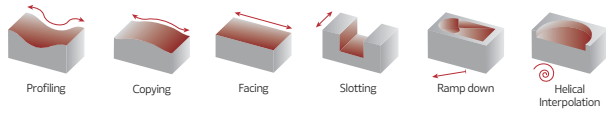


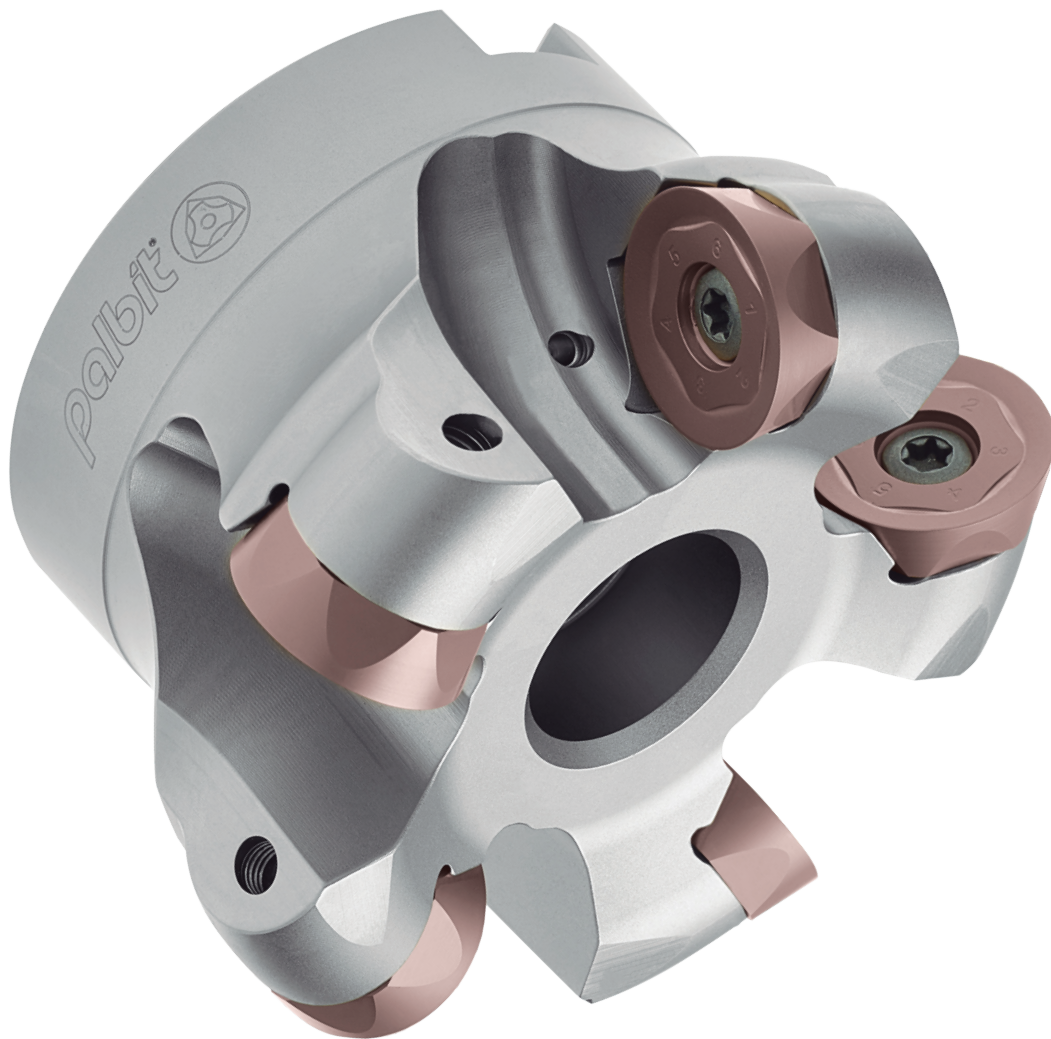
Machining of stainless steel & difficult-to-cut materials



