

SCHUMANTOOLS®
WORK INSPIRATION

X-MILL MD

2021

IL NOSTRO LAVORO CONTRIBUIRE A MIGLIORARE IL TUO.

OUR WORK IS IMPROVE YOURS.

**Perché lavorare bene quando puoi lavorare meglio?
Ci impegniamo a fornirti utensili, inserti, attrezzature e strumenti,
standard o personalizzati, adatti alla tua produzione.**

Why work well when you can work better?

We are committed to providing you with tools, inserts, equipment and tools, standard or customized, suitable for your production.

SERVIZIO CLIENTI

CUSTOMER CARE

I nostri operatori sono a tua disposizione per comunicarti informazioni e preventivi sui prodotti che scegli a catalogo o che hai concordato con i nostri tecnici. Il nostro responsabile commerciale può incontrarti anche presso la tua azienda.

Our operators are at your disposal to communicate information and quotes on the products you choose in the catalog or that you have agreed with our technicians. Our sales manager can also meet you at your company.



CONSULENZA

ADVICE

I nostri tecnici lavorano con i clienti per proporre le soluzioni adatte alle loro esigenze produttive: i nostri prodotti, standard e speciali, sono infatti progettati e realizzati anche attraverso le informazioni degli utenti finali, raccolte nelle diverse prove e analisi sul campo.

Our technicians work with customers to propose the solutions suited to their production needs: our products, standard and special, are in fact designed and manufactured also through the information of the end users, collected in the various tests and analysis in the field.



ASSISTENZA TECNICA

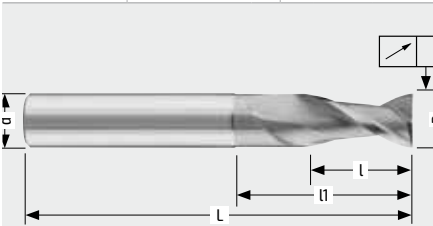
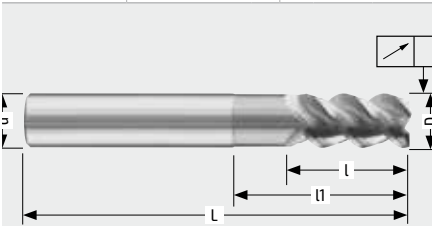
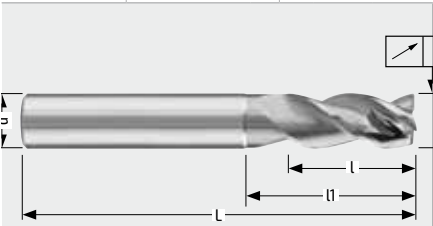
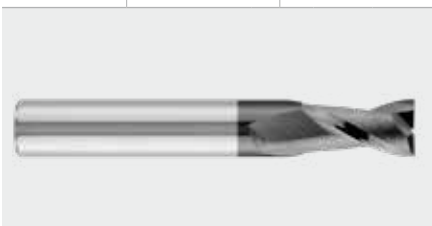
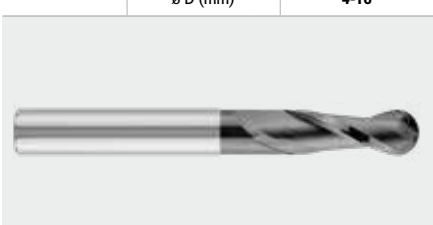
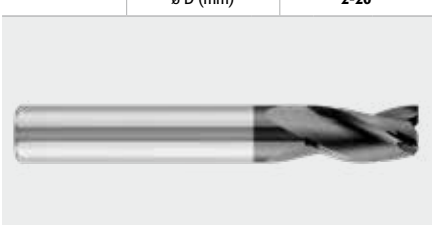
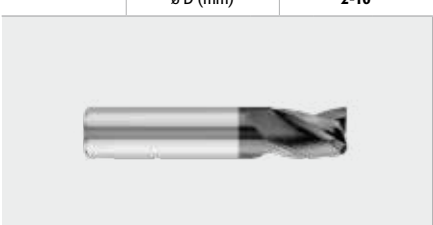
TECHNICAL ASSISTANCE

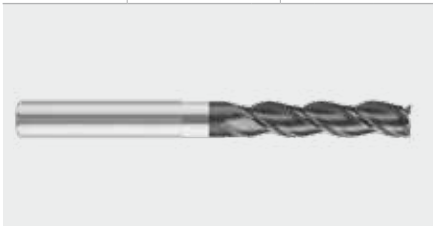
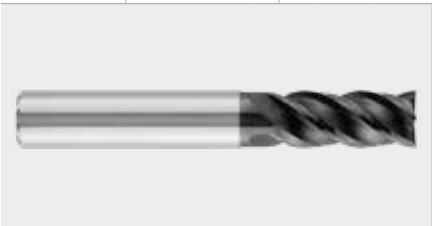
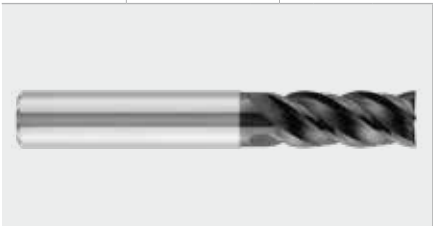
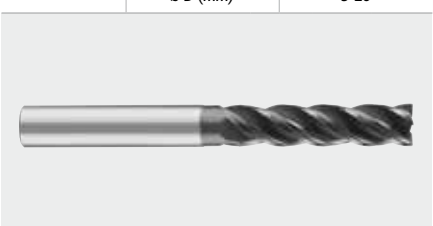
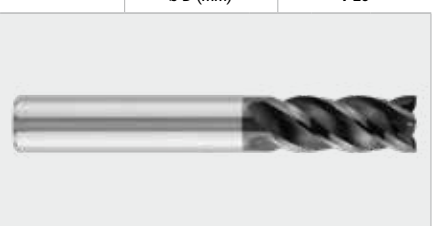
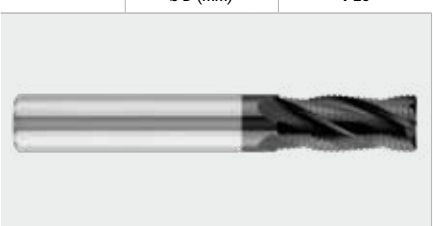
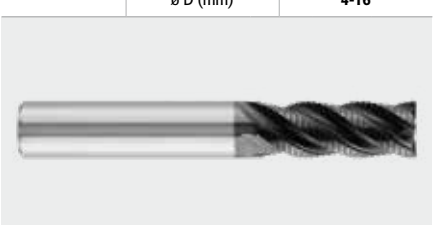
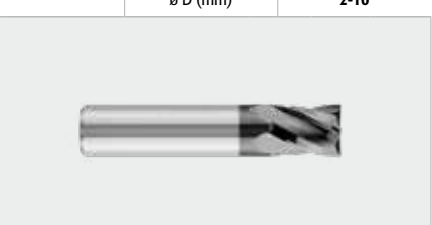
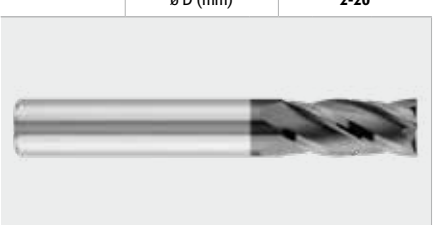
Vogliamo essere il tuo punto di riferimento nell'acquisto dei prodotti, ma anche dopo la vendita. Ecco perché ti garantiamo un servizio di assistenza tecnica continuativo: potrai chiamarci e scriverci per consultarti con i nostri esperti.

We want to be your point of reference in the purchase of products, but also after the sale. That's why we guarantee a continuous technical assistance service: you can call us and write us to consult with our experts.

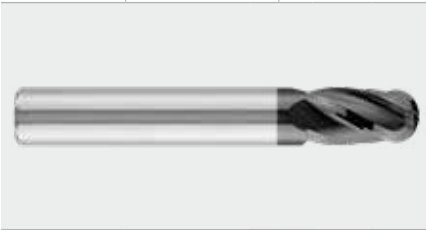
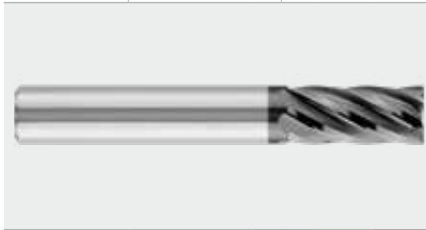


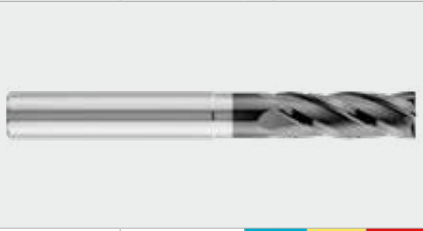
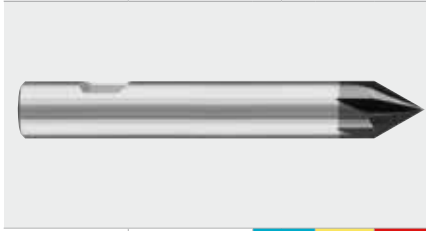
FRESE MD
HM MILL

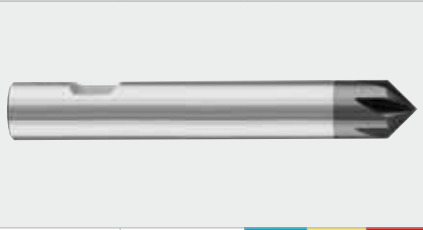
XE10AL ø D (mm) 2-20   90° N pag 8	XE12AL ø D (mm) 4-20   90° N pag 8	XE13AL ø D (mm) 3-20   45° N pag 9
XE06c ø D (mm) 2-20   90° P M K pag 10	XE06CR ø D (mm) 2-12   Cr P M K pag 11	XE21c ø D (mm) 2-10   90° P M K pag 12
XE79c ø D (mm) 2-16   90° P M K pag 12	XE01c ø D (mm) 2-20   90° P M K pag 13	XE16c ø D (mm) 2-20   P M K pag 14
XE81c ø D (mm) 4-16   P M K pag 14	XE36c ø D (mm) 2-20   90° P M K pag 15	XE26c ø D (mm) 2-10   90° P M K pag 15

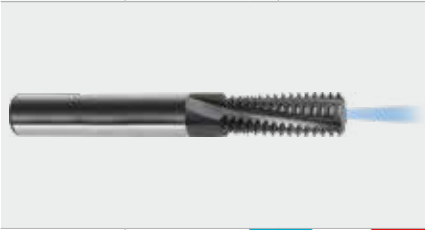
XE76c ø D (mm) 4-16   90° P M K pag 16	XE95c ø D (mm) 4-20   45° P M K pag 16	XE92c ø D (mm) 3-20   45° P M K pag 17
XE92cc/ccx ø D (mm) 3-20   45° 90° P M K pag 18	XE92L ø D (mm) 5-20   45° P M K pag 19	XE94c ø D (mm) 3-20   45° P M S pag 20
XE94L ø D (mm) 5-20   45° P M S pag 20	XE93c ø D (mm) 4-20   45° P M K pag 21	XE71 ø D (mm) 4-20   45° P M K pag 22
XE97c ø D (mm) 4-16   45° P M K pag 22	XE29 ø D (mm) 2-10   90° P M K pag 23	XE56 ø D (mm) 2-20   90° P M K pag 23

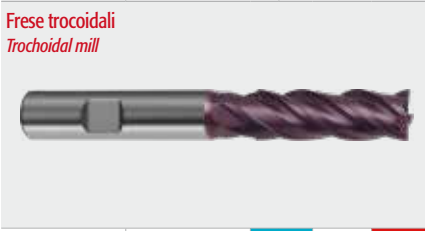
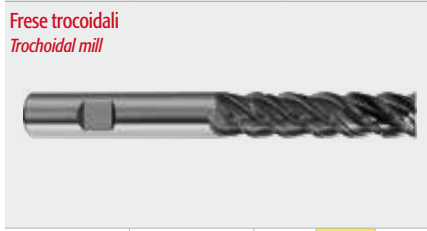
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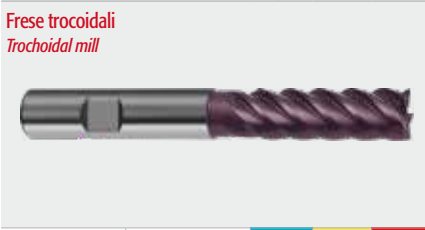
XE56CR			XE66			XE61		
	ø D (mm)	2-12		ø D (mm)	2-20		ø D (mm)	6-20
								
		P M K			P M K			P M K
		pag 24			pag 25			pag 25

XE59			XE83			XE41 _{WAL}		
	ø D (mm)	3-16		ø D (mm)	6-16		ø D (mm)	3-20
								
		P M K			P M K			P M K
		pag 26			pag 26			pag 27

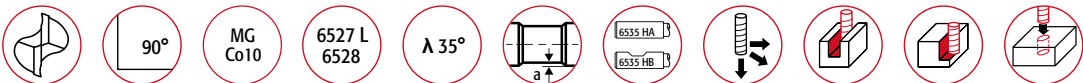
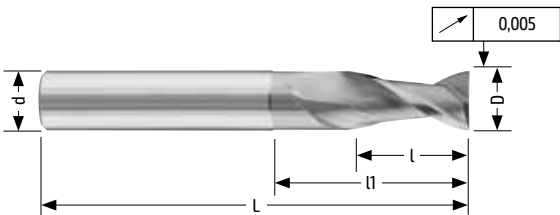
XE42 _{WAL}		
	ø D (mm)	3-20
		
