

NEW

Type B - Z4 - Side milling - Semi-finishing

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

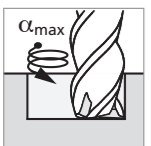
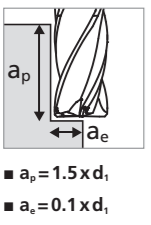
RECOMMENDATION FOR USE
● Excellent | ◐ Good | ○ Acceptable | ☒ Not recommended

P	N	S ₃	
M	S ₁	H ₁	
K	S ₂	H ₂	

MILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW

Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	Cutting edge geometry	$\varnothing d_1$												
						1/64" 0.4 mm		.020" 0.5 mm		.024" 0.6 mm		.028" 0.7 mm		1/32" 0.8 mm		.035" - .039" 0.9 - 1.0 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	
P	Unalloyed carbon steel Rm < 800 N/mm²	1.0301	C10	AISI 1010	GEOMETRY S	148 - 246 45 - 75	.00043 0.011	180 - 312 55 - 95	.00051 0.013	213 - 377 65 - 115	.00059 0.015	246 - 426 75 - 130	.00071 0.018	295 - 492 90 - 150	.00079 0.020	328 - 558 100 - 170	.00087 0.022	
		1.0401	C15	AISI 1015														
		1.1191	C45E/CK45	AISI 1045														
		1.0044	S275JR	AISI 1020														
		1.0715	11SMn30	AISI 1215														
		1.5752	15NiCr13	ASTM 3415 / AISI 3310														
	Low alloyed steel Rm > 900 N/mm²	1.7131	16MnCr5	AISI 5115														
		1.3505	100Cr6	AISI 52100														
		1.7225	42CrMo4	AISI 4140														
		1.2842	90MnCrV8	AISI O2														
		1.2379	X153CrMoV12	AISI D2														
		1.2436	X210CrW12	AISI D4/D6														
High alloyed tool steel Rm < 1200 N/mm²	1.3343	HS6-5-2C	AISI M2 / UNS T11302															
	1.3355	HS18-0-1	AISI T1 / UNS T12001															
	M	Stainless steel ferritic	1.4016	X6Cr17	AISI 430 / UNS S43000	GEOMETRY S	148 - 246 45 - 75	.00039 0.010	180 - 312 55 - 95	.00051 0.013	213 - 377 65 - 115	.00059 0.015	246 - 426 75 - 130	.00071 0.018	295 - 492 90 - 150	.00079 0.020	328 - 558 100 - 170	.00087 0.022
			1.4105	X6CrMoS17	AISI 430F													
		Stainless steel martensitic	1.4034	X46Cr13	AISI 420C													
			1.4112	X90CrMoV18	AISI 440B													
Stainless steel martensitic - PH		1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH														
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH														
Stainless steel austenitic	1.4301	X5CrNi18-10	AISI 304															
	1.4435	X2CrNiMo18-14-3	AISI 316L															
	1.4441	X2CrNiMo18-15-3	AISI 316LM															
1.4539	X1NiCrMoCu25-20-5	AISI 904L																
K	Cast iron	0.6020	GG20	ASTM 30	GEOMETRY S	148 - 246 45 - 75	.00043 0.011	180 - 312 55 - 95	.00051 0.013	213 - 377 65 - 115	.00059 0.015	246 - 426 75 - 130	.00071 0.018	295 - 492 90 - 150	.00079 0.020	328 - 558 100 - 170	.00087 0.022	
		0.6030	GG30	ASTM 40B														
		0.7040	GGG40	ASTM 60-40-18														
		0.7060	GGG60	ASTM 80-60-03														
		N	Aluminium alloy wrought	3.2315														AlMgSi1
3.4365	AlZnMgCu1.5			ASTM 7075														
Aluminium alloy cast	3.2163		GD-ALSi9Cu3	ASTM A380														
	3.2381		GD-ALSi10Mg	UNS A03590														
Copper	2.0040		Cu-OF / CW008A	UNS C10100														
	2.0065		Cu-ETP / CW004A	UNS C11000														
Brass lead free	2.0321		CuZn37 CW508L	UNS C27400														
	2.0360		CuZn40 CW509L	UNS C28000														
Brass, Bronze Rm < 400 N/mm²	2.0401		CuZn39Pb3 / CW614N	UNS C38500														
	2.1020		CuSn6	UNS C51900														
Bronze Rm < 600 N/mm²	2.0966		CuAl10Ni5Fe4	UNS C63000														
	2.0960		CuAl9Mn2	UNS C63200														
S₁	Super alloys	2.4856		Inconel 625	GEOMETRY SX	148 - 246 45 - 75	.00020 0.005	180 - 312 55 - 95	.00028 0.007	213 - 377 65 - 115	.00031 0.008	246 - 426 75 - 130	.00035 0.009	295 - 492 90 - 150	.00039 0.010	328 - 558 100 - 170	.00043 0.011	
		2.4668		Inconel 718														
		2.4617	NiMo28	Hastelloy B-2														
		2.4665	NiCr22Fe18Mo	Hastelloy X														
S₂	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	GEOMETRY S	148 - 246 45 - 75	.00028 0.007	180 - 312 55 - 95	.00039 0.010	213 - 377 65 - 115	.00047 0.012	246 - 426 75 - 130	.00055 0.014	295 - 492 90 - 150	.00063 0.016	328 - 558 100 - 170	.00071 0.018	
		3.7065	Gr.4	ASTM B348 / F68														
	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136														
9.9367		TiAl6Nb7	ASTM F1295															
S₃	CoCr alloys	2.4964	CoCr20W15Ni CrCoMo28	Haynes 25 ASTM F1537	GEOMETRY SX	148 - 246 45 - 75	.00020 0.005	180 - 312 55 - 95	.00028 0.007	213 - 377 65 - 115	.00031 0.008	246 - 426 75 - 130	.00035 0.009	295 - 492 90 - 150	.00039 0.010	328 - 558 100 - 170	.00043 0.011	
H₁ H₂	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1														
	Hardened steel ≥ 55 HRC	1.2379	X153CrMoV12	AISI D2														

Side milling
Semi-finishing



Note:
In case of helical interpolation milling see α_{max} on page 35

