CRAZYMILL™ by Mikron Tool Cool

CRAZYMILL™ by Mikron Tool Cool

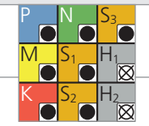
MILLING TOOLS
CRAZYMILL COOL SQUARE / CORNER RADIUS - Z4

NEW

Type C - Pre-machining

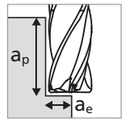
v_c [m/min] | **[SFM]**
f_z [mm] | **[IPT]**

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

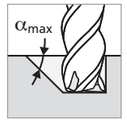


MILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW

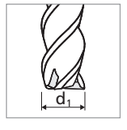
Pre-machining



- $a_p = 2 \times d_1$
- $a_e = 0.1 \times d_1$



Note:
In case of linear ramp or helical interpolation milling reduce f_z by 35%



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	1.0 mm | .039" v_c	1.0 mm | .039" f_z	1/16" 1.5 mm | .059" v_c	1/16" 1.5 mm | .059" f_z	3/32" 2.0 mm | .079" v_c	3/32" 2.0 mm | .079" f_z	1/8" 3.0 mm | .118" v_c	1/8" 3.0 mm | .118" f_z	Ød1 5/32" 4.0 mm | .157" v_c	Ød1 5/32" 4.0 mm | .157" f_z	3/16" - 7/32" 5.0 mm | .197" v_c	3/16" - 7/32" 5.0 mm | .197" f_z	1/4" 6.0 mm | .236" v_c	1/4" 6.0 mm | .236" f_z	8.0 mm | .315" v_c	8.0 mm | .315" f_z
P	Unalloyed carbon steel Rm < 800 N/mm²	1.0301	C10	AISI 1010	120 **394**	0.017 **.00067**	140 **459**	0.026 **.00102**	160 **525**	0.038 **.00150**	180 **591**	0.048 **.00189**	200 **656**	0.050 **.00197**	220 **722**	0.052 **.00205**	220 **722**	0.056 **.00220**	220 **722**	0.068 **.00268**
		1.0401	C15	AISI 1015																
		1.1191	C45E/CK45	AISI 1045																
		1.0044	S275JR	AISI 1020																
		1.0715	11SMn30	AISI 1215																
	Low alloyed steel Rm > 900 N/mm²	1.5752	15NiCr13	ASTM 3415 / AISI 3310	120 **394**	0.016 **.00063**	140 **459**	0.025 **.00098**	160 **525**	0.036 **.00142**	180 **591**	0.044 **.00173**	200 **656**	0.048 **.00189**	220 **722**	0.050 **.00197**	220 **722**	0.054 **.00213**	220 **722**	0.066 **.00260**
		1.7131	16MnCr5	AISI 5115																
		1.3505	100Cr6	AISI 52100																
		1.7225	42CrMo4	AISI 4140																
		1.2842	90MnCrV8	AISI O2																
	High alloyed tool steel Rm < 1200 N/mm²	1.2379	X153CrMoV12	AISI D2	120 **394**	0.012 **.00047**	140 **459**	0.022 **.00087**	160 **525**	0.035 **.00138**	180 **591**	0.042 **.00165**	200 **656**	0.043 **.00169**	220 **722**	0.045 **.00177**	220 **722**	0.048 **.00189**	220 **722**	0.058 **.00228**
		1.2436	X210CrW12	AISI D4/D6																
		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	120 **394**	0.018 **.00071**	140 **459**	0.026 **.00102**	160 **525**	0.038 **.00150**	180 **591**	0.046 **.00181**	200 **656**	0.048 **.00189**	220 **722**	0.050 **.00197**	220 **722**	0.055 **.00217**	260 **853**	0.062 **.00244**
		1.4105	X6CrMoS17	AISI 430F																
	Stainless steel martensitic	1.4034	X46Cr13	AISI 420C	120 **394**	0.017 **.00067**	140 **459**	0.025 **.00098**	160 **525**	0.036 **.00142**	180 **591**	0.044 **.00173**	200 **656**	0.046 **.00181**	220 **722**	0.048 **.00189**	220 **722**	0.052 **.00205**	260 **853**	0.060 **.00236**
		1.4112	X90CrMoV18	AISI 440B																
	Stainless steel martensitic – PH	1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH	120 **394**	0.017 **.00067**	140 **459**	0.025 **.00098**	160 **525**	0.036 **.00142**	180 **591**	0.044 **.00173**	200 **656**	0.046 **.00181**	220 **722**	0.048 **.00189**	220 **722**	0.052 **.00205**	260 **853**	0.060 **.00236**
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH																
	Stainless steel austenitic	1.4301	X5CrNi18-10	AISI 304	120 **394**	0.013 **.00051**	140 **459**	0.016 **.00063**	160 **525**	0.034 **.00134**	180 **591**	0.042 **.00165**	200 **656**	0.044 **.00173**	220 **722**	0.046 **.00181**	220 **722**	0.049 **.00193**	260 **853**	0.058 **.00228**
