e avanzamento più elevati rispetto alla filettatura.
- La maggiore durata dell'utensile aumenta la produttività.

Svantaggi della maschiatura a rullare:
- È necessaria la realizzazione del foro del nucleo.
- Non può essere usato come strumento a mano.
- Maggiore sviluppo di calore rispetto alla maschiatura
- Scelta del materiale limitata.
- Spesso è necessario l'uso di un agente di distacco.

La maschiatura a rullare dovrebbe essere impiegata per i materiali con buona deformabilità a freddo. Detti materiali sono, in aggiunta all'acciaio e all'acciaio inossidabile, le leghe di alluminio e anche metalli leggeri e le leghe leggere, con un resistenza allo snervamento di 1200 N/mm^2. Fondamentalmente si tratta di materiali che durante la foratura producono dei trucioli lunghi.



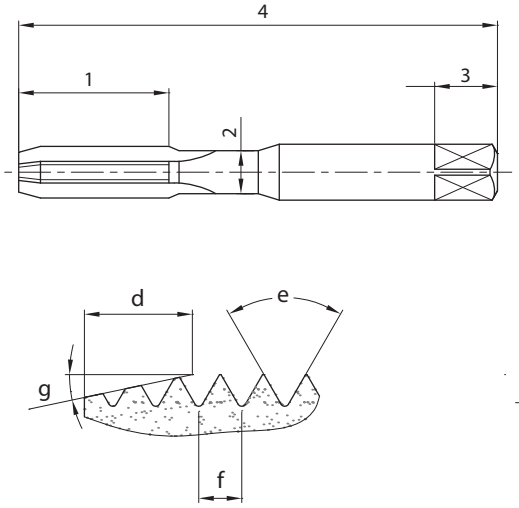
Orientamento delle fibre dopo la filettatura



Orientamento delle fibre dopo la maschiatura a rullare

Maschiatori in metallo duro integrale

Spiegazione dei termini



Lamatura e profilo del filetto

1. Lunghezza del filetto
2. Diametro del collo
3. Lunghezza del quadrato
4. Lunghezza totale

a. Diametro interno
b. Durezza del tagliente
c. Tasca del truciolo

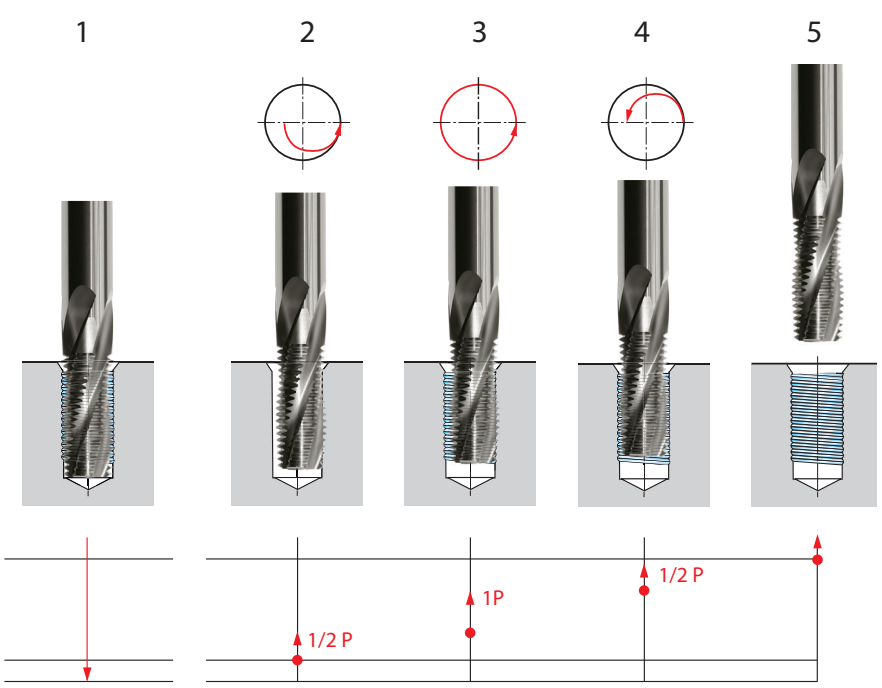
d. Lunghezza rastrematura
e. Angolo del profilo del filetto
f. Passo
g. Angolo di rastrematura

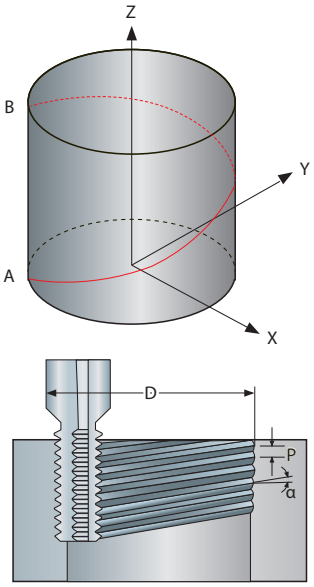
Vano truciolo e applicazione

Tipologia vano del truciolo	Proprietà	Applicazione
 Scanalatura elicoidale	– Vano del truciolo elicoidale – Nessun truciolo nel foro – Buona prestazione di rastrematura – Centraggio semplice	– Per materiali a truciolo lungo – Adatta per fori ciechi – Per fori con scanalatura assiale sulla parete interna
 Scanalatura diritta	– Tasca del truciolo con scanalatura diritta – Tagliente stabile – Facile da rettificare	– Per la lavorazione di pezzi temprati – Per materiali a trucioli corti – Per fori passanti e ciechi – Per materiali che producono usura

Frese a filettare in metallo duro integrale

Frese a filettare con codolo cilindrico – Esempio di lavorazione

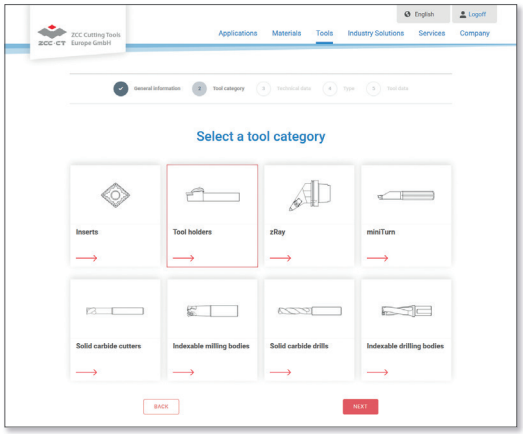




α Angolo di passo
D Diametro
p Passo

Andate direttamente all’utensile speciale personalizzato per operazioni di foratura

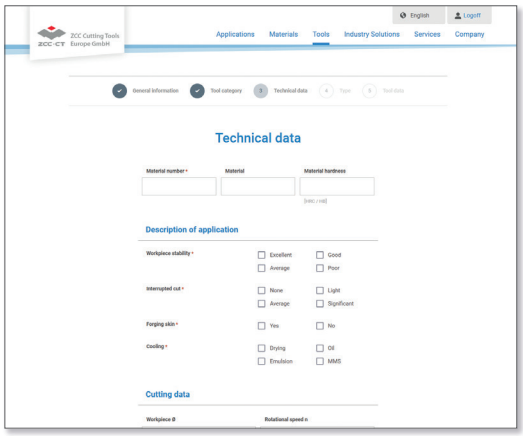
Lavorate con cicli di foratura per cui è possibile ottenere vantaggi in termini commerciali, tecnici, logistici o di processo impiegando utensili ottimizzati su misura e specifici per le vostre esigenze? ZCC Cutting Tools Europe vi offre consulenza e supporto personali nella programmazione, implementazione e ordinazione dei prodotti. Con il nostro innovativo Onlinetool dedicato alle richieste di utensili speciali, riceverete la vostra offerta personalizzata con pochi semplici passaggi (https://www.zccct-europe.com/it/gli-utensili/gli-utensili-speciali).