TOROMILL

33590 | 33690 | 33790
33890 | 33990

PHH
NEW
GRADE



RDHT
08



RPHT
10 | 12 | 16 | 20

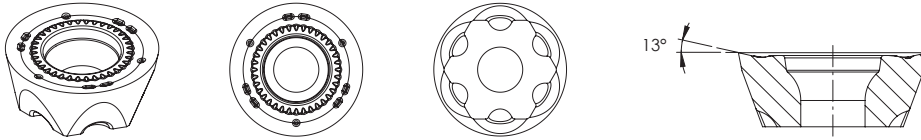


SINCE 1916

RPHT-LS



RPHT-LS



6 cutting edges insert

- Insert with 6 cutting edges for a higher productivity.

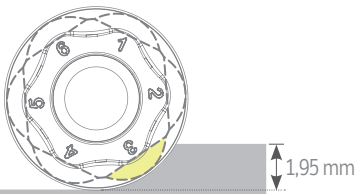
Insert Geometry

- Improved geometry for low cutting force;
- Positive insert with a brand new edge positioning system.

The maximum depth of cut using 6 cutting edges (LS)

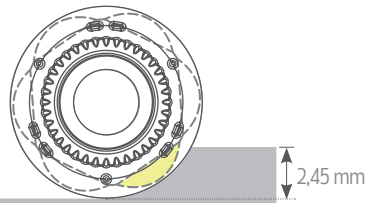
TOROMILL 33590

RDHT 0802...



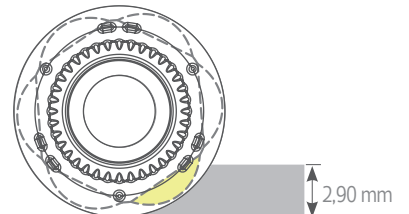
TURBOMILL 34190

RPHT 10T3M0E-LS



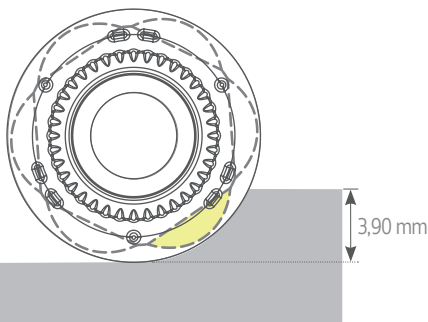
TURBOMILL 34290

RPHT 1204 M0E-LS



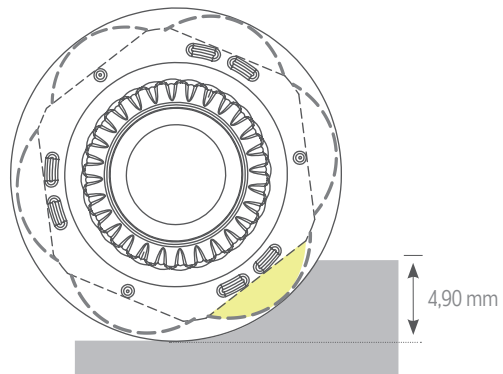
TOROMILL 33890

RPHT 1605 M0E-LS



TOROMILL 33990

RPHT 2006...



TOROMILL 33590 | 33690 | 33790 | 33890 | 33990

Line for machining stainless steel and difficult cutting materials

M S

Features

- High positive rake angle results in low cutting resistance;
- Optimal cutter design for stainless steel and difficult-to-cut material machining;
- Special grade (PHM740) with wear resistance and toughness characteristics.
- Optimized insert for machining with 6 cutting edges



TOROMILL 33590

RDHT 0802...

TOROMILL 33690

RPHT 10T3...

TOROMILL 33790

RPHT 1204...

