palbit

MILLING
Solid Carbide

RAD-INTEG

HX..30GL

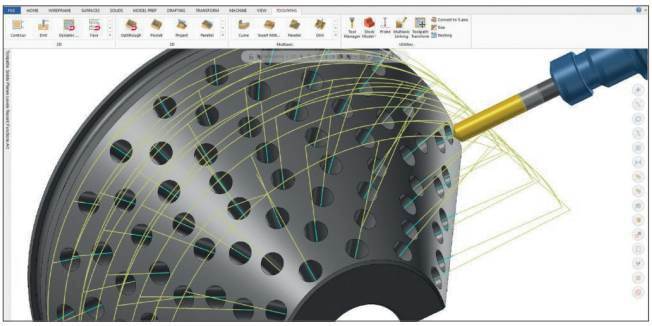
Radial solution for radical milling

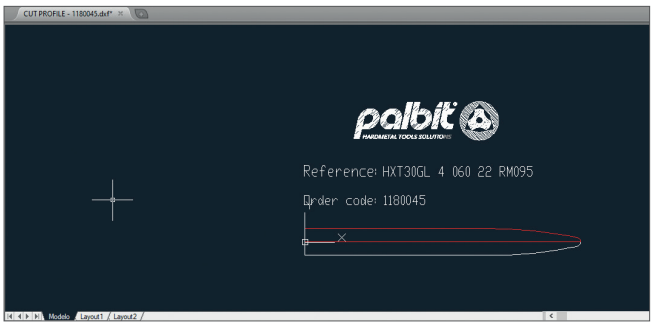
SINCE 1916

RAD-INTEG is Palbit's response to an ever evolving world of machining technology. Only with advanced CAM software and 5 axis machining centers will this tool takes its user to the productivity climax.

Advanced CAM Software (e.g. Mastercam®)

A CAM software with 5 axis strategies and free-form surface machining capabilities will allow the user to easily make the most of RAD-INTEG.



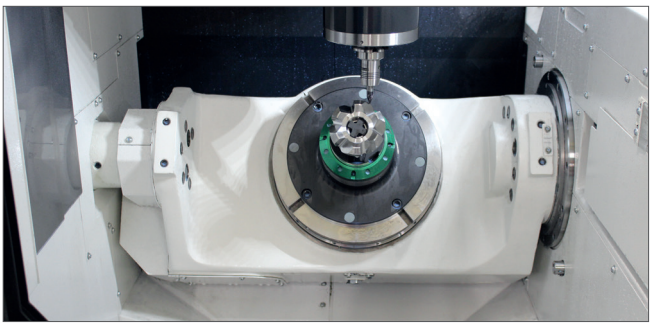


Cut Profile .DXF/.STEP file

Downloadable from our website. The cut profile file can be uploaded to most CAM software to ensure the most accurate machining.

5 axis Machining Center

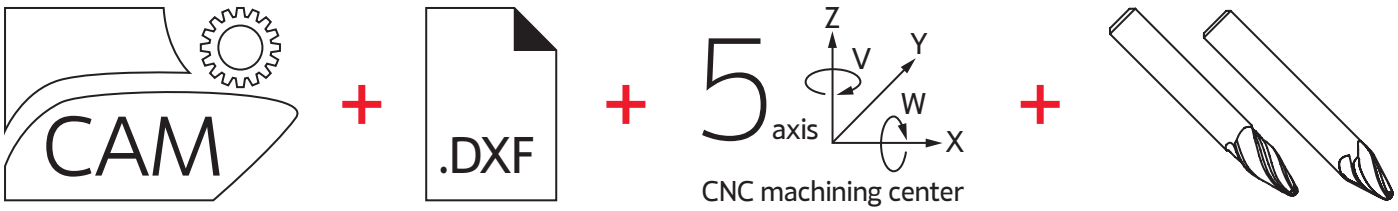
In a 5 continuous axis machining center, this tool is given the freedom to efficiently machine at its maximum potential.