		P M K
		pag 27

XM547			XM548			XM653		
	ø D (mm)	4,80-14,95		ø D (mm)	4,80-14,95		ø D (mm)	3-25
								
		P N S K			P N S K			P M S
		pag 33			pag 34			pag 36

XM653			XM871 UNIVERSAL			XM761 STAINLESS SPEED		
	ø D (mm)	3-25		ø D (mm)	6-20		ø D (mm)	3-20
								
		P M S			P S K			M S
		pag 37			pag 38			pag 39

XM632			XM898		
	ø D (mm)	8-25		ø D (mm)	4-20
					
Frese trocoidali Trochoidal mill			Frese trocoidali Trochoidal mill		
		P N M S K 48 HRC			P N M S K 48 HRC
		pag 40			pag 41

XE10_{AL}

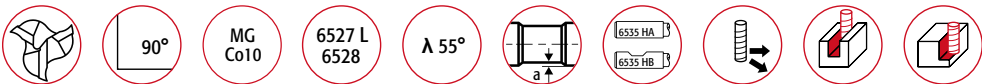
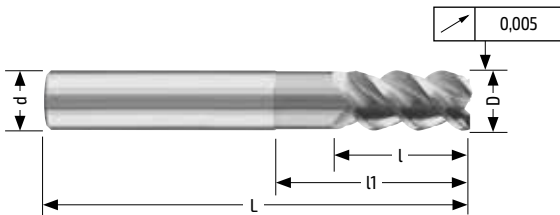


Fresa a 2 taglienti per alluminio
2 flute end mill for aluminium

CODICE CODE	D h6	d h6	L	l ap	l1	a	Z	
XE-10 D2 AL	2,0	3	50	6	-	-	2	○
XE-10 D3 AL	3,0	3	50	7	18	0,10	2	○
XE-10 D4 AL	4,0	4	50	8	19	0,10	2	○
XE-10 D5 AL	5,0	5	50	10	21	0,10	2	○
XE-10 D6 AL	6,0	6	57	10	21	0,15	2	○
XE-10 D8 AL	8,0	8	63	16	27	0,15	2	○
XE-10 D10 AL	10,0	10	72	19	30	0,15	2	○
XE-10 D12 AL	12,0	12	83	22	38	0,20	2	○
XE-10 D14 AL	14,0	14	83	22	38	0,20	2	○
XE-10 D16 AL	16,0	16	92	26	42	0,20	2	○
XE-10 D20 AL	20,0	20	104	32	54	0,20	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE12_{AL}

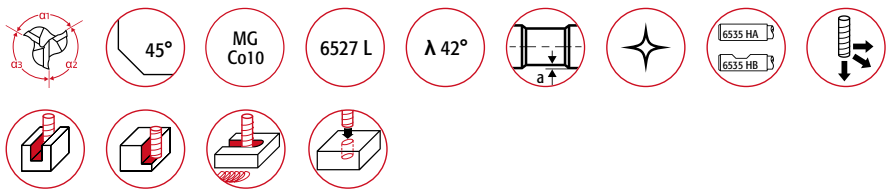
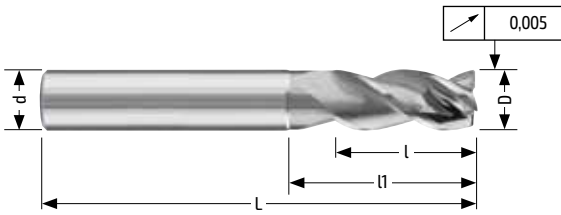


Fresa a 3 taglienti per alluminio
3 flute end mill for aluminium

CODICE CODE	D h6	d h6	L	l ap	l1	a	Z	
XE-12 D4 AL	4,0	4	50	8	19	0,10	3	○
XE-12 D5 AL	5,0	5	50	10	21	0,10	3	○
XE-12 D6 AL	6,0	6	57	10	21	0,15	3	○
XE-12 D7 AL	7,0	7	60	13	24	0,15	3	○
XE-12 D8 AL	8,0	8	63	16	27	0,15	3	○
XE-12 D9 AL	9,0	9	67	16	27	0,15	3	○
XE-12 D10 AL	10,0	10	72	19	30	0,15	3	○
XE-12 D12 AL	12,0	12	83	22	38	0,20	3	○
XE-12 D14 AL	14,0	14	83	22	38	0,20	3	○
XE-12 D16 AL	16,0	16	92	26	42	0,20	3	○
XE-12 D20 AL	20,0	20	104	32	54	0,20	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE13_{AL}



Fresa 3 taglienti serie normale per alluminio con divisione irregolare
3 flute end mill with unequal flute spacing regular version

CODICE CODE	D h10	d h5	L	l ap	l1	a	45°	Z	
XE-13 D3 AL	3,0	6	57	8	-	-	0,05	3	○
XE-13 D4 AL	4,0	6	57	11	-	-	0,05	3	○
XE-13 D5 AL	5,0	6	57	13	-	-	0,10	3	○
XE-13 D6 AL	6,0	6	57	13	20	0,15	0,10	3	○
XE-13 D8 AL	8,0	8	63	19	25	0,15	0,15	3	○
XE-13 D10 AL	10,0	10	72	22	30	0,15	0,20	3	○
XE-13 D12 AL	12,0	12	83	26	36	0,20	0,25	3	○
XE-13 D16 AL	16,0	16	92	32	42	0,20	0,30	3	○
XE-13 D20 AL	20,0	20	104	38	52	0,20	0,35	3	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE06c

P K M



Fresa a 2 taglienti serie normale						
2 flute end mill standard series						
CODICE	D	d	L	l	Z	
CODE	h10	h6		ap		
XE-06 D2 C	2,0	4	50	5	2	○
XE-06 D2.5 C	2,5	4	50	7	2	○
XE-06 D3 C	3,0	4	50	7	2	○
XE-06 D3.5 C	3,5	4	50	7	2	○
XE-06 D4 C	4,0	4	50	8	2	○
XE-06 D4.5 C	4,5	5	50	8	2	○
XE-06 D5 C	5,0	5	50	10	2	○
XE-06 D5.5 C	5,5	6	57	10	2	○
XE06 D6 C	6,0	6	57	10	2	○
XE-06 D7 C	7,0	7	60	13	2	○
XE-06 D8 C	8,0	8	63	16	2	○
XE-06 D9 C	9,0	9	67	16	2	○
XE-06 D10 C	10,0	10	72	19	2	○
XE-06 D11 C	11,0	11	83	22	2	○
XE-06 D12 C	12,0	12	83	22	2	○
XE-06 D13 C	13,0	13	83	22	2	○
XE-06 D14 C	14,0	14	83	22	2	○
XE-06 D15 C	15,0	15	92	26	2	○
XE-06 D16 C	16,0	16	92	26	2	○
XE-06 D17 C	17,0	17	92	26	2	○
XE-06 D18 C	18,0	18	92	26	2	○
XE-06 D19 C	19,0	19	92	26	2	○
XE-061 D20 C	20,0	20	104	32	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE06CR

P K M



Fresa a 2 taglienti serie normale						
2 flute end mill standard series						
CODICE	D	d	L	l	Cr	Z
CODE	h10	h6		ap		
XE-06CR05 D2	2,0	4	50	5	0,5	2 ○
XE-06CR05 D3	3,0	4	50	7	0,5	2 ○
XE-06CR05 D4	4,0	4	50	8	0,5	2 ○
XE-06CR05 D6	6,0	6	57	10	0,5	2 ○
XE-06CR05 D8	8,0	8	63	16	0,5	2 ○
XE-06CR05 D10	10,0	10	72	19	0,5	2 ○
XE-06CR05 D12	12,0	12	83	22	0,5	2 ○

Fresa a 2 taglienti serie normale						
2 flute end mill standard series						
CODICE	D	d	L	l	Cr	Z
CODE	h10	h6		ap		
XE-06CR10 D5	5,0	5	50	10	1,0	2 ○
XE-06CR10 D6	6,0	6	57	10	1,0	2 ○
XE-06CR10 D8	8,0	8	63	16	1,0	2 ○
XE-06CR10 D10	10,0	10	72	19	1,0	2 ○
XE-06CR10 D12	12,0	12	83	22	1,0	2 ○

Fresa a 2 taglienti serie normale						
2 flute end mill standard series						
CODICE	D	d	L	l	Cr	Z
CODE	h10	h6		ap		
XE-06CR20 D10	10,0	10	72	19	2,0	2 ○
XE-06CR20 D12	12,0	12	83	22	2,0	2 ○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE21c

P K M



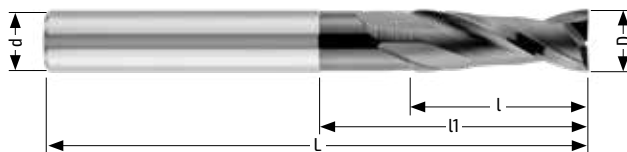
Fresa a 2 taglienti serie extra corta
2 flute end mill extra short series

CODICE CODE	D h10	d h6	L	l ap	Z	
XE-21 D2 C	2,0	6	38	3	2	○
XE-21 D3 C	3,0	6	38	4	2	○
XE-21 D4 C	4,0	6	38	5	2	○
XE-21 D5 C	5,0	6	38	6	2	○
XE-21 D6 C	6,0	6	38	7	2	○
XE-21 D7 C	7,0	8	43	9	2	○
XE-21 D8 C	8,0	8	43	9	2	○
XE-21 D9 C	9,0	10	50	11	2	○
XE-21 D10 C	10,0	10	50	11	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE79c

P K M



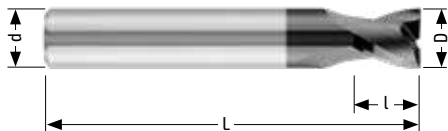
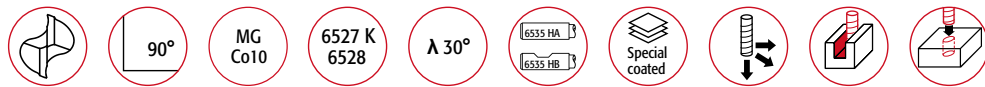
Fresa a 2 taglienti serie lunga
2 flute end mill long series

CODICE CODE	D h10	d h6	L	l ap	l1	a	Z	
XE-79 D4 C	4,0	4	62	16	-	-	2	○
XE-79 D5 C	5,0	5	62	20	-	-	2	○
XE-79 D6 C	6,0	6	78	20	30	0,15	2	○
XE-79 D8 C	8,0	8	78	25	35	0,15	2	○
XE-79 D10 C	10,0	10	105	28	48	0,15	2	○
XE-79 D12 C	12,0	12	105	32	52	0,20	2	○
XE-79 D16 C	16,0	16	130	40	60	0,20	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE01c

P K M



Fresa a 2 taglienti per sedi di chiave
2 flute end mill key slot

CODICE CODE	D e8	d h6	L	l ap	Z	
XE-01 D2 C	2,0	6	50	3	2	○
XE-01 D3 C	3,0	6	50	4	2	○
XE-01 D4 C	4,0	6	54	5	2	○
XE-01 D5 C	5,0	6	54	6	2	○
XE-01 D6 C	6,0	6	54	7	2	○
XE-01 D7 C	7,0	8	58	9	2	○
XE-01 D8 C	8,0	8	58	9	2	○
XE-01 D9 C	9,0	10	66	11	2	○
XE-01 D10 C	10,0	10	66	11	2	○
XE-01 D11 C	11,0	12	73	12	2	○
XE-01 D12 C	12,0	12	73	12	2	○
XE-01 D13 C	13,0	14	75	14	2	○
XE-01 D14 C	14,0	14	75	14	2	○
XE-01 D16 C	16,0	16	82	16	2	○
XE-01 D20 C	20,0	20	92	20	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE16c

P K M



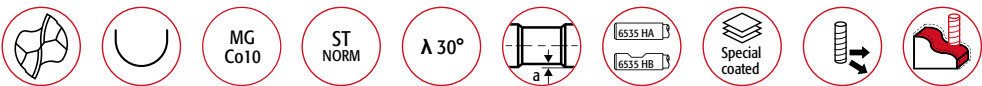
Fresa semisferica a 2 taglienti serie normale
2 flute ball nose end mill standard series

CODICE CODE	D h10	d h6	L	l ap	r	Z	
XE-16 D2 C	2,0	4	50	5	1,0	2	○
XE-16 D3 C	3,0	4	50	7	1,5	2	○
XE-16 D4 C	4,0	4	50	8	2,0	2	○
XE-16 D5 C	5,0	5	50	10	2,5	2	○
XE-16 D6 C	6,0	6	57	10	3,0	2	○
XE-16 D8 C	8,0	8	63	16	4,0	2	○
XE-16 D10 C	10,0	10	72	19	5,0	2	○
XE-16 D12 C	12,0	12	83	22	6,0	2	○
XE-16 D14 C	14,0	14	83	22	7,0	2	○
XE-16 D16 C	16,0	16	92	26	8,0	2	○
XE-16 D20 C	20,0	20	104	32	10,0	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE81c

P K M



Fresa semisferica a 2 taglienti serie lunga
2 flute ball nose end mill long series