Home page “Strumento online per utensili speciali” con Selezione della categoria dell’utensile

Selezione della categoria dell’utensile

Scansionando il codice QR presente nella pagina, sarete reindirizzati alla home page del nostro strumento online per la richiesta di utensili speciali e qui potrete iniziare subito con la categoria precedentemente selezionata. È semplicissimo.



Definizione dei parametri pertinenti dell’utensile

Definizione dei parametri dell’utensile

Successivamente potrete seguire comodamente la procedura. Potrete inoltre caricare parti di disegni, bozze e modelli 3D già esistenti in tutta sicurezza.

Con noi, il vostro utensile speciale è a portata di mano.
ZCC Cutting Tools Europe GmbH.

Effettuate subito l’accesso al nostro sito web per visualizzare il nuovo **Modulo per utensili speciali**.

Informazioni tecniche

Tabella di confronto materiali	**D2-D8**
Tabella confronto durezza e resistenza alla trazione	**D9-D10**
Esempi materiali per gruppi	**D11**
Momento torcente per viti	**D12**

D

Tabella di confronto materiali

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
P	Acciaio legato											
	15	1015	1.0401	C15	080M15	–	1350	CC12	C15C16	F.111	–	
	20	1020	1.0402	C22	050A20	2C	1450	CC20	C20C21	F.112	–	20
	35	1035	1.0501	C35	060A35	–	1550	CC35	C35	F.113	–	35
	45	1045	1.0503	C45	080M40	–	1650	CC45	C45	F.114	–	45
	55	1055	1.0535	C55	070M55	–	1655	–	C55	–	–	55
	60	1060	1.0601	C60	080A62	43D	–	CC55	C60	–	–	60
	Y15	1213	1.7015	9SMn28	230M07	–	1912	S250	CF9SMn28	11SMn28	SUM22	15Ch
	–	12L13	1.0718	9SMnPb28	–	–	1914	S250Pb	CF9MnPb28	11SMnPb28	SUM22L	–
	–	–	1.0722	10SPb20	–	–	–	10PbF2	CF10Pb20	10SPb20	–	–
	–	1140	1.0726	35S20	212M36	8M	1957	35MF4	–	F210G	–	–
	Y13	1215	1.0736	9SMn36	240M07	1B	–	S300	CF9SMn36	12SMn35	–	–
	–	12L14	1.0737	9SMnPb36	–	–	1926	S300Pb	CF9SMnPb36	12SMnP35	–	–
	55Si2Mn	9255	1.0904	55Si9	250A53	45	2085	55S7	55Si8	56Si7	–	–
	–	9262	1.0961	60SiCr7	–	–	–	60SC7	60SiCr8	60SiCr8	–	–
	15	1015	1.1141	Ck15	080M15	32C	1370	XC12	C16	C15K	S15C	15
	40Mn	1039	1.1157	40Mn4	150M36	15	–	35M5	–	–	–	40G
	25	1025	1.1158	Ck25	–	–	–	–	–	–	S25C	25
	35Mn2	1335	1.1167	36Mn5	–	–	2120	40Mn5	–	36Mn5	SMn438(H)	35G2,35GL
	30Mn	1330	1.1170	28Mn6	150M28	14A	–	20M5	C28Mn	–	SCMn1	30G
	35Mn	1035	1.1183	Cf35	060A35	–	1572	XS38TS	C36	–	S35C	–
	Ck45	1045	1.1191	45	080M46	–	1672	XC42	C45	C45K	S45C	–
	55	1055	1.1203	Ck55	070M55	–	–	XC45	C50	C55K	S55C	55
	50	1050	1.1213	Cf53	060A52	–	1674	XC48TS	C53	–	S50C	–
	60Mn	1060	1.1221	Ck60	080A62	43D	1678	XC60	C60	–	S58C	60,60G
	–	1095	1.1274	Ck101	060A96	–	1870	–	–	–	SUP4	–
	–	–	1.3401	X120Mn12	Z120M12	–	–	X120M12	XG120Mn12	X120Mn12	SCMnH/1	110G13L
	Gr15;45Gr	52100	1.3505	100Cr6	534A99	31	2258	100C6	100Cr6	F.131	SUJ2	SchCh 15
	–	ASTM A204Gr.A	1.5415	15Mo3	1501-240	–	2912	15D3	16Mo3KW	16Mo3	–	–
	–	4520	1.5426	16Mo5	1503-245-420	–	–	–	16Mo5	16Mo5	–	–
	–	ASTM A350LF5	1.5622	14Ni6	–	–	–	16N6	14Ni6	15Ni6	–	–
	–	ASTM A353	1.5662	X8Ni9	1501-509;510	–	–	–	X10Ni9	XBNi09	–	–

Tabella di confronto materiali

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
P	**Acciaio legato**											
	–	2515	1.5680	12Ni19	–	–	–	Z18N5	–	–	–	–
	–	3135	1.5710	36NiCr6	640A35	111A	–	35NC6	–	–	SNC236	–
	–	3415	1.5732	14NiCr10	–	–	–	14NC11	16NiCr11	15NiCr11	SNC415(H)	–
	–	3415 3310	1.5752	14NiCr14	655M13 655A12	36A	–	12NC15	–	–	SNC815(H)	–
	–	9840	1.6511	36CrNiMo4	816M40	110	–	40NCD3	38CrNiMo4(KB)	35CrNiMo4	–	40 ChN2MA
	–	8620	1.6523	21NiCrMo2	850M20	362	2503	20NCD2	20NiCrMo2	20NiCrMo2	SNCCM220(H)	–
	–	8740	1.6546	40NiCrMo2	311-Type7	–	–	–	40NiCrMo2(KB)	40NiCrMo2	SNC240	38ChGNM
	40CrNiMoA	4340	1.6582	34CrNiMo6	817M40	24	2541	35NCD6	35CrNiMo6(KB)	–	–	38Ch2N2MA
	–	–	1.6587	17CrNiMo6	820A16	–	–	18NCD6	–	14CrNiMo13	–	–
	15Cr	5015	1.7015	15Cr3	523M15	–	–	12C3	–	–	SCr415(H)	15Ch
	35Cr	5132	1.7033	34Cr4	530A32	18B	–	32C4	34Cr4(KB)	35Cr4	SCr430(H)	35Ch
	40Cr	5140	1.7035	41Cr4	530M40	18	–	42C4	41Cr4	42Cr4	SCr440(H)	40Ch
	40Cr	5140	1.7045	42Cr4	–	–	2245	–	–	42Cr4	SCr440	40Ch
	18CrMn	5115	1.7131	16MnCr15	(527M20)	–	2511	16MC5	16MnCr15	16MnCr15	–	18ChG
	20CrMn	5155	1.7176	55Cr3	527A60	48	–	55C3	–	–	SUP9(A)	50ChGA
	30CrMn	4130	1.7218	25CrMo4	1717CDS110	–	2225	25CD4	25CrMo4(KB)	55Cr3	SCM420; SCM430	30ChM
	35CrMo	4137;4135	1.7220	34CrMo4	708A37	19B	2234	35CD4	35CrMo4	34CrMo4	SCM432; SCRRM3	AS38ChGM
	40CrMoA	4140;4142	1.7223	41CrMo4	708M40	19A	2244	42CD4TS	41CrMo4	41CrMo4	SCM440	40 ChFA
	42CrMo 42CrMnMo	4140	1.7225	42CrMo4	708M40	19A	2244	42CD4	42CrMo4	42CrMo4	SCM440(H)	–
	–	–	1.7262	15CrMo5	–	–	2216	12CD4	–	12CrMo4	SCM415(H)	–
	–	ASTM A182 F11;F12	1.7335	13CrMo44	1501- 620Gr.27	–	–	15CD3.5; 15CD4.5	14CrMo44	14CrMo45	–	12ChM , 15ChM
	–	–	1.7361	32CrMo12	722M24	40B	2240	30CD12	32CrMo12	F.124.A	–	–
	–	ASTM A182 F.22	1.7380	10CrMo910	1501- 622Gr.31;45	–	2218	12CD9;10	12CrMo9,10	TU.H	–	–
	–	–	1.7715	14MoV63	1503-660-440	–	–	–	–	13MoCrV6	–	–
	50CrVA	6150	1.8159	50CrV4	735A50	47	2230	50CV4	50CrV4	51CrV4	SUP10	50ChGFA
	–	–	1.8509	41CrAlMo7	905M39	41B	2940	40CAD6,12	41CrAlMo7	41CrAlMo7	–	38ChMJuA
	–	–	1.8523	39CrMoV139	897M39	40C	–	–	36CrMoV12	–	–	–

