VAN CUTSEM tools
Quality tools for metalworking

KMO-zone Doornpark 19 – 9120 BEVEREN-WAAS - BELGIUM
tel +32 (0)3 776 84 92 - info@vancutsemtools.be - www.vancutsemtools.be

Topkwaliteit aan een lage snijkost!

Palbit profielfrees TURBOMILL 34290



- Lichtsnijdende profielfrees
- Uitermate goede eigenschappen in RVS en super legeringen.
- Positieve freesplaten met anti-rotatingsysteem.
- Toepassingsgebied: P M S
- Levertijd: 24/48h
- Freesplaten: RPHT 1204- 4 **snijkanten** - max.Ap: 6,0 mm




Palbit koppelverkoop!

Bestelref.	D_c		+	Set €
34290-40	40	4	1x 040A34290-04-05-016040 + 10x RPHT 1204 ...*	
34290-50	50	5	1x 050A34290-05-05-022040 + 10x RPHT 1204 ...*	
34290-52	52	5	1x 052A34290-05-05-022040 + 10x RPHT 1204 ...*	
34290-63	63	6	1x 063A34290-06-05-022040 + 10x RPHT 1204 ...*	
34290-66	66	6	1x 066A34290-06-05-027050 + 10x RPHT 1204 ...*	
34290-80	80	7	1x 080A34290-07-05-027050 + 10x RPHT 1204 ...*	

*RPHT 1204 MOE-LS PHP530 / PHH530

U wenst een koppelaankoop met een andere snijplaten? Contacteer ons!

Bij afname van:	Freesplaten (4 snijkanten) - max Ap: 6,0mm -	€/snijpl. *bruto*	korting	€/snijpl. *netto*	€/snijkant *netto*
10 stks	RPHT 1204 MOE-LS PHP530				
≥ 30 stks	RPHT 1204 MOE-LS PHP530				
	P M				
10 stks	RPHT 1204 MOE-LS PHH530				
≥ 30 stks	RPHT 1204 MOE-LS PHH530				
	M S				

VAN CUTSEM tools
Quality tools for metalworking

palbit

TURBOMILL 34190 | 34290

Super performance on Superalloy machining



MILLING GRADES Graus de fresagem | Grados de fresado

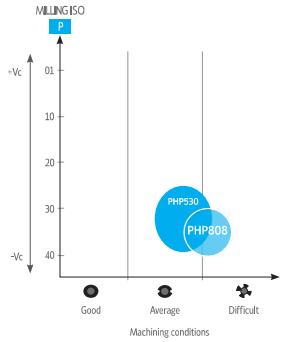
With the PHP and PHH PVD coating technology, Palbit has developed special grades for steel and superalloy machining. With these grades we guarantee that our inserts will last longer.
Test results show an improvement of 180% in tool life in comparison with our previous grades when machining Stainless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

