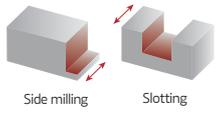


STEEL-INTEG

Steel Specialized Endmills



STEEL-INTEG

PHP
NEW
GRADE



SINCE 1916

HC35ML Corner chamfer steel specialized endmills



Short



Variable Pitch
4



Variable Helix
35°/38°



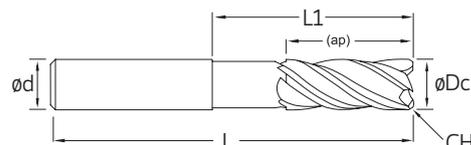
Reduced
Neck Ø



45°
Corner chamfer



< 48 HRC



⁽¹⁾ Order code		⁽²⁾ Grade code		T1	Dimensions Dimensões Dimensiones (mm)					
HA (Cylindrical)	HB (Weldon)	Reference Referência Referencia		PHP920	ØDc	Ød (h6)	ap _{max}	CH	L1	L
1180480	-	HF35ML 4 010 03	4	○	1	6	2,5	-	5	57
1180482	1180483	HC35ML 4 020 05	4	⊗	2	6	5	0,07 x 45°	10	57
1180466	1180467	HC35ML 4 030 08	4	⊗	3	6	8	0,15 x 45°	15	57
1180137	1180468	HC35ML 4 040 11	4	⊗	4	6	11	0,15 x 45°	17	57
1180469	1180521	HC35ML 4 050 13	4	⊗	5	6	13	0,15 x 45°	19	57
1180138	1180470	HC35ML 4 060 13	4	⊗	6	6	13	0,15 x 45°	21	57
1180052	1180471	HC35ML 4 080 19	4	⊗	8	8	19	0,15 x 45°	27	63
1180053	1180472	HC35ML 4 100 22	4	⊗	10	10	22	0,20 x 45°	32	72
1180139	1180473	HC35ML 4 120 26	4	⊗	12	12	26	0,20 x 45°	38	83
1180474	1180475	HC35ML 4 140 26	4	⊗	14	14	26	0,25 x 45°	38	83
1180153	1180476	HC35ML 4 160 32	4	⊗	16	16	32	0,35 x 45°	44	92
1180477	1180478	HC35ML 4 180 32	4	⊗	18	18	32	0,45 x 45°	44	92
1180140	1180479	HC35ML 4 200 38	4	⊗	20	20	38	0,60 x 45°	54	104

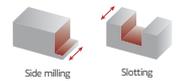
⊗ Stock item | Produto de stock | Itens de stock

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

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

Note: For HB (Weldon) endmills, the reference ends with "-W"

Example: "HC35ML 4 030 08-W"



HR35GL Corner radius steel specialized endmills



(1) Geometry code	(2) Grade code Reference Referência Referencia		T1 PHP920	Dimensions Dimensões Dimensiones (mm)				
				ØDc	Ød (h6)	ap _{max}	R	L
1180042	HR35GL 4 120 26 R100	4		12	12	26	1	81
1180043	HR35GL 4 120 26 R200	4		12	12	26	2	81
1180044	HR35GL 4 120 26 R300	4		12	12	26	3	81
1180187	HR35GL 4 160 24 R100	4		16	16	24	1	100
1180188	HR35GL 4 160 24 R200	4		16	16	24	2	100
1180189	HR35GL 4 200 40 R100	4		20	20	40	1	100
1180190	HR35GL 4 200 40 R200	4		20	20	40	2	100

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

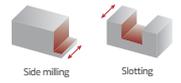
Endmill order code = (1) Geometry Code + (2) Grade Code

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

ISO	Material	fz (mm/t)			Vc (m/min)		
		a _e = 25%	a _e = 50%	a _e = 100%	a _e = 25%	a _e = 50%	a _e = 100%
P	Unalloyed Steel	0,008 × ØDc	0,005 × ØDc	0,004 × ØDc	190	180	150
	Low-Alloyed Steel	0,007 × ØDc	0,004 × ØDc	0,003 × ØDc	180	160	130
	High-Alloyed Steel	0,006 × ØDc	0,004 × ØDc	0,003 × ØDc	160	150	120
K	Malleable Cast Iron	0,008 × ØDc	0,005 × ØDc	0,004 × ØDc	230	210	180
	Grey Cast Iron	0,008 × ØDc	0,005 × ØDc	0,004 × ØDc	230	210	170
	Nodular Cast Iron	0,008 × ØDc	0,004 × ØDc	0,004 × ØDc	210	190	160

Note¹: Recommended feed values for maximum ap. For reduced ap, consider increasing Fz up to 25%.

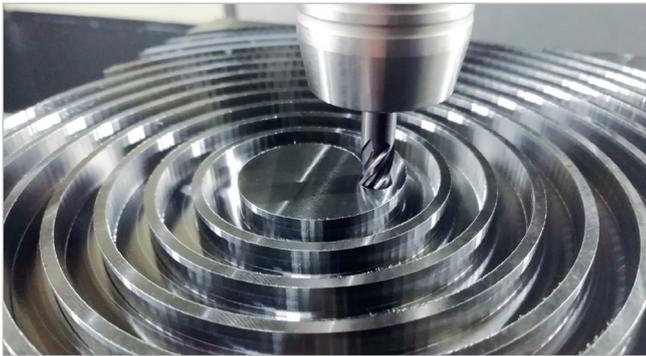
Note²: Cutting speeds selected for an economic use of the tool, for higher productivity consider increasing up to 70%.



TEST REPORT | Relatório de teste | Informes de prueba

Tool: HC35ML 4 060 13

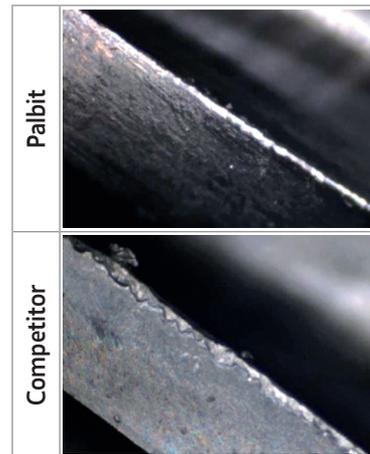
Grade: PHP920



Workpiece Material: Steel 1.2738 (38 HRC)

Cutting speed: V_c	140 m/min
Feed per tooth: f_z	0,03 mm/t
Depth of cut: a_p	6,0 mm
Stepover : a_e	100%
Operation	Spiral Slotting
Coolant	Emulsion

Endmill after 15 mins



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