

34190 | 34290

TURBOMILL

Super performance on superalloys machining

MILLING

Profiling | Copying | Facing



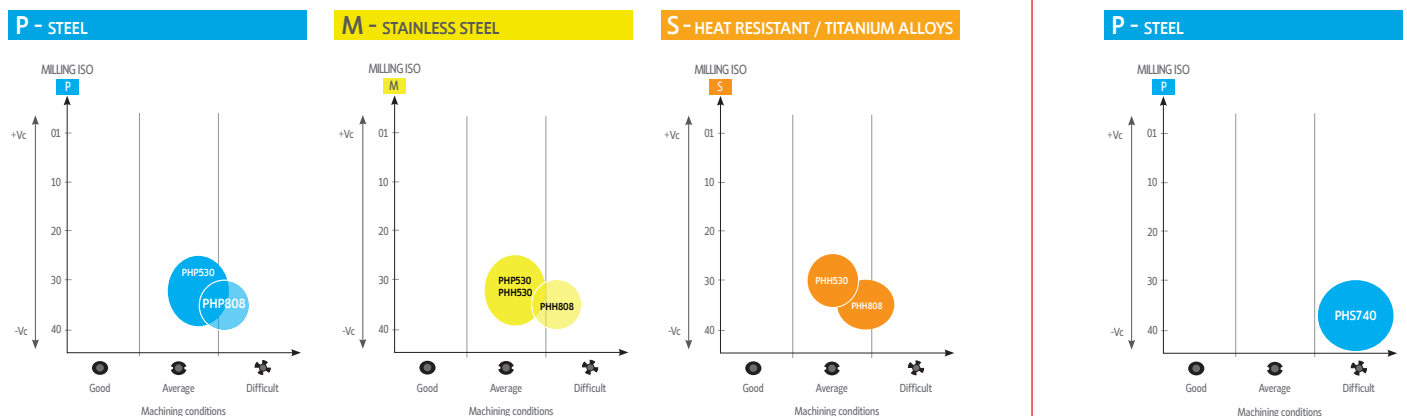
MILLING GRADES Graus de fresagem | Grados de fresado

With the PHP and PHH PVD coating technology, Palbit has developed special grades for steel and superalloy machining. With these grades we guarantee that our inserts will last longer. Test results show an improvement of 180% in tool life in comparison with our previous grades when machining Stainless steel.

		Materials	Applications	Characteristics	
PVD GRADES	PHP530	P25-P40 M25-M40	Milling grade for steel with a coarse grain substrate	Exceptional solution for Alloy Steels and ferritic stainless steels	Extreme heat resistance
	PHP808	P30-P40		Great solution for Steel milling	
	PHH530	M25-M40 S25-S35	Milling grade for stainless steel with a coarse grain substrate	First choice for Stainless steel and HRSA milling	Extreme heat resistance
	PHH808	M30-M40 S30-S40		Great solution for stainless steel milling	
CVD GRADE	PHS740	P30-P50	CVD alternative when increased wear resistance is needed	Suited for removal of oxide layer	