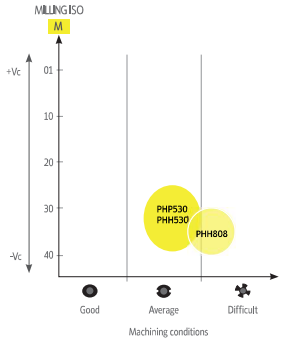
PVD grades

CVD grade

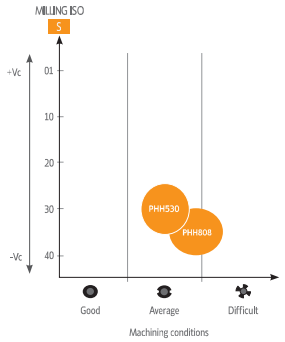
P - STEEL



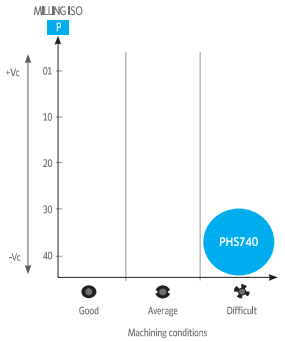
M - STAINLESS STEEL



S - HEAT RESISTANT / TITANIUM ALLOYS

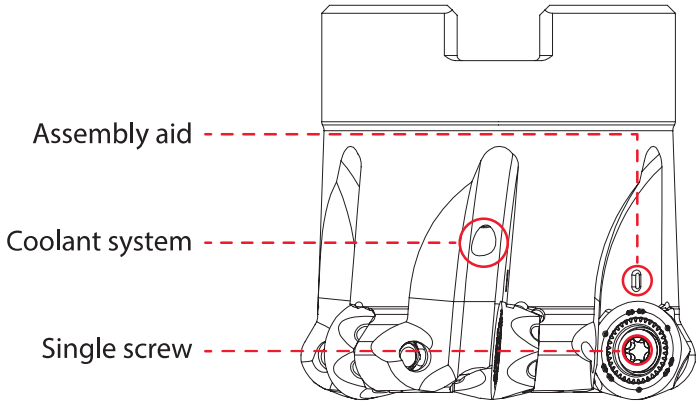


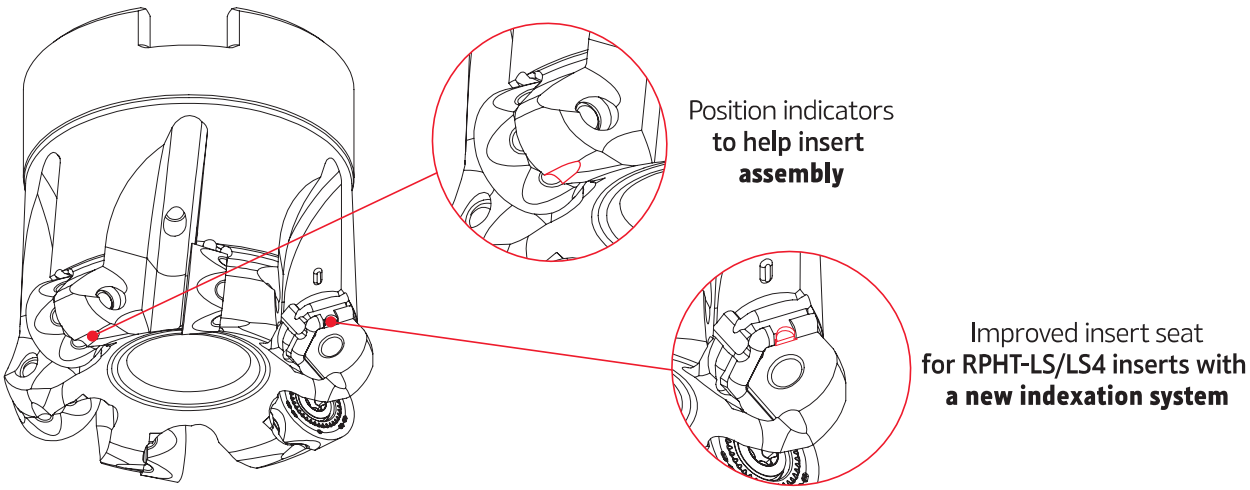
P - STEEL



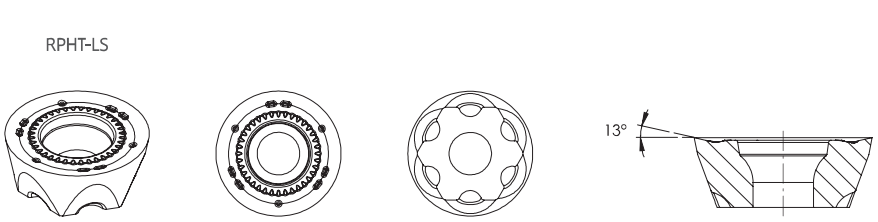
TURBOMILL 34190 | 34290

Super performance on supper alloy machining.





RPHT-LS



P M S

RPHT LS 10 | 12



6 cutting edges insert

- Insert with 6 cutting edges for a higher productivity.