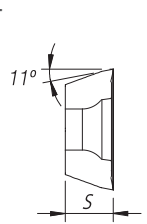
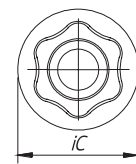
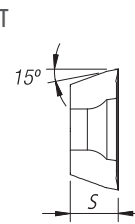
TOROMILL 33890

RPHT 1605...

TOROMILL 33990

RPHT 2006...

RDHT | RPHT | Inserts | Pastilhas | Plaquetas



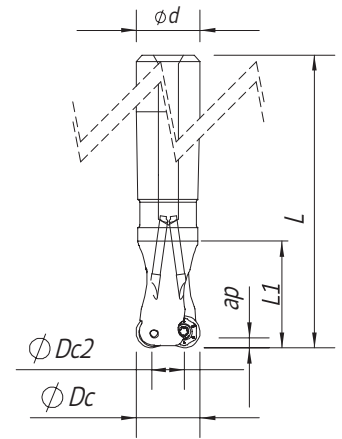
		P				M				S			Dimensions Dimensões Dimensiones (mm)	
		CVD	PVD			PVD				PVD				
(1) Geometry code	(2) Grade code ISO Reference	T9	T1	Z1	Z2	X9	Y2	Z2	Z3	X9	Y2	Z3	ic	S
1112152	RDHT 0802 MOE-LS												8,00	2,38
1112253	RPHT 10T3 MOE-MS												10,00	3,97
1112772	RPHT 10T3 MOE-LS												10,00	3,97
1112186	RPHT 1204 MOE-MS												12,00	4,76
1112766	RPHT 1204 MOE-LS												12,00	4,76
1112254	RPHT 1605 MOE-MS												16,00	5,56
1112951	RPHT 1605 MOE-LS												16,00	5,56
1112958	RPHT 2006 MOE-LS												20,00	6,35

🟡 First choice | Primeira opção | 1ª opção

🟢 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 página A-9)

Insert order code = (1) Geometry Code + (2) Grade Code



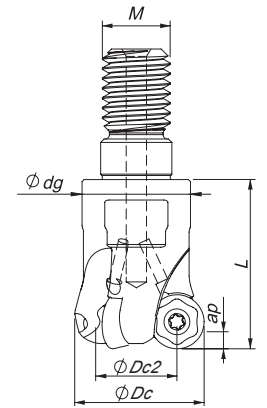
Cylindrical Shank

$\gamma_p = +5^\circ$

Order code Código	Reference Referência Referencia		Dimensions Dimensões Dimensiones (mm)					Kg	Specifications	Insert Pastilha Inserto	Stock
			ϕDc	$\phi Dc2$	ϕd	L	L1		Ap max (mm)		
33590											
181122500	016E33590-02-04-016160	2	16	8	16	160	59	0,23	4,0	RD...0802 MOE	
181122600	020E33590-03-05-020180	3	20	12	20	180	59	0,36	4,0	RD...0802 MOE	
181122700	025E33590-04-05-025200	4	25	17	25	200	59	0,65	4,0	RD...0802 MOE	
33690											
181123400	020E33690-02-05-020180	2	20	10	20	180	50	0,40	5,0	RP...10T3 MOE	
181123500	025E33690-03-05-025200	3	25	15	25	200	60	0,76	5,0	RP...10T3 MOE	
181123600	032E33690-04-05-032200	4	32	22	32	200	60	0,98	5,0	RP...10T3 MOE	

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)

