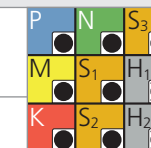


NEW

Type C - Side milling - Semi-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/mm²	1.0301	C10	AISI 1010																	
		1.0401	C15	AISI 1015																	
		1.1191	C45E/CK45	AISI 1045		120	0.017	140	0.026	160	0.038	180	0.048	200	0.050	220	0.052	220	0.056	220	0.068
		1.0044	S275JR	AISI 1020		394	.00067	459	.00079	525	.00150	591	.00146	656	.00197	722	.00205	722	.00169	722	.00268
		1.0715	11SMn30	AISI 1215																	
	Low alloyed steel Rm > 900 N/mm²	1.5752	15NiCr13	ASTM 3415 / AISI 3310																	
		1.7131	16MnCr5	AISI 5115		120	0.016	140	0.025	160	0.036	180	0.044	200	0.048	220	0.050	220	0.054	220	0.066
		1.3505	100Cr6	AISI 52100		394	.00063	459	.00075	525	.00106	591	.00138	656	.00150	722	.00150	722	.00213	722	.00260
		1.7225	42CrMo4	AISI 4140																	
		1.2842	90MnCrV8	AISI O2																	
High alloyed tool steel Rm < 1200 N/mm²	1.2379	X153CrMoV12	AISI D2																		
	1.2436	X210CrW12	AISI D4/D6		120	0.012	140	0.022	160	0.035	180	0.042	200	0.043	220	0.045	220	0.048	220	0.058	
	1.3343	HS6-5-2C	AISI M2 / UNS T11302		394	.00035	459	.00087	525	.00102	591	.00165	656	.00134	722	.00134	722	.00189	722	.00228	
	1.3355	HS18-0-1	AISI T1 / UNS T12001																		
	M	Stainless steel ferritic	1.4016	X6Cr17	AISI 430 / UNS S43000	120	0.018	140	0.026	160	0.038	180	0.046	200	0.048	220	0.050	220	0.055	220	0.062
1.4105			X6CrMoS17	AISI 430F	394	.00055	459	.00079	525	.00150	591	.00138	656	.00150	722	.00150	722	.00161	722	.00244	
1.4034			X46Cr13	AISI 420C	120	0.017	140	0.025	160	0.036	180	0.044	200	0.046	220	0.048	220	0.052	220	0.060	
Stainless steel martensitic		1.4112	X90CrMoV18	AISI 440B	394	.00067	459	.00075	525	.00106	591	.00138	656	.00146	722	.00146	722	.00205	722	.00236	
		1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH	120	0.017	140	0.025	160	0.036	180	0.044	200	0.046	220	0.048	220	0.052	220	0.060	
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH	394	.00067	459	.00075	525	.00106	591	.00138	656	.00146	722	.00146	722	.00205	722	.00236	
Stainless steel austenitic		1.4301	X5CrNi18-10	AISI 304																	
		1.4435	X2CrNiMo18-14-3	AISI 316L	120	0.013	140	0.016	160	0.034	180	0.042	200	0.044	220	0.046	220	0.049	220	0.058	
		1.4441	X2CrNiMo18-15-3	AISI 316LM	394	.00039	459	.00055	525	.00102	591	.00165	656	.00138	722	.00138	722	.00146	722	.00228	
1.4539	X1NiCrMoCu25-20-5	AISI 904L																			
K	Cast iron	0.6020	GG20	ASTM 30																	
		0.6030	GG30	ASTM 40B	100	0.012	120	0.026	140	0.032	160	0.043	180	0.054	200	0.056	200	0.058	200	0.070	
		0.7040	GGG40	ASTM 60-40-18	328	.00035	394	.00079	459	.00095	525	.00134	591	.00213	656	.00165	656	.00173	656	.00276	
		0.7060	GGG60	ASTM 80-60-03																	
N	Aluminium alloy wrought	3.2315	AlMgSi1	ASTM 6351	170	0.020	190	0.029	210	0.040	230	0.060	250	0.062	270	0.064	270	0.068	270	0.084	
		3.4365	AlZnMgCu1.5	ASTM 7075	558	.00059	623	.00114	689	.00122	755	.00181	820	.00244	886	.00252	886	.00268	886	.00331	
	Aluminium alloy cast	3.2163	GD-ALSi9Cu3	ASTM A380	170	0.020	190	0.029	210	0.040	230	0.060	250	0.062	270	0.064	270	0.068	270	0.084	
		3.2381	GD-ALSi10Mg	UNS A03590	558	.00059	623	.00114	689	.00122	755	.00181	820	.00244	886	.00252	886	.00268	886	.00331	
	Copper	2.0040	Cu-OF / CW008A	UNS C10100	170	0.022	190	0.029	210	0.040	230	0.060	250	0.062	270	0.064	270	0.068	270	0.084	
		2.0065	Cu-ETP / CW004A	UNS C11000	558	.00087	623	.00114	689	.00122	755	.00181	820	.00244	886	.00252	886	.00268	886	.00331	
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	170	0.022	190	0.029	210	0.040	230	0.060	250	0.062	270	0.064	270	0.068	270	0.084	
		2.0360	CuZn40 CW509L	UNS C28000	558	.00087	623	.00114	689	.00122	755	.00181	820	.00244	886	.00252	886	.00268	886	.00331	
	Brass, Bronze Rm < 400 N/mm²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	170	0.022	190	0.029	210	0.040	230	0.060	250	0.062	270	0.064	270	0.068	270	0.084	
		2.1020	CuSn6	UNS C51900	558	.00087	623	.00114	689	.00122	755	.00181	820	.00244	886	.00252	886	.00268	886	.00331	
Bronze Rm < 600 N/mm²	2.0966	CuAl10Ni5Fe4	UNS C63000	170	0.020	190	0.029	210	0.040	230	0.060	250	0.062	270	0.064	270	0.068	270	0.084		
	2.0960	CuAl9Mn2	UNS C63200	558	.00059	623	.00114	689	.00122	755	.00181	820	.00244	886	.00252	886	.00268	886	.00331		
S ₁	Super alloys	2.4856		Inconel 625																	
		2.4668		Inconel 718	100	0.008	100	0.010	120	0.012	120	0.016	140	0.018	160	0.020	160	0.022	160	0.024	
		2.4617	NiMo28	Hastelloy B-2	328	.00032	328	.00032	394	.00035	394	.00063	459	.00071	525	.00079	525	.00087	525	.00094	
		2.4665	NiCr22Fe18Mo	Hastelloy X																	
S ₂	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	100	0.018	100	0.022	120	0.032	120	0.042	140	0.044	160	0.046	160	0.048	160	0.054	
		3.7065	Gr.4	ASTM B348 / F68	328	.00071	328	.00087	394	.00095	394	.00165	459	.00138	525	.00138	525	.00146	525	.00213	
S ₃	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	100	0.018	100	0.022	120	0.032	120	0.042	140	0.044	160	0.046	160	0.048	160	0.054	
		9.9367	TiAl6Nb7	ASTM F1295	328	.00071	328	.00087	394	.00095	394	.00165	459	.00138	525	.00138	525	.00146	525	.00213	
H ₁ H ₂	Hardened steel ≥ 55 HRC	2.4964	CoCr20W15Ni	Haynes 25	100	0.008	100	0.010	120	0.012	120	0.016	140	0.018	160	0.020	160	0.022	160	0.024	
			CrCoMo28	ASTM F1537	328	.00032	328	.00032	394	.00035	394	.00063	459	.00071	525	.00079	525	.00087	525	.00094	