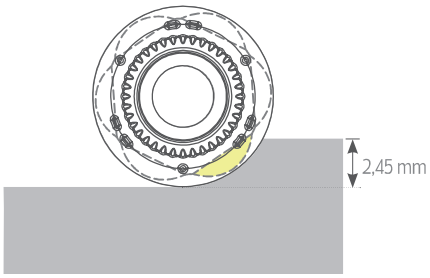
Insert Geometry

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

The maximum depth of cut using 6 cutting edges

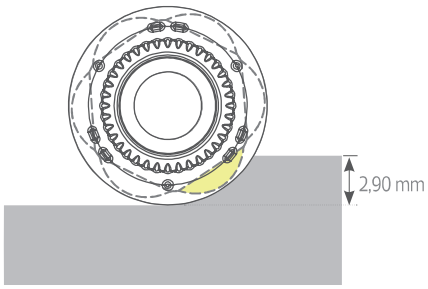
TURBOMILL 34190

RPHT 10T3M0E-LS



TURBOMILL 34290

RPHT 1204 M0E-LS

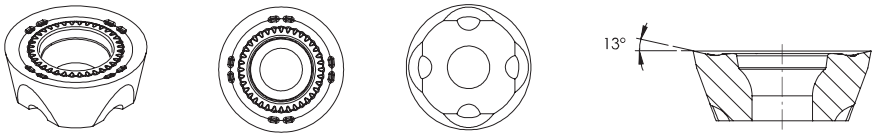


GEOMETRY FEATURES Características geométricas | Características geométricas

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

RPHT-LS4

RPHT-LS4



P M S

RPHT LS4 10 | 12

RPHT-LS4



4 cutting edges insert

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

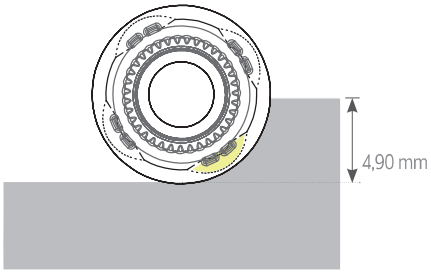
Insert Geometry

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

The maximum depth of cut using 4 cutting edges

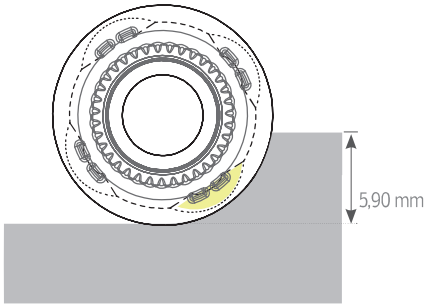
TURBOMILL 34190

RPHT 10T3M0E-LS4



TURBOMILL 34290

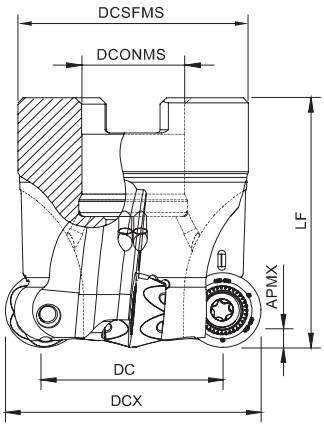
RPHT 1204 M0E-LS4



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.





Arbor Mounting

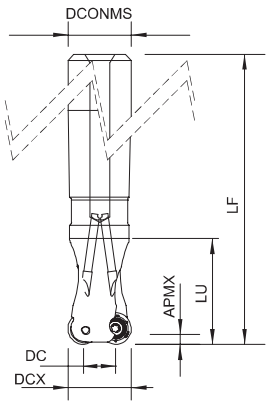
GAMP=+5°

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 (see page A-8) | Disponível sobre consulta (consulte a página A-8) | Disponible bajo consulta (mire pagina A-8)