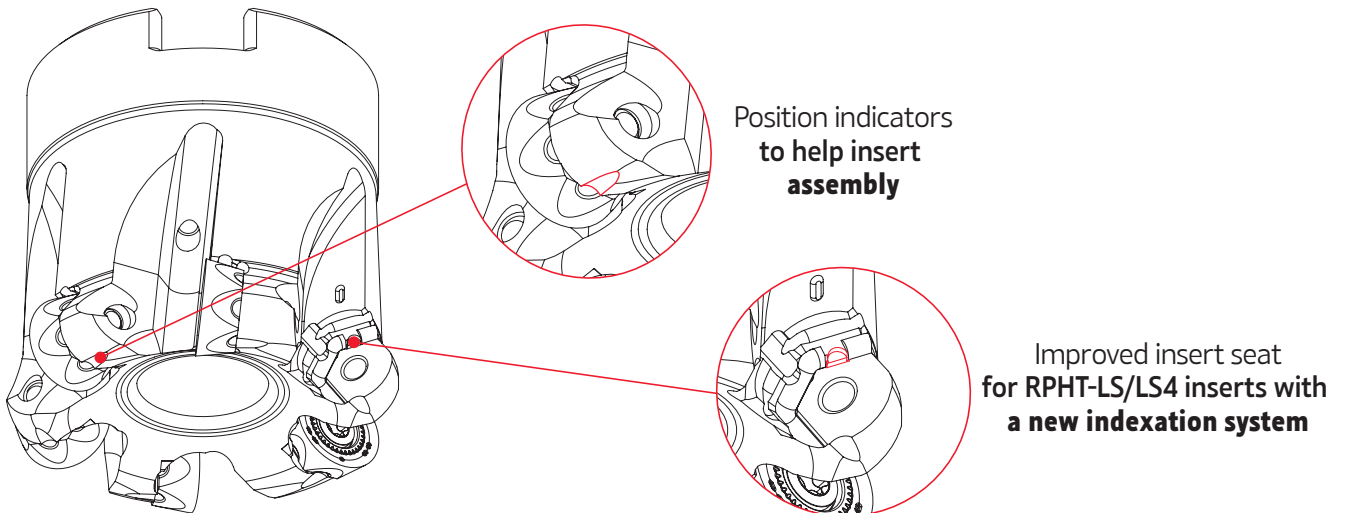
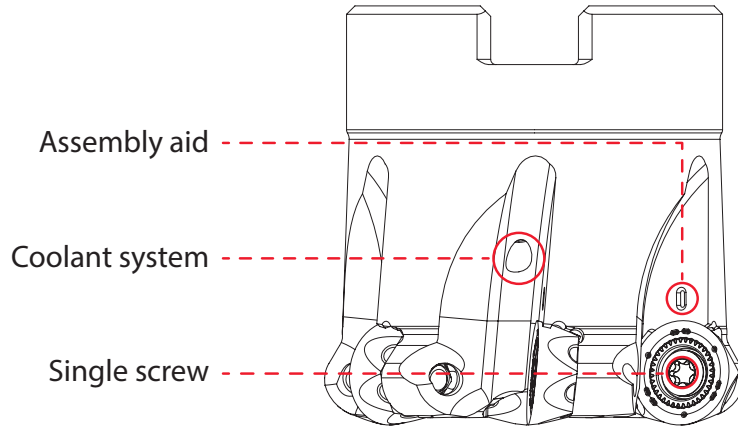
PVD grades

CVD grade



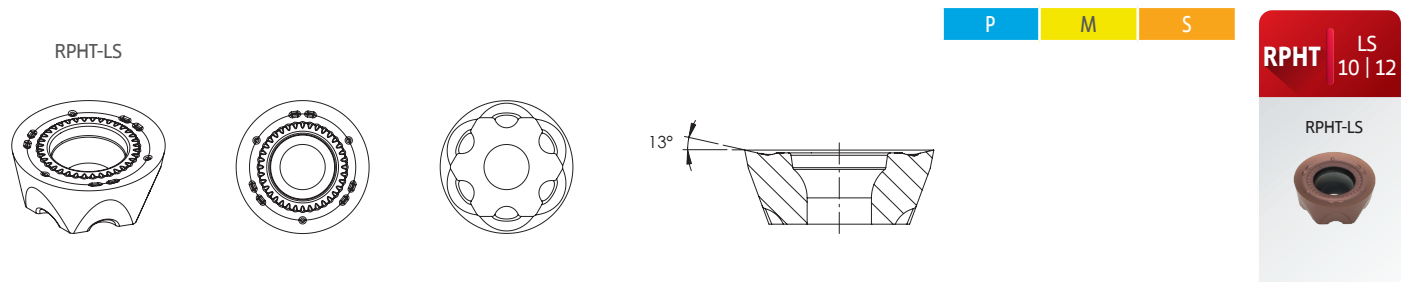
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Super performance on super alloy machining.



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RPHT-LS



6 cutting edges insert

- Insert with 6 cutting edges for a higher productivity.

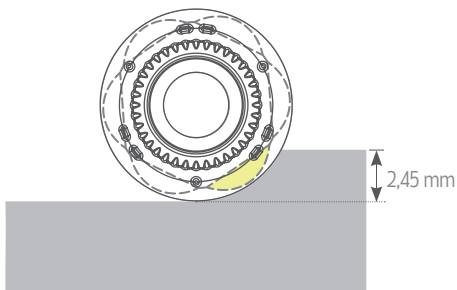
Insert Geometry

- Improved geometry for low cutting force;
- Positive insert with an edge positioning system.

