

NEW

Type M - Semi-finishing

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

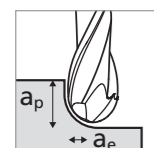
RECOMMENDATION FOR USE
● Excellent | ● Good | ○ Acceptable | ⊗ Not recommended



MILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW

Possibility 1

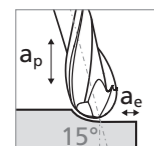
Inclination 0°



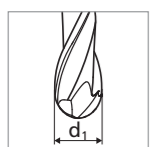
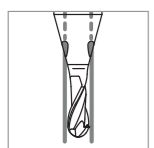
■ a_p = 1 x d₁
■ a_e = 0.2 x d₁

Possibility 2

Inclination 15°



■ a_p = 0.5 x d₁
■ a_e = 0.2 x d₁



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	f _z
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	140	0.013	140	0.014	200	0.020	200	0.022	220	0.029	220	0.031	240	0.037	260	0.040	260	0.040	260	0.043		
		1.0044	S275JR	AISI 1020	459	.00050	459	.00057	656	.00080	656	.00087	722	.00114	722	.00120	787	.00145	853	.00157	853	.00157	853	.00167		
		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	140	0.012	140	0.014	200	0.019	200	0.020	220	0.027	220	0.029	240	0.035	260	0.038	260	0.038	260	0.041		
		1.3505	100Cr6	AISI 52100	459	.00047	459	.00054	656	.00074	656	.00080	722	.00107	722	.00114	787	.00139	853	.00151	853	.00151	853	.00161		
		1.7225	42CrMo4	AISI 4140																						
		1.2842	90MnCrV8	AISI O2																						
		1.2379	X153CrMoV12	AISI D2																						
		1.2436	X210CrW12	AISI D4/D6	140	0.009	140	0.011	200	0.017	200	0.019	220	0.026	220	0.027	240	0.032	260	0.034	260	0.034	260	0.036		
M	Stainless steel ferritic	1.4016	X6Cr17	AISI 430 / UNS S43000	140	0.014	140	0.015	200	0.020	200	0.022	220	0.029	220	0.031	240	0.035	260	0.038	260	0.038	260	0.041		
		1.4105	X6CrMoS17	AISI 430F	459	.00054	459	.00060	656	.00080	656	.00087	722	.00114	722	.00120	787	.00139	853	.00151	853	.00151	853	.00161		
		1.4034	X46Cr13	AISI 420C	140	0.013	140	0.014	200	0.019	200	0.020	220	0.027	220	0.029	240	0.035	260	0.037	260	0.037	260	0.039		
	Stainless steel martensitic	1.4112	X90CrMoV18	AISI 440B	459	.00050	459	.00057	656	.00074	656	.00080	722	.00107	722	.00114	787	.00139	853	.00145	853	.00145	853	.00154		
		1.4542	X5CrNiCuNb16-4	AISI 630 / ASTM 17-4 PH	140	0.013	140	0.014	200	0.019	200	0.020	220	0.027	220	0.029	240	0.035	260	0.037	260	0.037	260	0.039		
		1.4545	X5CrNiCuNb15-5	ASTM 15-5 PH	459	.00050	459	.00057	656	.00074	656	.00080	722	.00107	722	.00114	787	.00139	853	.00145	853	.00145	853	.00154		
	Stainless steel austenitic	1.4301	X5CrNi18-10	AISI 304																						
		1.4435	X2CrNiMo18-14-3	AISI 316L	140	0.010	140	0.012	200	0.014	200	0.015	220	0.026	220	0.027	240	0.032	260	0.035	260	0.035	260	0.037		
		1.4441	X2CrNiMo18-15-3	AISI 316LM	459	.00040	459	.00047	656	.00054	656	.00060	722	.00100	722	.00107	787	.00126	853	.00139	853	.00139	853	.00147		
	K	Cast iron	0.6020	GG20	ASTM 30																					
			0.6030	GG30	ASTM 40B	120	0.009	120	0.019	140	0.020	140	0.022	160	0.024	160	0.031	180	0.034	200	0.040	200	0.042	200	0.044	
			0.7040	GGG40	ASTM 60-40-18	394	.00037	394	.00074	459	.00080	459	.00087	525	.00094	525	.00120	591	.00135	656	.00157	656	.00164	656	.00174	
0.7060			GGG60	ASTM 80-60-03																						
