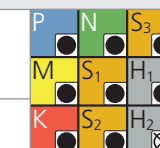


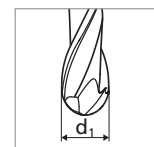
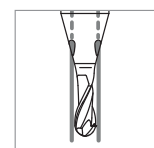
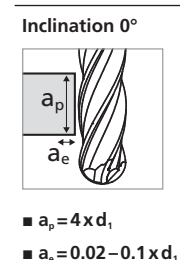
NEW Type N - Side-finishing

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"		1.2 mm .047"		1/16"		1.8 mm .071"		2.0 mm .079"		3/32"		1/8"		5/32"		3/16"		7/32 - 1/4"		
					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	v _c	f _z	v _c
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	130	0.009	185	0.012	185	0.013	204	0.017	204	0.018	222	0.020	241	0.025	241	0.028	241	0.033
		1.0044	S275JR	AISI 1020		425	.00031	425	.00035	608	.00047	608	.00051	668	.00067	668	.00071	729	.00079	790	.00098	790	.00110	790	.00130
		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																					
		1.3505	100Cr6	AISI 52100		130	0.007	130	0.008	185	0.011	185	0.012	204	0.016	204	0.017	222	0.019	241	0.024	241	0.026	241	0.031
		1.7225	42CrMo4	AISI 4140		425	.00028	425	.00031	608	.00043	608	.00047	668	.00063	668	.00067	729	.00075	790	.00094	790	.00102	790	.00122
		1.2842	90MnCrV8	AISI O2																					
		1.2379	X153CrMoV12	AISI D2																					
		1.2436	X210CrW12	AISI D4/D6		130	0.006	130	0.007	185	0.010	185	0.011	204	0.015	204	0.016	222	0.018	241	0.022	241	0.024	241	0.029
M	Stainless steel ferritic	1.4016	X6Cr17	AISI 430 / UNS S43000	130	0.008	130	0.009	185	0.012	185	0.013	204	0.017	204	0.018	222	0.020	241	0.024	241	0.026	241	0.031	
		1.4105	X6CrMoS17	AISI 430F	425	.00031	425	.00035	608	.00047	608	.00051	668	.00067	668	.00071	729	.00079	790	.00094	790	.00102	790	.00122	
		1.4034	X46Cr13	AISI 420C	130	0.008	130	0.009	185	0.011	185	0.012	204	0.016	204	0.017	222	0.018	241	0.023	241	0.025	241	0.030	
	Stainless steel martensitic	1.4112	X90CrMoV18	AISI 440B	425	.00031	425	.00035	608	.00043	608	.00047	668	.00063	668	.00067	729	.00071	790	.00091	790	.00098	790	.00118	
		1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH	130	0.008	130	0.009	185	0.011	185	0.012	204	0.016	204	0.017	222	0.018	241	0.023	241	0.025	241	0.030	
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH	425	.00031	425	.00035	608	.00043	608	.00047	668	.00063	668	.00067	729	.00071	790	.00091	790	.00098	790	.00118	
	Stainless steel austenitic	1.4301	X5CrNi18-10	AISI 304																					
		1.4435	X2CrNiMo18-14-3	AISI 316L	130	0.006	130	0.007	185	0.008	185	0.009	204	0.015	204	0.016	222	0.017	241	0.022	241	0.024	241	0.029	
		1.4441	X2CrNiMo18-15-3	AISI 316LM	425	.00024	425	.00028	608	.00031	608	.00035	668	.00059	668	.00063	729	.00067	790	.00087	790	.00094	790	.00114	
	K	Cast iron	0.6020	GG20	ASTM 30																				
			0.6030	GG30	ASTM 40B																				
			0.7040	GGG40	ASTM 60-40-18	111	0.006	111	0.011	130	0.012	130	0.013	148	0.014	148	0.018	167	0.021	185	0.026	185	0.029	185	0.034
0.7060			GGG60	ASTM 80-60-03	365	.00024	365	.00043	425	.00047	425	.00051	486	.00055	486	.00071	547	.00083	608	.00102	608	.00114	608	.00134	
N	Aluminium alloy wrought	3.2315	AlMgSi1	ASTM 6351	130	0.009	130	0.010	185	0.013	185	0.014	204	0.018	204	0.020	222	0.029	241	0.028	241	0.030	241	0.036	
