

HSS-PM HSS-PM Line

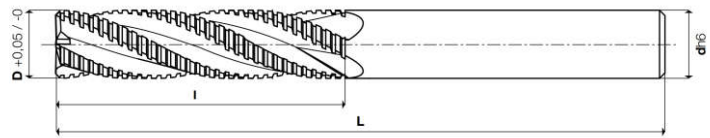
Serie/Series

21120

Frese a **SEMIFINIRE** tagliente al centro
Semi-finishing end mills center cutting

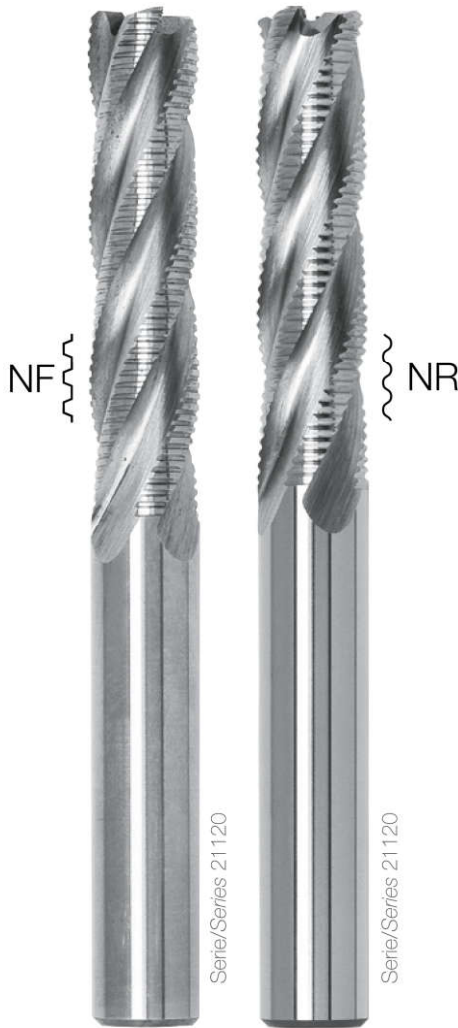
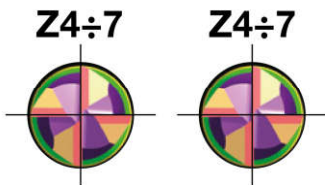
21120

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

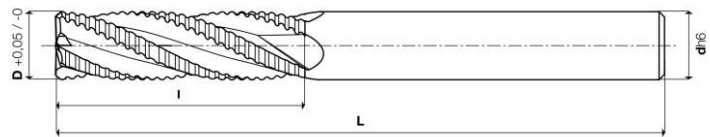


COATING: **Skin**
W: A RICHIESTA ON REQUEST
F: A RICHIESTA ON REQUEST
 $\lambda^{\circ}s$: 28
NF
UNI 8244
DIN 844A
ISO 1641/I

Cod. Art.	X-85 (PM Co 8,5%)	COATED	D +0,05 -0	I	L	dh6	Z
211200801	CM	CMX	8	38	88	10	4
211201001	CM	CMX	10	45	95	10	4
211201201	CM	CMX	12	53	110	12	4
211201401	CM	CMX	14	53	110	12	4
211201501	CM	CMX	15	63	123	16	4
211201601	CM	CMX	16	63	123	16	4
211201801	CM	CMX	18	63	123	16	4
211201805	CM	CMX	18	63	129	20	4
211202001	CM	CMX	20	75	135	16	4
211202005	CM	CMX	20	75	141	20	4
211202201	CM	CMX	22	75	141	20	4
211202205	CM	CMX	22	75	151	25	4
211202401	CM	CMX	24	90	166	25	5
211202501	CM	CMX	25	90	166	25	5
211202801	CM	CMX	28	90	166	25	5
211203001	CM	CMX	30	90	166	25	5
211203201	CM	CMX	32	106	186	32	5
211203601	CM	CMX	36	106	186	32	6
211204001	CM	CMX	40	125	205	32	6
211204501	CM	CMX	45	125	205	32	6
211205001	CM	CMX	50	150	230	32	7



