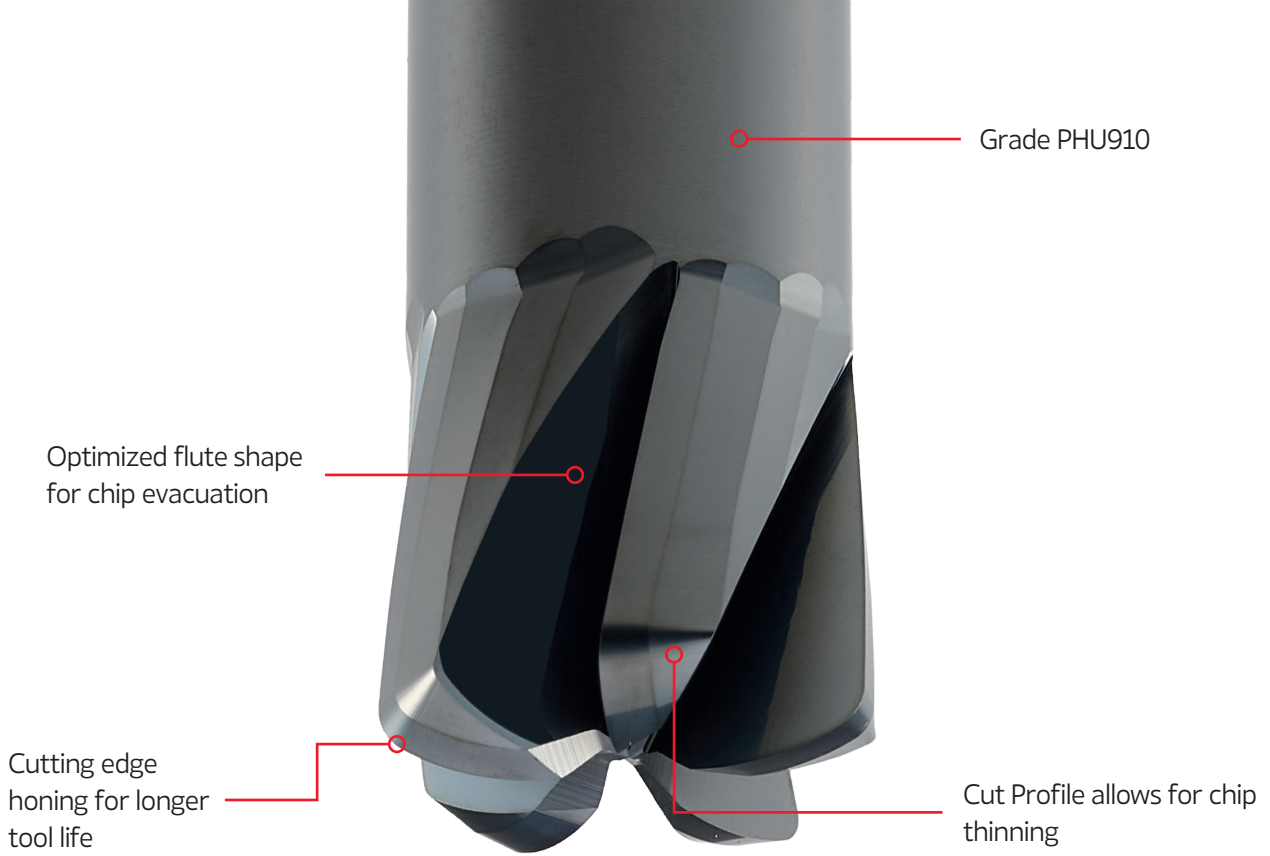


HIFEED INTEG

Better productivity and longer tool life
with our new line of high feed
solid carbide endmills!