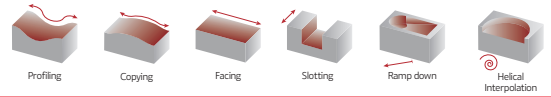


Threaded Coupling

$\gamma_p = +5^\circ$

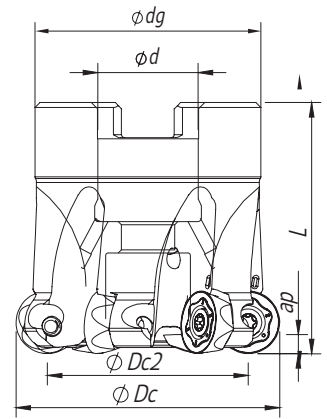
Order code Código	Reference Referência Referencia		Dimensions Dimensões Dimensiones (mm)					Kg	Specifications	Insert Pastilha Inserto	Stock
			ϕDc	$\phi Dc2$	ϕM	ϕdg	L		Ap max (mm)		
33590											
181098600	016R33590-02-04-M08020	2	16	8	M8	13	20	0,03	4,0	RD...0802 MOE	
181122800	020R33590-03-05-M10025	3	20	12	M10	16	25	0,07	4,0	RD...0802 MOE	
181122900	025R33590-04-05-M12030	4	25	17	M12	21	30	0,14	4,0	RD...0802 MOE	
181123000	032R33590-05-05-M16043	5	32	24	M16	29	43	0,25	4,0	RD...0802 MOE	
33690											
181110600	020R33690-02-05-M10032	2	20	10	M10	16	32	0,10	5,0	RP...10T3 MOE	
181110700	025R33690-03-05-M12035	3	25	15	M12	21	35	0,19	5,0	RP...10T3 MOE	
181110800	032R33690-04-05-M16035	4	32	22	M16	29	35	0,31	5,0	RP...10T3 MOE	
181120700	035R33690-05-05-M16045	5	35	25	M16	29	45	0,40	5,0	RP...10T3 MOE	

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



Arbor Mounting

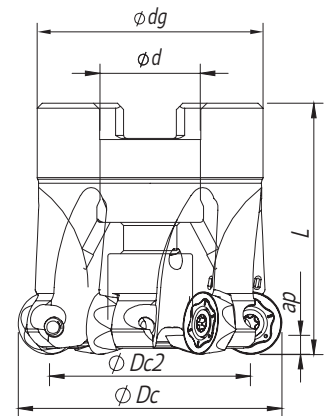
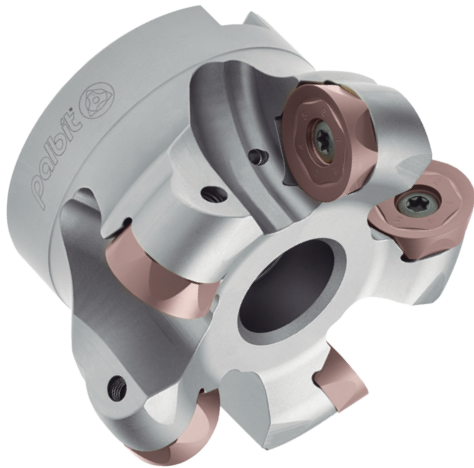
$\gamma_p = +5^\circ$



Order code Código	Reference Referência Referencia		Dimensions Dimensões Dimensiones (mm)					Kg	Specifications		Insert Pastilha Inserto	Stock
			ϕDc	$\phi Dc2$	$\phi d/M$	ϕdg	L		Arbor Type	Ap max (mm)		
33690												
181123700	042A33690-06-05-016040	6	42	32	16	36	40	0,16	A	5,0	RP...10T3 MOE	
181123800	050A33690-06-05-022040	6	50	40	22	42	40	0,26	A	5,0	RP...10T3 MOE	
181123900	052A33690-07-05-022040	7	52	42	22	42	40	0,30	A	5,0	RP...10T3 MOE	
33790												
181098700	040A33790-04-05-016040	4	40	28	26	36	40	0,15	A	6,0	RP...1204 MOE	
181111500	050A33790-04-05-022040	4	50	38	22	42	40	0,20	A	6,0	RP...1204 MOE	
181124200	052A33790-05-05-022040	5	52	40	22	42	40	0,25	A	6,0	RP...1204 MOE	
181122100	063A33790-06-05-022040	6	63	51	22	48	40	0,36	A	6,0	RP...1204 MOE	
181124300	066A33790-06-05-027050	6	66	54	27	48	50	0,40	A	6,0	RP...1204 MOE	
181124400	080A33790-07-05-027050	7	80	68	27	60	50	0,68	A	6,0	RP...1204 MOE	

