

06320

PENTA HIFEED

MILLING

Facing | Profiling | Copying

Penta hifeed milling line

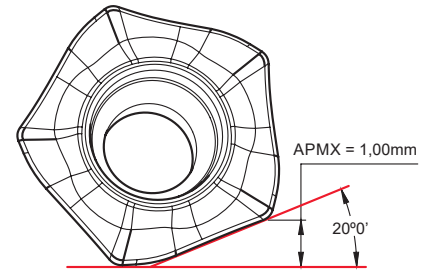
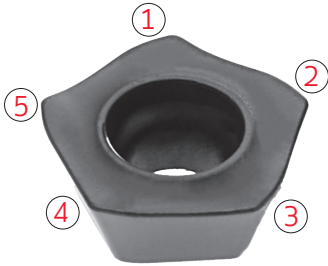


PENTA HIFEED 06320

Proprietary milling line

Line 06320 is a high-feed milling concept with five cutting edges for roughing to semi-finishing. It offers excellent performance in many materials.

5 cutting edges:



Benefits

- High productivity in applications requiring light cutting action;
- Specially developed for machining difficult-to-cut materials;
- Strong and robust inserts for reliable machining and long tool life;
- Low power consumption.

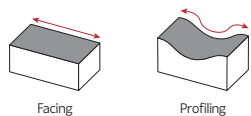
Features

- Five cutting edges per insert;
- Wide range of grades;
- Internal coolant on all cutters enables efficient wet machining as well as compressed air cooling;
- Reduced axial forces with a 20 degree lead angle and a positive axial inclination angle.

Application

- Face milling and profile milling, including ramping and helical interpolation;
- Suitable for most applications and industry segments;
- Machining of components requiring long overhangs.

Main operations

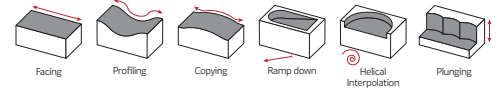


Working materials



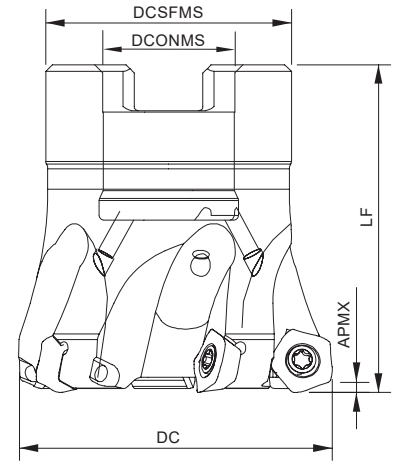
PENTA HIFEED 06320

POKT 04



Arbor Mounting

KAPR=20° | GAMP=14° | RP=2,5



Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert	Stock
			DC	DCONMS	DCSFMS	LF		APMX (mm)	Arbor Type		
181129300	040A06320-05-14-016040	5	40	16	30	40	0,15	1,0	A	POKT 0403...	☺
181129400	050A06320-06-14-022045	6	50	22	40	45	0,19	1,0	A	POKT 0403...	☺
181129500	052A06320-06-14-022045	6	52	22	40	45	0,29	1,0	A	POKT 0403...	☺
181129600	063A06320-07-14-027050	7	63	27	48	50	0,50	1,0	A	POKT 0403...	○
181131300	066A06320-07-14-027050	7	66	27	48	50	0,55	1,0	A	POKT 0403...	○

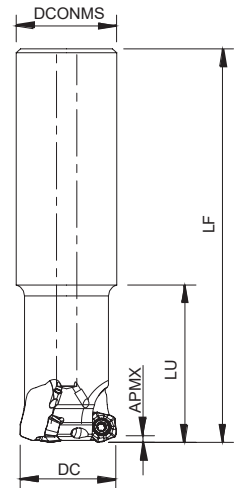
☺ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta



Cylindrical Shank

KAPR=20° | GAMP=14° | RP=2,5



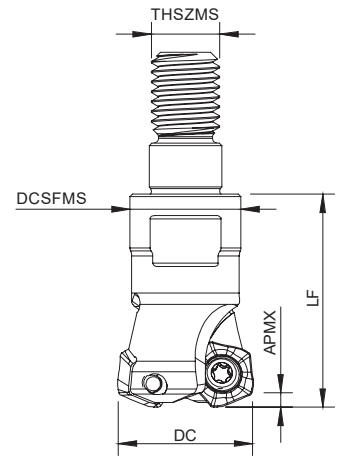
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert	Stock
			DC	DCONMS	LF	LU		APMX (mm)	Arbor Type		
181147200	020E06320-02-14-020130	2	20	20	130	40	0,38	1,0	POKT 0403...	☺	
181131000	025E06320-03-14-025150	3	25	25	150	40	0,41	1,0	POKT 0403...	☺	
181131100	032E06320-05-14-032180	5	32	32	180	50	0,56	1,0	POKT 0403...	☺	
181131200	040E06320-05-14-032180	5	40	32	180	50	0,70	1,0	POKT 0403...	○	

☺ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

PENTA HIFEED 06320

Proprietary milling line



Threaded Coupling

KAPR=20° | GAMP=14° | RP=2,5

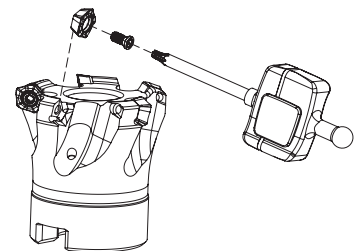
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications	Insert	Stock
			DC	THSZMS	DCSFMS	LF		APMX (mm)		
181113500	016R06320-02-14-M08025	2	16	M08	13	25	0,02	1,0	POKT 0403...	☉
181113600	020R06320-02-14-M10025	2	20	M10	18	25	0,05	1,0	POKT 0403...	☉
181113700	025R06320-03-14-M12028	3	25	M12	21	28	0,07	1,0	POKT 0403...	☉
181129100	032R06320-05-14-M16035	5	32	M16	29	35	0,17	1,0	POKT 0403...	☉
181129200	035R06320-05-14-M16035	5	35	M16	29	35	0,19	1,0	POKT 0403...	☉
181130900	042R06320-05-14-M16035	5	42	M16	29	35	0,23	1,0	POKT 0403...	☉

☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

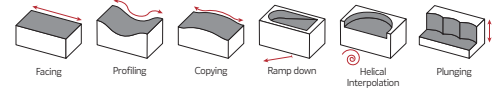
SPARE PARTS Acessórios | Repuestos

Cutter DC	Insert Screw	Key (Torx)	Order separately	
			Key (Torx - Nm)	Torque Value
R06320 - 16-42	P0250503	XT08	DT0812	1,20
E06320 - 25-40	P0250503	XT08	DT0812	1,20
A06320 - 40-60	P0250503	XT08	DT0812	1,20



PENTA HIFEED 06320

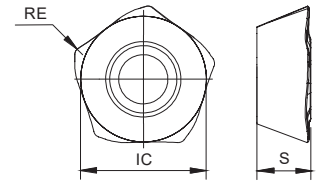
POKT 04



POKT 0403... Inserts | Pastilhas | Plaquitas



POKT-MP



POKT-MP

	⁽²⁾ Grade code	P				K		Dimensions Dimensões Dimensiones (mm)		
		PVD				PVD				
		G1	G4	P3	G6	G1	G4	IC	S	RE
⁽¹⁾ Geometry code	ISO Reference	PH7910	PH7920	PH7930	PH7740	PH7910	PH7920			
1112365	POKT 040305 ZDSR-MP	☺	☹	☺	☺	☹	☹	7,00	3,00	0,50