The maximum depth of cut using 6 cutting edges

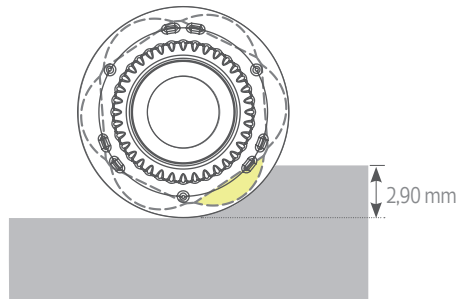
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RPHT 10T3M0E-LS



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RPHT 1204 M0E-LS



GEOMETRY FEATURES Características geométricas | Características geométricas

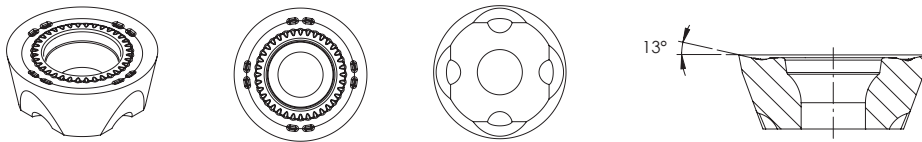
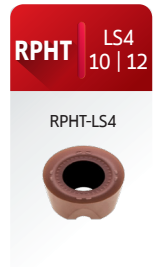
Geometry	Features Características Características
Geometry LS General machining	Optimized geometry for stainless steel and HRSA. Suitable for alloy steel machining.

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RPHT-LS4

RPHT-LS4

P M S



4 cutting edges insert

- Insert with 4 cutting edges for higher depth of cut.

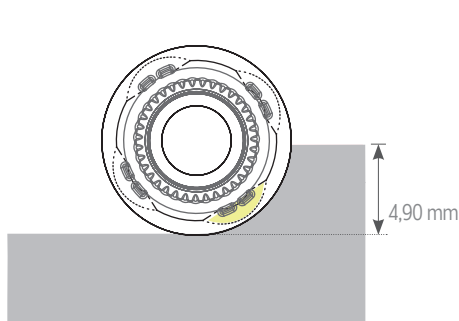
Insert Geometry

- Improved geometry for low cutting force;
- Positive insert with an edge positioning system.

The maximum depth of cut using 4 cutting edges

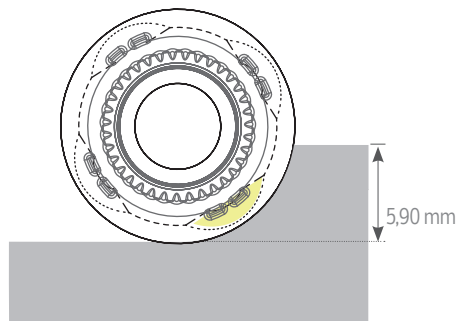
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RPHT 10T3M0E-LS4



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RPHT 1204 M0E-LS4



GEOMETRY FEATURES Características geométricas | Características geométricas

Geometry

Features | Características | Características

Geometry **LS4**
General machining

Optimized geometry for stainless steel and HRSA. Suitable for alloy steel machining. 4 Cutting edges version.

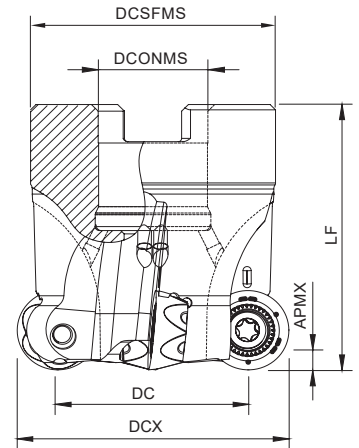
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Proprietary milling line