RAD-INTEG

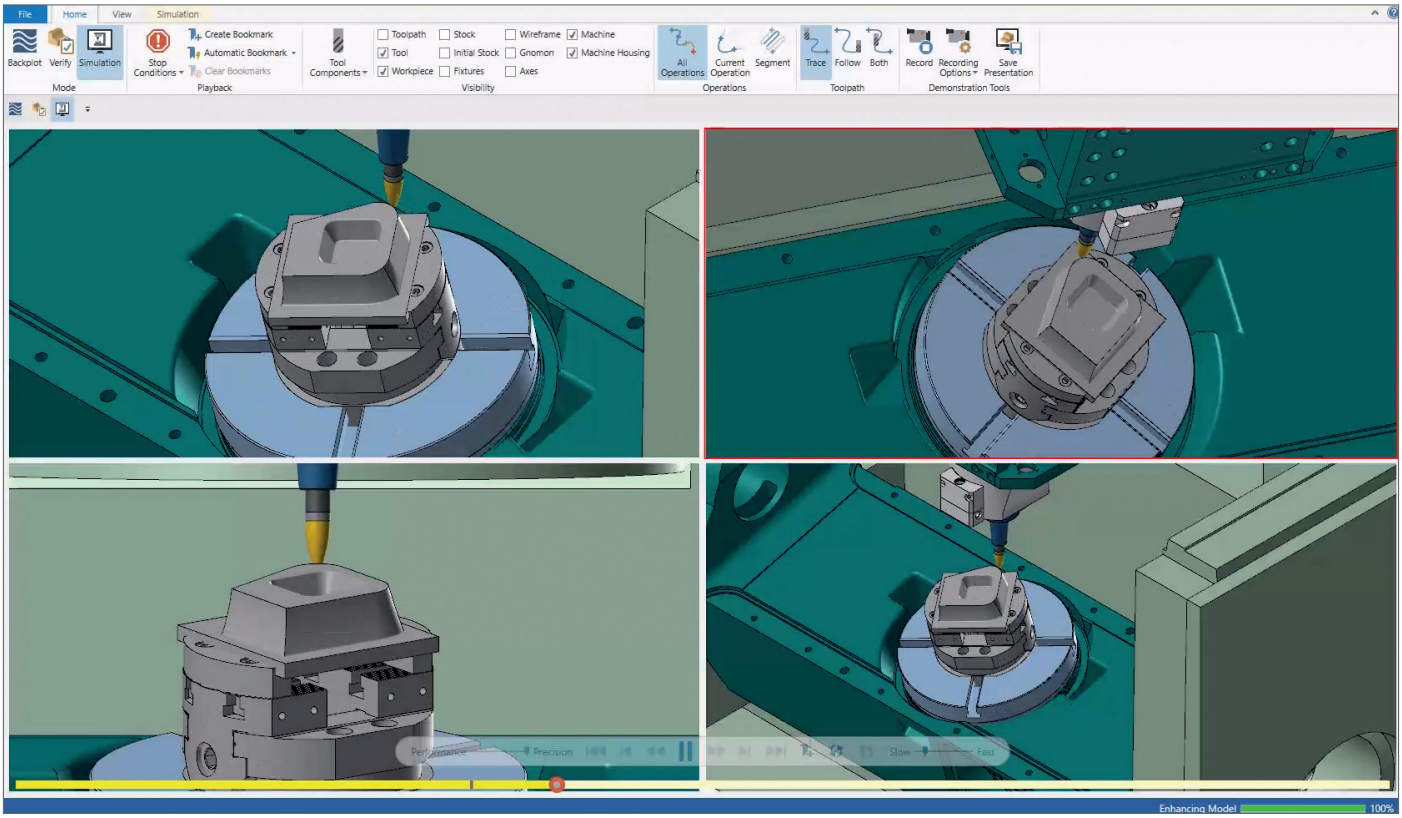
Conical / tangential segment endmills designed to use the most recent machining technology and put it to good use.