CODICE CODE	D h10	d h5	L	l ap	r	ll	a	Z	
XE-81 D4 C	4,0	4	62	16	2,0	-	-	2	○
XE-81 D5 C	5,0	5	62	20	2,5	-	-	2	○
XE-81 D6 C	6,0	6	78	20	3,0	30	0,15	2	○
XE-81 D8 C	8,0	8	78	25	4,0	35	0,15	2	○
XE-81 D10 C	10,0	10	105	28	5,0	48	0,15	2	○
XE-81 D12 C	12,0	12	105	32	6,0	52	0,20	2	○
XE-81 D16 C	16,0	16	130	40	8,0	60	0,20	2	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE36c

P K M



Fresa a 3 taglienti serie normale
3 flute end mill standard series

CODICE CODE	D h10	d h6	L	l ap	Z	
XE-36 D2 C	2,0	4	50	5	3	○
XE-36 D3 C	3,0	4	50	7	3	○
XE-36 D4 C	4,0	4	50	8	3	○
XE-36 D5 C	5,0	5	50	10	3	○
XE-36 D6 C	6,0	6	57	10	3	○
XE-36 D8 C	8,0	8	63	16	3	○
XE-36 D10 C	10,0	10	72	19	3	○
XE-36 D12 C	12,0	12	83	22	3	○
XE-36 D16 C	16,0	16	92	26	3	○
XE-36 D20 C	20,0	20	104	32	3	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE26c

P K M



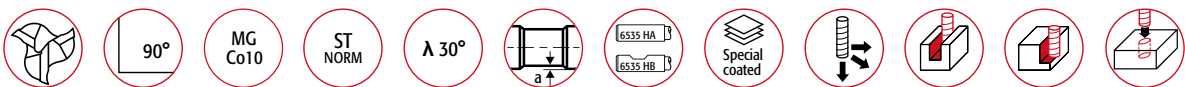
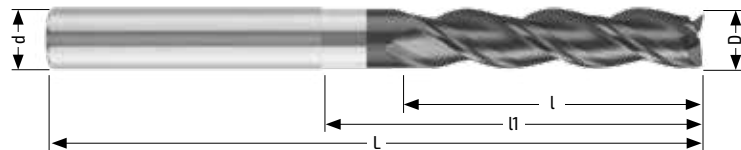
Fresa a 3 taglienti serie extra corta
3 flute end mill extra short series

CODICE CODE	D h10	d h6	L	l ap	Z	
XE-26 D2 C	2,0	6	38	4	3	○
XE-26 D2.5 C	2,5	6	38	4	3	○
XE-26 D3 C	3,0	6	38	5	3	○
XE-26 D3.5 C	3,5	6	38	6	3	○
XE-26 D4 C	4,0	6	38	7	3	○
XE-26 D4.5 C	4,5	6	38	8	3	○
XE-26 D5 C	5,0	6	38	8	3	○
XE-26 D6 C	6,0	6	38	8	3	○
XE-26 D7 C	7,0	8	43	11	3	○
XE-26 D8 C	8,0	8	43	11	3	○
XE-26 D9 C	9,0	10	50	13	3	○
XE-26 D10 C	10,0	10	50	13	3	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE76c

P K M



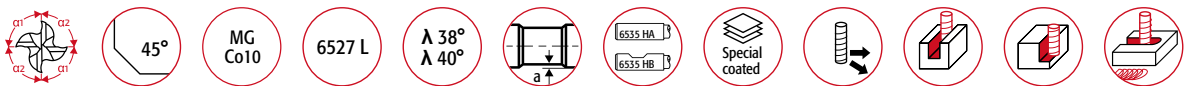
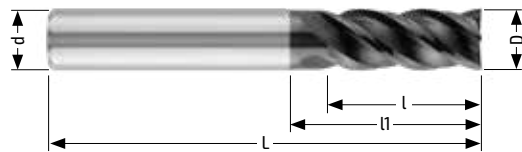
Fresa a 3 taglienti serie lunga
3 flute end mill long series

CODICE CODE	D h10	d h5	L	l ap	l1	a	Z	
XE-76 D4 C	4,0	4	62	16	-	-	3	○
XE-76 D5 C	5,0	5	62	20	-	-	3	○
XE-76 D6 C	6,0	6	78	20	30	0,15	3	○
XE-76 D8 C	8,0	8	78	25	35	0,15	3	○
XE-76 D10 C	10,0	10	105	28	48	0,15	3	○
XE-76 D12 C	12,0	12	105	32	52	0,20	3	○
XE-76 D16 C	16,0	16	130	40	60	0,20	3	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE95c

P K M



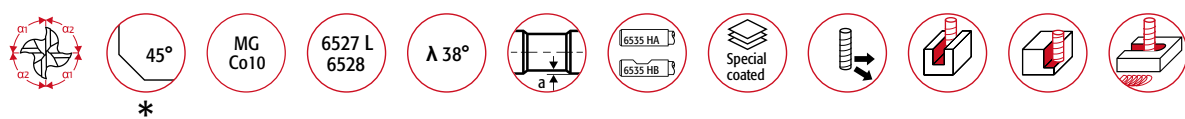
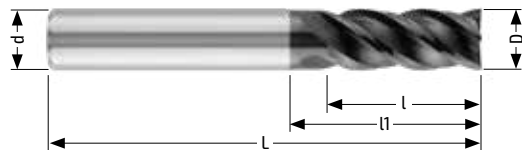
Fresa 4 taglienti serie normale con elica differenziata
4 flute end mill regular version with variable helix

CODICE CODE	D h10	d h5	L	l ap	l1	a	45°	Z
XE-95 D3 C	3,0	6	57	8	-	-	0,05	4
XE-95 D4 C	4,0	6	57	11	16	0,10	0,05	4
XE-95 D5 C	5,0	6	57	13	18	0,10	0,05	4
XE-95 D6 C	6,0	6	57	13	20	0,15	0,05	4
XE-95 D8 C	8,0	8	63	19	25	0,15	0,05	4
XE-95 D10 C	10,0	10	72	22	30	0,15	0,05	4
XE-95 D12 C	12,0	12	83	26	36	0,20	0,05	4
XE-95 D14 C	14,0	14	83	26	36	0,20	0,05	4
XE-95 D16 C	16,0	16	92	32	42	0,20	0,05	4
XE-95 D18 C	18,0	18	92	32	42	0,20	0,05	4
XE-95 D20 C	20,0	20	104	38	52	0,20	0,05	4

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE92c/cx

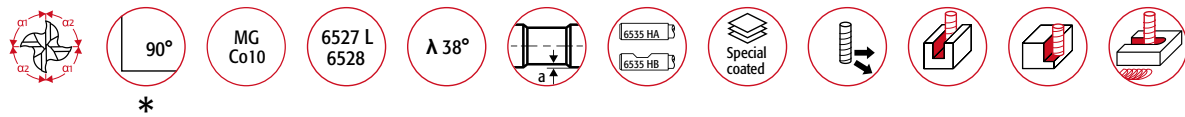
P K M



Fresa 4 taglienti serie normale
4 flute end mill normal version

CODICE CODE	D h10	d h5	L	l ap	l1	a	45°	Z
XE-92 D3 C	3,0	3	38	8	-	-	-	4
XE-92 D3 C6	3,0	6	57	8	11	0,10	0,05	4
XE-92 D4 C	4,0	4	50	11	16	0,10	0,10	4
XE-92 D4 C6	4,0	6	57	9	16	0,10	0,10	4
XE-92 D5 C	5,0	5	50	13	18	0,10	0,10	4
XE-92 D5 C6	5,0	6	57	13	18	0,10	0,10	4
XE-92 D6 C	6,0	6	57	13	20	0,15	0,10	4
XE-92 D8 C	8,0	8	63	19	25	0,15	0,15	4
XE-92 D10 C	10,0	10	72	22	30	0,15	0,15	4
XE-92 D12 C	12,0	12	83	26	36	0,20	0,15	4
XE-92 D14 C	14,0	14	83	26	36	0,20	0,15	4
XE-92 D16 C	16,0	16	92	32	42	0,20	0,20	4
XE-92 D18 C	18,0	18	92	32	42	0,20	0,20	4
XE-92 D20 C	20,0	20	104	38	52	0,20	0,20	4

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



Fresa 4 taglienti serie normale
4 flute end mill normal version

CODICE CODE	D h10	d h5	L	l ap	l1	a	45°	Z
XE-92 D3 CX	3,0	3	38	8	-	-	-	4
XE-92 D3 CX6	3,0	6	57	8	11	0,10	-	4
XE-92 D4 CX	4,0	4	50	11	16	0,10	-	4
XE-92 D4 CX6	4,0	6	57	9	16	0,10	-	4
XE-92 D5 CX	5,0	5	50	13	18	0,10	-	4
XE-92 D5 CX6	5,0	6	57	13	18	0,10	-	4
XE-92 D6 CX	6,0	6	57	13	20	0,15	-	4
XE-92 D6 CX	8,0	8	63	19	25	0,15	-	4
XE-92 D10 CX	10,0	10	72	22	30	0,15	-	4
XE-92 D12 CX	12,0	12	83	26	36	0,20	-	4
XE-92 D14 CX	14,0	14	83	26	36	0,20	-	4
XE-92 D16 CX	16,0	16	92	32	42	0,20	-	4
XE-92 D18 CX	18,0	18	92	32	42	0,20	-	4
XE-92 D20 CX	20,0	20	104	38	52	0,20	-	4

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE92_{CC/CCX}

P K M



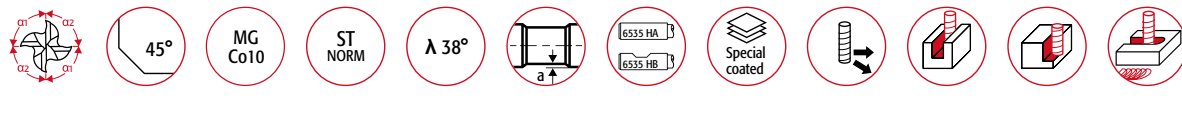
Fresa 4 taglienti serie corta
4 flute end mill short version

CODICE CODE	D h10	d h5	L	l ap	45°	Z	
XE-92 D3 CC	3,0	6	54	6	0,05	4	○
XE-92 D4 CC	4,0	6	54	8	0,10	4	○
XE-92 D5 CC	5,0	6	54	9	0,10	4	○
XE-92 D6 CC	6,0	6	54	10	0,10	4	○
XE-92 D8 CC	8,0	8	57	12	0,15	4	○
XE-92 D10 CC	10,0	10	66	14	0,15	4	○
XE-92 D12 CC	12,0	12	73	16	0,15	4	○
XE-92 D14 CC	14,0	14	75	18	0,15	4	○
XE-92 D16 CC	16,0	16	82	22	0,20	4	○
XE-92 D18 CC	18,0	18	84	24	0,20	4	○
XE-92 D20 CC	20,0	20	92	26	0,20	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE92_L

P K M



Fresa 4 taglienti serie lunga
4 flute end mill long version

CODICE CODE	D h10	d h5	L	l ap	l1	a	45°	Z	
XE-92 D5 L	5,0	6	74	20	25	0,10	0,10	4	○
XE-92 D6 L	6,0	6	74	24	30	0,15	0,10	4	○
XE-92 D8 L	8,0	8	80	32	40	0,15	0,15	4	○
XE-92 D10 L	10,0	10	87	40	46	0,15	0,15	4	○
XE-92 D12 L	12,0	12	105	48	58	0,20	0,15	4	○
XE-92 D14 L	14,0	14	105	48	58	0,20	0,15	4	○
XE-92 D16 L	16,0	16	125	64	68	0,20	0,20	4	○
XE-92 D20 L	20,0	20	160	70	80	0,20	0,20	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



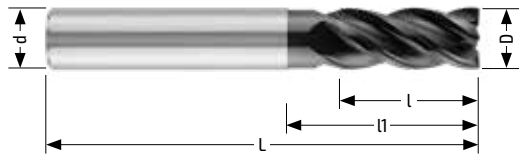
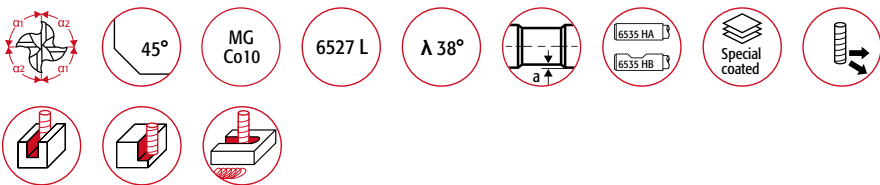
Fresa 4 taglienti serie corta
4 flute end mill short version

CODICE CODE	D h10	d h5	L	l ap		Z	
XE-92 D3 CCX	3,0	6	54	6	-	4	○
XE-92 D4 CCX	4,0	6	54	8	-	4	○
XE-92 D5 CCX	5,0	6	54	9	-	4	○
XE-92 D6 CCX	6,0	6	54	10	-	4	○
XE-92 D8 CCX	8,0	8	57	12	-	4	○
XE-92 D10 CCX	10,0	10	66	14	-	4	○
XE-92 D12 CCX	12,0	12	73	16	-	4	○
XE-92 D14 CCX	14,0	14	75	18	-	4	○
XE-92 D16 CCX	16,0	16	82	22	-	4	○
XE-92 D18 CCX	18,0	18	84	24	-	4	○
XE-92 D20 CCX	20,0	20	92	26	-	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE94c

