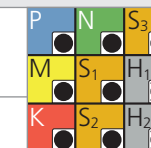


NEW

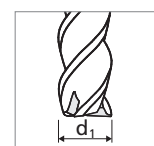
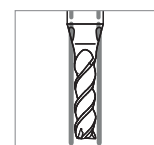
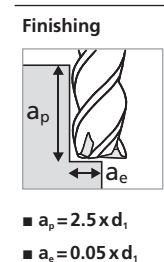
Type A - Side milling - Finishing

V_c [m/min] | [SFM]
 f_z [mm] | [IPT]

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



MILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	1.0 mm .039"		1/16" 1.5 mm .059"		3/32" 2.0 mm .079"		1/8" 3.0 mm .118"		Ød ₁ 5/32" 4.0 mm .157"		3/16" - 7/32" 5.0 mm .197"		1/4" 6.0 mm .236"		8.0 mm .315"				
					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			
P	Unalloyed carbon steel Rm < 800 N/mm ²	1.0301	C10	AISI 1010																			
		1.0401	C15	AISI 1015																			
		1.1191	C45E/CK45	AISI 1045		130	0.008	180	0.012	200	0.017	210	0.023	220	0.025	220	0.028	220	0.033	220	0.042		
		1.0044	S275JR	AISI 1020		425	.00032	591	.00047	656	.00067	688	.00091	772	.00098	772	.00110	772	.00130	772	.00165		
		1.0715	11SMn30	AISI 1215																			
		1.5752	15NiCr13	ASTM 3415 / AISI 3310																			
	Low alloyed steel Rm > 900 N/mm ²	1.7131	16MnCr5	AISI 5115		130	0.007	180	0.011	200	0.016	210	0.022	220	0.024	220	0.026	220	0.029	220	0.038		
		1.3505	100Cr6	AISI 52100		425	.00028	591	.00043	656	.00063	688	.00087	772	.00095	772	.00102	772	.00114	772	.00150		
		1.7225	42CrMo4	AISI 4140																			
		1.2842	90MnCrV8	AISI O2																			
		1.2379	X153CrMoV12	AISI D2																			
		1.2436	X210CrW12	AISI D4/D6		130	0.006	180	0.010	200	0.015	210	0.020	220	0.021	220	0.023	220	0.025	220	0.034		
M	Stainless steel ferritic	1.3343	HS6-5-2C	AISI M2 / UNS T11302	425	.00024	591	.00039	656	.00059	688	.00079	772	.00083	772	.00091	772	.00098	772	.00134			
		1.3355	HS18-0-1	AISI T1 / UNS T12001																			
	Stainless steel martensitic	1.4016	X6Cr17	AISI 430 / UNS S43000	130	0.008	180	0.012	200	0.017	210	0.022	220	0.024	220	0.026	220	0.029	220	0.036			
		1.4105	X6CrMoS17	AISI 430F	425	.00032	591	.00047	656	.00067	688	.00087	772	.00095	772	.00102	772	.00114	772	.00142			
	Stainless steel martensitic - PH	1.4034	X46Cr13	AISI 420C	130	0.008	180	0.011	200	0.016	210	0.022	220	0.023	220	0.025	220	0.028	220	0.037			
		1.4112	X90CrMoV18	AISI 440B	425	.00032	591	.00043	656	.00063	688	.00087	772	.00091	772	.00098	772	.00110	772	.00146			
	Stainless steel austenitic	1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH	130	0.008	180	0.011	200	0.016	210	0.022	220	0.023	220	0.025	220	0.028	220	0.037			
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH	425	.00032	591	.00043	656	.00063	688	.00087	772	.00091	772	.00098	772	.00110	772	.00146			
	Cast iron	1.4301	X5CrNi18-10	AISI 304	130	0.006	180	0.008	200	0.015	210	0.020	220	0.022	220	0.024	220	0.026	220	0.035			
		1.4435	X2CrNiMo18-14-3	AISI 316L	425	.00024	591	.00032	656	.00059	688	.00079	772	.00087	772	.00095	772	.00102	772	.00138			