Tabella di confronto materiali

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/ SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
P	Acciaio legato											
	T10	W.110	1.1545	C105W1	–	–	1880	Y1105	C98KU C100KU	F.515 F.516	–	U10A
	T12A	W.112	1.1663	C125W	–	–	–	Y2120	C120KU	(C120)	SK2	U13
	CrV;9SiCr	L3	1.2067	100Cr6	BL3	–	–	Y100C6	–	100Cr6	–	–
	Cr12	D3	1.2080	X210Cr12	BD3	–	–	Z200Cr12	X210Cr13KU X250Cr12KU	X210Cr12	SKD1	Ch12
	4Cr5MoVSi	H13	1.2344	X40CrMoV5 1	BH13	–	2242	Z40CDV5	X35CrMoV05KU X40CrMoV51KU	X40CrMoV5	SKD61	4Ch5MF1S
	Cr6WV	A2	1.2363	X100CrMoV5 1	BA2	–	2260	Z100CDV5	X100CrMoV51KU	X100CrMoV5	SKD12	–
	CrWMo	–	1.2419	105WCr6	–	–	2140	105WC13	10WCr6 107WCr5KU	105WCr5	SKS31 SKS2 SKS3	ChWG
	Cr12W	–	1.2436	X210CrW12	–	–	2312	–	X215CrW12 1KU	X210CrW12	SKD2	–
	5CrNiMo	S1	1.2542	45WCrV7	BS1	–	2710	–	45WCrV8KU	45WCrSi8	–	–
	3Cr2W8V	H21	1.2581	X30WCrV9 3 X30WCrV93KU	BH21	–	–	Z30WCV9	X28W09KU X30WCrV9 3KU	X30WCrV9	SKD5	3Ch2W8F
	Cr12MoV	–	1.2601	X165CrMoV 12	–	–	2310	–	X165CrMoW12KU	X160CrMoV12	SKD11	–
	5CrNiMo	L6	1.2713	55NiCrMoV6	–	–	–	55NCDV7	–	F.250.S	SKT4	5ChNM
	V	W210	1.2833	100V1	BW2	–	–	Y1105V	–	–	SKS43	–
	W6Mo5Cr4V2Co5	–	1.3243	S6-5-2-5	–	–	2723	Z85WDKCV	HS6–5–2–5	HS6-5-2-5	SKH55	R6M5K5
	W18Cr4VCo5	T4	1.3255	S18-1-2-5	BT4	–	–	Z80WKCV 10-05-04-01	X78WCo1805KU	HS18-1-1-5	SKH3	–
	W6Mo5Cr4V2	M2	1.3343	S6-5-2	BM2	–	2722	Z85WDCV 06-05-04-02	X82WMo0605KU	HS6-5-2	SKH9	R6M5
	–	M7	1.3348	S2-9-2	–	-Z-	2782	Z100WCWV 09-02-04-02	HS2-9-2	HS2-9-2	–	–
	W18Cr4V	T1	1.3355	S18-0-1	BT1	–	–	Z80WCV 18-04-01	X75W18KU	HS18-0-1	SKH2	–
	W6Mo5Cr4V3	M3	–	S6-5-3	–	–	–	–	–	–	SKH52	–
	–	M42	–	–	BM42	–	–	–	–	–	SKH59	–

Tabella di confronto materiali

ISO	Denominazione standard per paese						Applicazione principale
	China	USA	Germany	Japan	Daido Steel Co., Ltd (Japan)	Russia	
	GB	AISI/SAE	DIN	JIS	DAIDO	GOST	
P	**Acciaio stampato**						
	–	P20 mod.		–	PX5N		Grandi stampi di precisione ad alta lucentezza per la produzione in serie. Parti per automobili, videocamere, elettrodomestici ecc.
	–	–		–	NAK55		Stampi di precisione ad alta lucentezza per videocamere, CD musicali, contenitori cosmetici, coperture trasparenti.
	–	–		–	NAK80		Stampi di precisione ad alta lucentezza per videocamere, CD musicali, contenitori cosmetici, coperture trasparenti e rivestimenti.
	3Cr13	420 mod.		SUS420J2 mod.	S-STAR		Per stampi ultra-sottili,riflettenti e resistenti alla corrosione per gli accessori di macchine fotografiche. CD, lenti, orologi da polso.
	Acciaio per utensili per lavorazioni a freddo						
	–	02	–	SKS93	YK30		Punzoni per stampi, calibri, taglierine, utensili
	9CrWMn	01 mod.	–	SKS3 mod.	GOA		Per matrici di taglio, calibri, maschiatori, utensili di perforazione, trafile a freddo
	Cr12MoV	D2	X165CrMoV12	SKD11	DC11		Per matrici di taglio, stampi a pressione a freddo, trafile a freddo, cilindri di trafilatura.
	–	D2 mod.	–	SKD11 mod.	DC53		Per matrici di taglio, stampi a pressione a freddo, trafile a freddo, cilindri di trafilatura.
	Acciaio per lavorazioni a caldo						
	4Cr5MoSiV1	H13	X40CrMoV51	SKD61	DHA1		Stampi a pressione in alluminio, raccordi per stampi a pressione, matrici a caldo, stampi per estrusione a caldo, lame resistenti al calore ecc,
	–	–	–	–	DH21		Stampi a pressione in alluminio di lunga durata
	–	–	–	–	DH31-S		Stampi a pressione
	–	–	–	–	DH2F		Stampi a pressione, stampi in plastica