Arbor Mounting

GAMP=+5°



Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)					WT	Specifications		Insert Pastilha Inserto	Stock
			DCX	DC	DCONMS	DCSFMS	LF		Arbor Type	APMX (mm)		
181160100	042A34190-06-05-016040	6	42	32	16	36	40	0,16	A	5	RPHT 10T3M0E-LS(4)	⊗
181160200	050A34190-06-05-022039	6	50	40	22	42	40	0,26	A	5	RPHT 10T3M0E-LS(4)	⊗
181160700	052A34190-07-05-022040	7	52	42	22	42	40	0,30	A	5	RPHT 10T3M0E-LS(4)	⊗

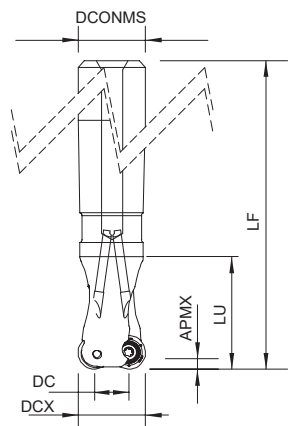
⊗ Stock item | Produto de stock | Itens de stock

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



Cylindrical Shank

GAMP=+5°



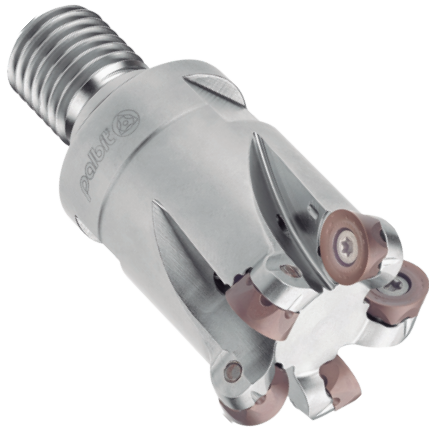
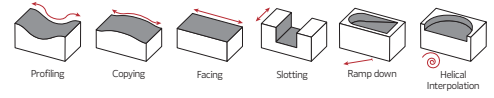
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)					WT	Specifications		Insert Pastilha Inserto	Stock
			DCX	DC	DCONMS	LF	LU		APMX (mm)			
181187200	020E34190-02-05-020180	2	20	10	20	180	50	0,40	5,0	RPHT 10T3M0E-LS(4)	⊗	
181183300	025E34190-03-05-025200	3	25	15	25	200	60	0,76	5,0	RPHT 10T3M0E-LS(4)	⊗	
181191500	032E34190-04-05-032200	4	32	22	32	200	60	0,98	5,0	RPHT 10T3M0E-LS(4)	○	

⊗ Stock item | Produto de stock | Itens de stock

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

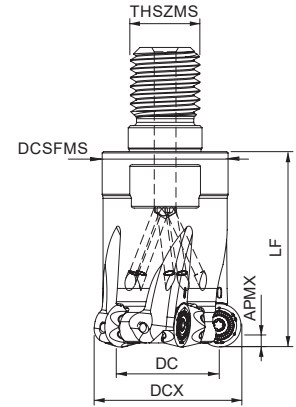
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RPHT



Threaded Coupling

GAMP=+5°



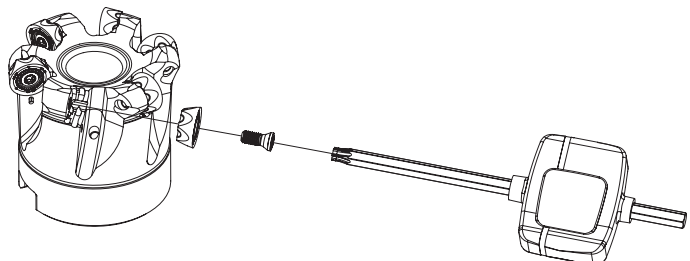
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)					WT	Specifications	Insert Pastilha Inserto	Stock
			DCX	DC	THSZMS	DCSFMS	LF		APMX (mm)		
181191600	020R34190-02-05-M10032	2	20	10	M10	16	32	0,10	5,0	RPHT 10T3M0E-LS(4)	○
181191700	025R34190-03-05-M12035	3	25	15	M12	21	35	0,19	5,0	RPHT 10T3M0E-LS(4)	○
181191800	032R34190-04-05-M16035	4	32	22	M16	29	35	0,31	5,0	RPHT 10T3M0E-LS(4)	○
181182300	035R34190-05-05-M16045	5	35	25	M16	29	45	0,40	5,0	RPHT 10T3M0E-LS(4)	⊗