PMS

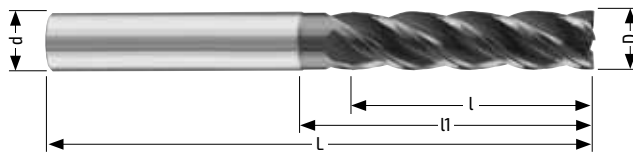
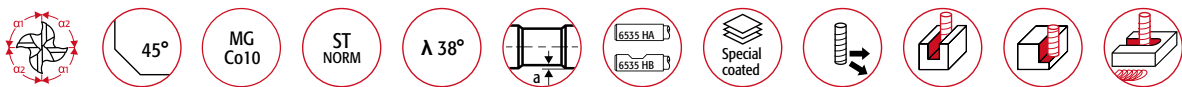


Fresa 4 taglienti serie normale per inox e acciai dolci									
4 flute end mill regular version for inox and mild steel									
CODICE	D	d	L	l	l1	a	45°	Z	
CODE	h10	h5		ap					
XE-94 D3 C	3,0	6	57	8	11	0,10	0,10	4	○
XE-94 D4 C	4,0	6	57	9	16	0,10	0,10	4	○
XE-94 D5 C	5,0	6	57	13	18	0,10	0,10	4	○
XE-94 D6 C	6,0	6	57	13	20	0,15	0,10	4	○
XE-94 D8 C	8,0	8	63	19	25	0,15	0,15	4	○
XE-94 D10 C	10,0	10	72	22	30	0,15	0,15	4	○
XE-94 D12 C	12,0	12	83	26	36	0,20	0,15	4	○
XE-94 D14 C	14,0	14	83	26	36	0,20	0,15	4	○
XE-94 D16 C	16,0	16	92	32	42	0,20	0,20	4	○
XE-94 D18 C	18,0	18	92	32	42	0,20	0,20	4	○
XE-94 D20 C	20,0	20	104	38	52	0,20	0,20	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE94L

PMS

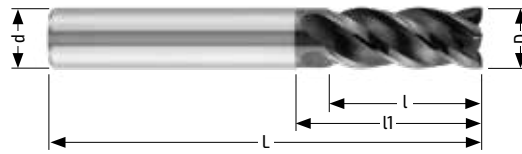
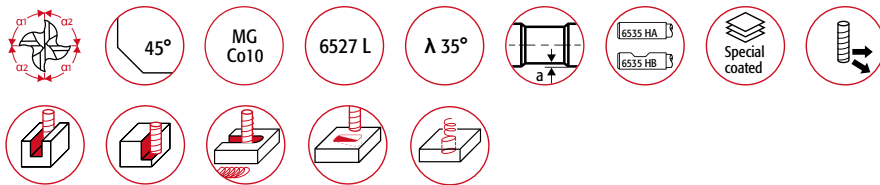


Fresa 4 taglienti serie lunga per inox e acciai dolci									
4 flute end mill long version for inox and mild steel									
CODICE	D	d	L	l	l1	a	45°	Z	
CODE	h10	h5		ap					
XE-94 D5 L	5,0	6	74	20	25	0,10	0,10	4	○
XE-94 D6 L	6,0	6	74	24	30	0,15	0,10	4	○
XE-94 D8 L	8,0	8	80	32	40	0,15	0,15	4	○
XE-94 D10 L	10,0	10	87	40	46	0,15	0,15	4	○
XE-94 D12 L	12,0	12	105	48	58	0,20	0,15	4	○
XE-94 D14 L	14,0	14	105	48	58	0,20	0,15	4	○
XE-94 D16 L	16,0	16	125	64	68	0,20	0,20	4	○
XE-94 D20 L	20,0	20	160	70	80	0,20	0,20	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE93c

PKM

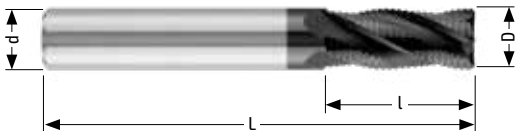


Fresa universale a 4 taglienti adatta per la fresatura in rampa									
4 flute multi-purpose end mill suitable for ramp milling									
CODICE	D	d	L	l	l1	45°	a	Z	
CODE	h10	h5		ap					
XE-93 D4 C	4,0	6	57	11	15	0,20	0,15	4	○
XE-93 D5 C	5,0	6	57	13	18	0,20	0,15	4	○
XE-93 D6 C	6,0	6	57	13	20	0,25	0,15	4	○
XE-93 D8 C	8,0	8	63	19	25	0,30	0,15	4	○
XE-93 D10 C	10,0	10	72	22	30	0,35	0,15	4	○
XE-93 D12 C	12,0	12	83	26	36	0,40	0,20	4	○
XE-93 D16 C	16,0	16	92	32	42	0,45	0,20	4	○
XE-93 D20 C	20,0	20	104	38	52	0,50	0,20	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE71

P K M



Fresa a sgrossare 4 taglienti con rompitruciolo serie normale
4 flute end mill for roughing with chip breaker standard series

CODICE CODE	D h11	d h6	L	l ap	Z	
XE-71 D4 C	4,0	6	57	13	4	○
XE-71 D5 C	5,0	6	57	13	4	○
XE-71 D6 C	6,0	6	57	13	4	○
XE-71 D8 C	8,0	8	63	19	4	○
XE-71 D10 C	10,0	10	72	22	4	○
XE-71 D12 C	12,0	12	83	26	4	○
XE-71 D16 C	16,0	16	92	32	4	○
XE-71 D20 C	20,0	20	104	38	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE97c

P K M



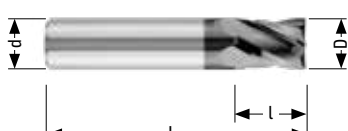
Fresa a SGROSSARE 4 taglienti serie normale
4 flute end mill for ROUGHING standard series

CODICE CODE	D h10	d h6	L	l ap	45°	Z	
XE-97 D4 C6	4,0	6	57	13	0,70	4	○
XE-97 D5 C6	5,0	6	57	13	0,80	4	○
XE-97 D6 C6	6,0	6	57	13	0,80	4	○
XE-97 D8 C8	8,0	8	63	19	0,80	4	○
XE-97 D10 C	10,0	10	72	22	0,80	4	○
XE-97 D12 C	12,0	12	83	26	0,90	4	○
XE-97 D16 C	16,0	16	92	32	0,90	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE29

P K M



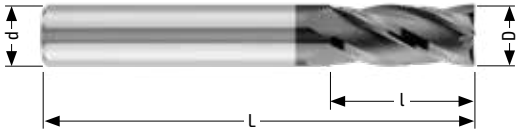
Fresa a 4 taglienti serie extra corta
4 flute end mill extra short series

CODICE CODE	D h10	d h5	L	l ap	Z	
XE-29 D2 C	2,0	6	38	4	4	○
XE-29 D3 C	3,0	6	38	5	4	○
XE-29 D4 C	4,0	6	38	7	4	○
XE-29 D5 C	5,0	6	38	8	4	○
XE-29 D6 C	6,0	6	38	8	4	○
XE-29 D8 C	8,0	8	43	11	4	○
XE-29 D10 C	10,0	10	50	13	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE56

P K M



Fresa a 4 taglienti serie normale
4 flute end mill standard series

CODICE CODE	D h10	d h5	L	l ap	Z	
XE-56 D2 C	2,0	4	50	7	4	○
XE-56 D2.5 C	2,5	4	50	8	4	○
XE-56 D3 C	3,0	4	50	8	4	○
XE-56 D3.5 C	3,5	4	50	10	4	○
XE-56 D4 C	4,0	4	50	11	4	○
XE-56 D4.5 C	4,5	5	50	11	4	○
XE-56 D5 C	5,0	5	50	13	4	○
XE-56 D5.5 C	5,5	6	57	13	4	○
XE-56 D6 C	6,0	6	57	13	4	○
XE-56 D6.5 C	6,5	7	60	16	4	○
XE-56 D7 C	7,0	7	60	16	4	○
XE-56 D7.5 C	7,5	8	63	19	4	○
XE-56 D8 C	8,0	8	63	19	4	○
XE-56 D8.5 C	8,5	9	67	19	4	○
XE-56 D9 C	9,0	9	67	19	4	○
XE-56 D9.5 C	9,5	10	72	22	4	○
XE-56 D10 C	10,0	10	72	22	4	○
XE-56 D11 C	11,0	11	83	26	4	○
XE-56 D12 C	12,0	12	83	26	4	○
XE-56 D13 C	13,0	13	83	26	4	○
XE-56 D14 C	14,0	14	83	26	4	○
XE-56 D15 C	15,0	15	92	32	4	○
XE-56 D16 C	16,0	16	92	32	4	○
XE-56 D18 C	18,0	18	92	32	4	○
XE-56 D20 C	20,0	20	104	38	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE56CR

P K M



Fresa a 4 taglienti serie normale							
4 flute end mill standard series							
CODICE	D	d	L	l	Cr	Z	
CODE	h10	h6		ap			
XE-56CR05 D2	2,0	4	50	7	0,5	4	○
XE-56CR05 D3	3,0	4	50	8	0,5	4	○
XE-56CR05 D4	4,0	4	50	11	0,5	4	○
XE-56CR05 D6	6,0	6	57	13	0,5	4	○
XE-56CR05 D8	8,0	8	63	19	0,5	4	○
XE-56CR05 D10	10,0	10	72	22	0,5	4	○
XE-56CR05 D12	12,0	12	83	26	0,5	4	○

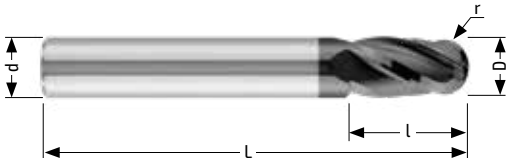
Fresa a 4 taglienti serie normale							
4 flute end mill standard series							
CODICE	D	d	L	l	Cr	Z	
CODE	h10	h6		ap			
XE-56CR10 D5	5,0	5	50	13	1,0	4	○
XE-56CR10 D6	6,0	6	57	13	1,0	4	○
XE-56CR10 D8	8,0	8	63	19	1,0	4	○
XE-56CR10 D10	10,0	10	72	22	1,0	4	○
XE-56CR10 D12	12,0	12	83	26	1,0	4	○

Fresa a 4 taglienti serie normale							
4 flute end mill standard series							
CODICE	D	d	L	l	Cr	Z	
CODE	h10	h6		ap			
XE-56CR20 D10	10,0	10	72	22	2,0	4	○
XE-56CR20 D12	12,0	12	83	26	2,0	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE66

P K M

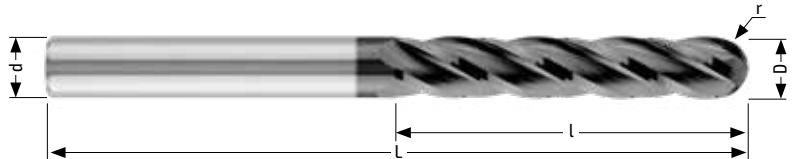


Fresa semisferica a 4 taglienti serie normale							
4 flute ball nose end mill standard series							
CODICE	D	d	L	l	r	Z	
CODE	h10	h6		ap			
XE-66 D2 C	2,0	3	38	5	1,0	4	○
XE-66 D3 C	3,0	3	38	7	1,5	4	○
XE-66 D4 C	4,0	4	50	8	2,0	4	○
XE-66 D5 C	5,0	5	50	10	2,5	4	○
XE-66 D6 C	6,0	6	57	10	3,0	4	○
XE-66 D7 C	7,0	7	60	13	3,5	4	○
XE-66 D8 C	8,0	8	63	16	4,0	4	○
XE-66 D9 C	9,0	9	67	16	4,5	4	○
XE-66 D10 C	10,0	10	72	19	5,0	4	○
XE-66 D12 C	12,0	12	83	22	6,0	4	○
XE-66 D13 C	13,0	13	83	22	6,5	4	○
XE-66 D14 C	14,0	14	83	22	7,0	4	○
XE-66 D16 C	16,0	16	92	26	8,0	4	○
XE-66 D18 C	18,0	18	92	26	9,0	4	○
XE-66 D20 C	20,0	20	104	32	10,0	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE83

P K M

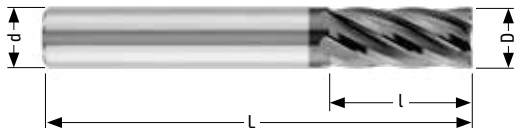


Fresa semisferica a 4 taglienti serie lunga							
4 flute ball nose end mill long series							
CODICE	D	d	L	l	r	Z	
CODE	h10	h6		ap			
XE-83 D6 C	6,0	6	105	42	3,0	4	○
XE-83 D8 C	8,0	8	105	50	4,0	4	○
XE-83 D10 C	10,0	10	120	50	5,0	4	○
XE-83 D12 C	12,0	12	160	65	6,0	4	○
XE-83 D16 C	16,0	16	160	70	8,0	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE61

P K M

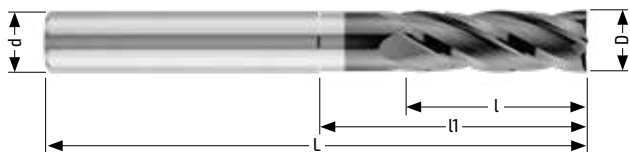
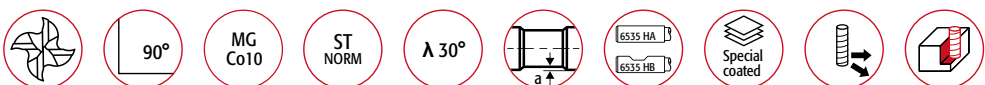