Cylindrical Shank

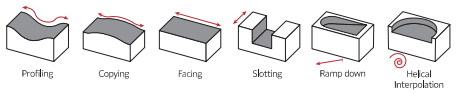
GAMP=+5°

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)	◯

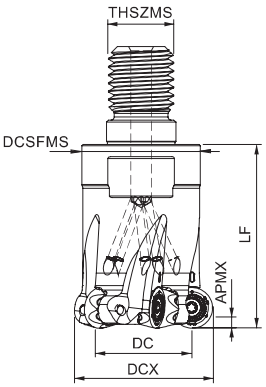
⛭ Stock item | Produto de stock | Itens de stock

◯ Available under request (see page A-8) | Disponível sobre consulta (consulte a página A-8) | Disponible bajo consulta (mire pagina A-8)

TURBOMILL 34190
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

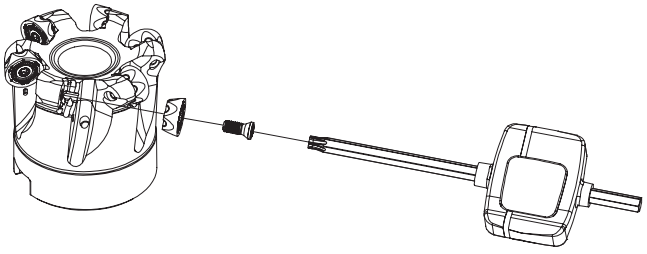
○ Available under request (see page A-8) | Disponível sobre consulta (consulte a página A-8) | Disponible bajo consulta (mire pagina A-8)

SPARE PARTS Acessórios | Repuestos

Order separately

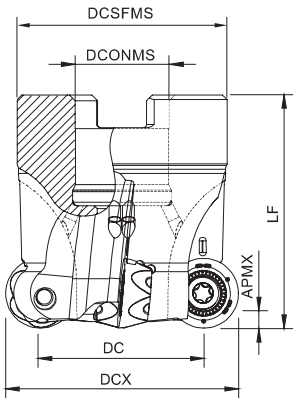
Cutter DC	Insert Screw	Key (Torx)	Key (Torx - Nm)	Torque Value
				
A34190 - 42-52	P0300800	XT09	DT0914	1,40
E34190 - 20-32	P0300800	XT09	DT0914	1,40
R34190 - 20-35	P0300800	XT09	DT0914	1,40

Note: The toolholder is supplied with the XT/PT key. To order the DT key please check the page A-301.
Check the procedures for the clamping screws on the page A-301.



TURBOMILL 34290





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

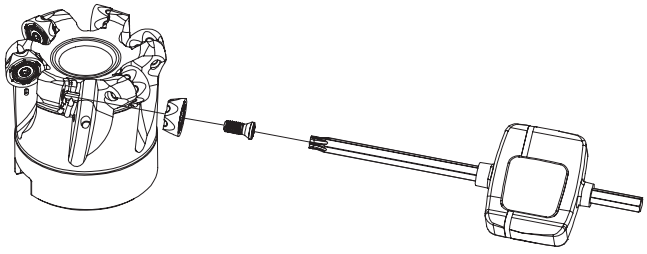
◯ Available under request (see page A-8) | Disponível sobre consulta (consulte a página A-8) | Disponible bajo consulta (mire pagina A-8)

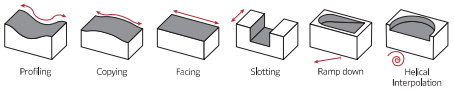
SPARE PARTS Acessórios | Repuestos

Order separately

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

Note: The toolholder is supplied with the XT/PT key. To order the DT key please check the page A-301.
Check the procedures for the clamping screws on the page A-301.