⊗ Stock item | Produto de stock | Itens de stock

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

SPARE PARTS Acessórios | Repuestos

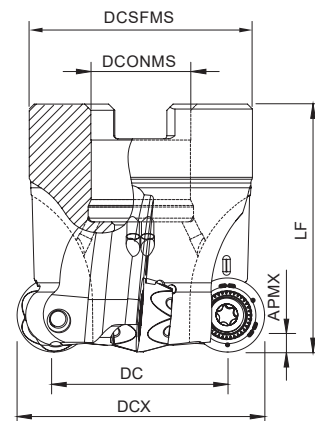
Cutter DC	Order separately			
	Insert Screw	Key (Torx)	Key (Torx - Nm)	Torque Value
A34190 - 42-52	P0300800	XT09	DT0914	1,40
E34190 - 20-32	P0300800	XT09	DT0914	1,40
R34190 - 20-35	P0300800	XT09	DT0914	1,40





Arbor Mounting

GAMP=+5°



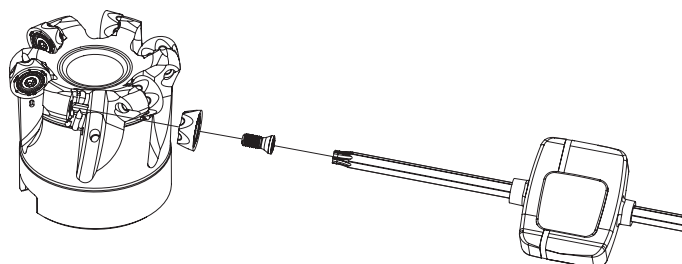
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)					WT	Specifications		Insert Pastilha Inserto	Stock
			DCX	DC	DCONMS	DCSFMS	LF		Arbor Type	APMX (mm)		
181159600	040A34290-04-05-016040	4	40	28	16	36	40	0,15	A	6	RPHT 1204 M0E-LS(4)	⊗
181186300	050A34290-05-05-022040	5	50	38	22	42	40	0,24	A	6	RPHT 1204 M0E-LS(4)	⊗
181159500	052A34290-05-05-022040	5	52	40	22	42	40	0,25	A	6	RPHT 1204 M0E-LS(4)	⊗
181160400	063A34290-06-05-022040	6	63	51	22	48	40	0,36	A	6	RPHT 1204 M0E-LS(4)	⊗
181160500	066A34290-06-05-027050	6	66	54	27	48	50	0,40	A	6	RPHT 1204 M0E-LS(4)	⊗
181160600	080A34290-07-05-027050	7	80	68	27	60	50	0,68	A	6	RPHT 1204 M0E-LS(4)	⊗

⊗ Stock item | Produto de stock | Itens de stock

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

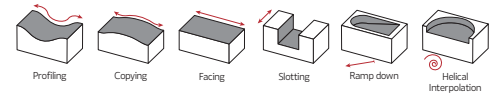
SPARE PARTS Acessórios | Repuestos

Cutter DC	Insert Screw	Key (Torx)	Order separately	
			Key (Torx - Nm)	Torque Value
A34290 - 40	P0350800	XT15	DT1530	3,00
A34290 - 50	P0351000	XT15	DT1530	3,00
A34290 - 52-80	P0350800	XT15	DT1530	3,00



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RPHT



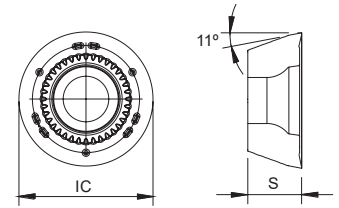
RPHT-LS Inserts | Pastilhas | Plaquetas



RPHT-LS



RPHT-LS4



RPHT-LS | LS4

		P			M			S		Dimensions Dimensões Dimensiones (mm)	
		CVD	PVD		PVD			PVD			
		T9	Z1	Z2	Y2	Z2	Z3	Y2	Z3		
⁽¹⁾ Geometry code	⁽²⁾ Grade code ISO Reference	PHS740	PHP808	PHP530	PHH808	PHP530	PHH530	PHH808	PHH530	IC	S
1112772	RPHT 10T3 M0E-LS	☉	☉	☹	☉	☉	☹	☉	☹	10,00	3,97
1113021	RPHT 10T3 M0E-LS4			☹		☉	☹		☹	10,00	3,97
1112766	RPHT 1204 M0E-LS	☉	☉	☹	☉	☉	☹	☉	☹	12,00	4,76
1113020	RPHT 1204 M0E-LS4			☹		☉	☹		☹	12,00	4,76