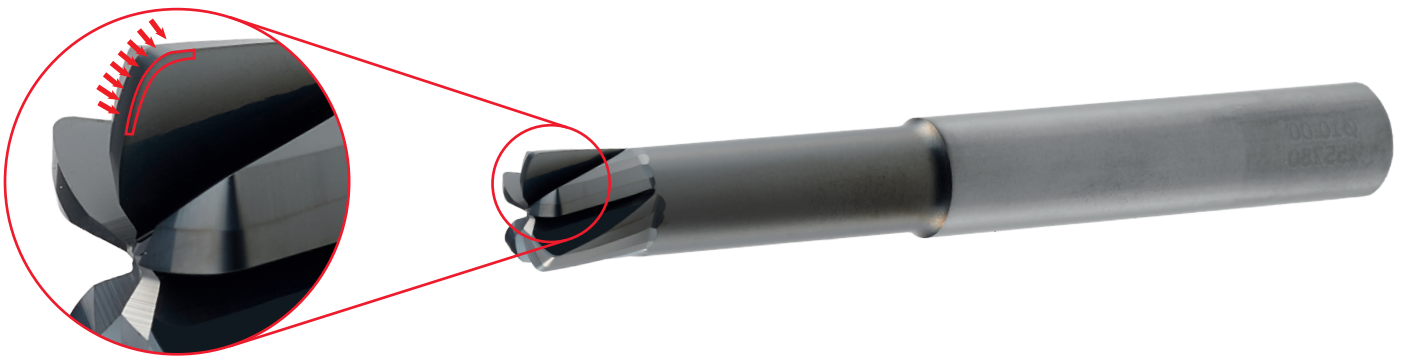




Achieve better productivity and longer tool life with our new line of high feed solid carbide endmills!

This innovative curved profile of the cutting edge along with low lead angle allow to:

- Cause a chip thinning effect and thus to achieve aggressive feed rates.
- Reduce the axial loads on the endmill and consequently tool deflection and vibration, leading to more stability.



These combined improvements allow to achieve tool life up to **30% higher** when compared to typical solid carbide endmills when processing hardened materials.

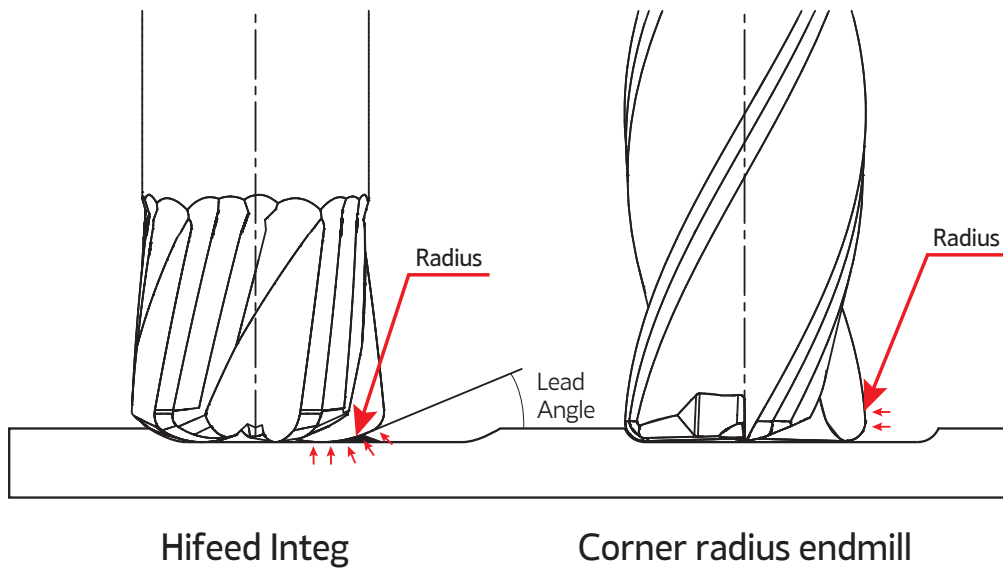
High feed endmills are the first choice for:

1. High material removal rate
2. Machining in unstable conditions
3. Versatility to machine deep or shallow parts
4. Plunge milling machine methods