Fresa a 6 taglienti serie normale						
6 flute end mill standard series						
CODICE	D	d	L	l	Z	
CODE	h10	h6		ap		
XE-61 D6 C	6,0	6	57	13	6	○
XE-61 D8 C	8,0	8	63	19	6	○
XE-61 D10 C	10,0	10	72	22	6	○
XE-61 D12 C	12,0	12	83	26	6	○
XE-61 D14 C	14,0	14	83	26	6	○
XE-61 D16 C	16,0	16	92	32	6	○
XE-61 D20 C	20,0	20	104	38	8	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE59

P K M

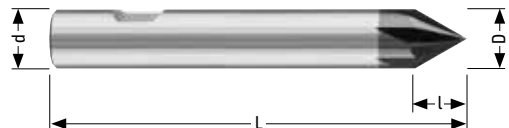


Fresa a 4 taglienti serie lunga							
4 flute end mill long series							
CODICE	D	d	L	l	l1	a	Z
CODE	h10	h6		ap			
XE-59 D3 C	3,0	3	62	14	-	-	4 ○
XE-59 D4 C	4,0	4	62	16	-	-	4 ○
XE-59 D5 C	5,0	5	62	20	-	-	4 ○
XE-59 D6 C	6,0	6	78	20	30	0,15	4 ○
XE-59 D8 C	8,0	8	78	25	35	0,15	4 ○
XE-59 D10 C	10,0	10	105	28	48	0,15	4 ○
XE-59 D12 C	12,0	12	105	32	52	0,20	4 ○
XE-59 D16 C	16,0	16	130	40	60	0,20	4 ○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

XE41WAL

P K M

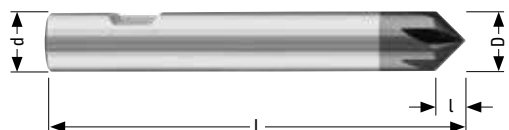


Fresa per smussi 60°				
End mill for chamfer 60°				
CODICE	D	d	L	Z
CODE	h10	h5		
XE-41 D3 WAL	3,0	4	50	4 ○
XE-41 D4 WAL	4,0	4	50	4 ○
XE-41 D6 WAL	6,0	6	57	6 ○
XE-41 D8 WAL	8,0	8	63	6 ○
XE-41 D10 WAL	10,0	10	72	6 ○
XE-41 D12 WAL	12,0	12	83	6 ○
XE-41 D16 WAL	16,0	16	92	6 ○
XE-41 D20 WAL	20,0	20	104	6 ○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

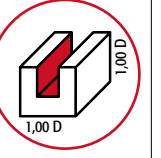
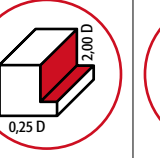
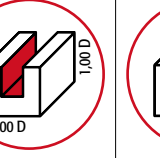
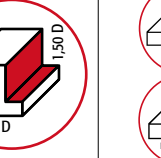
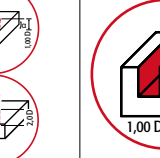
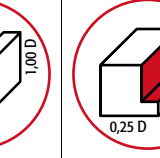
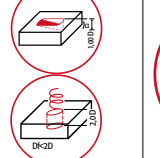
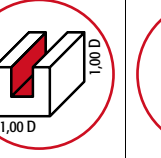
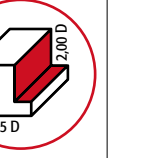
XE42WAL

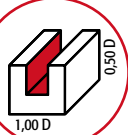
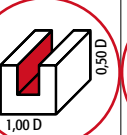
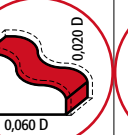
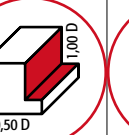
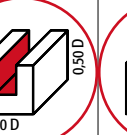
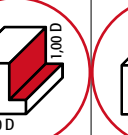
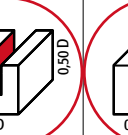
P K M

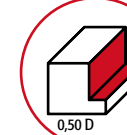
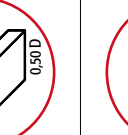
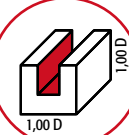
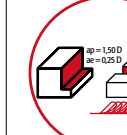
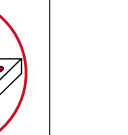


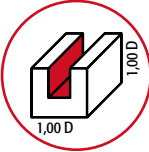
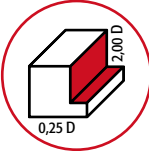
Fresa per smussi 90°				
End mill for chamfer 90°				
CODICE	D	d	L	Z
CODE	h10	h5		
XE-42 D3 WAL	3,0	4	50	4 ○
XE-42 D4 WAL	4,0	4	50	4 ○
XE-42 D6 WAL	6,0	6	57	6 ○
XE-42 D8 WAL	8,0	8	63	6 ○
XE-42 D10 WAL	10,0	10	72	6 ○
XE-42 D12 WAL	12,0	12	83	6 ○
XE-42 D16 WAL	16,0	16	92	6 ○
XE-42 D20 WAL	20,0	20	104	6 ○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad

Materiale Material	Diametro Diameter	XE95C						XE92C/XE93C						XE93C			XE93C/XE95C HF					
																						
		1,00 D		0,25 D		1,00 D		1,00 D		0,20 D		1,00 D		α=12°			1,00 D		0,25 D		1,00 D	
Acciaio <800 N/mm² Steel <800 N/mm²	m/min	Vc=140			Vc=160			Vc=140			Vc=160			α=12° Vc=140			Vc=260			Vc=330		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Acciaio <1000 N/mm² - Chiusa Steel <1000 N/mm² - Cast iron	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	594	14862	0,010	679	16985	0,010	594	14854	0,010	679	16977	-	-	-	-	-	-	-	-	-
	4,0	0,015	669	11146	0,015	764	12739	0,015	668	11141	0,015	764	12732	0,015	668	11141	0,013	1055	20690	0,013	1339	26261
	5,0	0,020	713	8917	0,020	815	10191	0,02	713	8913	0,020	815	10186	0,020	713	8913	0,017	1126	16552	0,017	1429	21008
	6,0	0,030	892	7431	0,030	1019	8493	0,03	891	7427	0,030	1019	8488	0,030	891	7427	0,026	1407	13793	0,026	1786	17507
	8,0	0,045	1003	5573	0,045	1146	6369	0,045	1003	5570	0,045	1146	6366	0,045	1003	5570	0,038	1583	10345	0,038	2009	13130
	10,0	0,060	1070	4459	0,060	1223	5096	0,060	1069	4456	0,060	1222	5093	0,060	1069	4456	0,051	1688	8276	0,051	2143	10504
	12,0	0,070	1040	3715	0,070	1189	4246	0,070	1040	3714	0,070	1188	4244	0,070	1040	3714	0,060	1641	6897	0,060	2083	8754
	14,0	-	-	-	-	-	-	-	0,072	917	3183	0,072	1048	3638	-	-	-	-	-	-	-	-
	16,0	0,075	836	2787	0,075	955	3185	0,075	836	2785	0,075	955	3183	0,075	836	2785	0,064	1319	5173	0,064	1674	6565
	20,0	0,082	731	2229	0,090	917	2548	0,082	731	2228	0,090	917	2546	0,082	731	2228	0,070	1154	4138	0,070	1464	5252
Acciaio <1300 N/mm² Steel <1300 N/mm²	m/min	Vc=115			Vc=130			Vc=115			Vc=125			α=12° Vc=115			Vc=220			Vc=280		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	488	12208	0,010	552	13800	0,010	488	12202	0,010	531	13263	-	-	-	-	-	-	-	-	-
	4,0	0,015	549	9156	0,015	621	10350	0,015	549	9151	0,015	597	9947	0,015	549	9151	0,013	893	17507	0,013	1136	22282
	5,0	0,020	586	7325	0,020	662	8280	0,02	586	7321	0,020	637	7958	0,020	586	7321	0,017	952	14006	0,017	1212	17825
	6,0	0,030	732	6104	0,030	828	6900	0,03	732	6101	0,030	796	6631	0,030	732	6101	0,026	1190	11671	0,026	1515	14854
	8,0	0,045	824	4578	0,045	932	5175	0,045	824	4576	0,045	895	4974	0,045	824	4576	0,038	1339	8754	0,038	1705	11141
	10,0	0,060	879	3662	0,060	994	4140	0,060	879	3661	0,060	955	3979	0,060	879	3661	0,051	1429	7003	0,051	1818	8913
	12,0	0,070	855	3052	0,070	966	3450	0,070	854	3050	0,070	928	3316	0,070	854	3050	0,060	1389	5836	0,060	1768	7427
	14,0	-	-	-	-	-	-	0,072	753	2615	0,072	819	2842	-	-	-	-	-	-	-	-	-
	16,0	0,075	687	2289	0,075	776	2588	0,075	686	2288	0,075	746	2487	0,075	686	2288	0,064	1116	4377	0,064	1420	5570
	20,0	0,082	601	1831	0,090	745	2070	0,082	600	1830	0,090	716	1989	0,082	600	1830	0,070	976	3501	0,070	1242	4456
Acciaio <1300 N/mm² Steel <1300 N/mm²	m/min	Vc=85			Vc=100			Vc=85			Vc=95			α=12° Vc=85			Vc=180			Vc=230		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	361	9023	0,010	425	10616	0,010	361	9019	0,010	403	10080	-	-	-	-	-	-	-	-	-
	4,0	0,015	406	6768	0,015	478	7962	0,015	406	6764	0,015	454	7560	0,015	406	6764	0,013	731	14324	0,013	933	18303
	5,0	0,020	433	5414	0,020	510	6369	0,020	433	5411	0,02	484	6048	0,020	433	5411	0,017	779	11459	0,017	996	14642
	6,0	0,030	541	4512	0,030	637	5308	0,030	541	4509	0,03	605	5040	0,030	541	4509	0,026	974	9549	0,026	1245	12202
	8,0	0,045	609	3384	0,045	717	3981	0,045	609	3382	0,045	680	3780	0,045	609	3382	0,038	1096	7162	0,038	1400	9151
	10,0	0,060	650	2707	0,060	764	3185	0,060	649	2706	0,060	726	3024	0,060	649	2706	0,051	1169	5730	0,051	1494	7321
	12,0	0,070	632	2256	0,070	743	2654	0,070	631	2255	0,070	706	2520	0,070	631	2255	0,060	1136	4775	0,060	1452	6101
	14,0	-	-	-	-	-	-	0,072	557	1933	0,072	622	2160	-	-	-	-	-	-	-	-	-
	16,0	0,075	508	1692	0,075	597	1990	0,075	507	1691	0,075	567	1890	0,075	507	1691	0,064	913	3581	0,064	1167	4576
	20,0	0,082	444	1354	0,090	573	1592	0,082	444	1353	0,090	544	1512	0,082	444	1353	0,070	799	2865	0,070	1021	3661
Acciaio <1300 N/mm² Steel <1300 N/mm²	m/min	Vc=45			Vc=60			Vc=45			Vc=50			α=10° Vc=45			Vc=80			Vc=110		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3,0	0,010	191	4777	0,010	255	6369	0,010	191	4775	0,010	212	5305	-	-	-	-	-	-	-	-	-
	4,0	0,015	215	3583	0,015	287	4777	0,015	215	3581	0,015	239	3979	0,015	215	3581	0,013	325	6366	0,013	446	8754
	5,0	0,020	229	2866	0,020	306	3822	0,020	229	2865	0,020	255	3183	0,020	229	2865	0,017	346	5093	0,017	476	7003
	6,0	0,030	287	2389	0,030	382	3185	0,030	286	2387	0,030	318	2653	0,030	286	2387	0,026	433	4244	0,026	595	5836
	8,0	0,045	322	1791	0,045	430	2389	0,045	322	1790	0,045	358	1989	0,045	322	1790	0,038	487	3183	0,038	670	4377
	10,0	0,060	344	1433	0,060	459	1911	0,060	344	1432	0,060	382	1592	0,060	344	1432	0,051	519	2546	0,051	714	3501
	12,0	0,070	334	1194	0,070	446	1592	0,070	334	1194	0,070	371	1326	0,070	334	1194	0,060	505	2122	0,060	694	2918
	14,0	-	-	-	-	-	-	0,072	295	1023	0,072	327	1137	-	-	-	-	-	-	-	-	-
	16,0	0,075	269	896	0,075	358	1194	0,075	269	895	0,075	298	995	0,075	269	895	0,064	406	1592	0,064	558	2188
	20,0	0,082	235	717	0,090	344	955	0,082	235	716	0,090	286	796	0,082	235	716	0,070	355	1273	0,070	488	1751
Acciaio Inox Stainless Steel	m/min	Vc=95			Vc=100			Vc=35			Vc=45			α=8° Vc=45			Vc=80			Vc=110		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z											

Materiale Material	Diametro Diameter	XE21C			XE01C			XE16C			XE36C			XE26C			XE41/42WALL		
																			