RAD INTEG Conical and Tangential Segment End mills



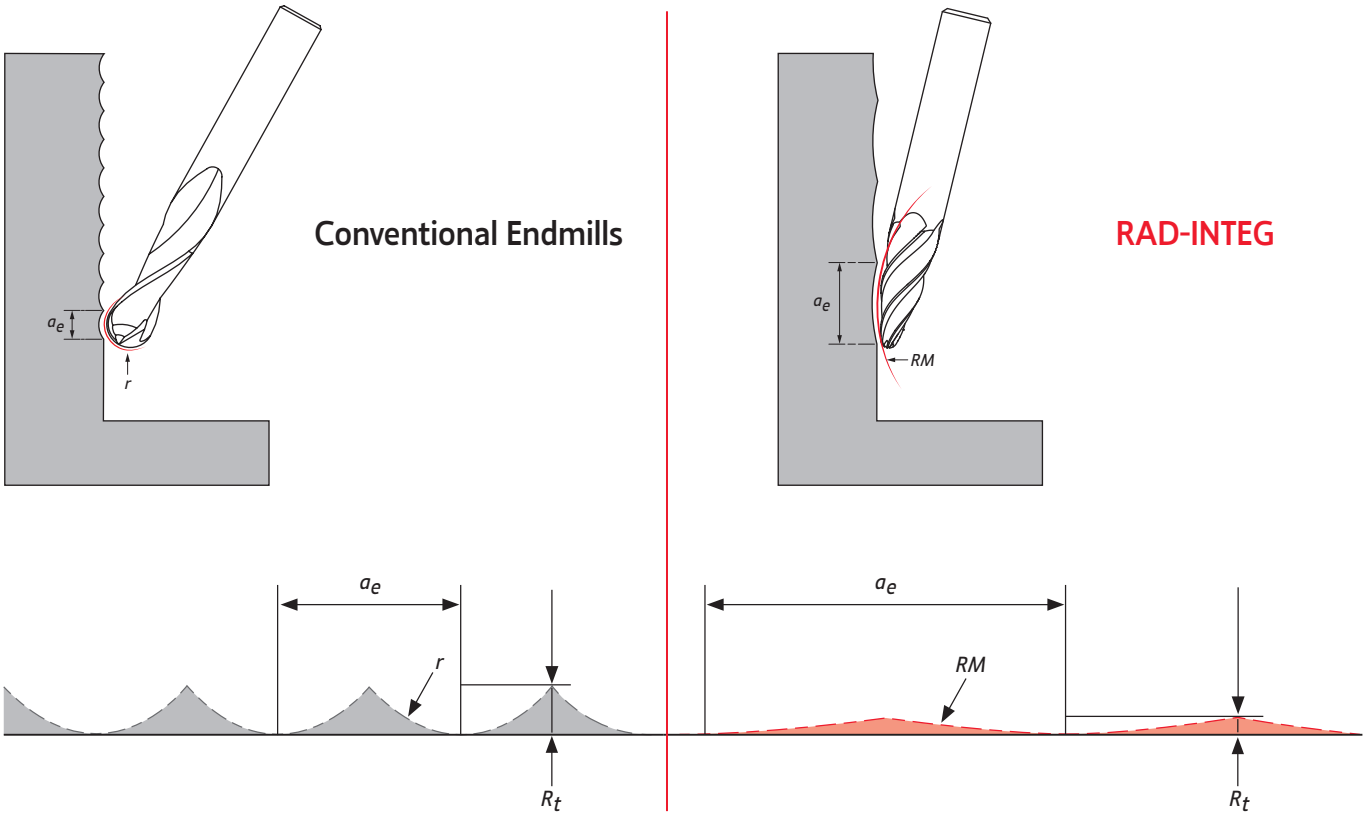
With all these tools combined we can achieve

NEW MILLING POSSIBILITIES AND BOOSTED PRODUCTIVITY



RAD INTEG Conical and Tangential Segment End mills

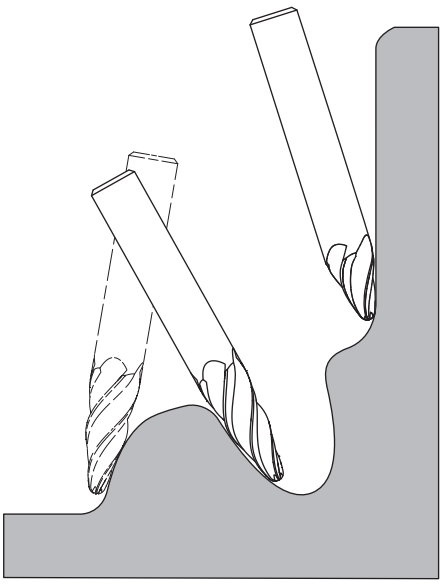
RAD-INTEG is a radial solution for radical milling. With its unique shape it opens a whole new range of machining possibilities. Its curved form allows an exceptional finishing even with higher stepover.



