Radial solution
for radical milling

palbit
TOOLING SOLUTIONS EXPERTS

NEW

RAD-INTEG

Conical & Tangential Endmills

PHP
NEW
GRADE

PHH
NEW
GRADE

PDF

SINCE 1916

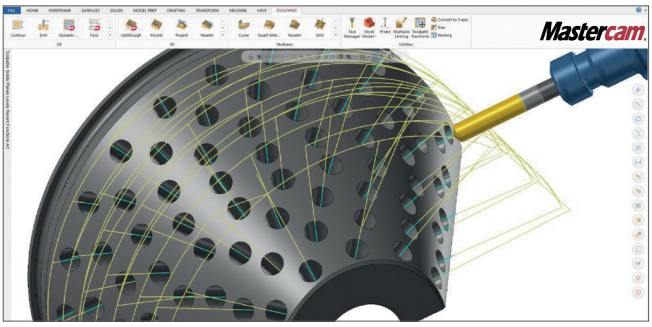
RAD-INTEG Integrated System

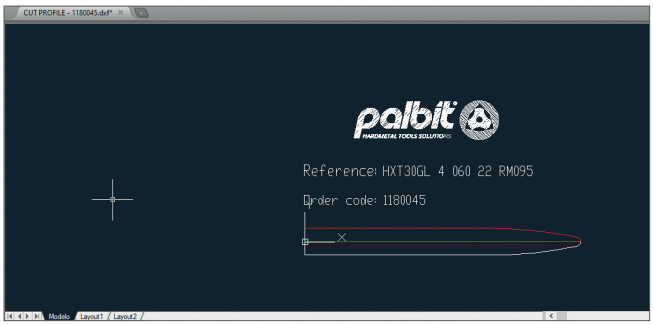
NEW

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.



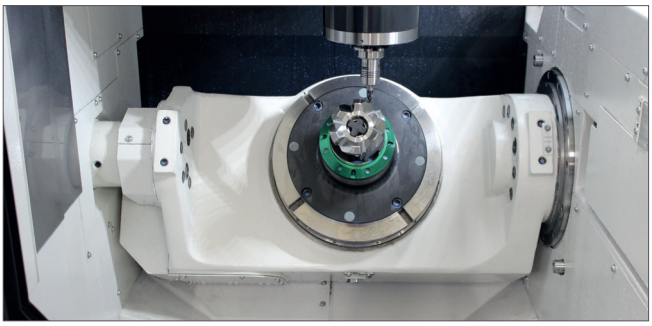


Cut Profile .DXF/.STEP file

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.