		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	100 **328**	0.012 **.00047**	120 **394**	0.026 **.00102**	140 **459**	0.032 **.00126**	160 **525**	0.043 **.00169**	180 **591**	0.054 **.00213**	200 **656**	0.056 **.00220**	200 **656**	0.058 **.00228**	200 **656**	**0.070** .00276
		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	ASTM 6351	170 **558**	0.020 **.00079**	190 **623**	0.029 **.00114**	210 **689**	0.040 **.00157**	230 **755**	0.060 **.00236**	250 **820**	0.062 **.00244**	270 **886**	0.064 **.00252**	270 **886**	0.068 **.00268**	270 **886**	0.084 **.00331**
		3.4365	AlZnMgCu1.5	ASTM 7075																
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	170 **558**	0.020 **.00079**	190 **623**	0.029 **.00114**	210 **689**	0.040 **.00157**	230 **755**	0.060 **.00236**	250 **820**	0.062 **.00244**	270 **886**	0.064 **.00252**	270 **886**	0.068 **.00268**	270 **886**	0.084 **.00331**
		3.2381	GD-AlSi10Mg	UNS A03590																
	Copper	2.0040	Cu-OF / CW008A	UNS C10100	170 **558**	0.022 **.00087**	190 **623**	0.029 **.00114**	210 **689**	0.040 **.00157**	230 **755**	0.060 **.00236**	250 **820**	0.062 **.00244**	270 **886**	0.064 **.00252**	270 **886**	0.068 **.00268**	270 **886**	0.084 **.00331**
		2.0065	Cu-ETP / CW004A	UNS C11000																
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	170 **558**	0.022 **.00087**	190 **623**	0.029 **.00114**	210 **689**	0.040 **.00157**	230 **755**	0.060 **.00236**	250 **820**	0.062 **.00244**	270 **886**	0.064 **.00252**	270 **886**	0.068 **.00268**	270 **886**	0.084 **.00331**
		2.0360	CuZn40 CW509L	UNS C28000																
	Brass, Bronze Rm < 400 N/mm²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	170 **558**	0.022 **.00087**	190 **623**	0.029 **.00114**	210 **689**	0.040 **.00157**	230 **755**	0.060 **.00236**	250 **820**	0.062 **.00244**	270 **886**	0.064 **.00252**	270 **886**	0.068 **.00268**	270 **886**	0.084 **.00331**
		2.1020	CuSn6	UNS C51900																
	Bronze Rm < 600 N/mm²	2.0966	CuAl10Ni5Fe4	UNS C63000	170 **558**	0.020 **.00079**	190 **623**	0.029 **.00114**	210 **689**	0.040 **.00157**	230 **755**	0.060 **.00236**	250 **820**	0.062 **.00244**	270 **886**	0.064 **.00252**	270 **886**	0.068 **.00268**	270 **886**	0.084 **.00331**
		2.0960	CuAl9Mn2	UNS C63200																
S_1	Super alloys	2.4856		Inconel 625	100 **328**	0.008 **.00032**	100 **328**	0.010 **.00039**	120 **394**	0.012 **.00047**	120 **394**	0.016 **.00063**	140 **459**	0.018 **.00071**	140 **459**	0.020 **.00079**	160 **525**	0.022 **.00087**	160 **525**	0.024 **.00094**
		2.4668		Inconel 718																
		2.4617	NiMo28	Hastelloy B-2																
		2.4665	NiCr22Fe18Mo	Hastelloy X																
S_2	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	100 **328**	0.018 **.00071**	100 **328**	0.022 **.00087**	120 **394**	0.032 **.00126**	120 **394**	0.042 **.00165**	140 **459**	0.044 **.00173**	140 **459**	0.046 **.00181**	160 **525**	0.048 **.00189**	160 **525**	0.054 **.00213**
		3.7065	Gr.4	ASTM B348 / F68																
	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	100 **328**	0.018 **.00071**	100 **328**	0.022 **.00087**	120 **394**	0.032 **.00126**	120 **394**	0.042 **.00165**	140 **459**	0.044 **.00173**	140 **459**	0.046 **.00181**	160 **525**	0.048 **.00189**	160 **525**	0.054 **.00213**
		9.9367	TiAl6Nb7	ASTM F1295																
S_3	CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	100 **328**	0.008 **.00032**	100 **328**	0.010 **.00039**	120 **394**	0.012 **.00047**	120 **394**	0.016 **.00063**	140 **459**	0.018 **.00071**	140 **459**	0.020 **.00079**	160 **525**	0.022 **.00087**	160 **525**	0.024 **.00094**
			CrCoMo28	ASTM F1537																
H_1	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1																
H_2	Hardened steel ≥ 55 HRC	1.2379	X153CrMoV12	AISI D2																