☉ First choice | Primeira opção | 1ª opción

☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta
Disponibile 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 →
				PHP920	PHH930	PHP530	PHH530	PHP808	PHH808	PHS740
P	1	Unalloyed Steel	125-220	✓		✓		✓		✓
	2	Low-Alloyed Steel	220-280	✓		✓		✓		✓
	3	High-Alloyed Steel	280-380	✓		✓		✓		✓
M	4	SS - Ferritic / Martensitic	200-330		✓	✓	✓		✓	
	5	SS - Austenitic	200-330		✓		✓		✓	
	6	SS - Austenitic-ferritic (Duplex)	230-260		✓		✓		✓	
S	11	Heat Resistant Super Alloys	200-320		✓		✓		✓	

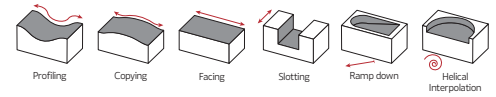
Good Conditions
 Average Conditions
 Difficult Conditions

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

ISO	PSM	Material	HB (Brinell)	Vc (m/min)						
				← Wear Resistance						Toughness →
				PHP920	PHH930	PHP530	PHH530	PHP808	PHH808	PHS740
P	1	Unalloyed Steel	125-220	180-250	-	180-340	-	180-340	-	180-350
	2	Low-Alloyed Steel	220-280	160-230	-	180-340	-	180-340	-	180-340
	3	High-Alloyed Steel	280-380	140-220	-	180-330	-	180-330	-	180-340
M	4	SS - Ferritic / Martensitic	200-330	-	140-210	150-270	170-280	-	160-270	-
	5	SS - Austenitic	200-330	-	120-170	-	160-280	-	160-270	-
	6	SS - Austenitic-ferritic (Duplex)	230-260	-	100-150	-	150-260	-	150-250	-
S	11	Heat Resistant Super Alloys	200-320	-	30-110	-	30-150	-	30-140	-

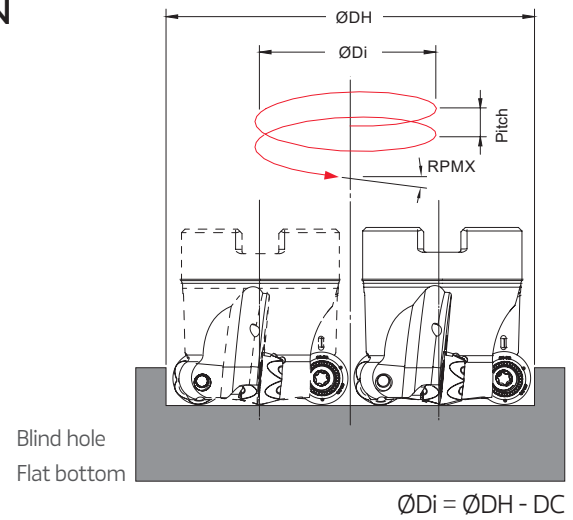
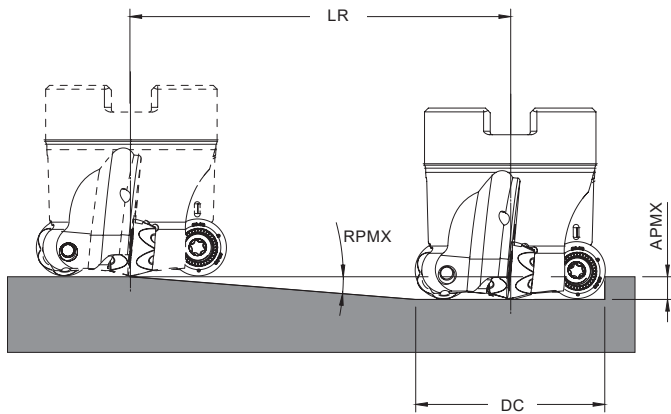
ISO	PSM	Material	HB (Brinell)	Feed fz (mm/t)	
				RPHT 10...	RPHT 12...
P	1	Unalloyed Steel	125-220	0,05-0,40	0,05-0,45
	2	Low-Alloyed Steel	220-280	0,05-0,40	0,05-0,45
	3	High-Alloyed Steel	280-380	0,05-0,35	0,05-0,40
M	4	SS - Ferritic / Martensitic	200-330	0,05-0,30	0,05-0,35
	5	SS - Austenitic	200-330	0,05-0,30	0,05-0,35
	6	SS - Austenitic-ferritic (Duplex)	230-260	0,05-0,30	0,05-0,35
S	11	Heat Resistant Super Alloys	200-320	0,05-0,25	0,05-0,30