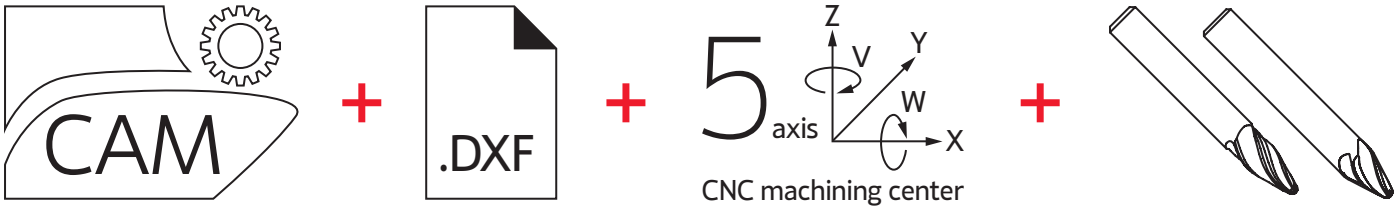


RAD-INTEG

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

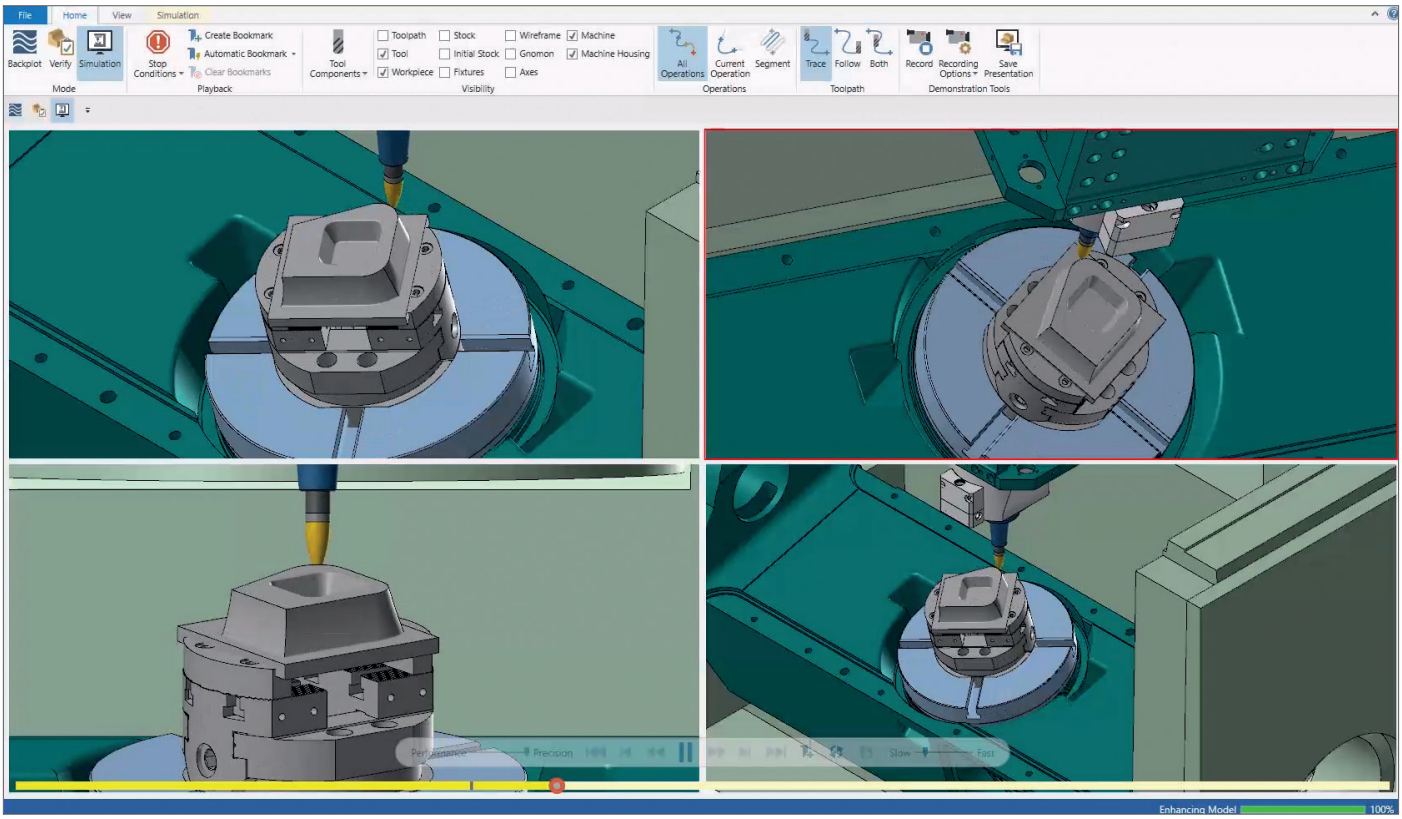
RAD-INTEG Integrated System

NEW



With all these tools combined we can achieve

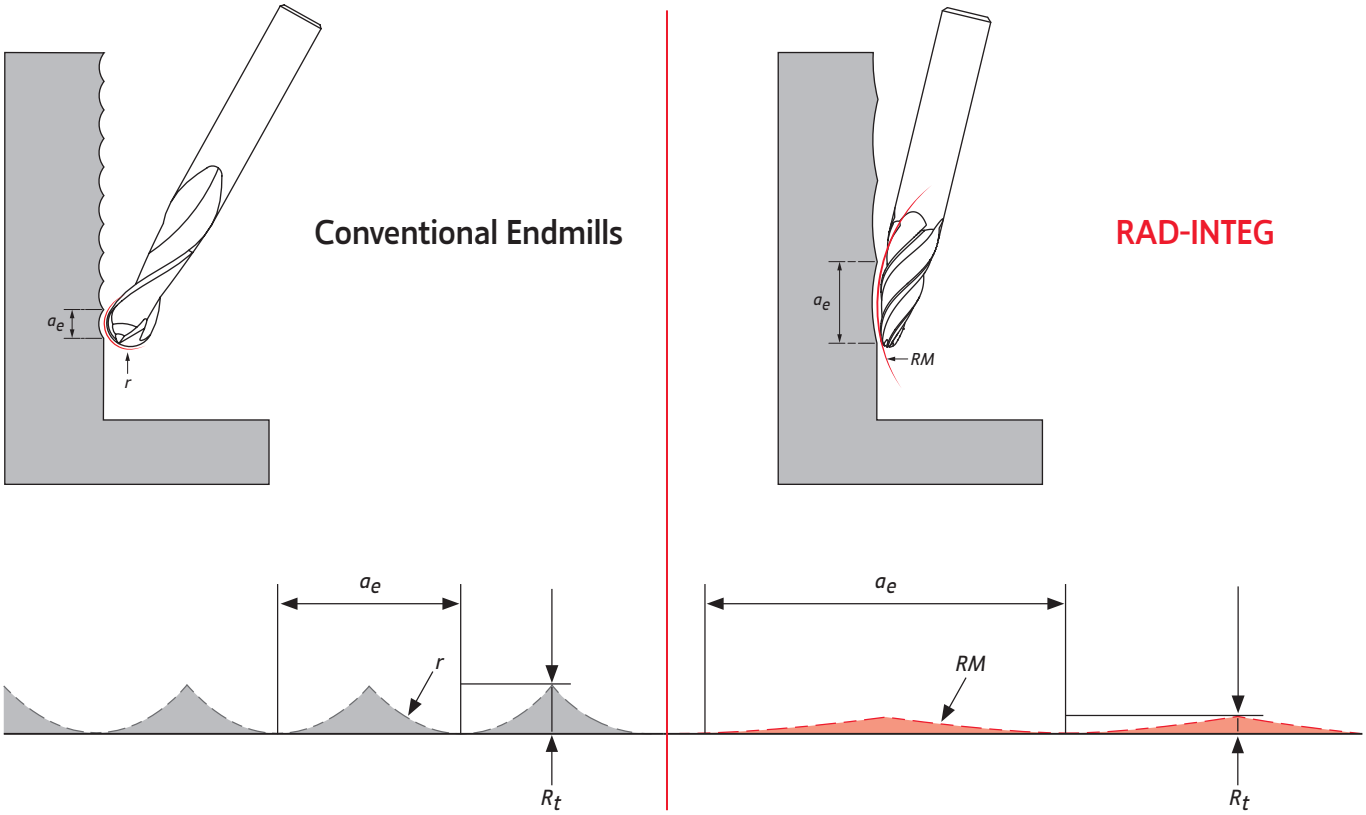
NEW MILLING POSSIBILITIES AND BOOSTED PRODUCTIVITY



RAD-INTEG Specifications

NEW

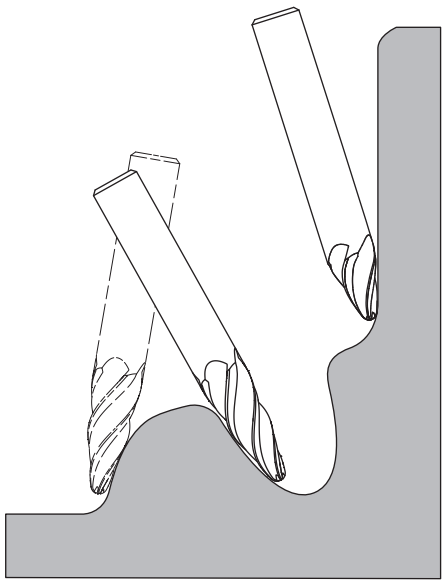
RAD-INTEG is a radial solution for radical milling. With its unique shape it opens a whole new range of machining possibilities. Its curved form allows an exceptional finishing even with higher stepover.