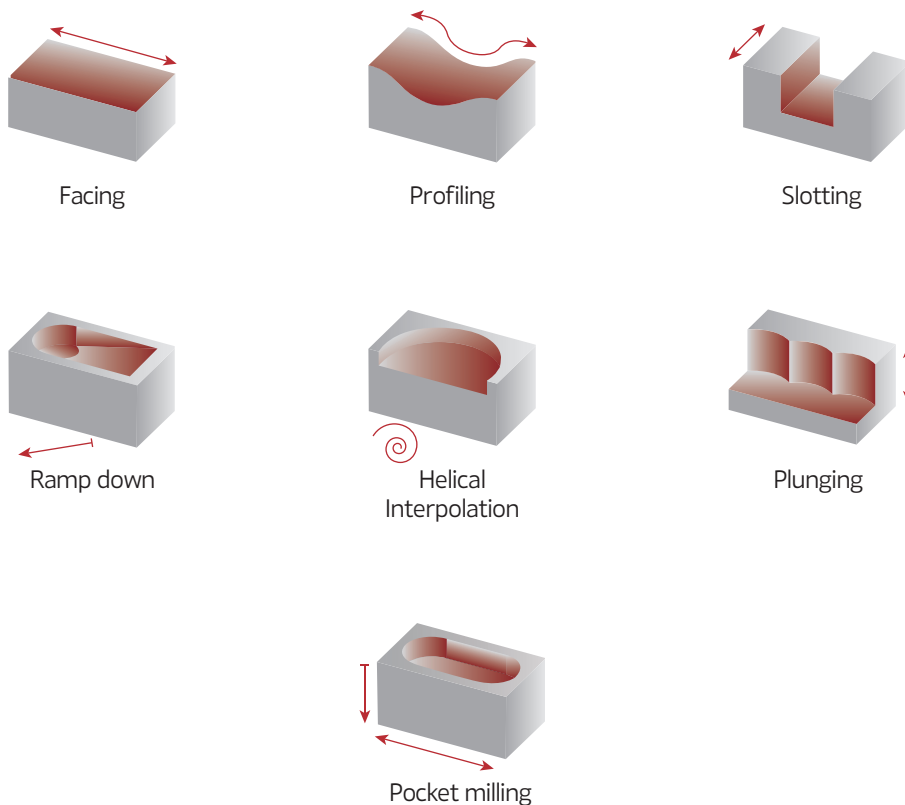
HIFEED-INTEG = High Feed endmills

HXR30HFGS Special radius roughing endmill

Thanks to the small lead angle and large part radius of the high feed endmill it is possible to minimise tool deflection, once the cutting force is transferred axially against the spindle, minimising radial forces. Benefiting the machining of thin walls or contouring deep pockets.



OPERATIONS

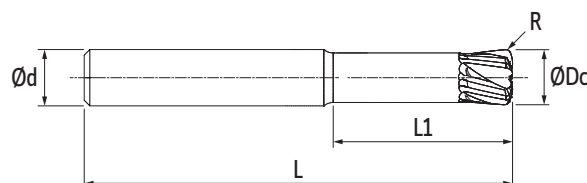


HXR30HFGS Special radius roughing endmill

P M K S H



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



(1) Geometry code	(2) Grade code		2A PHU910	Dimensions Dimensões Dimensiones (mm)						
	Reference Referência Referencia			ØDc	Ød (h6)	ap _{max}	R	R2*	L1	L
1181449	HXR30HFGS 4 030 002 XR020	4		3	6	0,20	0,20	0,40	9	63
1181450	HXR30HFGS 4 040 003 XR030	4		4	6	0,30	0,30	0,50	12	63
1181451	HXR30HFGS 4 050 003 XR040	4		5	6	0,30	0,40	0,60	15	63
1181452	HXR30HFGS 4 060 004 XR050	4		6	6	0,40	0,50	0,80	24	63
1181453	HXR30HFGS 5 080 004 XR060	5		8	8	0,40	0,60	0,90	32	75
1181430	HXR30HFGS 5 100 005 XR080	5		10	10	0,50	0,80	1,20	32	75
1181454	HXR30HFGS 5 120 005 XR100	5		12	12	0,50	1,00	1,40	36	83

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

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

* Programming radius.