Tabella di confronto materiali

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/ SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
M	**Acciaio inossidabile**											
	0Cr13; 1Cr12	403	1.4000	X6Cr13	403S17	–	2301	Z6C13	X6Cr13	F.3110	SUS403	08Ch13
	–	–	1.4001	X7Cr14	–	–	–	–	–	F.8401	–	–
	1Cr13	410	1.4006	X10Cr13	410S21	56A	2302	Z10C14	X12Cr13	F.3401	SUS410	12Ch13
	1Cr17	430	1.4016	X6Cr17	430S15	60	220	Z8C17	X8Cr17	F.3113	SUS430	12Ch17
	2Cr13	410	1.4021	X20Cr13	S62	56B; 56C	–	Z20C13	X20C13	F.3401	SUS410	20Ch13
	–	–	1.4027	G-X20Cr14	420C29	56B	–	Z20C13M	–	–	SCS2	20Ch13L
	4Cr13	–	1.4034	X46Cr13	420S45	56D	2304	Z40CM Z38C13M	X40Cr14	F.3405	SUS420J2	40Ch13
	1Cr17Ni2	431	1.4057	X20CrNi172	431S29	57	2321	Z15CNi6.02	X16CNi16	F.3427	SUS431	20Ch17N2
	Y1Cr17	430F	1.4104	X12CrMoS17	–	–	2383	Z10CF17	X10CrS17	F.3117	SUS430F	–
	1Cr17Mo	434	1.4113	X6CrMo171	434S17	–	2325	Z8CD17.01	X8CrMo17	–	SUS434	–
	–	–	1.4313	X5CrNi134	425C11	–	–	Z4CND13.4M	–	–	SCS5	–
	–	–	1.4408	G-X6CrNiMo1810	316C16	–	–	–	–	F.8414	SCS14	07Ch18N10G2S2M2L
	4Cr9Si2	HW3	1.4718	X45CrSi93	401S45	52	–	Z45CS9	X45CrSi8	F.322	SUH1	40Ch9S2
	0Cr13Al	405	1.4724	X10CrAl13	403S17	–	–	Z10C13	X10CrAl12	F.311	SUS405	10Ch13SJu
	Cr17	430	1.4742	X10CrAl18	430S15	60	–	Z10CAS18	X8Cr17	F.3113	SUS430	15Ch18SJu
	8Cr20Si2Ni	HNV6	1.4757	X80CrNiSi20	443S65	59	–	Z80CSN20.02	X80CrSiNi20	F.320V	SUH4	–
	2Cr25N	446	1.4762	X10CrAl24	–	–	2322	Z10CAS24	X16Cr26	–	SUH446	–
	Acciaio inossidabile austenitico											
	0Cr18Ni9	304	1.4301	X5CrNi1810	304S15	58E	2332	Z6CN18.09	X5CrNi1810	F.3551; F.3541; F.3504	SUS304	08Ch18N10
	1Cr18Ni9MoZr	303	1.4305	X10CrNiS189	303S21	58M	2346	Z10CNF18.09	X10CrNiS18.09	F.3508	SUS303	–
	0Cr19Ni10	304L	1.4306	X2CrNi1911	304S12	–	2352	Z2CN18.10	X2CrNi18.11	F.3503	SCS19	03Ch18N11
	–	–	1.4308	G–X6CrNi189	304C15	–	–	Z6CN18.10M	–	–	SCS13	07Ch18N9L
	Cr17Ni7	301	1.4310	X12CrNi177	–	–	2331	Z12CN17.07	X12CrNi1707	F.3517	SUS301	–
	–	304LN	1.4311	X2CrNiN1810	304S62	–	2371	Z2CN18.10	–	–	SUS304LN	–
	0Cr19Ni9	304	1.4350	X5CrNi189	304S31	58E	–	Z6CN18.09	X5CrNi1810	–	SUS304	–
	0Cr17Ni11Mo2	316	1.4401	X5CrNiMo1712	316S16	Z6CND17.11	2347	1.4401	X5CrNiMo1712	F.3543	SUS316	–
	00Cr17Ni13Mo2	316LN	1.4429	X2CrNiMoN17133	–	–	2375	Z2CND17.13	–	–	SUS316LN	–
	0Cr27Ni12Mo3	316L	1.4435	X2CrNiMo18143	316S12	–	2353	Z2CDN17.13	X2CrNiMo1713	–	SCS16,	03Ch17N14M2
	00Cr19Ni13Mo3	317L	1.4438	X2CrNiMo17133	317S12	–	2367	Z2CND19.15	X2CrNiMo18.16	–	SUS317L	–
	–	329L	1.4460	X8CrNiMo275	–	–	2324	–	–	–	SUS329L; SCH11; SCS11	–
	1Cr18Ni9Ti	321	1.4541	X6CrNiTi1810	2337	321S12	58B	Z6CNT18.10	X6CrNiTi1811	F.3553	SUS321	12Ch18N10T
	1Cr18Ni11Nb	347	1.4550	X6CrNiNb1810	347S17	58F	2338	Z6CNNb18.1	X6CrNiTi1811	F.3552	SUS347	08Ch18N12B
	Cr18Ni12Mo2Ti	316Ti	1.4571	X6CrNiMoTi17122	320S17	58J	2350	Z6NDT17.12	X6CrNiMoTi17	F.3535	–	10Ch17N13M2T

Tabella di confronto materiali

ISO	Denominazione standard per paese										
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/ SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
M	**Acciaio inossidabile austenitico**											
	–	–	1.4581	G–X5CrNiMoNb1810	318C7	–	–	Z4CNDNb1812M	XG8CrNiMo18	–	SCS22	–
	Cr17Ni12Mo3Nb	318	1.4583	X10CrNiMoNb1812	–	–	–	Z6CNDNb1713B	X6CrNiMoTiNb17	–	–	–
	1Cr23Ni13	309	1.4828	X15CrNiSi2012	309S24	–	–	Z15CNS20.1	–	–	SUH309	20Ch20N14S2
	0Cr25Ni20	310S	1.4845	X12CrNi2521	310S24	–	2361	Z12CN2520	X6CrNi2520	F.331	SUH310	20Ch23N18
	Cr15Ni36W3Ti	330	1.4864	X12NiCrSi3616	–	–	–	Z12CNS35.1	–	–	SUH330	–
	–	–	1.4865	G–X40NiCrSi3818	330C11	–	–	–	XG50NiCr3919	–	SCH15	–
	5Cr2Mn9Ni4N	EV8	1.4871	X53CrMnNiN219	349S54; 321S12	– 58B	–	Z52CMN21.0	X53CrMnNiN219	–	SUH35	55Ch20G9AN4
	1Cr18Ni9Ti	321	1.4878	X12CrNiTi189	321S320	58C	–	Z6CNT18.12	X6CrNiTi1811	F.3523	SU321	09Ch18N10T

