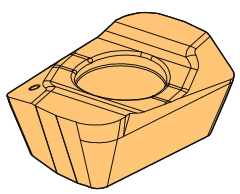
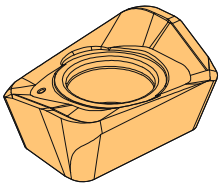
XPET 0602..

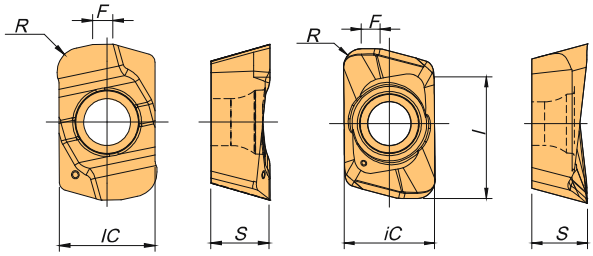
New

XPET-HF **XPET-LP**





XPET-HF **XPET-LP**



		Grades																												
		P							M			K							N		S			H		Dimensions (mm)				
	(2) Grade Code	68	G4	P3	66	78	86	I5	68	P3	I5	L5	54	G4	P3	66	L9	I5	10	D6	P3	G6	I5	M6	D4					
(1) Geometry Code	ISO Ref.	PH6920	PH7920	PH7930	PH6930	PH6125	PH6135	PH6740	PH6920	PH7930	PH6740	PH5705	PH6910	PH7920	PH7930	PH6930	PH5740	PH6740	PH0910	PDP410	PH7930	PH7740	PH6740	PH6103	PBH910	iC	S	l	R	F
New 1112049	XPET 060210 ZER-HF		◎	⊛						◎				◎	⊛						◎					3,9	2,4	-	1,0	0,8
1112002	XPET 060204 PDER-LP		◎	⊛						◎				◎	⊛						◎					3,9	2,4	5,3	0,4	0,8
1112003	XPET 060208 PDER-LP		◎	⊛						◎				◎	⊛						◎					3,9	2,4	5,3	0,8	0,6
1112004	XPET 060216 PDER-LP		◎	⊛						◎				◎	⊛						◎					3,9	2,4	5,3	1,6	0,5

◎ First choice / 1ª escolha / 1ª opción ⊛ Stock items / Itens de stock ◯ Available under request / Disponibilidade sob consulta / Disponible bajo consulta

Insert Order Code = (1) Geometry Code + (2) Grade Code

Applicable Grades

ISO	Material	HB (Brinell) / Grade	Grades ← Wear Resistance Toughness → PH7920	PH7930
P	Unalloyed steel	125-220	✓	✓
	Low-alloyed steel	220-280	✓	✓
	High-alloy steel	280-380	✓	✓
M	SS - Ferritic/martensitic	200-330		✓
	SS - Austenitic	200-330		✓
	SS - Austetenitic-ferretic (Duplex)	230-260		✓
K	Malleable cast iron	130-230	✓	✓
	Grey cast iron	180-245	✓	✓
	Nodular cast iron	160-250	✓	✓
S	Heat Resistant Super Alloys	200-320		✓

● Good Conditions

Average Conditions

Difficult Conditions

A Milling Plus TGPlus HiFeed AluPro LinePro Classic ToroMill W-Pro MultiFit HardMill Solid Carbide Technical Data

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Rec. Cutting Conditions

ISO	PSM	Material	HB (Brinell) / Grade	V_c (m/min)		Feed f_z (mm/t)	
				PH7920	PH7930	XPET 0602… LP	XPET 0602… HF
P	1	Unalloyed steel	125-220	160-280	140-220	0,05-0,07	0,4-0,8
	2	Low-alloyed steel	220-280	150-230	130-180	0,05-0,07	0,4-0,8
	3	High-alloy steel	280-380	140-190	100-170	0,05-0,07	0,4-0,6
M	4	SS - Ferritic/martensitic	200-330	-	130-220	0,05-0,07	0,4-0,8
	5	SS - Austenitic	200-330	-	120-180	0,05-0,07	0,4-0,6
	6	SS - Austetenitic-ferretic (Duplex)	230-260	-	70-140	0,05-0,07	0,4-0,6
K	7	Malleable cast iron	130-230	160-350	140-260	0,05-0,07	0,5-0,8
	8	Grey cast iron	180-245	150-300	130-220	0,05-0,07	0,5-0,8
	9	Nodular cast iron	160-250	120-260	100-180	0,05-0,07	0,5-0,8
S	11	Heat Resistant Super Alloys	200-320	-	35-65	0,05-0,07	0,4-0,6