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.



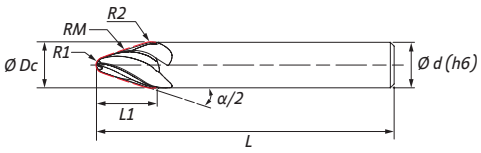
HXC30GL - CONICAL

PHP NEW GRADE

PHH NEW GRADE

P M K S

Long 4 30°



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

(1) Geometry code	Reference Referência Referencia		(2) Grade code P PVD T1 PHP920	P PVD Y3 PHH920	K PVD T1 PHP920	S PVD Y3 PHH920	Dimensions | Dimensões | Dimensiones (mm) ØDc	Ød (h6)	L	L1	α/2	RM	R1	R2
1180046	HXC30GL 4 080 10 18RM030	4	◉	◉	◉	◉	8	8	75	10	18	300	1	1
1180047	HXC30GL 4 120 14 18RM045	4	◉	◉	◉	◉	12	12	83	14	18	450	2	2
1180048	HXC30GL 4 160 18 18RM120	4	◉	◉	◉	◉	16	16	95	18	18	1200	3	3
1180049	HXC30GL 4 160 12 28RM080	4	◉	◉	◉	◉	16	16	95	12	28	800	3	3
1180050	HXC30GL 4 160 16 18RM120	4	◉	◉	◉	◉	16	16	110	16	18	1200	4	4
1180051	HXC30GL 4 160 11 28RM080	4	◉	◉	◉	◉	16	16	110	11	28	800	4	4

◉ First choice | Primeira opção | 1ª opción ◉ Stock item | Produto de stock | Itens de stock ○ Available under request | Disponível sobre consulta Disponible bajo consulta

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

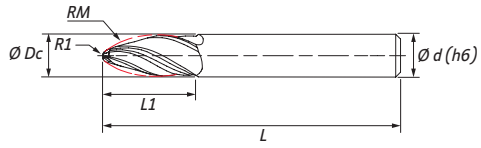
HXT30GL - TANGENTIAL

PHP NEW GRADE

PHH NEW GRADE

P M K S

Long 4 30°



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

(1) Geometry code	Reference Referência Referencia		(2) Grade code P PVD T1 PHP920	P PVD Y3 PHH920	K PVD T1 PHP920	S PVD Y3 PHH920	Dimensions | Dimensões | Dimensiones (mm) ØDc	Ød (h6)	L	L1	RM	R1
1180045	HXT30GL 3 060 22 RM095	4	◉	◉	◉	◉	6	6	63	22	95	1
1180037	HXT30GL 4 080 24 RM095	4	◉	◉	◉	◉	8	8	70	24	95	1
1180038	HXT30GL 4 100 28 RM085	4	◉	◉	◉	◉	10	10	72	28	85	2
1180039	HXT30GL 4 120 28 RM090	4	◉	◉	◉	◉	12	12	83	28	90	2
1180691	HXT30GL 4 160 30 RM080	4	◉	◉	◉	◉	16	16	110	30	80	3

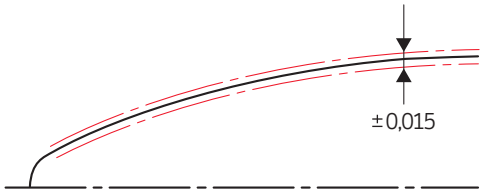
◉ First choice | Primeira opção | 1ª opción ◉ Stock item | Produto de stock | Itens de stock ○ Available under request | Disponível sobre consulta Disponible bajo consulta

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

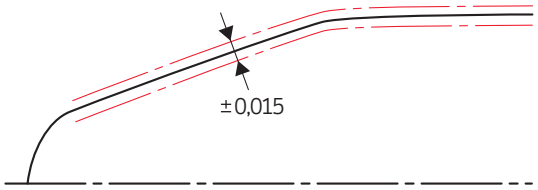
RAD-INTEG = Conical and Tangential Segment Endmills

