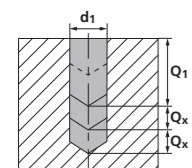
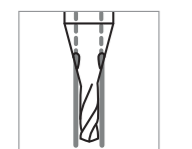


Steel - 50 x d - uncoated

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

P	N	S ₃
M	S ₁	H ₁
K	S ₂	H ₂

DRILLING WITH INTEGRATED COOLING | CUTTING DATA OVERVIEW



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	v _c [m/min]		Q ₁	Q ₂	f [mm/rev]													
					∅d1 ≤ 0.4	∅d1 > 0.4			∅d1													
									0.3 mm f	0.4 mm f	0.6 mm f	0.8 mm f	1.0 mm – 1.2 mm f									
P	Unalloyed carbon steel Rm < 800 N/mm ²	1.0301	C10	AISI 1010	5 – 40	40 – 60	7xd1	0.5xd1	0.010	0.015	0.030	0.040	0.060									
		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/mm ²	1.7131	16MnCr5	AISI 5115	5 – 25	25 – 50	7xd1	0.5xd1	0.008 – 0.010	0.012 – 0.015	0.020 – 0.025	0.035	0.050									
		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/mm ²	1.3343	HS6-5-2C	AISI M2 / UNS T11302	5 – 20	20 – 35	7xd1	0.5xd1	0.008	0.010	0.015	0.025	0.040										
	1.3355	HS18-0-1	AISI T1 / UNS T12001																			
	1.4016	X6Cr17	AISI 430 / UNS S43000										Recommended: CrazyDrill Flex SST-Inox 50 x d1									
	1.4105	X6CrMoS17	AISI 430F																			
	1.4034	X46Cr13	AISI 420C																			
	1.4112	X90CrMoV18	AISI 440B																			
1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH																				
1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH																				
1.4301	X5CrNi 18-10	AISI 304																				
1.4435	X2CrNiMo 18-14-3	AISI 316L																				
1.4441	X2CrNiMo 18-15-3	AISI 316LM																				
1.4539	X1NiCrMoCu 25-20-5	AISI 904L																				
K	Cast iron	0.6020	GG20	ASTM 30	5 – 40	50 – 100	7xd1	0.5xd1	0.010	0.015	0.020	0.035		0.050								
		0.6030	GG30	ASTM 40B																		
		0.7040	GGG40	ASTM 60-40-18																		
		0.7060	GGG60	ASTM 80-60-03																		
				40 – 80																		
N	Aluminium alloy wrought	3.2315	AlMgSi1	ASTM 6351	5 – 40	60 – 120	7xd1	1xd1	0.040	0.050	0.080	0.100	0.120									
		3.4365	AlZnMgCu1.5	ASTM 7075																		
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	5 – 40	50 – 80	7xd1	1xd1	0.040	0.050	0.080	0.100	0.120									
		3.2381	GD-AlSi10Mg	UNS A03590																		
	Copper	2.004	Cu-OF / CW008A	UNS C10100	5 – 40	60 – 100	7xd1	1xd1	0.030	0.040	0.060	0.080	0.100									
		2.0065	Cu-ETP / CW004A	UNS C11000																		
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400																		
		2.036	CuZn40 CW509L	UNS C28000																		
	Brass, Bronze Rm < 400 N/mm ²	2.0401	CuZn39Pb3 / CW614N	UNS C38500																		
		2.102	CuSn6	UNS C51900																		
Bronze Rm < 600 N/mm ²	2.0966	CuAl10Ni5Fe4	UNS C63000																			
	2.096	CuAl9Mn2	UNS C63200																			
S ₁	Super alloys	2.4856		Inconel 625										5 – 40	60 – 100	7xd1	1xd1	0.030	0.040	0.060	0.080	0.100
		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	5 – 40	60 – 100	7xd1	1xd1	0.030	0.040	0.060	0.080	0.100									
		3.7065	Gr.4	ASTM B348 / F68																		
S ₃	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	5 – 40	60 – 100	7xd1	1xd1	0.030	0.040	0.060	0.080	0.100									
		9.9367	TiAl6Nb7	ASTM F1295																		
H ₁	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1	5 – 40	60 – 100	7xd1	1xd1	0.030	0.040	0.060	0.080	0.100									
		2.4964	CoCr20W15Ni	Haynes 25																		
H ₂	Hardened steel ≥ 55 HRC	1.2379	X153CrMoV12	AISI D2	5 – 40	60 – 100	7xd1	1xd1	0.030	0.040	0.060	0.080	0.100									
			CrCoMo28	ASTM F1537																		