ISO	Denominazione standard per paese									
	China	USA	Germany	Great Britain	Sweden	France	Italy	Spain	Japan	Russia
K	**GGG**									
	QT400-18	60-40-18	GGG40	400/17	0717-02	FGS370-17	GS370-17	FGE38-17	FCD400	VC 42–12
	QT450-10	65-45-12	––	420/12	––	FGS400-12	GS400-12	FGE42-12	FCD450	–
	QT500-7	70-50-05	GGG50	500/7	0727-02	FGS500-7	GS500-7	FGE50-7	FCD500	VC 50–2
	QT600-3	80-60-03	GGG60	600/7	0732-03	FGS600-2	GS600-2	FGE60-2	FCD600	VC 60–2
	QT700-2	100-70-03	GGG70	700/2	0737-01	FGS700-2	GS700-2	FGE70-2	FCD700	VC 70–2
	QT800-2	120-90-02	GGG80	800/2	0864-03	FGS800-2	GS800-2	FGE80-2	FCD800	VC 80–2
	QT900-2	––	––	900/2	––	––	––	––	––	–
	Ghisa grigia									
	––	NO.60	GG40	––	0140	FGL400	––	––		Sc 40
	HT350	NO.50	GG35	350	0135	FGL350	G35	FG35	FC350	Sc 35
	HT300	NO.45	GG30	300	0130	FGL300	G30	FG30	FC300	Sc 30
	HT250	NO.35	GG25	250	0125	FGL250	G25	FG25	FC250	Sc 25
	HT200	NO.30	GG20	200	0120	FGL200	G20	FG20	FC200	Sc 20
	HT150	NO.20	GG15	150	0115	FGL150	G15	FG15	FC150	Sc 15
	HT100	––	––	100	0110	––	G10	––	FC100	–

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
H	**Materiali temprati**											
	–	440A	1.4108	X100CrMo03	–	–	2258 08	–	–	–	C4BS	–
	–	610	1.4111	X100CrMoV15	–	–	2534 05	–	–		AC4A	–
	–	0-2	–	X65CrMo14	–	–	2541 06	–	–		AC4A	–

Tabella di confronto materiali

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
N	**Leghe di alluminio**											
	–	SC64D	3.2373	G-AlSi9MgWA			4251	A-S7G			C4BS	–
	–	DG-AlSi12		G-ALMG5	LM5		4252	A-SU12			AC4A	
	–	356.1			LM25		4244				A5052	
	–	A413.0		GD-AlSi12			4247				A6061	
	–	A380.1		GD-AlSi8Cu3	LM24		4250				A7075	
	–	A413.1		G-AlSi12(Cu)	LM20		4260				ADC12	
	–	A413.2		G-AlSi12	LM6		4261					
	–	A360.2		G-AlSi10Mg(Cu)	LM9		4253					

ISO	Denominazione standard per paese											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
S	**Leghe di nichel**											
	–	5391	LW2 4670	S-NiCr13A16MoNb	mar-46	–	–	NC12AD	–	–		
	–	AMS 5397	LW2 4674	NiCo15Cr10MoAlTi	–	–	–	–	–	–		
	–	5660	LW2.4662	NiFe35Cr14MoTi	–	–	–	ZSNCDT42	–	–		
	–	5383	LW2.4668	NiCr19Fe19NbMo	HR8	–	–	NC19eNB	–	–		
	–	–	2.4631	NiCr20TiAk	Hr401.601	–	–	NC20TA	–	–		–
	–	AMS 5399	2.4973	NiCr19Co11MoTi	–	–	–	NC19KDT	–	–		–
	–	AMS 5544	LW2.4668	NiCr19Fe19NbMo	–	–	–	NC20K14	–	–		
	–	5390A	2.4603	–	–	–	–	NC22FeD	–	–		–
	–	5666	2.4856	NiCr22Mo9Nb	–	–	–	NC22FeDNB	–	–		–
	–	–	2.4630	NiCr20Ti	HR5.2034	–	–	NC20T	–	–		–
	–	4676	2.4375	NiCu30AL3Ti	3072-76	–	–	–	–	–		–
	Leghe di cobalto											
	–	5537C AMS		CoCr20W15Ni	–	–	–	KC20WN	–	–		
	–	5772	LW2.4964	CoCr20W14Ni				KC22WN				
	Leghe di titanio											
	–	UNS R54520	3.7115.1	TiAl5Sn2.5	TA14/17	–	–	T-A5E	–	–		
	–							UNS R56400				
	–	–	3.7165.1	TiAl6V4	TA10-13/ TA28		–	UNS R56401	T-A6V	–	–	
	–			TiAl5V5Mo5Cr3								
	–	–	3.7185	TiAl4Mo4Sn4Si0.5	–	–	–	–	–	–		

Tabella di confronto durezza e resistenza alla trazione

Durezza				Resistenza alla trazione di rottura N/mm²
Rockwell Durezza		Vickers Durezza	Brinell Durezza	
HRC	HRA	HV	HB	
70.0	86.6	1037	—	—
69.5	86.3	1017	—	—
69.0	86.1	997	—	—
68.5	85.8	978	—	—
68.0	85.5	959	—	—
67.5	85.2	941	—	—
67.0	85.0	923	—	—
66.5	84.7	906	—	—
66.0	84.4	889	—	—
65.5	84.1	872	—	—
65.0	83.9	856	—	—
64.5	83.6	840	—	—
64.0	83.3	825	—	—
63.5	83.1	810	—	—
63.0	82.8	795	—	—
62.5	82.5	780	—	—
62.0	82.2	766	—	—
61.5	82.0	752	—	—
61.0	81.7	739	—	—
60.5	81.4	726	—	—
60.0	81.2	713	—	2555
59.5	80.9	700	—	2500
59.0	80.6	688	—	2450
58.5	80.3	676	—	2395
58.0	80.1	664	—	2345
57.5	79.8	653	—	2295
57.0	79.5	642	—	2250
56.5	79.3	631	—	2205
56.0	79.0	620	—	2160
55.5	78.7	609	—	2115
55.0	78.5	599	—	2075
54.5	78.2	589	—	2035
54.0	77.9	579	—	1995
53.5	77.7	570	—	1955
53.0	77.4	561	—	1920
52.5	77.1	551	—	1885
52.0	76.9	543	—	1850
51.5	76.6	534	—	1815

Durezza				Resistenza alla trazione di rottura N/mm²
Rockwell Durezza		Vickers Durezza	Brinell Durezza	
HRC	HRA	HV	HB	
51.0	76.3	525	501	1780
50.5	76.1	517	494	1750
50.0	75.8	509	488	1720
49.5	75.5	501	481	1690
49.0	75.3	493	474	1660
48.5	75.0	485	468	1630
48.0	74.7	478	461	1605
47.5	74.5	470	455	1575
47.0	74.2	463	449	1550
46.5	73.9	456	442	1525
46.0	73.7	449	436	1500
45.5	73.4	443	430	1475
45.0	73.2	436	424	1450
44.5	72.9	429	418	1430
44.0	72.6	423	413	1405
43.5	72.4	417	407	1385
43.0	72.1	411	401	1360
42.5	71.8	405	396	1340
42.0	71.6	399	391	1320
41.5	71.3	393	385	1300
41.0	71.1	388	380	1280
40.0	70.8	382	375	1260
40.0	70.5	377	370	1245
39.5	70.3	372	365	1225
39.0	70.0	367	360	1210
38.5	—	362	355	1190
38.0	—	357	350	1175
37.5	—	352	345	1160
37.0	—	347	341	1140
36.5	—	342	336	1125
36.0	—	338	332	1110
35.5	—	333	327	1095
35.0	—	329	323	1080
34.5	—	324	318	1065
34.0	—	320	314	1050
33.5	—	316	310	1035
33.0	—	312	306	1020
32.5	—	308	302	1010

