

4FACEPLUS

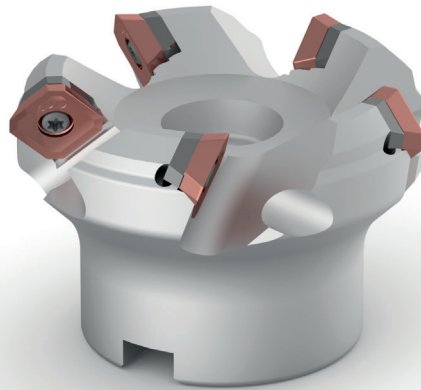
Face milling system for general machining

Application

- Face milling system with positive 4-cutting-edge inserts.
- Reliable even for irregular hard skin removal
- General face milling even on irregular surfaces
- Machining of linear and helical ramping
- Schlichtfräsen/Schrippschlichtfräsen/Schrupfräsen
- Entfernung von Verkrustungen
- Allgemeines Fräsen von unterbrochenen Flächen
- Lineare und spiralförmige Rampenbearbeitung
- Sistema di spianatura con inserti positivi a 4 taglienti
- Efficace anche nella rimozione della crosta superficiale
- Fresatura generica anche su superfici irregolari
- Lavorazioni in rampa lineare ed elicoidale
- Coupe positive
- Fiable même en conditions d'usinage instables
- Applications générales, même en coupes interrompues
- Usinages en ramping et interpolation hélicoïdale

Application range - ISO 513

P M K N S



Advantages and features

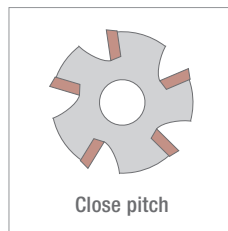
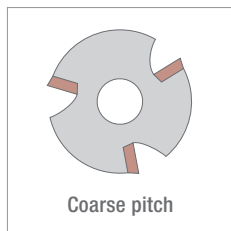
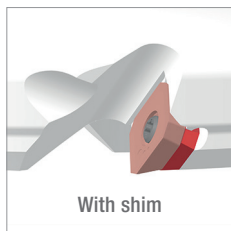
- High productivity and easy to use.
- Light cutting action with low spindle load.
- Inserts available in E tolerance (ground type) and M tolerance (pressed type) and also in wiper geometry for excellent surface finish.
- Hohe Produktivität und einfache Handhabung.
- Leichter Schnitt mit geringem Verschleiß.
- Erhältlich mit E-Toleranz (geschliffen) und Toleranz M (gepresst).
- Erhältlich mit Wiper-Geometrie für ein gutes Oberflächenergebnis.
- Elevata produttività e di facile utilizzo.
- Azione di taglio leggero con basso assorbimento di potenza.
- Inserti disponibili in tolleranza E (rettificati) e tolleranza M (stampati) e anche con geometria wiper per ottima finitura superficiale.
- Rendement élevé et facile à utiliser.
- Faibles efforts de coupe et peu de consommation de puissance
- Disponible avec tolérance E (rectifiée) et tolérance M (brut de frittage).
- Disponible avec une géométrie Wiper pour une bonne finition de surface.

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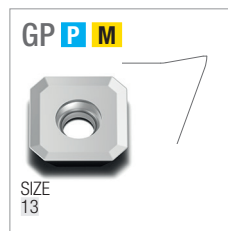
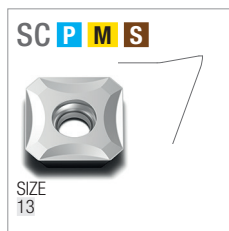
Milling holders

- Shell mill type with shim
 - From D50 to D200
- Attacco a manicotto con sottopiacchetta
 - Da D50 a D200
- Hülsenaufnahme mit Ausgleichsscheibe
 - D50 bis D200
- Type mandrin avec assise
 - Du D50 à D200



Inserts

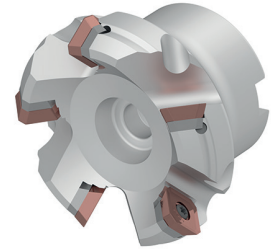
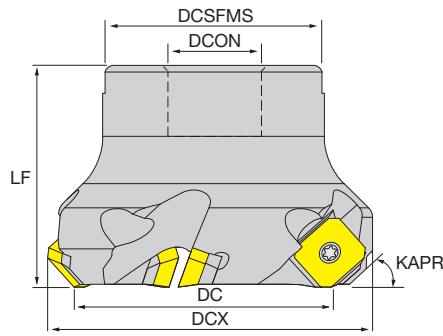
- 4 cutting edges
 - Edge length 13 with APMX = 6 mm
 - CVD and PVD coated and uncoated carbide grades.
 - Geometries: SC, GP, TE, AL, GG, GH, Flat, WU
- 4 taglienti
 - Lunghezza del tagliente 13 con APMX = 6 mm
 - Gradi in metallo duro nudo e rivestito CVD e PVD
 - Geometrie: SC, GP, TE, AL, GG, GH, Flat, WU
- 4 Schneidkanten
 - Länge der Schneidkante 13 mit APMX = 6 mm
 - CVD- und PVD-beschichtete Hartmetallqualitäten
 - Geometrien: SC, GP, TE, AL, GG, GH, Flat, WU
- 4 arêtes de coupe
 - Taille de plaquette 13 avec APMX = 6 mm
 - Nuances en carbure revêtues CVD et PVD
 - Géométries : SC, GP, TE, AL, GG, GH, Flat, WU