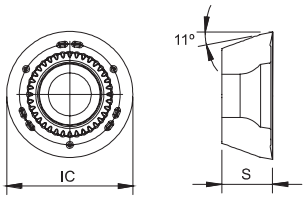
RPHT-LS Inserts | Pastilhas | Plaquitas



RPHT-LS



RPHT-LS4



RPHT-LS | LS4

		P			M			S		Dimensions Dimensões Dimensiones (mm)	
		CVD	PVD		PVD			PVD			
	(2) Grade code	T9	Z1	Z2	Y2	Z2	Z3	Y2	Z3		
(1) Geometry 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 (see page A-9) | Disponível sobre consulta (consulte a página A-9) | Disponible bajo consulta (mire pagina A-9)

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		✓		✓		✓	

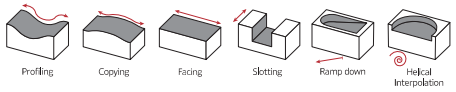
Good Conditions Average Conditions Difficult Conditions

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	-

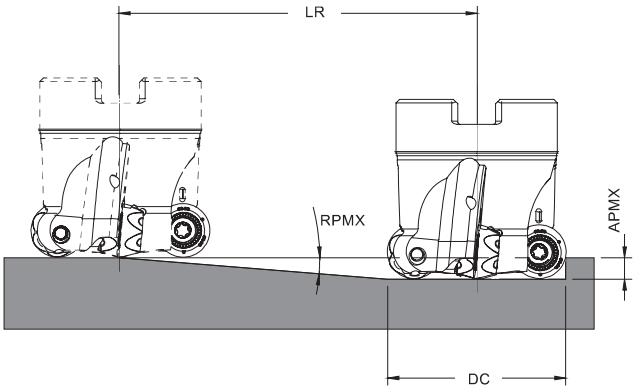
ISO	PSM	Material	HB (Brinell)	Feed fz (mm/t)	
				RPHT 10...	RPHT 12...
P	1	Unalloyed Steel	125-220	0,05-0,40	0,05-0,45
	2	Low-Alloyed Steel	220-280	0,05-0,40	0,05-0,45
	3	High-Alloyed Steel	280-380	0,05-0,35	0,05-0,40
M	4	SS - Ferritic / Martensitic	200-330	0,05-0,30	0,05-0,35
	5	SS - Austenitic	200-330	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

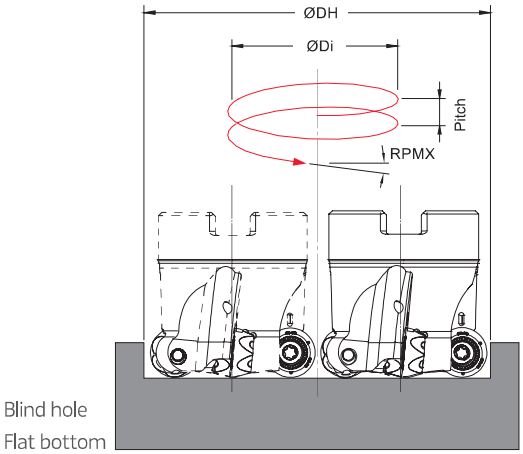
(Note 1) Cutting conditions $a_e/Dc=70\%$.



RAMPING AND HELICAL INTERPOLATION

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





ØDi = ØDH - DC

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 -	- 40	3 7
	25	6,0	5,0	47,6	40 -	- 50	4 8
	32	6,0	5,0	47,6	54 -	- 64	7 10
	35	5,0	5,0	57,2	60 -	- 70	6 9
	42	5,0	5,0	57,2	74 -	- 84	8 11
	50	4,0	5,0	71,5	90 -	- 100	8 10
	52	3,0	5,0	95,4	94 -	- 104	6 8
				34290			
RP.. 12	40	8,0	6,0	42,7	68 -	- 80	12 17
	50	3,5	6,0	98,1	88 -	- 100	7 9
	52	3,0	6,0	114,5	92 -	- 104	6 8
	63	2,5	6,0	137,4	114 -	- 126	6 8
	66	2,5	6,0	137,4	120 -	- 132	7 9
	80	2,0	6,0	171,8	148 -	- 160	7 8