Tabella di confronto durezza e resistenza alla trazione

Durezza				Resistenza alla trazione di rottura N/mm²	Durezza				Resistenza alla trazione di rottura N/mm²
Rockwell Durezza		Vickers Durezza	Brinell Durezza		Rockwell Durezza		Vickers Durezza	Brinell Durezza	
HRC	HRA	HV	HB		HRC	HRA	HV	HB	
32.0	—	304	298	995	24.0	—	249	245	820
31.5	—	300	294	980	23.5	—	246	242	810
31.0	—	296	291	970	23.0	—	243	240	800
30.5	—	292	287	960	22.5	—	240	237	790
30.0	—	289	283	950	22.0	—	237	234	785
29.5	—	285	280	935	21.5	—	234	232	775
29.0	—	281	276	920	21.0	—	231	229	765
28.5	—	278	273	910	20.5	—	229	227	760
28.0	—	274	269	900	20.0	—	226	225	750
27.5	—	271	266	890	19.5	—	223	222	745
27.0	—	268	263	880	19.0	—	221	220	735
26.5	—	264	260	870	18.5	—	218	218	730
26.0	—	261	257	860	18.0	—	216	216	725
25.5	—	258	254	850	17.5	—	214	214	715
25.0	—	255	251	835	17.0	—	211	211	710
24.5	—	252	248	830					

Osservazioni: I valori indicati nella tabella sono utilizzabili per l'acciaio al carbonio.

Esempi materiali per gruppi

Materiale cod.	Denominazione	Gruppo di sgrossatura
1.0722	10SPb20	1
1.0715	9SMn28	1
1.0736	9SMn36	1
1.0718	9SMnPb28	1
1.0737	9SMnPb36	1
1.0401	C15	1
1.0402	C22	1
1.1141	Ck15	1
1.1170	28Mn6	2
1.0726	35S20	2 / 3
1.1167	36Mn5	2 / 3
1.1157	40Mn4	2 / 3
1.0501	C35	2 / 3
1.0503	C45	2 / 3
1.1191	Ck45	2 / 3
1.1183	Cf35	2 /3
1.1213	Cf53	2 /3
1.1545	C 105 W1	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C55	4 / 5
1.0601	C60	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr6	5 / 9
1.5120	38MnSi 4	5 / 9
1.1545	C 105 W2	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C65	4 / 5
1.0601	C70	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr7	5 / 9
1.5120	38MnSi 5	5 / 9
1.1545	C 105 W3	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C75	4 / 5
1.0601	C80	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr8	5 / 9
1.5120	38MnSi 6	5 / 9
1.1545	C 105 W4	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C85	4 / 5
1.0601	C90	4 / 5
1.1274	Ck101	4 / 5

Materiale cod.	Denominazione	Gruppo di sgrossatura
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr9	5 / 9
1.5120	38MnSi 7	5 / 9
1.1545	C 105 W5	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C95	4 / 5
1.0601	C100	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr10	5 / 9
1.5120	38MnSi 8	5 / 9
1.5680	12Ni19	10 / 11
1.3255	S 18-1-2-5	10 / 11
1.3348	S 2-9-2	10 / 11
1.3343	S 6-5-2	10 / 11
1.3243	S 6-5-2-5	10 / 11
1.2363	X 100 CrMoV 5-1	10 / 11
1.2601	X165CrMoV12	10 / 11
1.2080	X210 Cr 12	10 / 11
1.2581	X30WCrV 9-3	10 / 11
1.2344	X40CrMoV 5-1	10 / 11
1.4718	X45CrSi9-3	10 / 11
1.3355	S 18–0–1	10 /11
1.4027	G–X20Cr14	12 / 13
1.4006	X12 Cr 13	12 / 13
1.4104	X12CrMoS 17	12 / 13
1.4057	X19CrNi 17-2	12 / 13
1.4034	X46Cr 13	12 / 13
1.4871	X53 CrMnNiN 21-9	12 / 13
1.4113	X6CrMo 17	12 / 13
1.4000	X6CR 13	12 / 13
1.4001	X7Cr14	12 / 13
1.4016	X6Cr17	12 / 13
1.4581	G–X5CrNiMoNb 18	14
1.4308	G–X6CrNi 18-9	14
1.4408	G–X6CrNiMo 18-10	14
1.4583	X6CrNiMoNb 18-12	14
1.4571	X6CrNiMoTi 17-12-2	14
1.4550	X6CrNiNb 18-10	14
1.4541	X14CrNiTi 18-10	14
1.4845	X12CrNi 25-21	14
1.4310	X10CrNi 18-8	14
1.4305	X10CrNiS 18-10	14
1.4878	X12CrNiTi 18-9	14
1.4317	X2CrNi 18-8	14
1.4436	X3CrNiMo 17-13-3	14
1.4440	X2CrNiMo 18-16	14

Materiale cod.	Denominazione	Gruppo di sgrossatura
1.4429	X2CrNiMoN 17-13-3	14
1.4311	X2CrNiN 18-10	14
1.4301	X5CrNi 18-10	14
1.4401	X5CrNiMo 17-12-2	14
0.6010	GG10	16
0.6015	GG15	16
0.6020	GG20	16
0.6025	GG25	16 / 17
0.6030	GG30	17
0.6035	GG35	17
0.6040	GG40	17
1.4829	X12NiCrSi 22-12	17
1.4828	X15CrNiSi20-12	17
0.7033	GGG35.3	18
0.7040	GGG40	18
0.7043	GGG40.3	18
0.8135	GTS-35	18
0.7050	GGG50	19
0.7060	GGG60	19
0.7070	GGG70	19
0.7660	GGGNiCr 20-2	19
0.7652	GGGNiMn 13-7	19
0.8155	GTS-55	21
0.8165	GTS-65	21
0.8170	GTS-70	21
0.8145	GTS-45	21
3.0205	Al99	22
3.3315	AlMg 1	22
3.1325	AlCuMg 1	23
3.2315	AlMgSi 1	23
3.2581	G-AlSi12	24
3.2163	G-AlSi9Cu3	24
3.2381	G-AlSi10Mg	25
2.0375	CuZn36Pb 3	27
2.1096	G-CuSn5ZnPb	27
2.0590	G-CuZn40Fe	27
2.0240	CuZn15	28
2.0060	E-Cu 57	29
1.4865	G-X40NiCrSi 38-18	30
1.4864	X12NiCrSi 36-16	30
2.4631	NiCr20TiAl	32
2.4856	NiCr22Mo9Nb	32
2.4375	NiCu30Al	33
2.4955	NiFe25Cr20NbTi	33
2.4764	CoCr20W15Ni	34
1.3401	G-X120Mn12	34
3.7165	TiAl6V4	36

Momento torcente per viti

Filettatura	M1,6	M1,8	M2	M2,2	M2,5	M3	M3,5	M4	M4,5	M5	M6	M7	M8	M10	M12
Momento torcente [Nm]	0,2	0,3	0,4	0,7	0,8	1,5	2,3	3,4	5,0	6,7	11,4	19,2	27,0	55,8	85