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COATING: **Skin**
W: A RICHIESTA ON REQUEST
F: A RICHIESTA ON REQUEST
 $\lambda^{\circ}s$: 28
NR
UNI 8244
DIN 844A
ISO 1641/I

Cod. Art.	X-85 (PM Co 8,5%)	COATED	D +0,05 -0	I	L	dh6	Z
211200803	CM	CMX	8	38	88	10	4
211201003	CM	CMX	10	45	95	10	4
211201203	CM	CMX	12	53	110	12	4
211201403	CM	CMX	14	53	110	12	4
211201503	CM	CMX	15	63	123	16	4
211201603	CM	CMX	16	63	123	16	4
211201803	CM	CMX	18	63	123	16	4
211201807	CM	CMX	18	63	129	20	4
211202003	CM	CMX	20	75	135	16	4
211202007	CM	CMX	20	75	141	20	4
211202203	CM	CMX	22	75	141	20	4
211202207	CM	CMX	22	75	151	25	4
211202403	CM	CMX	24	90	166	25	5
211202503	CM	CMX	25	90	166	25	5
211202803	CM	CMX	28	90	166	25	5
211203003	CM	CMX	30	90	166	25	5
211203203	CM	CMX	32	106	186	32	5
211203603	CM	CMX	36	106	186	32	6
211204003	CM	CMX	40	125	205	32	6
211204503	CM	CMX	45	125	205	32	6
211205003	CM	CMX	50	150	230	32	7







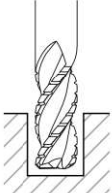
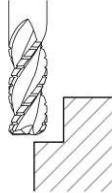
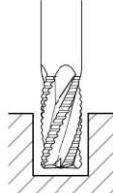
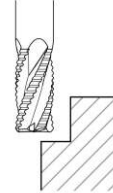
parametri tecnici a pag. / for technical parameters see page 124

MATERIALI LAVORABILI / WORKPIECE MATERIALS

serie	TITANIO TITANIUM	HRSA HRSA	ACCIAI INOSSIDABILI STAINLESS STEELS	MATERIALI NON FERROSI NON FERROUS MATERIALS	LEGHE LEGGERE LIGHT ALLOYS	ACCIAI STEELS	GHISE CAST IRON
21120	●	●	●	○	○	●	●
21120	●	●	●	○	○	●	●

● 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 $ap = 1\phi$ $ae = 1\phi$	Sgrossatura Roughing $ap = 1,5\phi$ $ae = 0,5\phi$	Cava Slotting $ap = 1\phi$ $ae = 1\phi$	Sgrossatura Roughing $ap = 1,5\phi$ $ae = 0,5\phi$		
							
Gruppo e descrizione Group and description		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 Alu
Ghisa Cast Iron	Grigia e sferoidale Grey and spheroidal	-	-	-	-	20 - 25	45 - 50
	Basso contenuto di C Low carbon content	-	-	-	-	30 - 35	60 - 70
Acciaio Steel	Medio contenuto di C Medium carbon content	-	-	-	-	30 - 35	50 - 60
	Basso legato Low alloyed	-	-	-	-	25 - 30	50 - 60
	Alto legato High alloyed	-	-	-	-	20 - 30	40 - 50
	Acciaio da stampi e utensili Die/tool steel	-	-	-	-	15 - 20	30 - 40
Acciaio Inossidabile Stainless Steel	AISI 304 - 416 - 420	-	-	-	-	-	15 - 20
	AISI 316 - 440	-	-	-	-	-	15 - 20
	17-4 ph 15-5 ph	-	-	-	-	-	10 - 15
	Leghe Cr - Co Cr - Co alloys	-	-	-	-	-	10 - 15
	Duplex F51	-	-	-	-	-	5 - 10
	Super Duplex F55	-	-	-	-	-	5 - 10
Superleghe resistenti al calore Heat Resistant Super Alloys	HRSA Hastelloy	-	-	-	-	-	5 - 10
	HRSA Inconel 625	-	-	-	-	-	5 - 10
	HRSA Inconel 718	-	-	-	-	-	5 - 10
	HRSA Nimonic	-	-	-	-	-	5 - 10
Ti	Titanio - Titanium	-	-	-	-	-	10 - 15
	Leghe di titanio Titanium alloys	-	-	-	-	-	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%