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



RAMPING AND HELICAL INTERPOLATION

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



Insert	DC	Ramping			Helical Interpolation		
		RPMX	APMX	Min LR	ØDHmin	ØDHmax	Max Pitch/Rev.
34190							
RP.. 10	20	7,0	5,0	40,7	30	-	3
	25	6,0	5,0	47,6	40	40	7
	32	6,0	5,0	47,6	54	50	8
	35	5,0	5,0	57,2	60	64	7
	42	5,0	5,0	57,2	74	70	10
	50	4,0	5,0	71,5	90	84	6
	52	3,0	5,0	95,4	94	100	9
34290							
RP.. 12	40	8,0	6,0	42,7	68	-	12
	50	3,5	6,0	98,1	88	80	17
	52	3,0	6,0	114,5	92	100	7
	63	2,5	6,0	137,4	114	104	9
	66	2,5	6,0	137,4	120	126	6
	80	2,0	6,0	171,8	148	132	8
						160	7

Note: During helical interpolation do not exceed APMX.

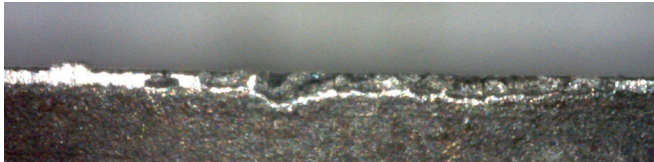
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TEST REPORT Relatório de teste | Informe de prueba

