

NEW

Helical interpolation (XYZ / XCZ) - 3.5 x d / 5 x d

v_c [m/min]
 f_z [mm]
 p [mm]

RECOMMENDATION FOR USE
● Excellent | ● Good | ○ Acceptable | ☒ Not recommended

P	N	S ₃
M	S ₁	H ₁
K	S ₂	H ₂

MILLING WITH EXTERNAL COOLING | CUTTING DATA OVERVIEW



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	p (pitch)		T4 Ød1 0.20 mm		T5 Ød1 0.25 mm		T6 - T7 Ød1 0.30 mm		T8 - T10 Ød1 0.40 mm		T10 - T15 Ød1 0.50 mm		T20 Ød1 0.60 mm		T25 Ød1 0.80 mm		T30 Ød1 1.00 mm	
					3.5 x d1	5 x d1	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z
S ₂	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	0.2 - 0.8 x d1	0.1 - 0.4 x d1																
		9.9367	TiAl6Nb7	ASTM F1295																		

Note: In case of p = 0.8 x d1 decrease the feed f_z by 30% to increase tool life and profile precision.

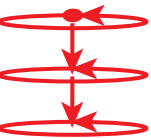
Side milling - 3.5 x d / 5 x d

v_c [m/min]
 f_z [mm]

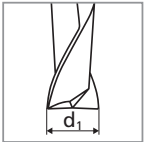
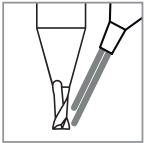
a_p [mm]
 a_e [mm]

07

MILLING WITH EXTERNAL COOLING | CUTTING DATA OVERVIEW



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	$a_{p, max}$	a_e	T4 Ød1 0.20 mm		T5 Ød1 0.25 mm		T6 - T7 Ød1 0.30 mm		T8 - T10 Ød1 0.40 mm		T10 - T15 Ød1 0.50 mm		T20 Ød1 0.60 mm		T25 Ød1 0.80 mm		T30 Ød1 1.00 mm	
							v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z	v_c	f_z
M	Stainless steel austenitic	1.4435	X2CrNiMo 18-14-3	AISI 316L	0.5 x d1	0.1 x d1																
		1.4441	X2CrNiMo 18-15-3	AISI 316LM																		
S ₂	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	0.5 x d1	variable																
		9.9367	TiAl6Nb7	ASTM F1295																		



General advise: Cutting conditions have been tested and approved with n = 30'000 - 40'000 rpm, different cutting speeds may affect tool life.