NT-SE

4FacePlus

- Positive general face milling cutters
- With shims to protect the insert seats
- Kapr 45°, without coolant through



Designation	DC	CIC2	DCON	LF	DCSFMS	DCX	WT	MID			Stock
ARBOR MOUNTING											
NT-SE13 D040-F16-Z03	40	3	16	40	35	53	-	SE∞13T3			⊙
NT-SE13 D050-F22-Z04	50	4	22	40	40	63	0.41	SE∞13T3			●
NT-SE13 D050-F22-Z05	50	5	22	50	40	63	0.39	SE∞13T3			●
NT-SE13 D063-F22-Z05	63	5	22	50	50	76	0.71	SE∞13T3			●
NT-SE13 D063-F22-Z06	63	6	22	50	50	76	0.7	SE∞13T3			●
NT-SE13 D080-F27-Z06	80	6	27	50	60	93	1.06	SE∞13T3			●
NT-SE13 D080-F27-Z08	80	8	27	50	60	93	1.02	SE∞13T3			●
NT-SE13 D100-F32-Z07	100	7	32	50	80	113	1.56	SE∞13T3			●
NT-SE13 D100-F32-Z10	100	10	32	50	80	113	1.54	SE∞13T3			●
NT-SE13 D125-F40-Z08	125	8	40	63	100	138	2.92	SE∞13T3			●
NT-SE13 D125-F40-Z12	125	12	40	63	100	138	3.04	SE∞13T3			●
NT-SE13 D160-F40-Z10	160	10	40	63	100	173	4.06	SE∞13T3			●
NT-SE13 D200-F60-Z12	200	12	60	63	130	213	6.34	SE∞13T3			●

★ 1st choice, ☆ suitable, ● stock standard, ⊙ non-stock standard (no MOQ), ○ non-stock standard (MOQ), ▲ upcoming product, ▽ stock exhaustion

Spare parts	Insert screw	Flag wrench	Shim	Shim screw	L wrench
NT-SE13 D∞∞-F∞∞-Z∞∞	NT-ST35120T15	NT-FTB15	NT-SH004	NT-SR002	NT-WR035