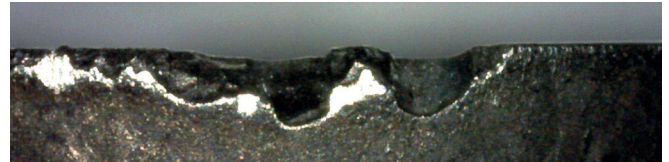
Cutter: 052A34290-05-05-022040

Insert: RPHT 1204 M0E-LS

Grade: PHH530



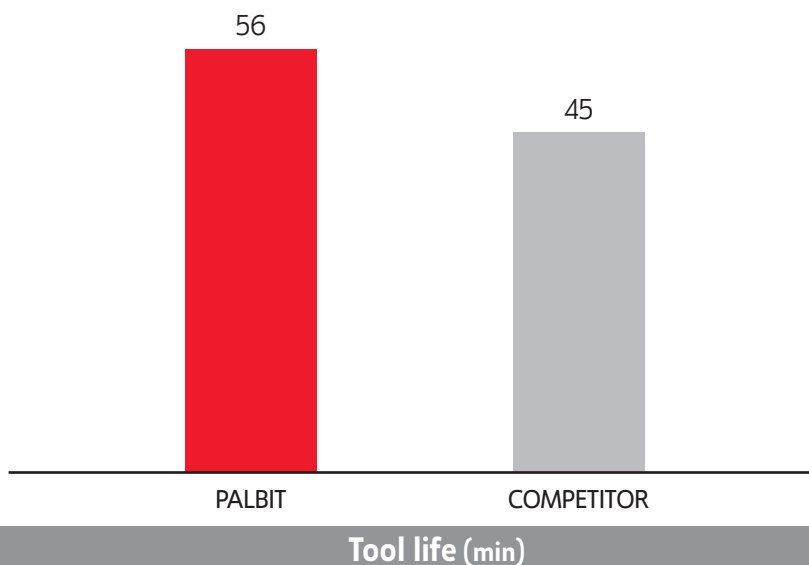
Palbit Insert

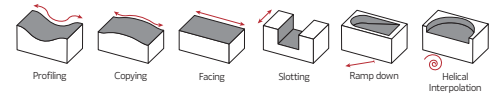


Competitor Insert

Workpiece material: AISI 316L - After 45 mins

Cutting speed: V_c	200 m/min
Feed per tooth: f_z	0,2 mm/tooth
Depth of cut: a_p	2,0 mm
Stepover : a_e	60%
Operation	Face milling
Coolant	Air



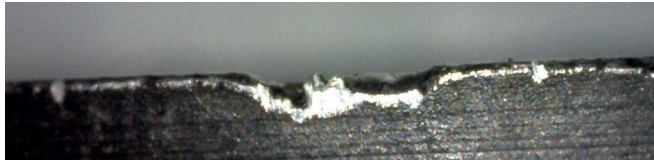


TEST REPORT Relatório de teste | Informe de prueba

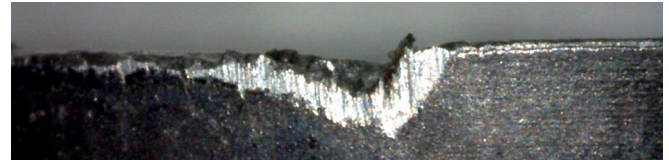
Cutter: 052A34290-05-05-022040

Insert: RPHT 1204 M0E-LS

Grade: PHP530



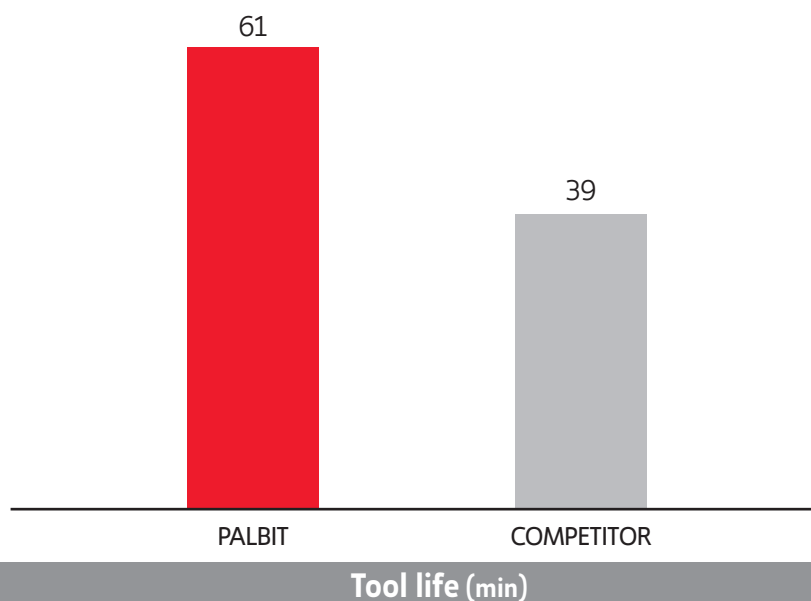
Palbit Insert



Competitor Insert

Workpiece material: X22CrMoV12-1 (1.4923) - After 39 mins

Cutting speed: V_c	315 m/min
Feed per tooth: f_z	0,2 mm/tooth
Depth of cut: a_p	2,0 mm
Stepover : a_e	60%
Operation	Face milling
Coolant	Air



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Check the QrCode for more information



HEADQUARTERS

PALBIT. S.A.

T (+351) 234 540 300 | F (+351) 234 540 301

palbit@palbit.pt | www.palbit.pt

Branch office

PALBIT México, S de RL de CV

T (+52) 5555 454 543 | F (+52) 5552 509 190

info@palbit.com.mx | www.palbit.pt/mx

Branch office

PALBIT Brasil

T (+55) 011 25 343 648

palbit@palbit.com.br | www.palbit.pt/br