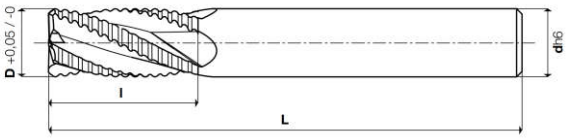


Serie/*Series*

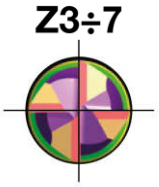
21105

Frese a **SGROSSARE** tagliente al centro
Roughing end mills center cutting

COATING	W	F	λ°s			
Skin	A RICHIESTA *ON REQUEST*	A RICHIESTA *ON REQUEST*	28	NR	UNI 8244 DIN 844A ISO 1641/I	

Cod. Art.	X-85 (PM Co 8,5%)	COATED	D +0,05 -0	l	L	dh6	Z
211050603 CM		**CMX**	6	13	57	6	3
211050703 CM		**CMX**	7	16	66	10	3
211050803 CM		**CMX**	8	19	69	10	4
211050903 CM		**CMX**	9	19	69	10	4
211051003 CM		**CMX**	10	22	72	10	4
211051103 CM		**CMX**	11	22	79	12	4
211051203 CM		**CMX**	12	26	83	12	4
211051303 CM		**CMX**	13	26	83	12	4
211051403 CM		**CMX**	14	26	83	12	4
211051503 CM		**CMX**	15	32	92	16	4
211051603 CM		**CMX**	16	32	92	16	4
211051703 CM		**CMX**	17	32	92	16	4
211051803 CM		**CMX**	18	32	92	16	4
211051807 CM		**CMX**	18	32	98	20	4
211052003 CM		**CMX**	20	38	98	16	4
211052007 CM		**CMX**	20	38	104	20	4
211052203 CM		**CMX**	22	38	104	20	4
211052207 CM		**CMX**	22	38	114	25	4
211052403 CM		**CMX**	24	45	121	25	5
211052503 CM		**CMX**	25	45	121	25	5
211052603 CM		**CMX**	26	45	121	25	5
211052803 CM		**CMX**	28	45	121	25	5
211053003 CM		**CMX**	30	45	121	25	5
211053203 CM		**CMX**	32	53	133	32	5
211053603 CM		**CMX**	36	53	133	32	6
211054003 CM		**CMX**	40	63	143	32	6
211054503 CM		**CMX**	45	63	143	32	6
211055003 CM		**CMX**	50	75	155	32	7

parametri tecnici a pag. / *for technical parameters see page 124*

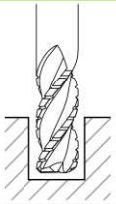
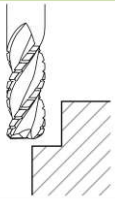
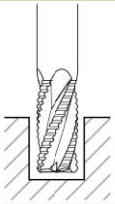
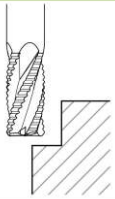


MATERIALI LAVORABILI / *WORKPIECE MATERIALS*

serie *series*	TITANIO *TITANIUM*	HRSA *HRSA*	ACCIAI INOSSIDABILI *STAINLESS STEELS*	MATERIALI NON FERROSI *NON FERROUS MATERIALS*	LEGHE LEGGERE *LIGHT ALLOYS*	ACCIAI *STEELS*	GHISE *CAST IRON*
21105	◕	◕	◕	○	○	●	●

● consigliata/*recommended* ◕ accettabile/*acceptable* ○ non consigliata/*not recommended*

Parametri di taglio/*Cutting parameters*

		15105 15120* WF		15105 15120* WF		21105 21120* NF NR		19105 - 20105 20120* - 21105 21120* NF NR	
Materiali *Materials*		Cava *Slotting* *ap = 1ø ae = 1ø*		Sgrossatura *Roughing* *ap = 1,5ø ae = 0,5ø*		Cava *Slotting* *ap = 1ø ae = 1ø*		Sgrossatura *Roughing* *ap = 1,5ø ae = 0,5ø*	
									
	Gruppo e descrizione *Group and description*	Vc (mt /min.)		Vc (mt /min.)		Vc (mt /min.)		Vc (mt /min.)	
		X-85 NON RIVESTITA *UNCOATED*	**X-85** **Skin** *Alu*	**X-85** NON RIVESTITA *UNCOATED*	**X-85** **Skin** *Alu*	**X-85** NON RIVESTITA *UNCOATED*	**X-85** **Skin**	**X-85** NON RIVESTITA *UNCOATED*	**X-85** **Skin**
Ghisa *Cast Iron*	**Grigia e sferoidale** *Grey and spheroidal*	–	–	–	–	20 - 25	45 - 50	20 - 25	45 - 50
Acciaio *Steel*	**Basso contenuto di C** *Low carbon content*	–	–	–	–	30 - 35	60 - 70	30 - 35	60 - 70
	Medio contenuto di C *Medium carbon content*	–	–	–	–	30 - 35	50 - 60	30 - 35	50 - 60
	Basso legato *Low alloyed*	–	–	–	–	25 - 30	50 - 60	25 - 30	50 - 60
	Alto legato *High alloyed*	–	–	–	–	20 - 30	40 - 50	20 - 30	40 - 50
	Acciaio da stampi e utensili *Die/tool steel*	–	–	–	–	15 - 20	30 - 40	15 - 20	30 - 40
Acciaio Inossidabile *Stainless Steel*	**AISI 304 - 416 - 420**	–	–	–	–	–	15 - 20	–	15 - 20
	AISI 316 - 440	–	–	–	–	–	15 - 20	–	15 - 20
	17-4 ph 15-5 ph	–	–	–	–	–	10 - 15	–	10 - 15
	Leghe Cr - Co *Cr - Co alloys*	–	–	–	–	–	10 - 15	–	10 - 15
	Duplex F51	–	–	–	–	–	5 - 10	–	5 - 10
	Super Duplex F55	–	–	–	–	–	5 - 10	–	5 - 10
Superleghe resistenti al calore *Heat Resistant Super Alloys*	**HRSA Hastelloy**	–	–	–	–	–	5 - 10	–	5 - 10
	HRSA Inconel 625	–	–	–	–	–	5 - 10	–	5 - 10
	HRSA Inconel 718	–	–	–	–	–	5 - 10	–	5 - 10
	HRSA Nimonic	–	–	–	–	–	5 - 10	–	5 - 10
Ti	**Titanio** - *Titanium*	–	–	–	–	–	10 - 15	–	10 - 15
	Leghe di titanio *Titanium alloys*	–	–	–	–	–	10 - 15	–	10 - 15
Materiali non ferrosi Leghe leggere *Non ferrous materials Light alloys*	**Alluminio non legato** *Unalloyed aluminium*	110 - 120	250 - 260	110 - 120	250 - 260	–	–	–	–
	Alluminio Si < 6% *si < 6% aluminium*	70 - 80	170 - 180	70 - 80	170 - 180	–	–	–	–
	Materiali termoplastici *Thermoplastic materials*	130 - 140	270 - 280	130 - 140	270 - 280	–	–	–	–
	Rame/Ottone *Copper/Brass*	30 - 35	75 - 80	30 - 35	75 - 80	–	–	–	–

D	**Avanzamento fz mm/tagliente** *FEED mm/tooth*			
6	0,012	0,025	0,012	0,020
8	0,016	0,035	0,016	0,026
10	0,022	0,045	0,022	0,030
12	0,026	0,055	0,026	0,040
16	0,036	0,070	0,036	0,060
20	0,045	0,085	0,045	0,080

* series **fz** consigliato | *RECOMMENDED* -50%