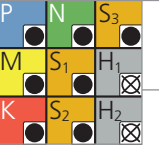


**NEW**

Type C - Milling of through slots

$v_c$  [m/min] | [SFM]  
 $f_z$  [mm] | [IPT]  
 $a_p$  [mm] | [inch]

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"			3/32"			1/8"			5/32"			3/16" - 7/32"			1/4"																																																																																						
								1.5 mm   .059"			2.0 mm   .079"			3.0 mm   .118"			4.0 mm   .157"			5.0 mm   .197"			6.0 mm - 8.0 mm   .236" - .315"																																																																																						
					$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$	$v_c$	$f_z$	$a_p$																																																																																	
P	Unalloyed carbon steel Rm < 800 N/mm <sup>2</sup>	1.0301	C10	AISI 1010	120 394	0.009 .00035	0.5xd1	140 459	0.015 .00059	0.5xd1	160 525	0.020 .00079	0.5xd1	180 591	0.029 .00114	0.5xd1	200 656	0.031 .00122	0.5xd1	200 656	0.031 .00122	0.5xd1	220 722	0.032 .00126	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/mm <sup>2</sup>	1.5752	15NiCr13	ASTM 3415 / AISI 3310	120 394	0.008 .00032	0.5xd1	140 459	0.013 .00051	0.5xd1	160 525	0.019 .00075	0.5xd1	180 591	0.028 .00110	0.5xd1	200 656	0.029 .00114	0.5xd1	200 656	0.030 .00118	0.5xd1	220 722	0.031 .00122	0.5xd1																																																																																				
		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																																																																																																									
	High alloyed tool steel Rm < 1200 N/mm <sup>2</sup>	1.2436	X210CrW12	AISI D4/D6	120 394	0.006 .00024	0.25xd1	140 459	0.012 .00047	0.25xd1	160 525	0.017 .00067	0.25xd1	180 591	0.025 .00098	0.25xd1	200 656	0.026 .00102	0.25xd1	200 656	0.026 .00102	0.25xd1	220 722	0.027 .00106	0.25xd1																																																																																				
1.3343		HS6-5-2C	AISI M2 / UNS T11302																																																																																																										
1.3355		HS18-0-1	AISI T1 / UNS T12001																																																																																																										
1.4016		X6Cr17	AISI 430 / UNS S43000	120 394																						0.009 .00035	0.5xd1	140 459	0.015 .00059	0.5xd1	160 525	0.020 .00079	0.5xd1	180 591	0.028 .00110	0.5xd1	200 656	0.029 .00114	0.5xd1	200 656	0.030 .00118	0.5xd1	220 722	0.031 .00122	0.5xd1																																																																
1.4105		X6CrMoS17	AISI 430F																																																																																																										
1.4034		X46Cr13	AISI 420C																																																																																																										
1.4112	X90CrMoV18	AISI 440B																																																																																																											
1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH																																																																																																											
1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH																																																																																																											
M	Stainless steel ferritic	1.4301	X5CrNi18-10	AISI 304	120 394	0.007 .00028	0.5xd1	140 459	0.011 .00043	0.5xd1	160 525	0.017 .00067	0.5xd1	180 591	0.025 .00098	0.5xd1	200 656	0.027 .00106	0.5xd1	200 656	0.027 .00106	0.5xd1	220 722	0.028 .00110	0.5xd1																																																																																				
		1.4435	X2CrNiMo18-14-3	AISI 316L																																																																																																									
	Stainless steel austenitic	1.4441	X2CrNiMo18-15-3	AISI 316LM																																																																																																									
		1.4539	X1NiCrMoCu25-20-5	AISI 904L																																																																																																									
		0.6020	GG20	ASTM 30																						100 328	0.007 .00028	0.5xd1	120 394	0.015 .00059	0.5xd1	140 459	0.017 .00067	0.5xd1	160 525	0.025 .00098	0.5xd1	180 591	0.031 .00122	0.5xd1	200 656	0.031 .00122	0.5xd1	200 656	0.032 .00126	0.5xd1																																																															
		0.6030	GG30	ASTM 40B																																																																																																									
0.7040	GGG40	ASTM 60-40-18																																																																																																											
0.7060	GGG60	ASTM 80-60-03																																																																																																											
K	Cast iron	3.2315	AlMgSi1	ASTM 6351	170 558	0.010 .00039	0.5xd1	190 623	0.016 .00063	0.5xd1	210 689	0.021 .00083	0.5xd1	230 755	0.034 .00134	0.5xd1	250 820	0.035 .00139	0.5xd1	250 820	0.036 .00142	0.5xd1	270 886	0.037 .00146	0.5xd1																																																																																				
