CRAZYMILL by Mikron Tool Cool

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MILLING TOOLS
CRAZYMILL COOL P&S

NEW Type C - Plunge - Slot milling

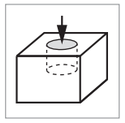
v_c [m/min] a_p [mm]
$f_{z,p}$ [mm] $f_{z,s}$ [mm]

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

P	N	S_3
M	S_1	H_1
K	S_2	H_2

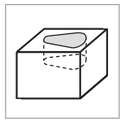
MILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW

Plunge milling

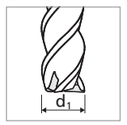


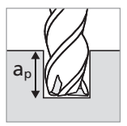
■ $f_{z,p}$: for plunge milling

Slot milling



■ $f_{z,p}$: for plunge milling
■ $f_{z,s}$: for slot milling





Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	Ød1 1.0 mm v_c	$f_{z,p}$	$f_{z,s}$	a_p	1.5 mm 1/16" v_c	$f_{z,p}$	$f_{z,s}$	a_p	2.0 mm 3/32" v_c	$f_{z,p}$	$f_{z,s}$	a_p	3.0 mm 1/8" v_c	$f_{z,p}$	$f_{z,s}$	a_p	4.0 mm 5/32" v_c	$f_{z,p}$	$f_{z,s}$	a_p	5.0 mm 3/16" - 7/32" v_c	$f_{z,p}$	$f_{z,s}$	a_p	6.0 mm - 8.0 mm 1/4" v_c	$f_{z,p}$	$f_{z,s}$	a_p
P	Unalloyed carbon steel Rm < 800 N/mm²	1.0301	C10	AISI 1010	100	0.0013	0.0046	0.5xd1	120	0.0020	0.0065	0.5xd1	120	0.0026	0.0091	0.5xd1	140	0.004	0.013	0.5xd1	140	0.005	0.020	0.5xd1	150	0.005	0.026	0.5xd1	160	0.006	0.033	0.5xd1
		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	100	0.0014	0.0049	0.5xd1	120	0.0021	0.0070	0.5xd1	120	0.0028	0.0098	0.5xd1	140	0.004	0.014	0.5xd1	140	0.005	0.021	0.5xd1	150	0.006	0.027	0.5xd1	160	0.006	0.034	0.5xd1
		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	100	0.0012	0.0042	0.25xd1	120	0.0018	0.0060	0.25xd1	120	0.0024	0.0084	0.25xd1	140	0.003	0.012	0.25xd1	140	0.004	0.017	0.25xd1	150	0.004	0.022	0.25xd1	160	0.005	0.028	0.25xd1
		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	100	0.0010	0.0035	0.5xd1	120	0.0015	0.0050	0.5xd1	120	0.0020	0.0070	0.5xd1	140	0.003	0.010	0.5xd1	140	0.004	0.015	0.5xd1	150	0.004	0.020	0.5xd1	160	0.005	0.025	0.5xd1
		1.4105	X6CrMoS17	AISI 430F																												
	Stainless steel martensitic	1.4034	X46Cr13	AISI 420C	100	0.0010	0.0035	0.25xd1	120	0.0015	0.0050	0.25xd1	120	0.0020	0.0070	0.25xd1	140	0.003	0.010	0.25xd1	140	0.004	0.015	0.25xd1	150	0.004	0.020	0.25xd1	160	0.005	0.025	0.25xd1
		1.4112	X90CrMoV18	AISI 440B																												
	Stainless steel martensitic – PH	1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH	100	0.0010	0.0035	0.25xd1	120	0.0015	0.0050	0.25xd1	120	0.0020	0.0070	0.25xd1	140	0.003	0.010	0.25xd1	140	0.004	0.015	0.25xd1	150	0.004	0.020	0.25xd1	160	0.005	0.025	0.25xd1
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH																												
	Stainless steel austenitic	1.4301	X5CrNi18-10	AISI 304	100	0.0010	0.0035	0.5xd1	120	0.0015	0.0050	0.5xd1	120	0.0020	0.0070	0.5xd1	140	0.003	0.010	0.5xd1	140	0.004	0.015	0.5xd1	150	0.004	0.020	0.5xd1	160	0.005	0.020	0.5xd1