☺ First choice | Primeira opção | 1ª opción
☺ Stock item | Produto de stock | Itens de stock
○ Available under request | Disponível sobre consulta | Disponible bajo consulta
Insert order code = (1) Geometry Code + (2) Grade Code

GRADES SELECTION GUIDE Guia para selecção de graus | Tabla para selección de calidades

ISO	PSM	Material	HB (Brinell)	Grades			
				← Wear Resistance			Toughness →
				PH7910	PH7920	PH7930	PH7740
P	1	Unalloyed Steel	125-220	☺	☺	☺	☹
	2	Low-Alloyed Steel	220-280	☺	☺	☺	☺
	3	High-Alloyed Steel	280-380	☺	☺	☺	☺
K	7	Malleable Cast Iron	130-230	☺	☺		
	8	Grey Cast Iron	180-245	☺	☺		
	9	Nodular Cast iron	160-250	☺	☺		

☺ Good Conditions
☹ Average Conditions
☹ Difficult Conditions

RECOMMENDED CUTTING CONDITIONS Condições de corte recomendadas | Condiciones de corte recomendables

ISO	PSM	Material	HB (Brinell)	Vc (m/min)				Feed fz (mm/t)
				← Wear Resistance			Toughness →	
				PH7910	PH7920	PH7930	PH7740	
P	1	Unalloyed Steel	125-220	180-250	180-240	160-220	140-200	0,50-1,50
	2	Low-Alloyed Steel	220-280	160-230	160-220	140-200	130-180	0,50-1,51
	3	High-Alloyed Steel	280-380	140-220	140-210	120-190	100-170	0,50-1,52
K	7	Malleable Cast Iron	130-230	180-300	160-260	-	-	0,50-1,53
	8	Grey Cast Iron	180-245	160-250	140-240	-	-	0,50-1,54
	9	Nodular Cast iron	160-250	150-200	120-200	-	-	0,50-1,55

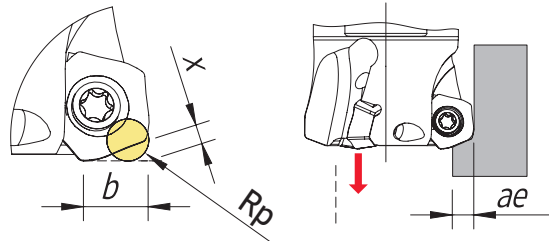
(Note 1) Cutting conditions $a_e/D_c=70\%$.

(Note 2) It's possible to occur vibrations in certain cases. Please reduce depth of cut and / or reduce cutting conditions in following cases:

- When using long shank;
- When using long tool overhang with arbor type;
- When application has poor clamping rigidity or when using a low rigidity machine.

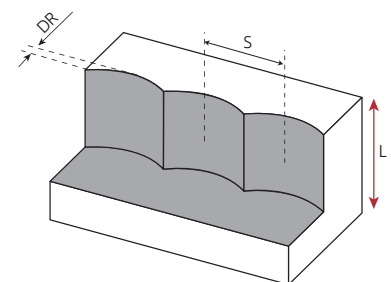
PROGRAMMING DATA Dados para programação | Datos para la programación

Insert	Programming Data			
	Rp	X	b	a_e
POKT 0403...	2,5	1,2	4,3	4,0



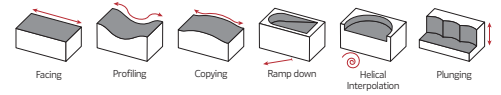
PLUNGING Mergulho | Plunge

$L \leq 3DC$	$L > 3DC$	S_{max}
f_z (mm/t)		
0,08-0,15	0,05 - 0,10	$S_{max} = \sqrt{DC \cdot Dr - Dr^2}$