Higher productivity and better finishing even at higher stepover

New milling possibilities

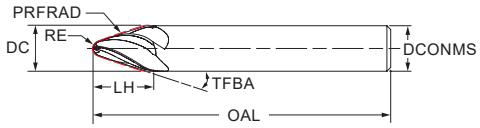
+ Hard to reach and free-form surface machining;
+ Large side cutting radius;
+ Machining time greatly reduced;
+ Better surface quality;
+ Ballnose alternative for profiling in mold-making and turbine blades production.



RAD INTEG Conical and Tangential Segment End mills

HXC30GL Conical

P M K S



All order codes are cylindrical shank.
Weldon shank available under request.

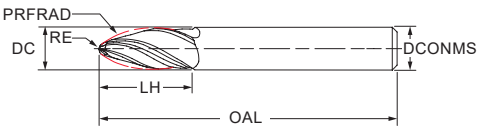
(1) Geometry code	(2) Grade code: Reference Referência Referencia	NOF	T1: PHP920	Y3: PHH920	Dimensions | Dimensões | Dimensiones (mm): DC	DCONMS	TFBA	PRFRAD	RE	LH	OAL
1180046	HXC30GL 4 080 10 18RM030	4	◈	◈	8	8	18	300	1	10	75
1180047	HXC30GL 4 120 14 18RM045	4	◈	◈	12	12	18	450	2	14	83
1180048	HXC30GL 4 160 18 18RM120	4	◈	◈	16	16	18	1200	3	18	95
1180049	HXC30GL 4 160 12 28RM080	4	◈	◈	16	16	28	800	3	12	95
1180050	HXC30GL 4 160 16 18RM120	4	◈	◈	16	16	18	1200	4	16	110
1180051	HXC30GL 4 160 11 28RM080	4	◈	◈	16	16	28	800	4	11	110

◈ Stock item | Produto de stock | Itens de stock ◯ Available under request | Disponível sobre consulta | Disponible bajo consulta

End mill order code = (1) Geometry Code + (2) Grade Code

HXT30GL Tangential

P M K S



All order codes are cylindrical shank.
Weldon shank available under request.

(1) Geometry code	(2) Grade code: Reference Referência Referencia	NOF	T1: PHP920	Y3: PHH920	Dimensions | Dimensões | Dimensiones (mm): DC	DCONMS	PRFRAD	RE	LH	OAL
1180045	HXT30GL 4 060 22 RM095	4	◈	◈	6	6	95	1	22	63
1180037	HXT30GL 4 080 24 RM095	4	◈	◈	8	8	95	1	24	70
1180038	HXT30GL 4 100 28 RM085	4	◈	◈	10	10	85	2	28	72
1180039	HXT30GL 4 120 28 RM090	4	◈	◈	12	12	90	2	28	83
1180691	HXT30GL 4 160 30 RM080	4	◈	◈	16	16	80	3	30	110

◈ Stock item | Produto de stock | Itens de stock ◯ Available under request | Disponível sobre consulta | Disponible bajo consulta

