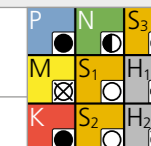
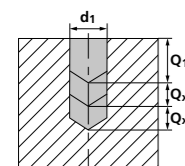
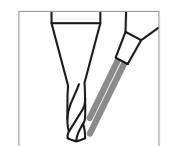


CrazyDrill Steel 4 x d

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



DRILLING WITH EXTERNAL COOLING | CUTTING DATA OVERVIEW



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	v _c [m/min]		Q ₁	Q _x	f [mm/rev]														
					Mid	High			0.4 mm	0.8 mm	1.0 mm	1.25 mm	1.5 mm	2.0 mm	2.5 mm	3.0 mm	4.0 mm	5.0 mm	6.0 mm				
									1/64" f	1/32" f	f	f	f	f	f	f	f	f	f	f			
P	Unalloyed carbon steel Rm < 800 N/mm ²	1.0301	C10	AISI 1010	80	120	4xd1	-															
		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 ²	1.5752	15NiCr13	ASTM 3415 / AISI 3310	60	80	4xd1	-															
		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/mm ²	1.2379	X153CrMoV12	AISI D2	40	60	4xd1	-															
		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																			
		1.4105	X6CrMoS17	AISI 430F																			
		1.4034	X46Cr13	AISI 420C																			
	Stainless steel martensitic	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																			
	Stainless steel martensitic – PH	1.4301	X5CrNi 18-10	AISI 304																			
		1.4435	X2CrNiMo 18-14-3	AISI 316L																			
		1.4441	X2CrNiMo 18-15-3	AISI 316LM																			
Stainless steel austenitic	1.4539	X1NiCrMoCu 25-20-5	AISI 904L																				
K	Cast iron	0.6020	GG20	ASTM 30	100	150	4xd1	-															
		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	150	220	4xd1	-															
		3.4365	AlZnMgCu1.5	ASTM 7075																			
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	150	200	4xd1	-															
		3.2381	GD-AlSi10Mg	UNS A03590																			
	Copper	2.0040	Cu-OF / CW008A	UNS C10100	80	120	1.5xd1	1xd1															
		2.0065	Cu-ETP / CW004A	UNS C11000																			
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	100	150	1.5xd1	1xd1															
		2.0360	CuZn40 CW509L	UNS C28000																			
	Brass, Bronze Rm < 400 N/mm ²	2.0401	CuZn39Pb3 / CW614N	UNS C38500	70	100	1.5xd1	1xd1															
		2.1020	CuSn6	UNS C51900																			
Bronze Rm < 600 N/mm ²	2.0966	CuAl10Ni5Fe4	UNS C63000	70	100	4xd1	-																
	2.0960	CuAl9Mn2	UNS C63200																				
S ₁	Super alloys	2.4856		Inconel 625	20	40	1xd1	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	20	40	1xd1	0.25xd1															
		3.7065	Gr.4	ASTM B348 / F68																			
S ₂	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	20	40	1xd1	0.3xd1															
		9.9367	TiAl6Nb7	ASTM F1295																			
S ₃	CrCo alloys	2.4964	CoCr20W15Ni CrCoMo28	Haynes 25 ASTM F1537	15	30	4xd1	-															
H ₁	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1	15	30	4xd1	-															
H ₂	Hardened steel ≥ 55 HRC	1.2379	X153CrMoV12	AISI D2																			