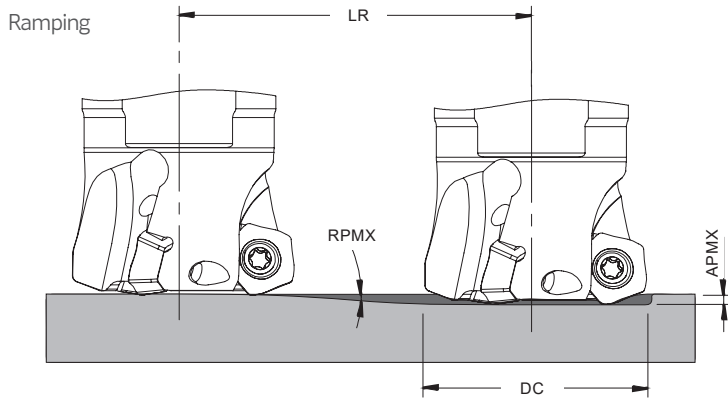
S max and DR corresponding cutting diameter DC (mm)											
DR (mm)	DC (mm)										
	16	20	25	32	35	40	42	50	52	63	66
1,0	3,9	4,4	4,9	5,7	5,8	6,2	6,4	7,0	7,1	7,9	8,1
2,0	5,3	6,0	6,8	2,7	8,1	8,7	8,9	9,8	10,0	11,0	11,3
3,0	6,2	7,1	8,1	9,3	9,8	10,5	10,8	11,9	12,1	13,4	13,7
4,0	6,9	8,0	9,2	10,6	11,1	12,0	12,3	13,6	13,9	15,4	15,7

Note: Recommended for $L \leq 4c$ for extra long tool this step and side cut must be reduced.

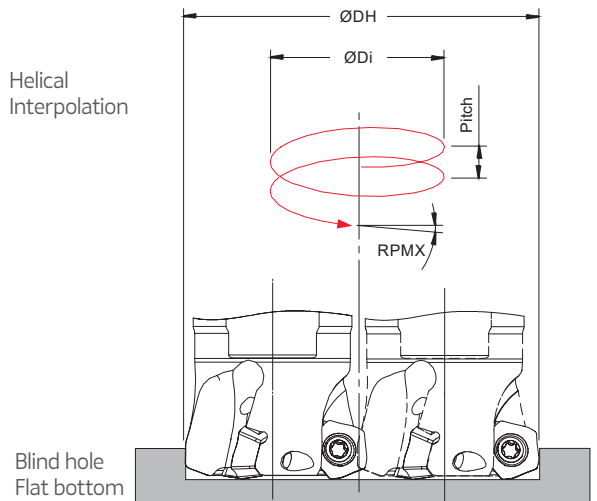


RAMPING AND HELICAL INTERPOLATION

Descida em rampa e interpolação helicoidal | Bajada en rampa e interpolación circular



Helical Interpolation



$$\text{ØDi} = \text{ØDH} - \text{DC}$$

DC	Ramping			Helical Interpolation		
	RPMX	APMX	Min LR	ØDHmin	ØDHmax	Max Pitch/Rev.
16	15	1,0	3,7	23,4	-	6
				-	30,0	11
20	9,0	1,0	6,3	31,4	-	5
				-	38,0	8
25	5,0	1,0	11,4	41,4	-	4
				-	48,0	6
32	3,4	1,0	16,8	55,4	-	4
				-	62,0	5
35	3,0	1,0	19,1	61,4	-	4
				-	68,0	5
40	2,0	1,0	28,6	71,4	-	3
				-	78,0	4
42	2,0	1,0	28,6	84,0	-	4
				-	82,0	4
50	2,0	1,0	28,6	91,4	-	4
				-	98,0	5
52	2,0	1,0	28,6	95,4	-	4
				-	102,0	5
63	2,0	1,0	28,6	117,4	-	5
				-	124,0	6
66	1,8	1,0	31,8	123,4	-	5
				-	130,0	6

Note: During helical interpolation do not exceed APMX.

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Check the QrCode for more information



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