K	Cast iron	1.4441	X2CrNiMo18-15-3	AISI 316LM																			
		1.4539	X1NiCrMoCu25-20-5	AISI 904L																			
		0.6020	GG20	ASTM 30	110	0.006	130	0.012	150	0.014	160	0.022	170	0.025	170	0.029	170	0.031	200	0.040			
		0.6030	GG30	ASTM 40B	361	.00024	427	.00047	492	.00055	525	.00087	558	.00098	558	.00114	558	.00122	656	.00157			
N	Aluminium alloy wrought	0.7040	GGG40	ASTM 60-40-18																			
		0.7060	GGG60	ASTM 80-60-03																			
	Aluminium alloy cast	2.0040	Cu-OF / CW008A	UNS C10100	130	0.010	180	0.013	200	0.018	210	0.029	220	0.030	220	0.033	220	0.036	270	0.045			
		2.0065	Cu-ETP / CW004A	UNS C11000	425	.00039	591	.00051	656	.00071	688	.00114	772	.00118	772	.00130	772	.00142	886	.00177			
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	130	0.010	180	0.013	200	0.018	210	0.029	220	0.030	220	0.033	220	0.036	270	0.045			
		2.0360	CuZn40 CW509L	UNS C28000	425	.00039	591	.00051	656	.00071	688	.00114	772	.00118	772	.00130	772	.00142	886	.00177			
	Brass, Bronze Rm < 400 N/mm ²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	130	0.010	180	0.013	200	0.018	210	0.029	220	0.030	220	0.033	220	0.036	270	0.045			
		2.1020	CuSn6	UNS C51900	425	.00039	591	.00051	656	.00071	688	.00114	772	.00118	772	.00130	772	.00142	886	.00177			
	Bronze Rm < 600 N/mm ²	2.0966	CuAl10Ni5Fe4	UNS C63000	130	0.009	180	0.013	200	0.018	210	0.029	220	0.030	220	0.033	220	0.036	270	0.045			
		2.0960	CuAl9Mn2	UNS C63200	425	.00035	591	.00051	656	.00071	688	.00114	772	.00118	772	.00130	772	.00142	886	.00177			
	S ₁	Super alloys	2.4856		Inconel 625																		
			2.4668		Inconel 718		110	0.004	120	0.005	130	0.005	130	0.008	140	0.010	140	0.011	150	0.012	160	0.021	
2.4617			NiMo28	Hastelloy B-2	361	.00016	394	.00020	427	.00020	427	.00032	459	.00039	459	.00043	492	.00047	525	.00083			
2.4665			NiCr22Fe18Mo	Hastelloy X																			
S ₂	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	110	0.008	120	0.010	130	0.014	130	0.020	140	0.022	150	0.024	150	0.026	160	0.035			
		3.7065	Gr.4	ASTM B348 / F68	361	.00032	394	.00039	427	.00055	427	.00079	459	.00087	492	.00095	492	.00102	525	.00138			
S ₃	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	110	0.008	120	0.010	130	0.014	130	0.020	140	0.022	150	0.024	150	0.026	160	0.035			
		9.9367	TiAl6Nb7	ASTM F1295	361	.00032	394	.00039	427	.00055	427	.00079	459	.00087	492	.00095	492	.00102	525	.00138			
H ₁	Hardened steel < 55 HRC	2.4964	CoCr20W15Ni	Haynes 25	110	0.004	120	0.005	130	0.005	130	0.008	140	0.010	140	0.011	150	0.012	160	0.021			
		361	.00016	394	.00020	427	.00020	427	.00032	459	.00039	459	.00043	492	.00047	525	.00083						
H ₂	Hardened steel ≥ 55 HRC			ASTM F1537																			
		1.2510	100MnCrMoW4	AISI O1																			
		1.2379	X153CrMoV12	AISI D2																			