NEW

CUTTING SEGMENT TOLERANCES | Tolerâncias do Segmento de Corte | Tolerancias de corte de segmento



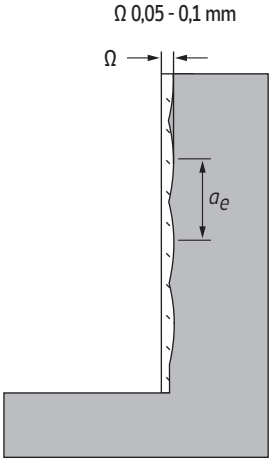
HXT30GL - Tangential Endmill



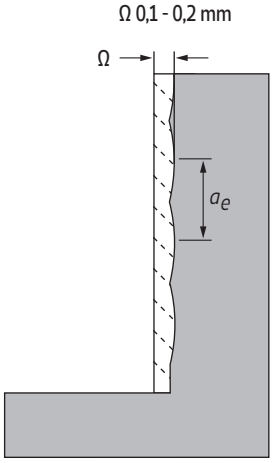
HXC30GL - Conical Endmill

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

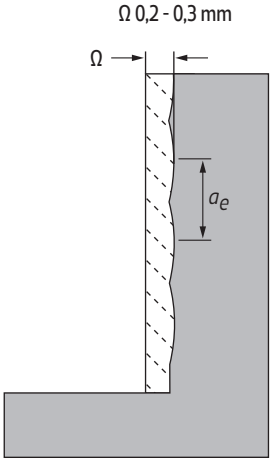
Ω - Allowance
a_e - Stepover



Fine Finishing



Finishing



Semi-Finishing

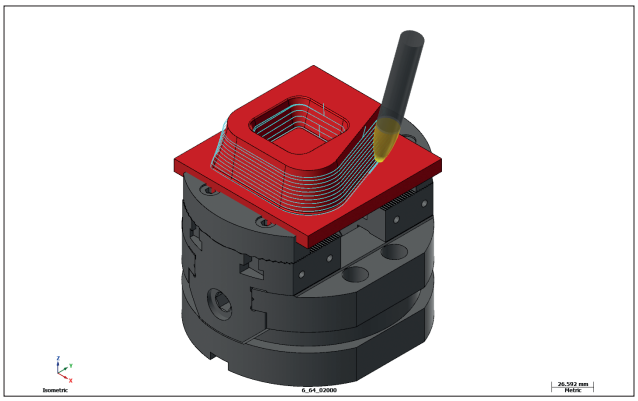
ISO	Workpiece Material	Vc (m/min)		fz (mm/t)				
				HXC30GL - Conical		HXT30GL - Tangential		
		min	max	Ω 0,05 - 0,1 mm	Ω 0,1 - 0,2 mm	Ω 0,05 - 0,1 mm	Ω 0,1 - 0,2 mm	Ω 0,2 - 0,3 mm
P	Non-alloy Steel < 600 N/mm²	120	320	0,006xDc	0,004xDc	0,007xDc	0,007xDc	0,006xDc
	Non-alloy Steel < 800 N/mm²	120	300	0,006xDc	0,004xDc	0,007xDc	0,006xDc	0,005xDc
	Alloy Steel 800 N/mm² - 1000 N/mm²	110	250	0,005xDc	0,003xDc	0,006xDc	0,005xDc	0,004xDc
	Alloy Steel 1000 N/mm² - 1400 N/mm²	110	200	0,004xDc	0,003xDc	0,005xDc	0,004xDc	0,003xDc
	Alloy Steel 1400 N/mm² - 1600 N/mm²	100	180	0,004xDc	0,003xDc	0,005xDc	0,004xDc	0,003xDc
M	Ferretic/Martensetic Stainless Steel - Soft	90	170	0,004xDc	0,003xDc	0,005xDc	0,004xDc	0,003xDc
	Ferretic/Martensetic Stainless Steel - Hard	90	160	0,003xDc	0,002xDc	0,004xDc	0,003xDc	0,002xDc
K	Cast Iron - Soft	120	350	0,007xDc	0,005xDc	0,008xDc	0,007xDc	0,006xDc
	Cast Iron - Hard	110	280	0,003xDc	0,002xDc	0,004xDc	0,003xDc	0,002xDc
S	Heat resistent super alloys	30	100	0,003xDc	0,002xDc	0,004xDc	0,003xDc	0,002xDc