		3.4365	AlZnMgCu1.5	ASTM 7075	425	.00035	425	.00039	608	.00051	608	.00055	668	.00071	668	.00079	729	.00114	790	.00110	790	.00118	790	.00142	
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	130	0.009	130	0.010	185	0.013	185	0.014	204	0.018	204	0.020	222	0.029	241	0.028	241	0.030	241	0.036	
		3.2381	GD-AlSi10Mg	UNS A03590	425	.00035	425	.00039	608	.00051	608	.00055	668	.00071	668	.00079	729	.00114	790	.00110	790	.00118	790	.00142	
	Copper	2.0040	Cu-OF / CW008A	UNS C10100	130	0.010	130	0.011	185	0.013	185	0.014	204	0.018	204	0.020	222	0.029	241	0.028	241	0.030	241	0.036	
		2.0065	Cu-ETP / CW004A	UNS C11000	425	.00039	425	.00043	608	.00051	608	.00055	668	.00071	668	.00079	729	.00114	790	.00110	790	.00118	790	.00142	
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	130	0.010	130	0.011	185	0.013	185	0.014	204	0.018	204	0.020	222	0.029	241	0.028	241	0.030	241	0.036	
		2.0360	CuZn40 CW509L	UNS C28000	425	.00039	425	.00043	608	.00051	608	.00055	668	.00071	668	.00079	729	.00114	790	.00110	790	.00118	790	.00142	
	Brass, Bronze Rm < 400 N/mm ²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	130	0.010	130	0.011	185	0.013	185	0.014	204	0.018	204	0.020	222	0.029	241	0.028	241	0.030	241	0.036	
		2.1020	CuSn6	UNS C51900	425	.00039	425	.00043	608	.00051	608	.00055	668	.00071	668	.00079	729	.00114	790	.00110	790	.00118	790	.00142	
	Bronze Rm < 600 N/mm ²	2.0966	CuAl10Ni5Fe4	UNS C63000	130	0.009	130	0.010	185	0.013	185	0.014	204	0.018	204	0.020	222	0.029	241	0.028	241	0.030	241	0.036	
		2.0960	CuAl9Mn2	UNS C63200	425	.00035	425	.00039	608	.00051	608	.00055	668	.00071	668	.00079	729	.00114	790	.00110	790	.00118	790	.00142	
S ₁	Super alloys	2.4856		Inconel 625																					
		2.4668		Inconel 718																					
		2.4617	NiMo28	Hastelloy B-2	111	0.004	111	0.004	120	0.005	120	0.005	130	0.005	130	0.006	139	0.008	157	0.010	157	0.011	157	0.013	
		2.4665	NiCr22Fe18Mo	Hastelloy X	365	.00016	365	.00016	425	.00020	425	.00020	486	.00024	486	.00024	547	.00031	608	.00039	608	.00043	608	.00051	
S ₂	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	111	0.008	111	0.009	120	0.010	120	0.011	130	0.014	130	0.015	139	0.017	157	0.021	157	0.023	157	0.027	
		3.7065	Gr.4	ASTM B348 / F68	365	.00031	365	.00035	425	.00039	425	.00043	486	.00055	486	.00059	547	.00067	608	.00083	608	.00091	608	.00106	
S ₃	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	111	0.008	111	0.009	120	0.010	120	0.011	130	0.014	130	0.015	139	0.017	157	0.021	157	0.023	157	0.027	
		9.9367	TiAl6Nb7	ASTM F1295	365	.00031	365	.00035	425	.00039	425	.00043	486	.00055	486	.00059	547	.00067	608	.00083	608	.00091	608	.00106	
H ₁	Hardened steel < 55 HRC	2.4964	CoCr20W15Ni	Haynes 25	130	0.004	130	0.004	167	0.005	167	0.005	185	0.005	185	0.006	204	0.008	222	0.010	222	0.011	222	0.013	
			CrCoMo28	ASTM F1537	425	.00016	425	.00016	547	.00020	547	.00020	608	.00024	608	.00024	668	.00031	729	.00039	729	.00043	729	.00051	
H ₂	Hardened steel ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1	93	0.005	93	0.006	130	0.007	130	0.009	167	0.010	167	0.013	185	0.015	222	0.016	222	0.018	222	0.021	
		1.2379	X153CrMoV12	AISI D2	304	.00020	304	.00024	425	.00028	425	.00035	547	.00039	547										