INDEXABLE

A - TURNING

B - THREADING

C - GROOVING

D - MILLING

E - DRILLING

F - ACCESSORIES

G - SPARE PARTS

ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520			JP5530			JP8725		
				min	start	max	min	start	max	min	start	max
P1 - P2	Free cutting steel and low carbon (ex. 1.0715/9 smn 28/avp, 1.0503/c45)	≤ 200	100%	130	180	230	100	140	180	100	150	200
			30%	200	240	280	160	200	240	160	210	260
			10%	260	280	300	220	240	260	220	250	280
P3 - P4	Medium and high alloy steel (ex. 1.7225/42 CrMo 4, 1.3505/100 Cr 6)	200 ÷ 300	100%	100	140	180	80	120	160	90	130	170
			30%	160	200	240	120	160	200	130	170	210
			10%	220	240	260	180	200	220	190	210	230
P5 - P6	High tensile strength and tool steel (ex. 1.2344/X 40 CrMoV 5 1/ORVAR, Hardox400®)	300 ÷ 400	100%	70	100	130	60	90	120	80	110	140
			30%	120	160	200	100	130	160	120	150	180
			10%	200	220	240	140	170	200	160	190	220
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540			JP5530			JP9535		
min	start	max	min	start	max	min	start	max	min	start	max	
P7	Ferritic and martensitic stainless steel (ex. 1.4021/X 20 Cr 13/AISI420)	≤ 200	100%	90	130	170	60	100	140	80	120	160
			30%	110	160	210	80	130	180	100	150	200
			10%	130	190	250	100	160	220	120	180	240
P8	Precipitation hardening stainless steel (ex. 1.4548/X 5 CrNiCuNb 17 4/17-4-PH)	≤ 450	100%	70	100	130				60	90	120
			30%	80	110	140				70	100	130
			10%	90	120	150				80	110	140
M1	Austenitic stainless steel (ex. 1.4305/X 10 CrNiS 18 9/AISI303)	> 200	100%	90	120	150	60	90	120	80	110	140
			30%	110	150	190	80	120	160	100	140	180
			10%	130	170	210	100	140	180	120	160	200
M2 - M3	Austenitic and Duplex stainless steel (ex. 1.4401/X 5 CrNiMo 17 12 2/AISI316)		100%	80	110	140				70	100	130
			30%	90	120	150				80	110	140
			10%	100	130	160				90	120	150
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC8520			JP7525					
min	start	max	min	start	max	min	start	max	min	start	max	
K1	Grey cast iron (ex. 0.6025/GG 25/EN-GJL-250)	150 ÷ 250	100%	160	200	240	140	180	220			
			30%	180	230	280	160	210	260			
			10%	200	260	320	180	240	300			
K2	Nodular cast iron (ex. 0.7050/GGG 50/EN-GJS-500-7)	150 ÷ 350	100%	120	160	200	100	140	180			
			30%	140	190	240	120	170	220			
			10%	160	220	280	140	200	260			
K3 - K4	Austenitic and ADI cast iron (ex. 0.6660/GGL-NiCr 20 2/Ni-Resist 2, GJS-1000-5/ADI1000)	250 ÷ 500	100%	100	130	160	90	120	150			
			30%	120	160	200	120	150	180			
			10%	140	190	240	150	180	210			
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JU6520								
min	start	max	min	start	max	min	start	max	min	start	max	
N1	Aluminium alloys ≤ Si 12% (ex. 3.4365/AlZn5.5MgCu/ERGA)		100%	300	400	500						
			30%	400	600	800						
			10%	500	800	1100						
N2	Aluminium alloys Si > 12% (ex. 3.2382/G-AlSi12)		100%	200	250	300						
			30%	300	350	400						
			10%	400	450	500						
ISO 513	MATERIAL	HARDNESS HB	ae/DC	JC9540			JP9535					
min	start	max	min	start	max	min	start	max	min	start	max	
S1 - S2 - S3	Fe/Ni/Co based heat resistant alloys (ex. Hastelloy, Inconel 625, Inconel 718)		100%	30	40	50	20	30	40			
			30%	40	50	60	30	40	50			
			10%	50	60	70	40	50	60			
S4 - S5	Titanium alloys (ex. TiAl2Sn4Zr2MoSi)		100%				40	50	60			
			30%				50	60	70			
			10%				60	70	80			

ae: radial depth of cut; DC: milling cutter diameter

Complete workpiece materials p. M1.

DESIGNATION	ae/DC	DEPTH OF CUT			FEED RATE		
		ap (mm)			fz (mm)		
		min	start	max	min	start	max
SEoT13T3AGEN-GP	100%	1.00	3.00	5.00	0.08	0.15	0.22
	30%	1.00	3.00	5.00	0.10	0.19	0.28
	10%	1.00	3.00	5.00	0.12	0.22	0.32
SEET13T3AGEN-SC	100%	0.50	2.50	4.50	0.06	0.11	0.16
	30%	0.50	2.50	4.50	0.08	0.14	0.20
	10%	0.50	2.50	4.50	0.09	0.16	0.23
SEoT13T3AGSN-TE	100%	1.00	3.00	5.00	0.11	0.20	0.29
	30%	1.00	3.00	5.00	0.14	0.25	0.36
	10%	1.00	3.00	5.00	0.16	0.29	0.42
SEoT13T3AGSN-GG	100%	0.50	2.50	4.50	0.10	0.18	0.26
	30%	0.50	2.50	4.50	0.12	0.22	0.32
	10%	0.50	2.50	4.50	0.14	0.26	0.38
SEoT13T3AGSN-GH	100%	1.00	3.00	5.00	0.13	0.23	0.33
	30%	1.00	3.00	5.00	0.16	0.28	0.40
	10%	1.00	3.00	5.00	0.19	0.33	0.47
SEEW13T3AGSN	100%	1.00	3.00	5.00	0.14	0.24	0.34
	30%	1.00	3.00	5.00	0.18	0.30	0.42
	10%	1.00	3.00	5.00	0.21	0.35	0.49
SEET13T3AGFN-AL	100%	0.50	2.50	4.50	0.06	0.11	0.16
	30%	0.50	2.50	4.50	0.08	0.14	0.20
	10%	0.50	2.50	4.50	0.09	0.16	0.23
SEET13T3-WU	100%	0.50	1.00	1.50	0.06	0.13	0.20
	30%	0.50	1.00	1.50	0.08	0.16	0.24
	10%	0.50	1.00	1.50	0.09	0.18	0.27