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

ISO	Workpiece Material	f _z (mm/t)			v _c (m/min)			Plunging	
		a _e = 25%	a _e = 50%	a _e = 100%	a _e = 25%	a _e = 50%	a _e = 100%	f _z (mm/t)	v _c (m/min)
P	Unalloyed Steel	0,044 x ØDc	0,038 x ØDc	0,023 x ØDc	300	280	270	0,004 x ØDc	160
	Low-Alloyed Steel	0,044 x ØDc	0,038 x ØDc	0,023 x ØDc	280	250	230	0,004 x ØDc	140
	High-Alloyed Steel	0,040 x ØDc	0,036 x ØDc	0,020 x ØDc	200	180	150	0,004 x ØDc	120
M	Stainless Steel (Ferritic / Martensitic)	0,035 x ØDc	0,035 x ØDc	0,018 x ØDc	180	160	150	0,003 x ØDc	110
	Stainless Steel (Austenitic)	0,035 x ØDc	0,033 x ØDc	0,018 x ØDc	120	110	100	0,003 x ØDc	100
	Stainless Steel (Austenitic/Ferritic/Duplex)	0,033 x ØDc	0,031 x ØDc	0,018 x ØDc	80	70	60	0,003 x ØDc	60
K	Malleable Cast Iron	0,034 x ØDc	0,032 x ØDc	0,021 x ØDc	170	150	130	0,003 x ØDc	110
	Grey Cast Iron	0,035 x ØDc	0,035 x ØDc	0,021 x ØDc	220	200	180	0,003 x ØDc	120
	Nodular Cast Iron	0,034 x ØDc	0,032 x ØDc	0,021 x ØDc	160	140	120	0,003 x ØDc	110
S	Heat Resistant Super Alloys	0,022 x ØDc	0,017 x ØDc	0,014 x ØDc	40	35	30	0,002 x ØDc	30
H	Hardened Steels	0,026 x ØDc	0,021 x ØDc	0,014 x ØDc	90	85	70	0,002 x ØDc	70

Note: Plunge Depth = 2 x ØDc

A_e Stepover = 0,2 x ØDc

TEST REPORT

Operation: Helical Interpolation | Slotting | Pocket Milling

Material: 1.2738 | 34-36 HRC

Tool: HXR30HFGS 5 080 004 XR060

Diameter: Ø8 mm

Grade: PHU910

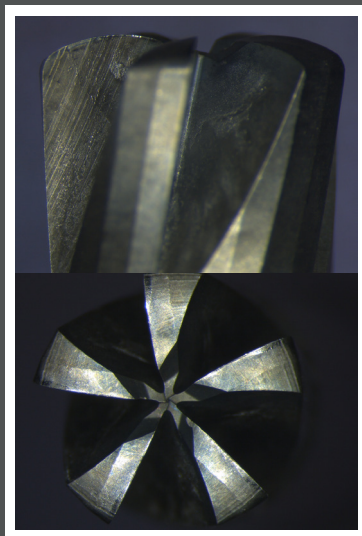


+15%
Metal Removal
Rate

Workpiece Material: Mould Steel

Operations	Helical Interpolation	Slotting	Pocket Milling
Cutting speed: v_c	150 m/min	130 m/min	150 m/min
Feed per tooth: f_z	0,3 mm/t	0,3 mm/t	0,3 mm/t
Depth of cut: a_p	0,3 mm	0,3 mm	0,3 mm
Width of Cut : a_e	-	100%	60%
Coolant	Air	Air	Air

Operations were performed with a single HIFEED endmill and compared with a competitor's endmill of the same diameter and under the same cutting conditions. The HXR endmill has 5 flutes while the competitor's endmill has 4.



HXR endmill wear after 35min of helical interpolation and slotting + 70min of interrupted cutting in pocket milling

7,9

HIFEED INTEG

6,9

COMPETITOR

Metal Removal Rate (cm³/min)
Helical Interpolation + Slotting

The competitor's endmill broke during slotting after 39 minutes of machining

HIFEED=INTEG

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