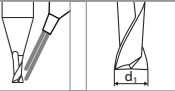



# Helical interpolation (XYZ / XCZ) - 3.5 x d / 5 x d

$v_c$  [SFM] | [m/min]  
 $f_z$  [IPT] | [mm]  
 $p$  [inch] | [mm]

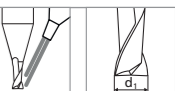


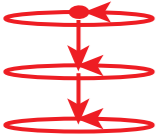
Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	p (pitch)		T4 Ød1		T5 Ød1		T6 - T7 Ød1		T8 - T10 Ød1		T10 - T15 Ød1		T20 Ød1		T25 Ød1		T30 Ød1	
					3.5 x d1	5 x d1	.0079"   0.20mm		.0098"   0.25mm		.0118"   0.30mm		.0157"   0.40mm		.0197"   0.50mm		.0236"   0.60mm		.0315"   0.80mm		.0394"   1.00mm	
					$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$
	M Stainless steel austenitic	1.4435	X2CrNiMo 18-14-3	AISI 316L	0.2 - 0.8 x d1	0.1 - 0.4 x d1	66 - 131	.00004	82 - 164	.00004	98 - 197	.00004	131 - 246	.00006	164 - 295	.00008	197 - 328	.00010	230 - 427	.00012	263 - 459	.00016
		1.4441	X2CrNiMo 18-15-3	AISI 316LM			20 - 40	0.0010	25 - 50	0.0010	30 - 60	0.0010	40 - 75	0.0015	50 - 90	0.0020	60 - 100	0.0025	70 - 130	0.0030	80 - 140	0.0040
	S <sub>2</sub> Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	0.2 - 0.8 x d1	0.1 - 0.4 x d1	66 - 131	.00004	82 - 164	.00004	98 - 197	.00004	131 - 246	.00006	164 - 295	.00008	197 - 328	.00010	230 - 427	.00012	263 - 459	.00016
		9.9367	TiAl6Nb7	ASTM F1295			20 - 40	0.0010	25 - 50	0.0010	30 - 60	0.0010	40 - 75	0.0015	50 - 90	0.0020	60 - 100	0.0025	70 - 130	0.0030	80 - 140	0.0040
	S <sub>3</sub> CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	0.2 - 0.8 x d1	0.1 - 0.4 x d1	66 - 131	.00003	82 - 164	.00003	98 - 197	.00003	131 - 246	.00005	164 - 295	.00006	197 - 328	.00008	230 - 427	.00010	263 - 459	.00012
			CrCoMo28	ASTM F1537			20 - 40	0.0008	25 - 50	0.0008	30 - 60	0.0008	40 - 75	0.0012	50 - 90	0.0015	60 - 100	0.0020	70 - 130	0.0025	80 - 140	0.0030

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

# Side milling - 3.5 x d / 5 x d

$v_c$  [SFM] | [m/min]  
 $f_z$  [IPT] | [mm]  
 $a_p$  [inch] | [mm]  
 $a_e$  [inch] | [mm]



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	$a_{p,max}$	$a_e$	T4 Ød1		T5 Ød1		T6 - T7 Ød1		T8 - T10 Ød1		T10 - T15 Ød1		T20 Ød1		T25 Ød1		T30 Ød1			
							3.5 x d1	5 x d1	.0079"   0.20mm		.0098"   0.25mm		.0118"   0.30mm		.0157"   0.40mm		.0197"   0.50mm		.0236"   0.60mm		.0315"   0.80mm		.0394"   1.00mm	
							$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$	$v_c$	$f_z$
	M Stainless steel austenitic	1.4435	X2CrNiMo 18-14-3	AISI 316L	0.5 x d1	0.1 x d1	66 - 131	.00006	82 - 164	.00010	98 - 197	.00012	131 - 246	.00018	164 - 295	.00024	197 - 328	.00026	230 - 427	.00032	263 - 459	.00039		
		1.4441	X2CrNiMo 18-15-3	AISI 316LM			20 - 40	0.0015	25 - 50	0.0025	30 - 60	0.0030	40 - 75	0.0045	50 - 90	0.0060	60 - 100	0.0065	70 - 130	0.0080	80 - 140	0.0100		
	S <sub>2</sub> Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	0.5 x d1	variable	66 - 131	.00006	82 - 164	.00010	98 - 197	.00012	131 - 246	.00018	164 - 295	.00024	197 - 328	.00026	230 - 427	.00032	263 - 459	.00039		
		9.9367	TiAl6Nb7	ASTM F1295			20 - 40	0.0015	25 - 50	0.0025	30 - 60	0.0030	40 - 75	0.0045	50 - 90	0.0060	60 - 100	0.0065	70 - 130	0.0080	80 - 140	0.0100		
	S <sub>3</sub> CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	0.5 x d1	0.1 x d1	66 - 131	.00005	82 - 164	.00008	98 - 197	.00010	131 - 246	.00014	164 - 295	.00018	197 - 328	.00020	230 - 427	.00024	263 - 459	.00030		
			CrCoMo28	ASTM F1537			20 - 40	0.0012	25 - 50	0.0020	30 - 60	0.0025	40 - 75	0.0035	50 - 90	0.0045	60 - 100	0.0050	70 - 130	0.0060	80 - 140	0.0075		

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