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



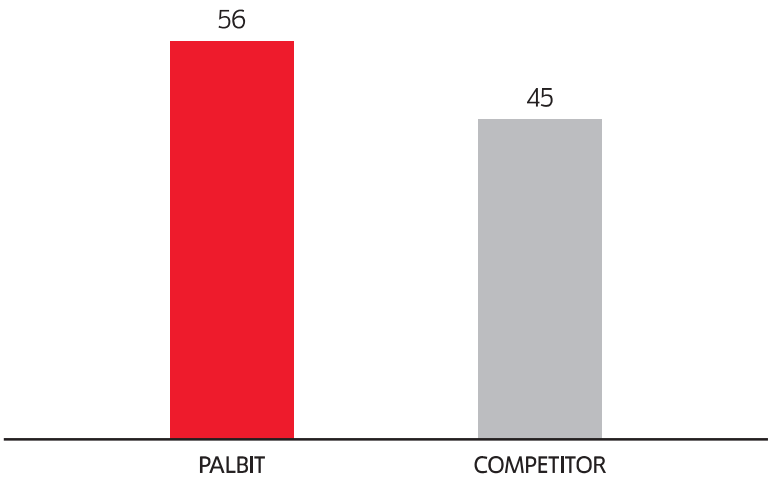
Palbit Insert



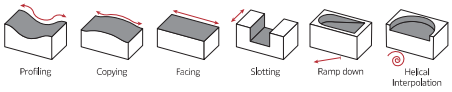
Competitor Insert

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



Tool life (min)



TEST REPORT Relatório de teste | Informe de prueba

Cutter: 052A34290-05-05-022040

Insert: RPHT 1204 M0E-LS

Grade: PHP530



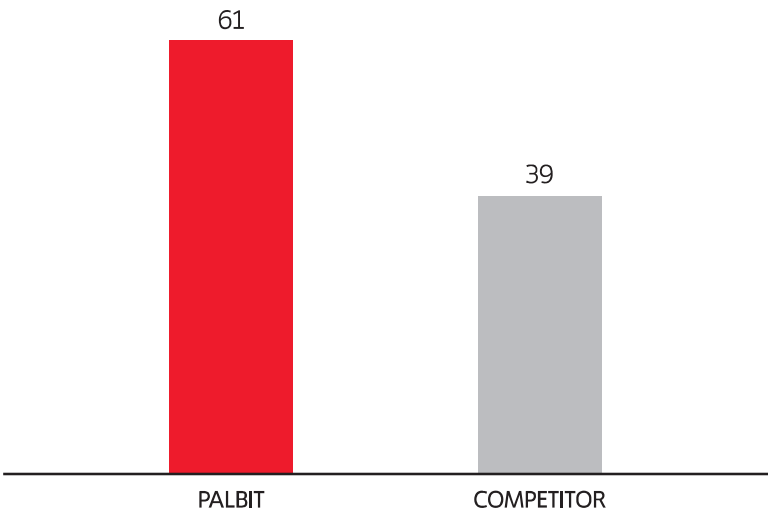
Palbit Insert



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



Tool life (min)

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Super performance on Superalloy machining



HEADQUARTERS
PALBIT. S.A.
P.O.Box 4 - Palhal
3854-908 - Branca ALB - Portugal
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
C/ Alfonso Esparza Oteo 37
Colonia Guadalupe Inn
Alcaldía Álvaro Obregón
01020 Ciudad de México
T (+52) 5555 454 543 | F (+52) 5552 509 190
info@palbit.com.mx | www.palbit.pt/mx

Branch office:
PALBIT Brasil
Av. João XXIII, n°20 Salas 41 e 65
Vila Gilda, Sto André, SP
CEP: 09190-500 – São Paulo
T (+55) 011 25 343 648
palbit@palbit.com.br | www.palbit.pt/br

VAN CUTSEM tools
Quality tools for metalworking
KMO-zone Doornpark 19 – 9120 BEVEREN-WAAS - BELGIUM
tel +32 (0)3 776 84 92 - info@vancutsemtools.be - www.vancutsemtools.be