Acciaio <800 N/mm² Steel <800 N/mm²	m/min	Vc = 120			Vc = 120			Vc = 360			Vc = 130			Vc = 120			Vc = 130		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
Acciaio <1000 N/mm² - Ghisa Steel <1000 N/mm² - Cast iron	2,0	0,002	76	19108	0,002	76	19108	0,022	2521	57296	0,002	124	20701	0,002	115	19108	0,002	124	20701
	3,0	0,004	102	12739	0,004	102	12739	0,081	6188	38197	0,004	166	13800	0,004	153	12739	0,020	764	9554
	4,0	0,009	172	9554	0,009	172	9554	0,139	7964	28648	0,009	279	10350	0,009	258	9554	0,030	860	7166
	5,0	0,014	214	7643	0,014	214	7643	0,184	8434	22918	0,014	348	8280	0,014	321	7643	0,040	764	4777
	6,0	0,018	229	6369	0,018	229	6369	0,220	8403	19099	0,018	373	6900	0,018	344	6369	0,050	717	3583
	8,0	0,023	220	4777	0,023	220	4777	0,278	7964	14324	0,023	357	5175	0,023	330	4777	0,060	688	2866
	10,0	0,028	214	3822	0,028	214	3822	0,322	7380	11459	0,028	348	4140	0,028	321	3822	0,070	669	2389
	12,0	-	-	-	0,032	204	3185	0,359	6856	9549	0,032	331	3450	0,032	306	3185	0,080	459	1433
	14,0	-	-	-	0,034	186	2730	0,389	6368	8185	-	-	-	-	-	-	-	-	-
	16,0	-	-	-	0,038	182	2389	0,416	5959	7162	0,038	295	2588	0,038	272	2389	-	-	-
	20,0	-	-	-	0,042	161	1911	-	-	-	0,042	261	2070	0,042	241	1911	-	-	-
Acciaio <1300 N/mm² Steel <1300 N/mm²	m/min	Vc = 100			Vc = 100			Vc = 295			Vc = 110			Vc = 100			Vc = 110		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	64	15924	0,002	64	15924	0,022	2066	46951	0,002	105	17516	0,002	96	15924	0,020	594	7431
	3,0	0,004	85	10616	0,004	85	10616	0,081	5071	31300	0,004	140	11677	0,004	127	10616	0,030	669	5573
	4,0	0,009	143	7962	0,009	143	7962	0,139	6526	23475	0,009	236	8758	0,009	215	7962	0,040	594	3715
	5,0	0,014	178	6369	0,014	178	6369	0,184	6911	18780	0,014	294	7006	0,014	268	6369	0,050	557	2787
	6,0	0,018	191	5308	0,018	191	5308	0,22	6886	15650	0,018	315	5839	0,018	287	5308	0,060	535	2229
	8,0	0,023	183	3981	0,023	183	3981	0,278	6526	11738	0,023	302	4379	0,023	275	3981	0,070	520	1858
	10,0	0,028	178	3185	0,028	178	3185	0,322	6047	9390	0,028	294	3503	0,028	268	3185	0,080	390	1393
	12,0	-	-	-	0,032	170	2654	0,359	5618	7825	0,032	280	2919	0,032	255	2654	-	-	-
	14,0	-	-	-	0,034	155	2275	0,389	5218	6707	-	-	-	-	-	-	-	-	-
Acciaio Inox Stainless Steel	m/min	Vc = 75			Vc = 75			Vc = 225			Vc = 80			Vc = 75			Vc = 80		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,002	48	11943	0,002	48	11943	0,022	1576	35810	0,002	76	12739	0,002	72	11943	0,020	510	6369
	3,0	0,004	64	7962	0,004	64	7962	0,081	3867	23873	0,004	102	8493	0,004	96	7962	0,030	573	4777
	4,0	0,009	107	5971	0,009	107	5971	0,139	4978	17905	0,009	172	6369	0,009	161	5971	0,040	510	3185
	5,0	0,014	134	4777	0,014	134	4777	0,184	5271	14324	0,014	214	5096	0,014	201	4777	0,050	446	1592
	6,0	0,018	143	3981	0,018	143	3981	0,220	5252	11937	0,018	229	4246	0,018	215	3981	0,060	459	1911
	8,0	0,023	137	2986	0,023	137	2986	0,278	4978	8952	0,023	220	3185	0,023	206	2986	0,070	446	1592
	10,0	0,028	134	2389	0,028	134	2389	0,322	4612	7162	0,028	214	2548	0,028	201	2389	0,080	334	1194
	12,0	-	-	-	0,032	127	1990	0,359	4285	5968	0,032	204	2123	0,032	191	1990	-	-	-
	14,0	-	-	-	0,034	116	1706	0,389	3980	5116	-	-	-	-	-	-	-	-	-

Materiale Material	Diametro Diameter	XE10AL			XE12AL			XE13AL		
										
Alluminio e leghe < 6% Si Aluminium and alloys < 6% Si	m/min	Vc = 600			Vc = 795			Vc = 600		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	1910	95493	0,010	2531	126528	-	-	-
	3,0	0,014	1783	63662	0,014	2362	84352	-	-	-
	4,0	0,024	2292	47746	0,024	3037	63264	0,021	3008	47746
	5,0	0,044	3361	38197	0,044	4454	50611	0,035	4011	38197
	6,0	0,060	3820	31831	0,060	5061	42176	0,050	4775	31831
	8,0	0,086	4106	23873	0,086	5441	31632	0,073	5228	23873
	10,0	0,106	4049	16999	0,106	5365	25306	0,091	5214	16999
	12,0	0,122	3883	15915	0,122	5145	21088	0,105	5013	15915
	14,0	0,136	3711	13642	0,136	4917	18075	0,118	4829	13642
Alluminio e leghe > 6% Si Aluminium and alloys > 6% Si	m/min	Vc = 225			Vc = 300			Vc = 225		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	716	35810	0,010	955	47746	-	-	-
	3,0	0,014	668	23873	0,014	891	31831	-	-	-
	4,0	0,024	859	17905	0,024	1146	23873	0,021	1128	17905
	5,0	0,044	1261	14324	0,044	1681	19099	0,035	1504	14324
	6,0	0,060	1432	11937	0,060	1910	15915	0,050	1790	11937
	8,0	0,086	1540	8952	0,086	2053	11937	0,073	1961	8952
	10,0	0,106	1518	7162	0,106	2024	9549	0,091	1955	7162
	12,0	0,122	1456	5968	0,122	1942	7958	0,105	1880	5968
	14,0	0,136	1391	5116	0,136	1855	6821	0,118	1811	5116
Rame e leghe Copper and alloys	m/min	Vc = 375			Vc = 495			Vc = 375		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	1194	59683	0,010	1576	78782	-	-	-
	3,0	0,014	1114	39789	0,014	1471	52521	-	-	-
	4,0	0,024	1432	29842	0,024	1891	39391	0,021	1880	29842
	5,0	0,044	2101	23873	0,044	2773	31513	0,035	2507	23873
	6,0	0,060	2387	19894	0,060	3151	26261	0,050	2984	19894
	8,0	0,086	2566	14921	0,086	3388	19695	0,073	3268	14921
	10,0	0,106	2531	11937	0,106	3340	15756	0,091	3259	11937
	12,0	0,122	2427	9947	0,122	3204	13130	0,105	3133	9947
	14,0	0,136	2319	8526	0,136	3061	11255	0,118	3018	8526
Resina termoplastica Thermoplastics	m/min	Vc = 450			Vc = 595			Vc = 450		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	2,0	0,010	1432	71620	0,010	1894	94697	-	-	-
	3,0	0,014	1337	47746	0,014	1768	63131	-	-	-
	4,0	0,024	1719	35810	0,024	2273	47349	0,021	2256	35810
	5,0	0,044	2521	28648	0,044	3333	37879	0,035	3008	28648
	6,0	0,060	2865	23873	0,060	3788	31566	0,050	3581	23873
	8,0	0,086	3080	17905	0,086	4072	23674	0,073	3921	17905
	10,0	0,106	3037	14324	0,106					

Materiale Material	Diametro Diameter	XE94C					
							
Inox ferritico Ferritic stainless steel	m/min	Vc=130			Vc=140		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	0,013	718	13800	0,013	773	14862
	4,0	0,020	828	10350	0,020	892	11146
	5,0	0,025	828	8280	0,025	892	8917
	6,0	0,030	828	6900	0,030	892	7431
	8,0	0,040	828	5175	0,040	892	5573
	10,0	0,050	828	4140	0,050	892	4459
	12,0	0,060	828	3450	0,060	892	3715
	16,0	0,070	725	2588	0,070	780	2787
	20,0	0,080	662	2070	0,080	713	2229
Inox austenitico Austenitic stainless steel	m/min	Vc=110			Vc=120		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	0,013	607	11677	0,013	662	12739
	4,0	0,020	701	8758	0,020	764	9554
	5,0	0,025	701	7006	0,025	764	7643
	6,0	0,030	701	5839	0,030	764	6369
	8,0	0,040	701	4379	0,040	764	4777
	10,0	0,050	701	3503	0,050	764	3822
	12,0	0,060	701	2919	0,060	764	3185
	16,0	0,070	613	2189	0,070	669	2389
	20,0	0,080	561	1752	0,080	611	1911
Titanio Titanium	m/min	Vc=60			Vc=70		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	0,005	127	6369	0,010	297	7431
	4,0	0,007	124	4777	0,016	357	5573
	5,0	0,009	130	3822	0,020	357	4459
	6,0	0,010	127	3185	0,030	446	3715
	8,0	0,013	124	2389	0,040	446	2787
	10,0	0,018	138	1911	0,050	446	2229
	12,0	0,022	140	1592	0,060	446	1858
	16,0	0,032	153	1194	0,080	446	1393
	20,0	0,040	153	955	0,100	446	1115
Acciaio <800 N/mm² Steel < 800N/mm²	m/min	Vc=130			Vc=140		
	D mm	fz mm/z	F mm/min	n rpm	fz mm/z	F mm/min	n rpm
	3,0	0,013	718	13800	0,013	773	14862
	4,0	0,020	828	10350	0,020	892	11146
	5,0	0,025	828	8280	0,025	892	8917
	6,0	0,030	828	6900	0,030	892	7431
	8,0	0,040	828	5175	0,040	892	5573
	10,0	0,050	828	4140	0,050	892	4459
	12,0	0,060	828	3450	0,060	892	3715
	16,0	0,070	725	2588	0,070	780	2787
	20,0	0,080	662	2070	0,080	713	2229

XM547



P K N S

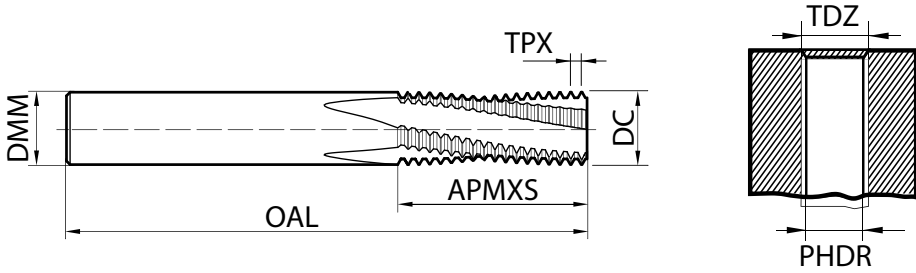


Fresa a filettare in metallo duro/Solid carbide thread milling cutters

CODICE CODE	TDZ	TPX*60°	DC	DMM	PHDR	OAL	APMXS	Z	
XM-547 M6 Z3-WE	M6	1,00	4,80	6	5	54	13,50	3	●
XM-547 M8 Z3-WE	M8	1,25	6,40	8	6,8	62	18,10	3	●
XM-547 M10 Z3-WE	M10	1,50	7,95	10	8,5	74	21,80	3	●
XM-547 M12 Z4-WE	M12	1,75	9,95	10	10,2	74	25,40	4	●
XM-547 M14 Z4-WE	M14	2,00	11,20	12	12	90	31,00	4	●
XM-547 M16 Z4-WE	M16	2,00	12,80	14	14	90	35,00	4	●
XM-547 M20 Z4-WE	M20	2,50	14,95	16	17,5	102	41,30	4	●

● Stock Italia/Warehouse in Italy

○ Stock Estero/Warehouse abroad



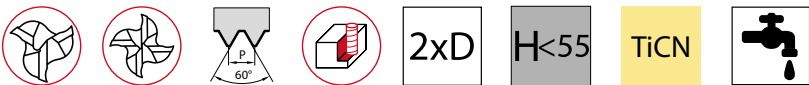
Frese a filettare in metallo duro adatte a tutti i materiali senza fori di lubrificazione, attacco weldon. Possibilità di fare filetti destri e sinistri con un'unica fresa, tolleranze regolabili a piacere. Con lo stesso passo è possibile fare filetti di diametri diversi.

Carbide thread drills suitable for all materials without lubrication holes, weldon connection. Right and left threads with a single milling cutter, adjustable tolerances. With the same step it is possible to make threads of different diameters.