N	Aluminium alloy wrought	3.2315	AlMgSi1	ASTM 6351	140	0.015	140	0.017	200	0.022	200	0.024	220	0.031	220	0.034	240	0.046	260	0.048	260	0.048	260	0.051		
		3.4365	AlZnMgCu1.5	ASTM 7075	459	.00060	459	.00067	656	.00087	656	.00094	722	.00120	722	.00134	787	.00183	853	.00189	853	.00189	853	.00201		
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	140	0.015	140	0.017	200	0.022	200	0.024	220	0.031	220	0.034	240	0.046	260	0.048	260	0.048	260	0.051		
		3.2381	GD-AlSi10Mg	UNS A03590	459	.00060	459	.00067	656	.00087	656	.00094	722	.00120	722	.00134	787	.00183	853	.00189	853	.00189	853	.00201		
	Copper	2.0040	Cu-OF / CW008A	UNS C10100	140	0.017	140	0.019	200	0.022	200	0.024	220	0.031	220	0.034	240	0.046	260	0.048	260	0.048	260	0.051		
		2.0065	Cu-ETP / CW004A	UNS C11000	459	.00067	459	.00074	656	.00087	656	.00094	722	.00120	722	.00134	787	.00183	853	.00189	853	.00189	853	.00201		
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	140	0.017	140	0.019	200	0.022	200	0.024	220	0.031	220	0.034	240	0.046	260	0.048	260	0.048	260	0.051		
		2.0360	CuZn40 CW509L	UNS C28000	459	.00067	459	.00074	656	.00087	656	.00094	722	.00120	722	.00134	787	.00183	853	.00189	853	.00189	853	.00201		
	Brass, Bronze Rm < 400 N/mm ²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	140	0.017	140	0.019	200	0.022	200	0.024	220	0.031	220	0.034	240	0.046	260	0.048	260	0.048	260	0.051		
		2.1020	CuSn6	UNS C51900	459	.00067	459	.00074	656	.00087	656	.00094	722	.00120	722	.00134	787	.00183	853	.00189	853	.00189	853	.00201		
	Bronze Rm < 600 N/mm ²	2.0966	CuAl10Ni5Fe4	UNS C63000	140	0.015	140	0.017	200	0.022	200	0.024	220	0.031	220	0.034	240	0.046	260	0.048	260	0.048	260	0.051		
		2.0960	CuAl9Mn2	UNS C63200	459	.00060	459	.00067	656	.00087	656	.00094	722	.00120	722	.00134	787	.00183	853	.00189	853	.00189	853	.00201		
S ₁	Super alloys	2.4856		Inconel 625																						
		2.4668		Inconel 718	120	0.006	120	0.007	130	0.008	130	0.009	140	0.009	140	0.010	150	0.012	170	0.016	170	0.016	170	0.017		
		2.4617	NiMo28	Hastelloy B-2	394	.00023	394	.00027	427	.00030	427	.00033	459	.00033	459	.00040	492	.00047	558	.00063	558	.00063	558	.00067		
		2.4665	NiCr22Fe18Mo	Hastelloy X																						
S ₂	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	120	0.014	120	0.015	130	0.017	130	0.019	140	0.024	140	0.026	150	0.032	170	0.035	170	0.035	170	0.037		
		3.7065	Gr.4	ASTM B348 / F68	394	.00054	394	.00060	427	.00067	427	.00074	459	.00094	459	.00100	492	.00126	558	.00139	558	.00139	558	.00147		
S ₃	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	120	0.014	120	0.015	130	0.017	130	0.019	140	0.024	140	0.026	150	0.032	170	0.035	170	0.035	170	0.037		
		9.9367	TiAl6Nb7	ASTM F1295	394	.00054	394	.00060	427	.00067	427	.00074	459	.00094	459	.00100	492	.00126	558	.00139	558	.00139	558	.00147		
H ₁	Hardened steel < 55 HRC	2.4964	CoCr20W15Ni	Haynes 25	140	0.006	140	0.007	180	0.008	180	0.009	200	0.009	200	0.010	220	0.012	240	0.016	240	0.016	240	0.017		
			CrCoMo28	ASTM F1537	459	.00023	459	.00027	591	.00030	591	.00033	656	.00033	656	.00040	722	.00047								