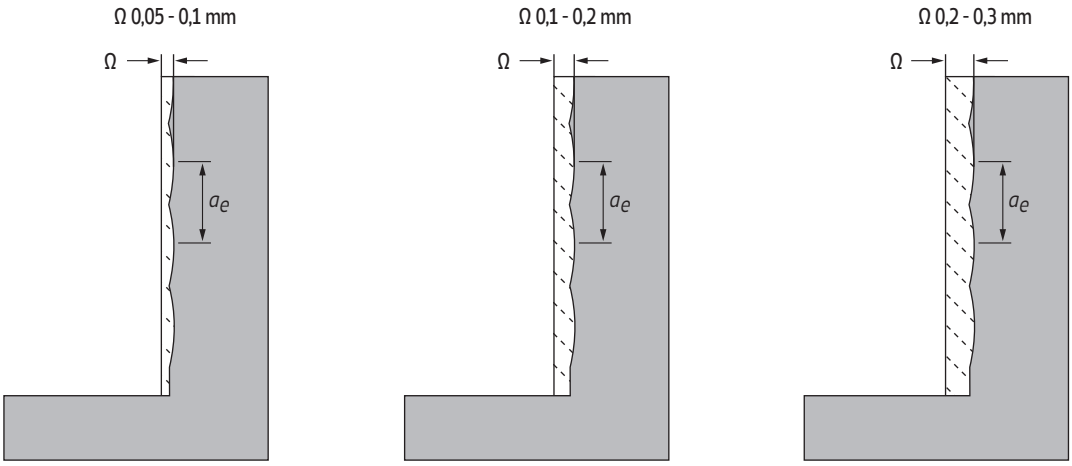
End mill order code = (1) Geometry Code + (2) Grade Code

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

ISO	Material	Grades	
		PHP920	PHH920
P	Unalloyed Steel	✓	
	Low-Alloyed Steel	✓	
	High-Alloyed Steel	✓	
M	Stainless Steel (Ferritic / Martensitic)		✓
	Stainless Steel (Austenitic)		✓
	Stainless Steel (Austenitic/Ferritic/Duplex)		✓
K	Malleable Cast Iron	✓	
	Grey Cast Iron	✓	
	Nodular Cast Iron	✓	
S	Heat Resistant Super Alloys		✓

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

Ω - Allowance
a_e - Stepover



Fine Finishing **Finishing** **Semi-Finishing**

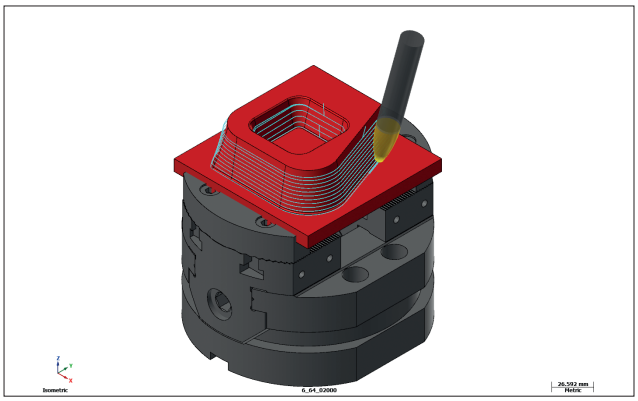
ISO	Workpiece Material	Vc (m/min)	fz (mm/t)				
			HXC30GL - Conical		HXT30GL - Tangential		
			Ω 0,05 - 0,1 mm	Ω 0,1 - 0,2 mm	Ω 0,05 - 0,1 mm	Ω 0,1 - 0,2 mm	Ω 0,2 - 0,3 mm
P	Unalloyed Steel	180	0,007 x DC	0,006 x DC	0,007 x DC	0,006 x DC	0,005 x DC
	Low-Alloyed Steel	160	0,006 x DC	0,005 x DC	0,006 x DC	0,005 x DC	0,004 x DC
	High-Alloyed Steel	150	0,005 x DC	0,004 x DC	0,005 x DC	0,004 x DC	0,004 x DC
M	Stainless Steel (Ferritic / Martensitic)	120	0,005 x DC	0,004 x DC	0,005 x DC	0,004 x DC	0,004 x DC
	Stainless Steel (Austenitic)	120	0,004 x DC	0,003 x DC	0,004 x DC	0,003 x DC	0,003 x DC
	Stainless Steel (Austenitic/Ferritic/Duplex)	110	0,003 x DC	0,003 x DC	0,003 x DC	0,003 x DC	0,002 x DC
K	Malleable Cast Iron	220	0,007 x DC	0,006 x DC	0,007 x DC	0,006 x DC	0,005 x DC
	Grey Cast Iron	210	0,007 x DC	0,006 x DC	0,007 x DC	0,006 x DC	0,005 x DC
	Nodular Cast Iron	190	0,006 x DC	0,005 x DC	0,006 x DC	0,005 x DC	0,005 x DC
S	Heat Resistant Super Alloys	60	0,003 x DC	0,003 x DC	0,003 x DC	0,003 x DC	0,002 x DC