		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	0.0013	0.0042	0.5xd1	120	0.0019	0.0060	0.5xd1	120	0.0024	0.0084	0.5xd1	140	0.004	0.012	0.5xd1	140	0.004	0.017	0.5xd1	150	0.005	0.022	0.5xd1	160	0.005	0.028	0.5xd1
		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	100	0.0012	0.0100	0.5xd1	120	0.0018	0.0160	0.5xd1	120	0.0024	0.0210	0.5xd1	150	0.004	0.034	0.5xd1	160	0.004	0.035	0.5xd1	170	0.005	0.036	0.5xd1	180	0.005	0.037	0.5xd1
		3.4365	AlZnMgCu1.5	ASTM 7075																												
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	100	0.0012	0.0100	0.5xd1	120	0.0018	0.0160	0.5xd1	120	0.0024	0.0210	0.5xd1	150	0.004	0.034	0.5xd1	160	0.004	0.035	0.5xd1	170	0.005	0.036	0.5xd1	180	0.005	0.037	0.5xd1
		3.2381	GD-AlSi10Mg	UNS A03590																												
	Copper	2.0040	Cu-OF / CW008A	UNS C10100	100	0.0012	0.0100	0.5xd1	120	0.0018	0.0160	0.5xd1	120	0.0024	0.0210	0.5xd1	150	0.004	0.034	0.5xd1	160	0.004	0.035	0.5xd1	170	0.005	0.036	0.5xd1	180	0.005	0.037	0.5xd1
		2.0065	Cu-ETP / CW004A	UNS C11000																												
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	100	0.0012	0.0100	0.5xd1	120	0.0018	0.0160	0.5xd1	120	0.0024	0.0210	0.5xd1	150	0.004	0.034	0.5xd1	160	0.004	0.035	0.5xd1	170	0.005	0.036	0.5xd1	180	0.005	0.037	0.5xd1
		2.0360	CuZn40 CW509L	UNS C28000																												
	Brass, Bronze Rm < 400 N/mm²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	100	0.0012	0.0100	0.5xd1	120	0.0018	0.0160	0.5xd1	120	0.0024	0.0210	0.5xd1	150	0.004	0.034	0.5xd1	160	0.004	0.035	0.5xd1	170	0.005	0.036	0.5xd1	180	0.005	0.037	0.5xd1
		2.1020	CuSn6	UNS C51900																												
	Bronze Rm < 600 N/mm²	2.0966	CuAl10Ni5Fe4	UNS C63000	100	0.0012	0.0100	0.5xd1	120	0.0018	0.0160	0.5xd1	120	0.0024	0.0210	0.5xd1	150	0.004	0.034	0.5xd1	160	0.004	0.035	0.5xd1	170	0.005	0.036	0.5xd1	180	0.005	0.037	0.5xd1
		2.0960	CuAl9Mn2	UNS C63200																												
S_1	Super alloys	2.4856		Inconel 625	40	0.0010	0.0035	0.25xd1	40	0.0015	0.0050	0.25xd1	50	0.0020	0.0070	0.25xd1	50	0.003	0.010	0.25xd1	60	0.004	0.014	0.25xd1	80	0.004	0.018	0.25xd1	80	0.005	0.021	0.25xd1
		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	80	0.0010	0.0032	0.25xd1	90	0.0014	0.0045	0.25xd1	100	0.0018	0.0063	0.25xd1	110	0.003	0.010	0.25xd1	120	0.004	0.013	0.25xd1	120	0.004	0.016	0.25xd1	120	0.005	0.019	0.25xd1
		3.7065	Gr.4	ASTM B348 / F68																												
	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	80	0.0010	0.0032	0.25xd1	90	0.0014	0.0045	0.25xd1	100	0.0018	0.0063	0.25xd1	110	0.003	0.010	0.25xd1	120	0.004	0.013	0.25xd1	120	0.004	0.016	0.25xd1	120	0.005	0.019	0.25xd1
		9.9367	TiAl6Nb7	ASTM F1295																												
S_3	CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	60	0.0010	0.0035	0.25xd1	60	0.0015	0.0050	0.25xd1	80	0.0020	0.0070	0.25xd1	80	0.003	0.010	0.25xd1	100	0.004	0.014	0.25xd1	100	0.004	0.018	0.25xd1	120	0.005	0.021	0.25xd1
			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																												