(Note 1) Cutting conditions a_e/Dc=70%.

(Note 2) Cutting conditions should be ajusted according to the machine and work rigidity.

(Note 3) The cutting speed and feed should be reduce 20%~30% of the value show on the above table when overhang lenght of tools exceed 3xD.

(Note 4)

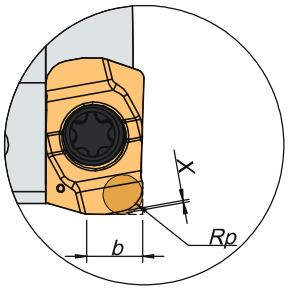
Operation	a_e	V_c & f_z	a_p (mm)
Slotting	100%	< 20%	1,0-3,0
Shouldering	< 50%	> 8%	1,0-4,0
	≤ 25%	> 12%	1,0-4,0

(Note 5) 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

Insert	Programming Data		
	Rp	x	b
XPET 06 HF	1,1	0,84	2,3



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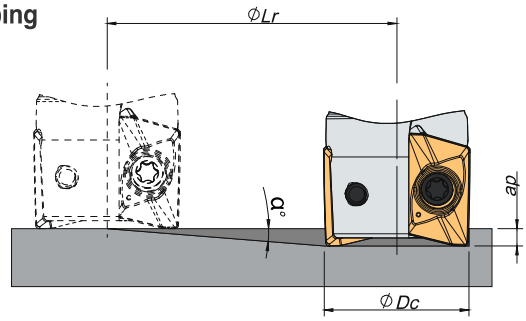
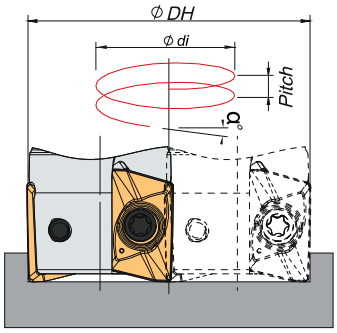
Ramping and Helical Interpolation

Ramping



Helical Interpolation



Ødi = ØDH - ØDc

ØDc	Ramping			Helical Interpolation		
				Diameter for Blind Hole, Flat Bottom Face (1)		Max Pitch/Rev.
	Max Ramp α°	Max a_p	Min Lr	ØDHmin	ØDHmax	
10	5,5	4,0	41,5	17,2 -	- 18,4	2,2 2,5
12	4,0	4,0	57,2	21,2 -	- 22,4	2,0 2,3
16	2,5	4,0	91,6	29,2 -	- 30,4	1,8 2,0
17	2,2	4,0	104,1	31,2 -	- 32,4	1,7 1,9
20	1,9	4,0	120,6	37,2 -	- 38,4	1,8 1,9
21	1,6	4,0	143,2	39,2 -	- 40,4	1,6 1,7
25	1,3	4,0	171,0	47,2 -	- 48,4	1,6 1,7
32	1,0	4,0	229,2	61,2 -	- 62,4	1,6 1,7

(1) Using LP insert radius 0,8mm

Note: During helical interpolation do not exceed max Pitch.

When using different insert radius to calculate the ØDHmin and ØDHmax use the below equation:

- Minimum Diameter: ØDHmin = 2 x (ØDc - (R corner radius + F width of edge wiper))
- Maximum Diameter: ØDHmax = 2 x (ØDc - R corner radius)

(On HF insert the corner radius should be corner radius programming)