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)



Arbor Mounting

$$\gamma_p = 5^\circ$$

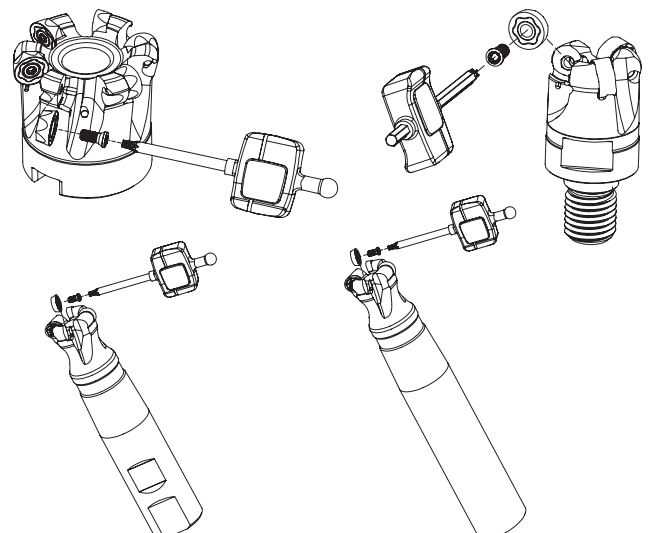
Order code Código	Reference Referência Referencia		Dimensions Dimensões Dimensiones (mm)					Kg	Specifications		Insert Pastilha Inserto	Stock
			ϕDc	$\phi Dc2$	$\phi d/M$	ϕdg	L		Arbor Type	Ap max (mm)		
33890												
181124500	050A33890-04-05-022040	4	50	34	22	42	40	0,21	A	8,0	RP...1605 M0E	○
181124600	052A33890-04-05-022040	4	52	36	22	42	40	0,25	A	8,0	RP...1605 M0E	○
181114900	063A33890-05-05-022040	5	63	47	22	48	40	0,37	A	8,0	RP...1605 M0E	⊗
181124700	066A33890-05-05-027050	5	66	54	27	48	50	0,46	A	8,0	RP...1605 M0E	⊗
181124800	080A33890-06-05-027052	6	80	64	27	60	52	0,85	A	8,0	RP...1605 M0E	⊗
181124900	100A33890-07-05-032052	7	100	84	32	80	52	1,57	A	8,0	RP...1605 M0E	⊗
181122200	125A33890-08-05-040052	8	125	109	40	90	52	2,12	A	8,0	RP...1605 M0E	⊗
33990												
181112200	080A33990-05-05-027050	5	80	60	27	60	50	0,73	A	10,0	RP...2006 M0E	⊗
181099800	100A33990-06-05-032063	6	100	80	32	80	63	1,62	A	10,0	RP...2006 M0E	⊗
181099900	125A33990-06-05-040063	6	125	105	40	90	63	2,53	A	10,0	RP...2006 M0E	⊗

⊗ Stock item | Produto de stock | Itens de stock

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

SPARE PARTS | Complementos | Repuestos




Cutter ϕDc	Insert Screw	Key (Torx)	Order separately	
			Key (Torx - Nm)	Torque Value
33590	P0250503	XT08	DT0812	1,20
33690	P0300800	XT09	DT0914	1,40
33790	P0350800	XT15	DT1530	3,00
33890	P0451100	XT20	DT2050	5,00
33990	P0501302	PT20	DT2050	5,00



TOROMILL 33590 | 33690 | 33790 | 33890 | 33990

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

ISO	PSM	Material	HB (Brinell)	Grades	
				← Wear Resistance PH7930	Toughness → PHM740
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	✓	✓