		3.4365	AlZnMgCu1.5	ASTM 7075																																																																																																									
		3.2163	GD-AlSi9Cu3	ASTM A380																																																																																																									
		3.2381	GD-AlSi10Mg	UNS A03590																																																																																																									
	Aluminium alloy wrought	2.0040	Cu-OF / CW008A	UNS C10100																						170 558	0.012 .00047	0.5xd1	190 623	0.016 .00063	0.5xd1	210 689	0.021 .00083	0.5xd1	230 755	0.034 .00134	0.5xd1	250 820	0.035 .00139	0.5xd1	250 820	0.036 .00142	0.5xd1	270 886	0.037 .00146	0.5xd1																																																															
		2.0065	Cu-ETP / CW004A	UNS C11000																																																																																																									
	Aluminium alloy cast	2.0321	CuZn37 CW508L	UNS C27400																																											170 558	0.012 .00047	0.5xd1	190 623	0.016 .00063	0.5xd1	210 689	0.021 .00083	0.5xd1	230 755	0.034 .00134	0.5xd1	250 820	0.035 .00139	0.5xd1	250 820	0.036 .00142	0.5xd1	270 886	0.037 .00146	0.5xd1																																										
		2.0360	CuZn40 CW509L	UNS C28000																																																																																																									
	Copper	2.0401	CuZn39Pb3 / CW614N	UNS C38500																																																																170 558	0.012 .00047	0.5xd1	190 623	0.016 .00063	0.5xd1	210 689	0.021 .00083	0.5xd1	230 755	0.034 .00134	0.5xd1	250 820	0.035 .00139	0.5xd1	250 820	0.036 .00142	0.5xd1	270 886	0.037 .00146	0.5xd1																					
		2.1020	CuSn6	UNS C51900																																																																																																									
	Brass lead free	2.0966	CuAl10Ni5Fe4	UNS C63000																																																																																					170 558	0.011 .00043	0.5xd1	190 623	0.016 .00063	0.5xd1	210 689	0.021 .00083	0.5xd1	230 755	0.034 .00134	0.5xd1	250 820	0.035 .00139	0.5xd1	250 820	0.036 .00142	0.5xd1	270 886	0.037 .00146	0.5xd1
		2.0960	CuAl9Mn2	UNS C63200																																																																																																									
N	Super alloys	2.4856		Inconel 625	80 262	0.005 .00020	0.25xd1	80 262	0.006 .00024	0.25xd1	100 328	0.007 .00028	0.25xd1	100 328	0.010 .00039	0.25xd1	120 394	0.013 .00051	0.25xd1	120 394	0.013 .00051	0.25xd1	140 459	0.013 .00051	0.25xd1																																																																																				
		2.4668		Inconel 718																																																																																																									
		2.4617	NiMo28	Hastelloy B-2																																																																																																									
		2.4665	NiCr22Fe18Mo	Hastelloy X																																																																																																									
	Titanium pure	3.7035	Gr.2	ASTM B348 / F67																						80 262	0.009 .00035	0.25xd1	80 262	0.012 .00047	0.25xd1	100 328	0.017 .00067	0.25xd1	100 328	0.027 .00106	0.25xd1	120 394	0.027 .00106	0.25xd1	120 394	0.027 .00106	0.25xd1	140 459	0.028 .00110	0.25xd1																																																															
		3.7065	Gr.4	ASTM B348 / F68																																																																																																									
	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136																																											80 262	0.009 .00035	0.25xd1	80 262	0.012 .00047	0.25xd1	100 328	0.017 .00067	0.25xd1	100 328	0.027 .00106	0.25xd1	120 394	0.027 .00106	0.25xd1	120 394	0.027 .00106	0.25xd1	140 459	0.028 .00110	0.25xd1																																										
		9.9367	TiAl6Nb7	ASTM F1295																																																																																																									
CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	80 262	0.005 .00020	0.25xd1	80 262	0.006 .00024	0.25xd1	100 328	0.007 .00028	0.25xd1	100 328	0.010 .00039	0.25xd1	120 394	0.013 .00051	0.25xd1	120 394	0.013 .00051	0.25xd1	140 459	0.013 .00051	0.25xd1																																																																																					
		CrCoMo28	ASTM F1537																																																																																																										
H <sub>1</sub>	1.2510	100MnCrMoW4	AISI O1																																																																																																										
	1.2379	X153CrMoV12	AISI D2																																																																																																										
H <sub>2</sub>																																																																																																													