XM548



P K N S

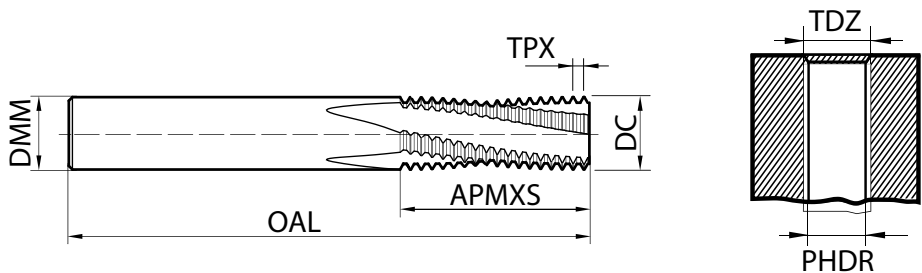


Fresa a filettare in metallo duro/Solid carbide thread milling cutters

CODICE CODE	TDZ	TPX*60°	DC	DMM	PHDR	OAL	APMXS	Z	
XM-548 M6-A Z3-C	M6	1,00	4,80	6	5	54	13,50	3	●
XM-548 M8-A Z3-C	M8	1,25	6,40	8	6,8	62	18,10	3	●
XM-548 M10-A Z3-C	M10	1,50	7,95	10	8,5	74	21,80	3	●
XM-548 M12-A Z4-C	M12	1,75	9,95	10	10,2	74	25,40	4	●
XM-548 M14-A Z4-C	M14	2,00	11,20	12	12	90	31,00	4	●
XM-548 M16-A Z4-C	M16	2,00	12,80	14	14	90	35,00	4	●
XM-548 M20-A Z4-C	M20	2,50	14,95	16	17,5	102	41,30	4	●

● Stock Italia/Warehouse in Italy

○ Stock Estero/Warehouse abroad



Frese a filettare in metallo duro adatte a tutti i materiali con fori di lubrificazione, attacco cilindrico. Possibilità di fare filetti destri e sinistri con un'unica fresa, tolleranze regolabili a piacere. Con lo stesso passo è possibile fare filetti di diametri diversi.

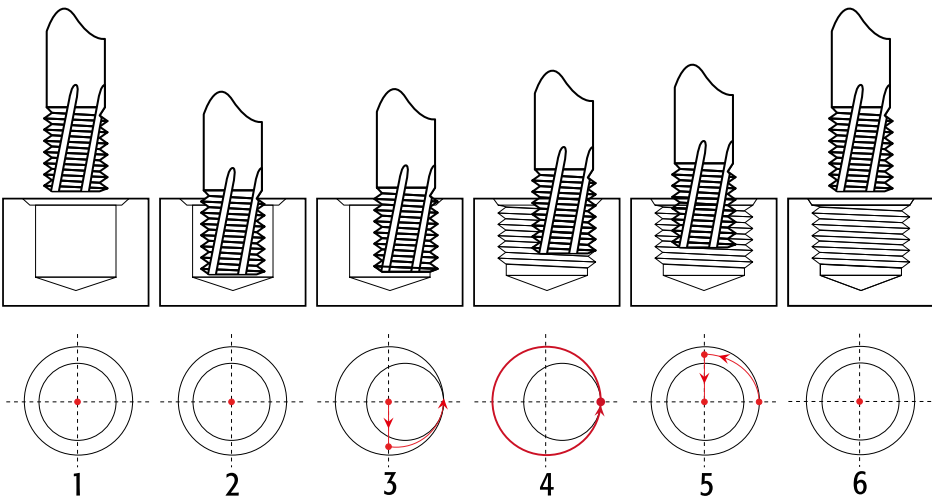
Carbide thread drills suitable for all materials with lubrication holes, cylindrical connection. Right and left threads with a single milling cutter, adjustable tolerances. With the same step it is possible to make threads of different diameters.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

MATERIALE MATERIAL	Vc (m/min)	Fz=DC x coeff. Coeff.	Lavorazione consigliata
Acciaio basso legato/Low alloy steel	120/160	0,0020	●
Acciaio medio legato/Medium alloy steel	80/120	0,0020	●
Acciaio legato, per stampi-utensili/Alloy steel for dies-tools	60/100	0,0015	○
Inox/ss	50/90	0,0015	○
Duplex, leghe titanio, inconel 625/Duplex steel, titanium alloys, Inconel 625	40/70	0,0010	○
Ghisa/Cast iron	90/140	0,0020	●
Materiali non ferrosi, alluminio/Aluminium	160/200	0,0020	○

Esempio di ciclo di lavorazione



- 1 Posizionamento centro foro e avvio rotazione mandrino, inserimento lavoro incrementale.
- 2 Avvicinamento in Z alla profondità di lavoro, inserimento compensazione raggio.
- 3 Ingresso dolce con rotazione di 180° e incremento Z metà passo.
- 4 Ciclo di lavorazione con rotazione di 360° e incremento in Z pari al passo del filetto.
- 5 Uscita dolce con rotazione 180°, incremento Z metà passo e disattivazione compensazione raggio.
- 6 Uscita dal foro, disattivazione lavoro incrementale e fine ciclo.

- 1 Center hole positioning and spindle rotation start, incremental job insertion.
- 2 Approach in Z to the working depth, insertion of radius compensation.
- 3 Sweet input with 180 ° rotation and Z increment half step.
- 4 Machining cycle with 360 ° rotation and Z increment equal to thread pitch.
- 5 Soft output with 180 ° rotation, Z increment half step and radius compensation deactivation.
- 6 Exit from the hole, deactivate incremental work and end cycle.

Per i CNC che non calcolano automaticamente l'avanzamento dal centro dell'utensile, deve essere preso in considerazione il valore Vf_m.

$V_f = f_z \times Z \times n$ avanzamento in contornatura

$V_{fm} = \frac{V_f \times (TDZ - DC)}{TDZ}$ avanzamento dal centro fresa

Esempio indicativo parametri per M12 acciai medio legato

Vc.	100	S (n° giri):	$\frac{100 \times 1000}{9,95 \times 3,14} = 3200$
DC	9,95		
Z	4		
M	12	Fz (mm) = DC x coeff. :	$9,95 \times 0,002 = 0,02$
		Vf periferico (mm/min):	$3200 \times 0,02 \times 4 = 256$
		Vfm centro fresa (mm/min):	$\frac{256 \times (12 - 9,95)}{12} = 44$

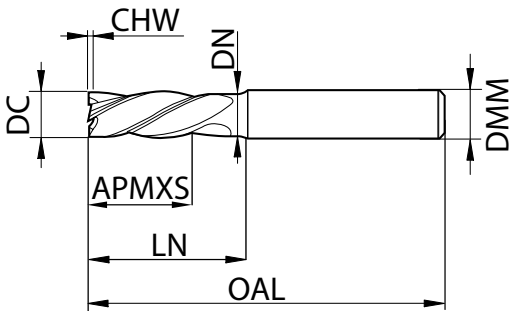
XM653



Fresa MD per lavorazioni universali/Solid carbide for general machining

CODICE CODE	D h10	DMM h6	DN	OAL	APMXS	LN	CHW	Z	
XM-653 D3.00 Z4-C	3	6	2,8	57	8	15	0,1X45°	4	●
XM-653 D4.00 Z4-C	4	6	3,8	57	11	18	0,15X45°	4	●
XM-653 D5.00 Z4-C	5	6	4,8	57	13	18	0,15X45°	4	●
XM-653 D6.00 Z4-C	6	6	5,7	57	13	20	0,2X45°	4	●
XM-653 D8.00 Z4-C	8	8	7,7	63	19	26	0,25X45°	4	●
XM-653 D10.00 Z4-C	10	10	9,5	72	22	30	0,3X45°	4	●
XM-653 D12.00 Z4-C	12	12	11,5	83	26	36	0,35X45°	4	●
XM-653 D14.00 Z4-C	14	14	13,5	83	26	36	0,4X45°	4	●
XM-653 D16.00 Z4-C	16	16	15,5	92	32	42	0,5X45°	4	●
XM-653 D18.00 Z4-C	18	18	17,5	92	32	42	0,6X45°	4	●
XM-653 D20.00 Z4-C	20	20	19,5	104	38	52	0,6X45°	4	●
XM-653 D25.00 Z4-C	25	25	24	121	45	63	0,75X45°	4	●

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



Frese MD Z4 elica e passo differenziati. Con attacco cilindrico, disponibili anche con attacco weldon. Solid carbide mills Z4 differentiated helix and pitch. Cylindrical and weldon connection available.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

MATERIALE MATERIAL	FINITURA IN CONTORNATURA/CONTOURING FINISHING				
	N/mm²	vc	ap	ae	fz
Acciai basso legati/Low alloy steel	<800	170/210	1,5 x D	0,25 x D	0,006 x D
Acciai medio legati/Medium alloy steel	<1000	150/180	1,5 x D	0,25 x D	0,006 x D
Acciai legati, per utensili/Alloy steel tools	<1300	90/120	1,5 x D	0,20 x D	0,005 x D
Acciai al cromo, inox/SS Cr Steel		50/100	1,5 x D	0,15 x D	0,005 x D
Duplex, leghe titanio, inconel 625		40/60			0,0045 x D
Materiali non ferrosi, alluminio/Aluminium		120/150	1,5 x D	0,03 x D	0,008 x D

FINITURA IN CONTORNATURA

Impegno laterale radiale Ae : mm. 0,03 x D
Aumentare o ridurre Fz per ottenere il grado di finitura richiesto

Contouring finishing

Radial cutting width Ae : mm. 0,03 x D
Increase decrease the Fz for satisfactory surface quality

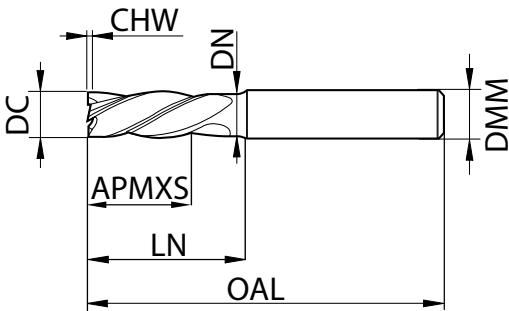
XM654



Fresa MD per lavorazioni universali/Solid carbide for general machining

CODICE CODE	D h10	DMM h6	DN	OAL	APMXS	LN	CHW	Z	
XM-654 D3.00 Z4-WE	3	6	2,8	57	8	15	0,1X45°	4	○
XM-654 D4.00 Z4-WE	4	6	3,8	57	11	18	0,15X45°	4	○
XM-654 D5.00 Z4-WE	5	6	4,8	57	13	18	0,15X45°	4	○
XM-654 D6.00 Z4-WE	6	6	5,7	57	13	20	0,2X45°	4	○
XM-654 D8.00 Z4-WE	8	8	7,7	63	19	26	0,25X45°	4	○
XM-654 D10.00 Z4-WE	10	10	9,5	72	22	30	0,3X45°	4	○
XM-654 D12.00 Z4-WE	12	12	11,5	83	26	36	0,35X45°	4	○
XM-654 D14.00 Z4-WE	14	14	13,5	83	26	36	0,4X45°	4	○
XM-654 D16.00 Z4-WE	16	16	15,5	92	32	42	0,5X45°	4	○
XM-654 D18.00 Z4-WE	18	18	17,5	92	32	42	0,6X45°	4	○
XM-654 D20.00 Z4-WE	20	20	19,5	104	38	52	0,6X45°	4	○
XM-654 D25.00 Z4-WE	25	25	24	121	45	63	0,75X45°	4	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



Frese MD Z4 elica e passo differenziati. Con attacco weldon, disponibili anche con attacco cilindrico. Solid carbide mills Z4 differentiated helix and pitch. Weldon and cylindrical connection available.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

MATERIALE MATERIAL	FINITURA IN CONTORNATURA/CONTOURING FINISHING				
	N/mm²	vc	ap	ae	fz
Acciai basso legati/Low alloy steel	<800	170/210	1,5 x D	0,25 x D	0,006 x D
Acciai medio legati/Medium alloy steel	<1000	150/180	1,5 x D	0,25 x D	0,006 x D
Acciai legati, per utensili/Alloy steel tools	<1300	90/120	1,5 x D	0,20 x D	0,005 x D
Acciai al cromo, inox/SS Cr Steel		50/100	1,5 x D	0,15 x D	0,005 x D
Duplex, leghe titanio, inconel 625		40/60			0,0045 x D
Materiali non ferrosi, alluminio/Aluminium		120/150	1,5 x D	0,03 x D	0,008 x D

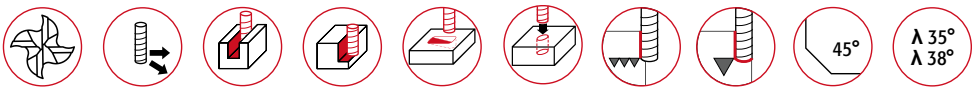
FINITURA IN CONTORNATURA

Impegno laterale radiale Ae : mm. 0,03 x D
Aumentare o ridurre Fz per ottenere il grado di finitura richiesto

Contouring finishing

Radial cutting width Ae : mm. 0,03 x D
Increase decrease the Fz for satisfactory surface quality

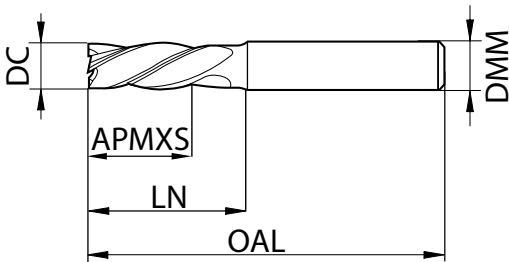
XM871 UNIVERSAL



Fresa MD per lavorazioni trocoidali Z4, gambo con attacco weldon
Solid carbide milling cutter Z4 for trochoidal machining with weldon connection

CODICE CODE	D h10	DMM h6	OAL	APMXS	LN	Z	
XM-871 D6.00 Z4 WE	6	6	65	18	28	4	●
XM-871 D8.00 Z4 WE	8	8	75	24	38	4	●
XM-871 D10.00 Z4 WE	10	10	80	30	38	4	●
XM-871 D12.00 Z4 WE	12	12	93	36	46	4	●
XM-871 D16.00 Z4 WE	16	16	108	48	58	4	●
XM-871 D20.00 Z4 WE	20	20	126	60	74	4	●