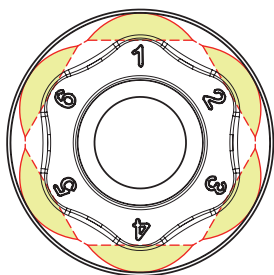
 Good Conditions
 Average Conditions
 Difficult Conditions

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

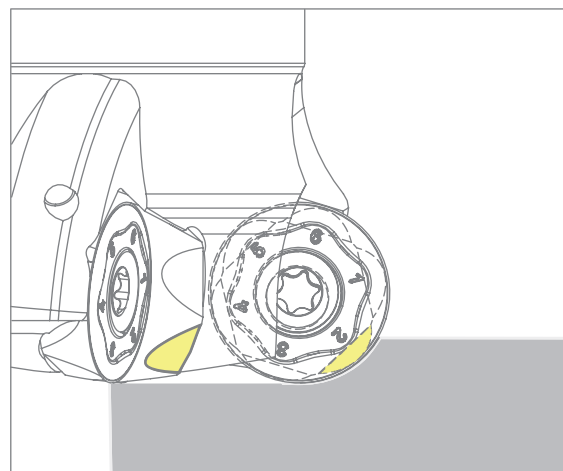
ISO	PSM	Material	HB (Brinell)	Vc (m/min)		RD... 08		RP... 10	
				← Wear Resistance PH7930	Toughness → PHM740	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)
M	4	SS - Ferritic / Martensitic	200-330	100-120	100-130	0,05-0,25	≤4,00	0,05-0,30	≤5,00
	5	SS - Austenitic	200-330	80-110	80-120	0,05-0,25		0,05-0,30	
	6	SS - Austenitic-ferritic (Duplex)	230-260	70-100	70-110	0,05-0,25		0,05-0,30	
S	11	Heat Resistant Super Alloys	200-320	20-80	20-90	0,05-0,20		0,05-0,25	

ISO	PSM	Material	HB (Brinell)	RP... 12		RP... 16		RP... 20	
				fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)	fz (mm/t)	ap (mm)
M	4	SS - Ferritic / Martensitic	200-330	0,05-0,35	≤6,00	0,08-0,45	≤8,00	0,08-0,55	≤10,00
	5	SS - Austenitic	200-330	0,05-0,35		0,08-0,45		0,08-0,55	
	6	SS - Austenitic-ferritic (Duplex)	230-260	0,05-0,35		0,08-0,45		0,08-0,55	
S	11	Heat Resistant Super Alloys	200-320	0,05-0,30		0,08-0,35		0,08-0,40	

The maximum depth of cut using 6 cutting edges

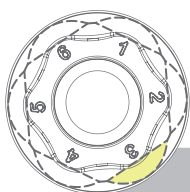


6 cutting edges



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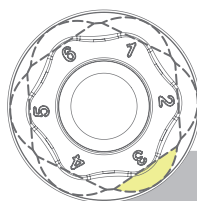
RDHT 0802...



2,00 mm

TOROMILL 33690

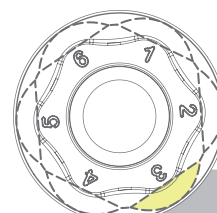
RPHT 10T3...



2,80 mm

TOROMILL 33790

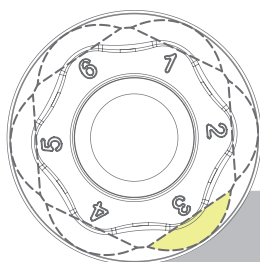
RPHT 1204...



3,00 mm

TOROMILL 33890

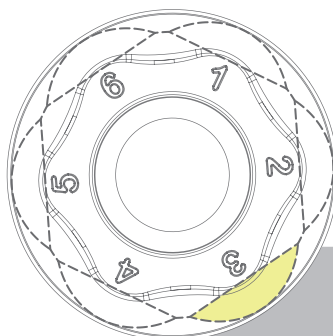
RPHT 1605...



4,50 mm

TOROMILL 33990

RPHT 2006...



5,00 mm