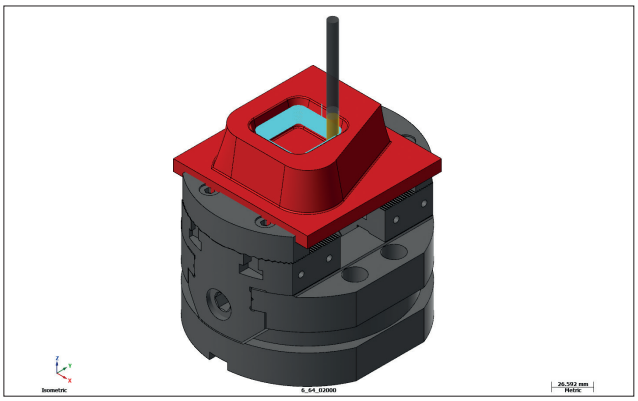
TEST REPORT | Relatório de teste | Informe de prueba

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

VS

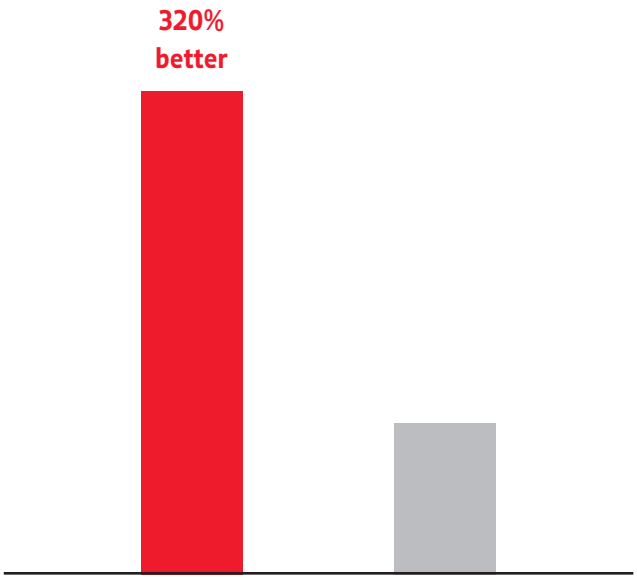
Conventional Ball Endmill Ø12



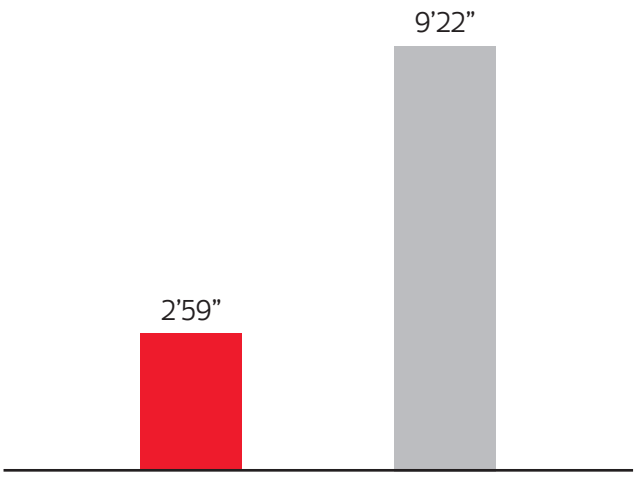


Cutting Speed (V_c)	200 m/min
Feed per tooth (f_z)	0,07 | 0,11 mm/t
Stepover (a_e)	4,0 | 3,0 mm
Feed time (t_f)	2'59"
Expected Roughness (R_a)	1,1 | 3,6 µm

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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Conical & Tangential Endmills

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