Indice

Inserti	**E2-E6**
Utensili	**E7-E10**

E

A

ANGX*PNR-GM B124 B126 B128 B130 B132
ANGX*PNR-LH B124 B126 B128 B130 B132
APKT-ALH B104 B107 B111 B114 B116 B202 B213
APKT-APF B104 B107 B111 B114 B116 B202 B213
APKT-APM B104 B107 B111 B114 B116 B202 B213
APKT-LH B104 B107 B111 B114 B116 B202 B213
APKT-NM B104 B107 B111 B114 B116 B202 B213
APKT-PF B104 B107 B111 B114 B116 B202 B213
APKT-PM B104 B107 B111 B114 B116 B202 B213
APKT-PR B104 B107 B111 B114 B116 B202 B213
APMT B118

C

CCGT (PCD) A180
CCGT-SF A116
CCGT-USF A116
CCGW-1 (PCD) A182
CCGW-2 (PCBN) A167
CCGW-L (PCD) A183
CCGX-LC A122
CCGX-LH A122
CCMT-AHF A117
CCMT-EF A118
CCMT-EM A119
CCMT-HF A117
CCMT-HM A120
CCMT-HR A121
CCMT-TC A121
CCMT-XF A118
CCMT-XM A119
CCMW A121
CNE-A/B B174
CNEG-NF A52
CNGA (ceramico) A200
CNGA-1 (PCD) A177
CNGA-2 (PCBN) A160
CNGA-2W (PCBN) A160
CNGN (PCBN) A173
CNGN-M (PCBN) A173
CNGX (ceramico) A203
CNMA A61
CNMG A61
CNMG-ADF A51
CNMG-DF A51
CNMG-DM A54
CNMG-DR A57
CNMG-EF A51
CNMG-EG A54
CNMG-EM A54
CNMG-ER A58
CNMG-NM A56
CNMG-PM A53
CNMG-RF A114
CNMG-SF A51
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UMC-4E-W B472

V

VPM-4E B387
VSM-4E B473
VSM-4E-C B474
VSM-4R B475

X

XMP01 B173
XMR01 B165

Z

ZD03 C30
ZSD02 C10
ZSD03 C13
ZSD04 C16
ZSD05 C19
ZTD02 C22
ZTD03 C24
ZTD04 C26
ZTD05 C28



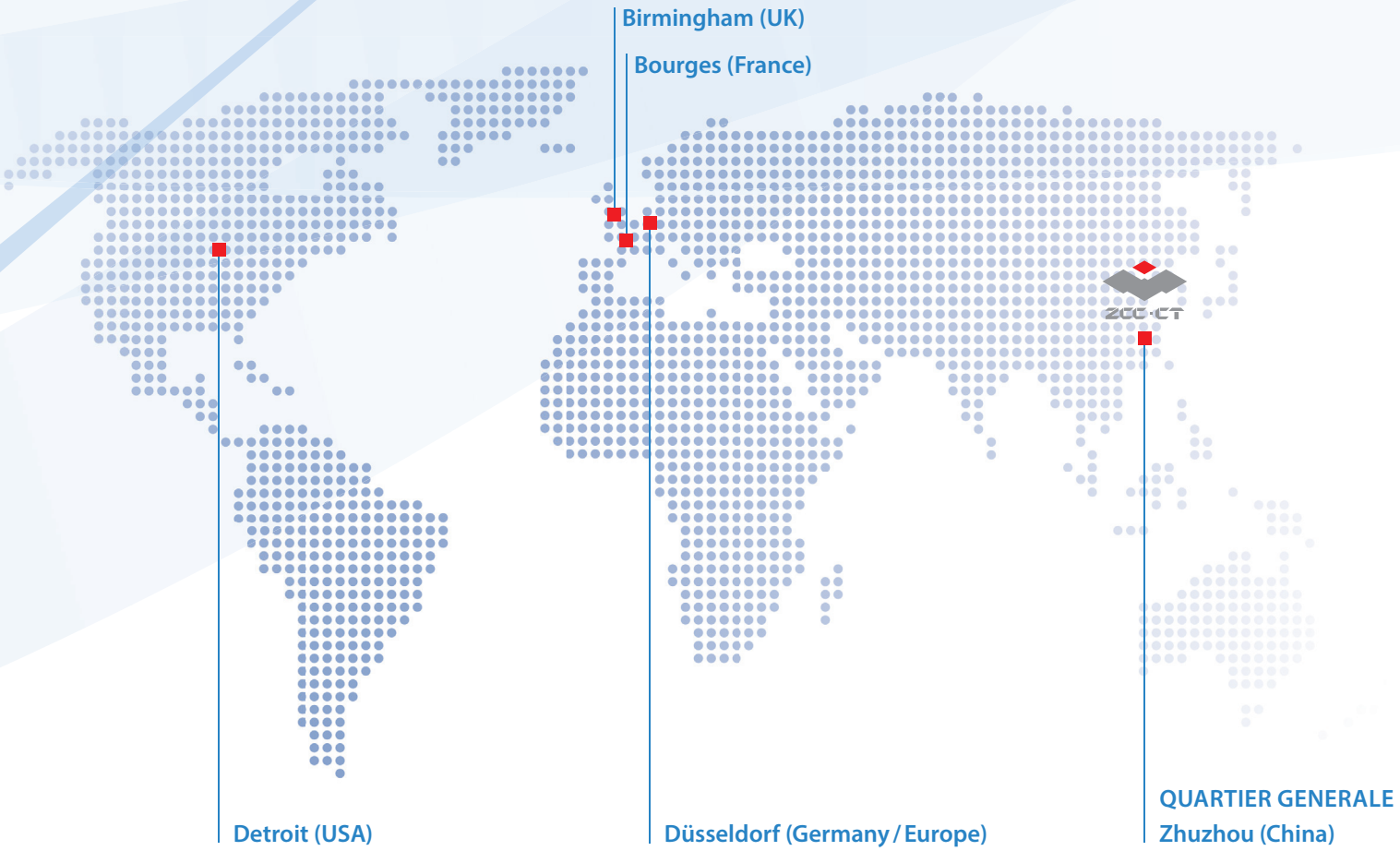
Rettifica di utensili in metallo duro integrale



Rettifica di inserti

Il nuovo complesso industriale di ZCC Cutting Tools, Zhuzhou, Cina







cqc

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00120Q33433R6L/4300

We hereby certify that

Zhuzhou Cemented Carbide Cutting Tools Co.,Ltd.

Huanghe Southern Road, Hi-Tech Development Zone, Zhuzhou City, Hunan Province, P.R.China

by reason of its

Quality Management System

has been awarded this certificate for compliance with the standard

GB/T 19001-2016 / ISO 9001:2015

The Quality Management System Applies in the following area:

Research, Design, Production and Service of Matching Technology for Cemented Carbide, Super Hard Material Indexable Inserts, Tips and Brazed Insert, Notched Toolholders, Solid Carbids Cutting Tools for Bore Machining and End Mills

Certified since: December 18, 2002 Valid from: June 3, 2020 Valid until: May 26, 2023

CHINA QUALITY CERTIFICATION CENTRE



cqc

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00121E32279R6L/4300

We hereby certify that

Zhuzhou Cemented Carbide Cutting Tools Co.,Ltd.