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



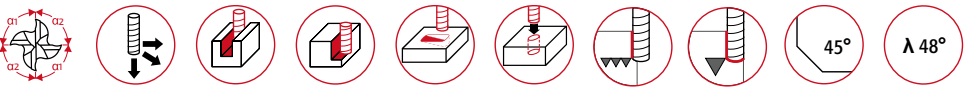
Frese MD Z4 **elica differenziata**. Con angolo smussato per una lavorazione stabile.
Solid carbide mills Z4 differentiated helix angle. Corner protection chamfer and face protection.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

ISO	Hardness	vc	fz (mm/z) Ø								vc	fz (mm/z) Ø							
			3	6	8	10	12	16	20			3	6	8	10	12	16	20	
			ap = l2		Sgros.	Finit.		ae max. = 0,10 x D				ap = l2			ae max. = 0,02 x D				
P	≤ 850 N/MM2	340	0,036	0,072	0,096	0,138	0,17	0,22	0,28	360	0,017	0,034	0,046	0,066	0,08	0,11	0,13		
	≥ 850 N/MM2	250	0,031	0,062	0,083	0,115	0,14	0,18	0,23	270	0,015	0,030	0,040	0,055	0,07	0,09	0,11		
K	≤ 240 HB	300	0,038	0,076	0,101	0,150	0,18	0,24	0,30	320	0,018	0,036	0,048	0,072	0,09	0,11	0,14		
	≥ 240 HB	260	0,035	0,069	0,092	0,127	0,15	0,20	0,25	280	0,017	0,033	0,044	0,061	0,07	0,10	0,12		

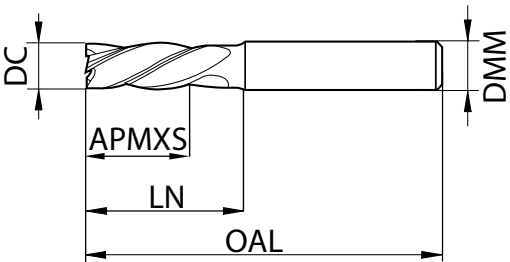
XM761 STAINLESS SPEED



Fresa MD per lavorazioni trocoidali Z4 con elica e passo differenziato, gambo con attacco weldon
Solid carbide milling cutter Z4 for trochoidal machining with weldon connection

CODICE CODE	D h10	DMM h6	OAL	APMXS	LN	Z	
XM-761 D3.00 Z4 WE	3	6	57	12	14,9	4	○
XM-761 D4.00 Z4 WE	4	6	65	16	18,9	4	○
XM-761 D5.00 Z4 WE	5	6	65	20	22,9	4	○
XM-761 D6.00 Z4 WE	6	6	65	24	29,0	4	●
XM-761 D8.00 Z4 WE	8	8	75	32	39,0	4	●
XM-761 D10.00 Z4 WE	10	10	90	40	50,0	4	●
XM-761 D12.00 Z4 WE	12	12	100	46	55,0	4	●
XM-761 D16.00 Z4 WE	16	16	108	55	60,0	4	●
XM-761 D20.00 Z4 WE	20	20	126	65	76,0	4	●

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



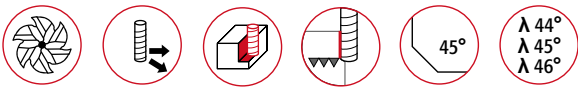
Frese MD Z4 **passo differenziato**. Con vani evacuazione truciolo profondi per maggiore asportazione, angolo smussato per una lavorazione stabile, rompi truciolo aggiuntivo lungo filo tagliente e ampia varietà di materiali.
Solid carbide mills Z4 differentiated helix pitch. Deepened flute on front cutting edge area for improved chip evacuation, corner protection chamfer and face protection, extra length's chip breakers in the cutting edges ensure short chips for secure evacuation and wide variety of materials.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

ISO	Hardness	vc	fz (mm/z) ø								vc	fz (mm/z) ø							
			3	6	8	10	12	16	20			3	6	8	10	12	16	20	
			ap = l2		Sgros.	Finit.		ae max. = 0,10 x D				ap = l2			ae max. = 0,02 x D				
M	≤ 750 N/MM2	220	0,031	0,062	0,083	0,115	0,14	0,18	0,23	240	0,015	0,030	0,040	0,055	0,07	0,09	0,11		
	≥ 750 N/MM2	110	0,024	0,048	0,064	0,092	0,11	0,15	0,18		120	0,011	0,021	0,028	0,040	0,05	0,06	0,08	
S	Ni-based	60	0,019	0,039	0,052	0,074	0,09	0,12	0,15	60	0,008	0,017	0,022	0,032	0,04	0,05	0,06		
	Ti-based	110	0,028	0,055	0,074	0,104	0,12	0,17	0,21		120	0,013	0,026	0,035	0,050	0,06	0,08	0,10	

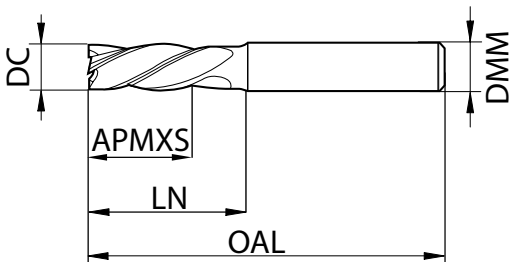
XM632



Fresa MD per lavorazioni trocoidali Z6, gambo con attacco weldon
Solid carbide milling cutter Z6 for trochoidal machining with weldon connection

CODICE CODE	D h10	DMM h6	OAL	APMXS	LN	Z	
XM-632 D8.00 Z6 WE	8	8	63	19	26	6	●
XM-632 D10.00 Z6 WE	10	10	72	22	30	6	●
XM-632 D12.00 Z6 WE	12	12	83	26	36	6	●
XM-632 D16.00 Z6 WE	16	16	92	32	42	6	●
XM-632 D20.00 Z6 WE	20	20	104	38	52	6	●
XM-632 D25.00 Z6 WE	25	25	121	45	63	6	○

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



Frese MD Z6 **elica differenziata**. Con angolo smussato per una lavorazione stabile e ampia varietà di materiali.
Solid carbide mills Z6 differentiated helix angle. Corner protection chamfer and face protection and wide variety of materials.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

ISO	Hardness	vc	fz (mm/z) ø							vc	fz (mm/z) ø						
			3	6	8	10	12	16	20		3	6	8	10	12	16	20
			ap = l2	Sgros.	Finit.		ae max. = 0,10 x D				ap = l2		ae max.= 0,02 x D				
P	≤ 850 N/MM2	340	0,036	0,072	0,096	0,138	0,17	0,22	0,28	360	0,017	0,034	0,046	0,066	0,08	0,11	0,13
	≥ 850 N/MM2	250	0,031	0,062	0,083	0,115	0,14	0,18	0,23	270	0,015	0,030	0,040	0,055	0,07	0,09	0,11
M	≤ 750 N/MM2	220	0,031	0,062	0,083	0,115	0,14	0,18	0,23	240	0,015	0,030	0,040	0,055	0,07	0,09	0,11
	≥ 750 N/MM2	110	0,024	0,048	0,064	0,092	0,11	0,15	0,18	120	0,011	0,021	0,028	0,040	0,05	0,06	0,08
S	Ni-based	60	0,019	0,039	0,052	0,074	0,09	0,12	0,15	60	0,008	0,017	0,022	0,032	0,04	0,05	0,06
	Ti-based	110	0,028	0,055	0,074	0,104	0,12	0,17	0,21	120	0,013	0,026	0,035	0,050	0,06	0,08	0,10
K	≤ 240 HB	300	0,038	0,076	0,101	0,150	0,18	0,24	0,30	320	0,018	0,036	0,048	0,072	0,09	0,11	0,14
	≥ 240 HB	260	0,035	0,069	0,092	0,127	0,15	0,20	0,25	280	0,017	0,033	0,044	0,061	0,07	0,10	0,12
N	≤ 7 % Si	900	0,045	0,090	0,120	0,184	0,22	0,29	0,37	1000	0,021	0,043	0,057	0,088	0,11	0,14	0,18
	≥ 7 % Si	430	0,038	0,076	0,101	0,138	0,17	0,22	0,28	460	0,018	0,036	0,048	0,066	0,08	0,11	0,13

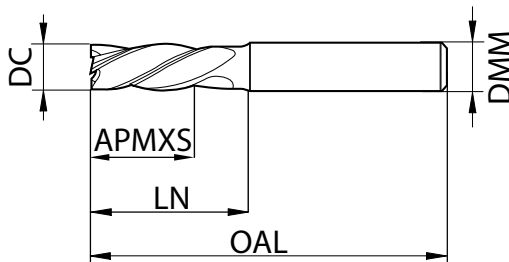
XM898



Fresa MD per lavorazioni trocoidali Z5, gambo con attacco weldon
Solid carbide milling cutter Z5 for trochoidal machining with weldon connection

CODICE CODE	D h10	DMM h6	OAL	APMXS	LN	Z	
XM-898 D4.00 Z5 WE	4	6	65	12	26	5	○
XM-898 D5.00 Z5 WE	5	6	65	15	26	5	○
XM-898 D6.00 Z5 WE	6	6	65	18	28	5	○
XM-898 D8.00 Z5 WE	8	8	75	24	38	5	○
XM-898 D10.00 Z5 WE	10	10	80	30	38	5	○
XM-898 D12.00 Z5 WE	12	12	93	36	46	5	●
XM-898 D16.00 Z5 WE	16	16	108	48	58	5	●
XM-898 D20.00 Z5 WE	20	20	126	60	74	5	●

● Stock Italia/Warehouse in Italy ○ Stock Estero/Warehouse abroad



Frese MD Z5 con angolo smussato per una lavorazione stabile e ampia varietà di materiali.
Solid carbide mills Z5 with corner protection chamfer and face protection, wide variety of materials.

INFORMAZIONI TECNICHE/TECHNICAL INFORMATION

Dati di taglio/Cutting data

ISO	Hardness	vc	fz (mm/z) ø							vc	fz (mm/z) ø						
			3	6	8	10	12	16	20		3	6	8	10	12	16	20
			ap = l2	Sgros.	Finit.		ae max. = 0,10 x D				ap = l2		ae max.= 0,02 x D				
P	≤ 850 N/MM2	340	0,036	0,072	0,096	0,138	0,17	0,22	0,28	360	0,017	0,034	0,046	0,066	0,08	0,11	0,13
	≥ 850 N/MM2	250	0,031	0,062	0,083	0,115	0,14	0,18	0,23	270	0,015	0,030	0,040	0,055	0,07	0,09	0,11
M	≤ 750 N/MM2	220	0,031	0,062	0,083	0,115	0,14	0,18	0,23	240	0,015	0,030	0,040	0,055	0,07	0,09	0,11
	≥ 750 N/MM2	110	0,024	0,048	0,064	0,092	0,11	0,15	0,18	120	0,011	0,021	0,028	0,040	0,05	0,06	0,08
S	Ni-based	60	0,019	0,039	0,052	0,074	0,09	0,12	0,15	60	0,008	0,017	0,022	0,032	0,04	0,05	0,06
	Ti-based	110	0,028	0,055	0,074	0,104	0,12	0,17	0,21	120	0,013	0,026	0,035	0,050	0,06	0,08	0,10
K	≤ 240 HB	300	0,038	0,076	0,101	0,150	0,18	0,24	0,30	320	0,018	0,036	0,048	0,072	0,09	0,11	0,14
	≥ 240 HB	260	0,035	0,069	0,092	0,127	0,15	0,20	0,25	280	0,017	0,033	0,044	0,061	0,07	0,10	0,12
N	≤ 7 % Si	900	0,045	0,090	0,120	0,184	0,22	0,29	0,37	1000	0,021	0,043	0,057	0,088	0,11	0,14	0,18
	≥ 7 % Si	430	0,038	0,076	0,101	0,138	0,17	0,22	0,28	460	0,018	0,036	0,048	0,066	0,08	0,11	0,13

Legenda
Legend

	2 Taglienti 2 Flutes		Attacchi 6535 HA + 6535 HB 6535 HA + 6535 HB holders
	3 Taglienti 3 Flutes		Attacco 6535 HA 6535 HA holder
	3 Taglienti con elica differenziata 3 Flutes with unequal helix		Attacco 6535 HB 6535 HB holder
	4 Taglienti 4 Flutes		Direzione di avanzamento Feed direction
	4 Taglienti 4 Flutes		Fresatura di cava Slotting
	4 Taglienti 4 Flutes		Fresatura laterale e frontale Side and face milling
	4 Taglienti con elica differenziata 4 Flutes with unequal helix		Fresatura trocoidale Trochoidal milling
	6 Taglienti 6 Flutes		Fresatura in rampa Ramp milling
	Qualità metallo duro Hard metal quality		Copiatura 3D 3D Copy milling
	Norma 6527 L 6528 6527 L 6528 Norm		Smussatura Chamfering
	Norma 6527 L 6527 L Norm		Geometria frontale 45° 45° Profile geometry
	Norma 6527 K 6528 6527 K 6528 Norm		Geometria frontale 60° 60° Profile geometry
	Norma ST ST Norm		Geometria frontale 90° 90° Profile geometry
	Angolo elica Helix angle		Geometria frontale 90° 90° Profile geometry
	Rivestimento Speciale Special coating		Geom. front. corner radius Corner radius prof. geom.
	Ribassamento dopo il tagliente Neck relief		Geom. front. semisferica Ball nose profile geometry
	Lucida Polishent		



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Sito



Contatti