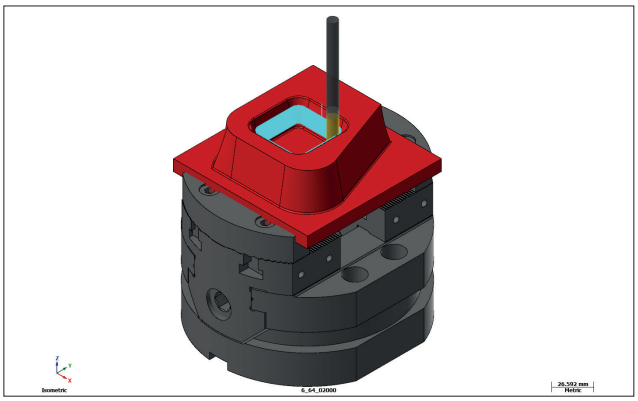
TEST REPORT Relatório de Teste | Informe de Prueba

Ø12 RAD-INTEG | HXC30GL 4 120 14 18RM045
Ø16 RAD-INTEG | HXT30GL 4 160 30 RM080

VS

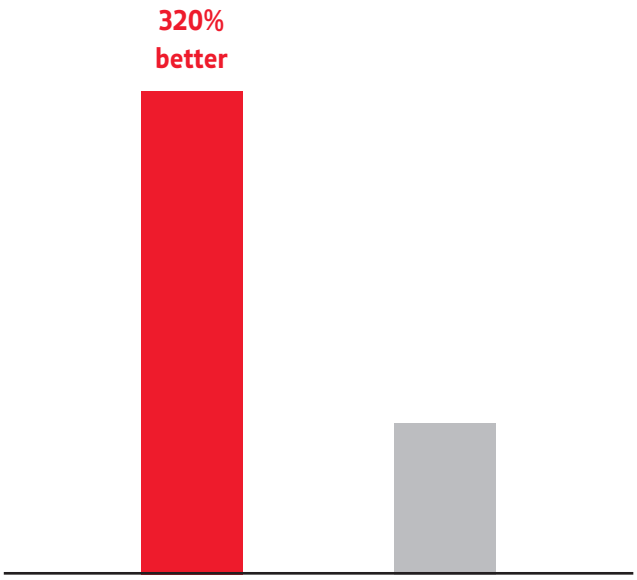
Conventional Ball Endmill Ø12



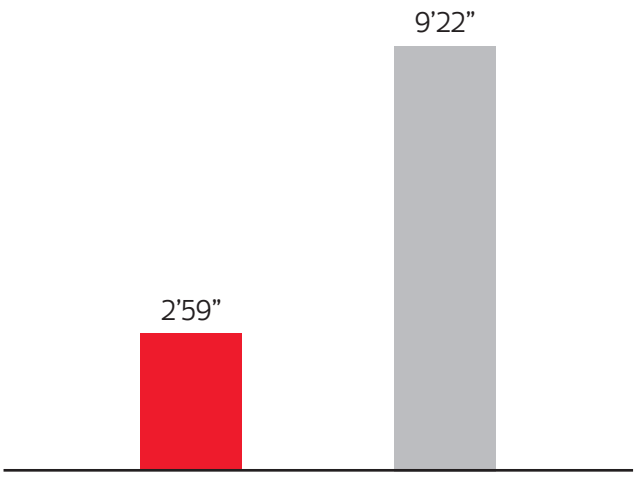


Cutting Speed (V_c)	200 m/min
Feed per tooth (f_z)	0,07 | 0,11 mm/t
Stepover (a_e)	4,0 | 3,0 mm
Feed time (t_f)	2'59"
Expected Roughness (R_a)	1,1 | 3,6 µm

Cutting Speed (V_c)	200 m/min
Feed per tooth (f_z)	0,08 mm/t
Stepover (a_e)	1,2 mm
Feed time (t_f)	9'22"
Expected Roughness (R_a)	7,7 µm



Roughness
R_a (µm)



Feed Time

RAD-INTEG

Conventional Ball Endmill Ø12mm

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Check the QrCode for more information

FYMKT_57_ED01_REV00

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