Registration Address: Huanghe Southern Road, Hi-Tech Development Zone, Zhuzhou City, Hunan Province, P.R.China

Production Address1: Huanghe Southern Road, Hi-Tech Development Zone, Zhuzhou City, Hunan Province, P.R.China

Production Address2: 399 Xinma Southern Roadand Hi-Tech Development Zone, Zhuzhou City, Hunan Province, P.R.China

by reason of its

Environmental Management System

has been awarded this certificate for compliance with the standard

GB/T 24001-2016 / ISO 14001:2015

The Environmental Management System Applies in the following area:

Research, Design, Production and Service of Matching Technology for Cemented Carbide, Super Hard Material Indexable Inserts, Tips and Brazed Insert, Matched Toolholders, Solid Carbids Cutting Tools for Bore Machining and End Mills and Related Management Activities

Certified since: May 30, 2003 Valid from: June 15, 2021 Valid until: June 25, 2024

CHINA QUALITY CERTIFICATION CENTRE

A 0126614



bsi.

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

ZCC Cutting Tools Europe GmbH
Wanheimer Str. 57
Düsseldorf
40472
Germany

Holds Certificate No: FS 651501

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Development, Construction, Distribution and Logistics for Metal Cutting Tools.

For and on behalf of BSI:

Dr. Tatiana Schmidlock-Baranova, Managing Director, BSI Group Deutschland GmbH

Original Registration Date: 2010-06-17
Latest Revision Date: 2022-06-08

Effective Date: 2022-06-18
Expiry Date: 2025-06-17

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...making excellence a habit.

L'azienda

Zhuzhou Cemented Carbide Cutting Tools Co., Ltd. (ZCC-CT) *con sede principale a Zhuzhou, Hunan, nella Repubblica Popolare Cinese, è il maggior produttore cinese di utensili in metallo duro e una delle aziende chiave di China Tungsten High-Tech Material Co. Ltd all'interno di China Minmetals Corporation.*

Dalla sua fondazione nel 1953, *la storia di ZCC Cutting Tools Co., Ltd. è proseguita fino a oggi fino a diventare, grazie all'impiego di tecnologie all'avanguardia e di personale altamente qualificato, il produttore leader al mondo di metallo duro integrale con più di 2.000 dipendenti all'attivo. Le tecnologie produttive vengono costantemente modernizzate, di pari passo con l'ampliamento delle capacità di fabbricazione per il raggiungimento degli obiettivi di crescita aziendale. Come parte di Minmetals Corporation, ZCC-CT si occupa autonomamente dell'intera catena di creazione del valore nella moderna produzione di utensili in metallo duro integrale, dall'estrazione delle materie prime sino al prodotto finito e rivestito e comprendendo anche tutte le relative fasi intermedie.*

Ricorrendo alle più recenti tecnologie europee di produzione, è quindi possibile offrire in ogni momento prodotti caratterizzati costantemente dalla massima qualità. L'ampia gamma comprende inserti in metallo duro, inserti in Cermet, CBN, PCD e ceramica, utensili in metallo duro integrale come portautensili, corpi fresa e sistemi di utensili a questi ultimi abbinati. La fabbricazione dei prodotti rispetta fondamentalmente i comuni standard internazionali, quali ad esempio ISO, DIN, ANSI, JIS e BSI. Inoltre, ZCC-CT offre soluzioni su misura del cliente e prodotti speciali in metallo duro sviluppati in base a specifiche personalizzate.

In ZCC-CT, ricerca e sviluppo hanno una posizione di particolare rilievo. Anche in questo campo vengono impiegati macchinari moderni e all'avanguardia, provenienti tra l'altro da Germania e Svizzera. Gli investimenti in questo settore sono superiori alla media. Con l'aiuto di ingegneri e scienziati che vantano conoscenze straordinarie e di un team internazionale di assoluto rilievo, ZCC Cutting Tools si impegna nella ricerca delle basi teoriche necessarie e sviluppa in questo senso prodotti costantemente innovativi e ottimizzati.

L'azienda è costantemente in prima linea nella garanzia di qualità per riuscire a soddisfare la necessità sempre più pressante di prodotti nuovi e innovativi, creati nell'interesse del cliente, e per incrementare i vantaggi a favore di quest'ultimo. Sia la produzione sia l'amministrazione in Cina sono soggette alle norme ISO 9001:2008 e nel settore della gestione ambientale agli standard ISO 14001:2004.

Già dal 2003, la sede centrale europea di ZCC-CT, *ZCC Cutting Tools Europe GmbH, è situata a Düsseldorf (Germania) e qui ospita il centro logistico europeo. Da qui vengono gestite le relazioni con tutti i Paesi europei e i mercati adiacenti.*

Il sistema di gestione della qualità di ZCC Cutting Tools Europe GmbH è certificato secondo le norme DIN EN ISO 9001:2008 per il settore "Distribuzione e logistica di utensili per la lavorazione dei metalli".

L'azienda vanta uno stabilimento di produzione in Germania e dal 2019 è membro attivo dell'associazione VDMA.

La divisione situata nel Regno Unito è inoltre membro della Manufacturing Technologies Association (MTA).

Per garantire un servizio clienti di eccellenza, il numero di dipendenti attivi nei reparti Distribuzione e Vendite interne, Assistenza tecnica e Tecnologia applicativa, Ricerca e sviluppo oltre naturalmente ai settori Logistica, Marketing, IT, Risorse Umane e Amministrazione in ZCC Cutting Tools Europe GmbH cresce di pari passo con l'ampliamento complessivo dell'azienda. Il sistema di gestione è costantemente aggiornato per rispondere all'espansione aziendale.

A sottolineare l'importanza dei servizi orientati al cliente e focalizzati sui mercati di ZCC Cutting Tools Europe GmbH, vi è l'istituzione di un reparto interno di ricerca e sviluppo, dedicato in particolare ai mercati dell'Europa, che si coordina a stretto giro con il reparto di ricerca e sviluppo in Cina, oltre al Centro dimostrativo e di prova realizzato nel 2019 a Düsseldorf destinato a test e presentazioni di soluzioni innovative. Il Centro dimostrativo e di prova dà inoltre la possibilità di ottimizzare i processi del cliente sulla base delle esigenze personali di ognuno.

I collaboratori per l'estero e i distributori europei curano le relazioni in loco con la clientela. I tecnici ZCC-CT sono disponibili anche telefonicamente, per e-mail o di persona nel reparto produzione, mettendo a disposizione le proprie competenze, esperienze e know-how.

Il servizio Vendite interne e Vendite estere esterne si occupa, nel suo complesso, delle richieste europee grazie a un team di operatori madrelingua che assicura, in collaborazione con il reparto Logistica e un servizio di assistenza di eccellenza, che tutti gli ordini vengano consegnati nel minor tempo possibile. Le divisioni dislocate in Francia e nel Regno Unito garantiscono un'ulteriore vicinanza al cliente a livello regionale.

ZCC Cutting Tools Europe GmbH è tutto questo. Siamo al vostro fianco in qualità di partner su cui contare e mettiamo a vostra disposizione il nostro know-how per rispondere a tutte le sfide della produzione meccanica. È questa la definizione per il nostro motto: "Il valore aggiunto si ottiene con la collaborazione".

Catalogo Principale

Version 2023



400 | CAT | v2022.07 | 2.0 | 07.22

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ZCC Cutting Tools Europe GmbH

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