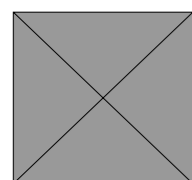
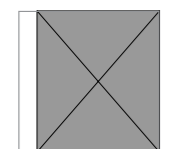


# CrazyDrill Steel 4 x d

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 <sub>c</sub> [m/min]	Q <sub>1</sub>	Q <sub>2</sub>	f [mm/rev]											
								0.4 mm 1/64" f	0.8 mm 1/32" f	1.0 mm f	1.25 mm f	1.5 mm 1/16" f	2.0 mm f	2.5 mm 3/32" f	3.0 mm 1/8" f	4.0 mm 5/32" f	5.0 mm 3/16" - 7/32" f	6.0 mm 1/4" f	
P	Unalloyed carbon steel Rm < 800 N/mm <sup>2</sup>	1.0301	C10	AISI 1010	120	4xd1	-	0.040	0.100	0.120	0.150	0.200	0.250	0.270	0.350	0.370	0.390	0.400	
		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	80	4xd1	-	0.015	0.030	0.080	0.120	0.160	0.200	0.230	0.250	0.270	0.300	0.320	
		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 <sup>2</sup>	1.2379	X153CrMoV12															AISI D2
	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	150	4xd1	-	0.040	0.150	0.200	0.250	0.300	0.350	0.400	0.450	0.470	0.490	0.500
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																
	0.6020	GG20	ASTM 30																
	0.6030	GG30	ASTM 40B																
K	Cast iron	0.7040	GGG40	ASTM 60-40-18															
		0.7060	GGG60	ASTM 80-60-03															
		3.2315	AlMgSi1	ASTM 6351															
		3.4365	AlZnMgCu1.5	ASTM 7075															
N	Aluminium alloy wrought	3.2163	GD-AlSi9Cu3	ASTM A380	200	4xd1	-	0.040	0.055	0.075	0.085	0.100	0.120	0.140	0.170	0.180	0.190	0.210	0.250
		3.2381	GD-AlSi10Mg	UNS A03590															
	Aluminium alloy cast	2.0040	Cu-OF / CW008A	UNS C10100	120	1.5xd1	1xd1	0.030	0.050	0.060	0.065	0.075	0.080	0.095	0.110	0.130	0.160	0.200	
		2.0065	Cu-ETP / CW004A	UNS C11000															
	Copper	2.0321	CuZn37 CW508L	UNS C27400	150	1.5xd1	1xd1	0.030	0.050	0.065	0.070	0.075	0.090	0.110	0.140	0.160	0.200	0.220	
		2.0360	CuZn40 CW509L	UNS C28000															
	Brass lead free	2.0401	CuZn39Pb3 / CW614N	UNS C38500	100	1.5xd1	1xd1	0.035	0.055	0.070	0.080	0.090	0.110	0.130	0.150	0.180	0.220	0.240	
		2.1020	CuSn6	UNS C51900															
	Brass, Bronze Rm < 400 N/mm <sup>2</sup>	2.0966	CuAl10Ni5Fe4	UNS C63000	100	4xd1	-	0.015	0.025	0.035	0.050	0.060	0.075	0.095	0.110	0.130	0.160	0.220	
		2.0960	CuAl9Mn2	UNS C63200															
S <sub>1</sub>	Super alloys	2.4856		Inconel 625	40	1xd1	0.25xd1	0.002	0.004	0.005	0.006	0.007	0.010	0.012	0.015	0.020	0.025	0.030	
		2.4668		Inconel 718															
		2.4617	NiMo28	Hastelloy B-2															
		2.4665	NiCr22Fe18Mo	Hastelloy X															
S <sub>2</sub>	Titanium pure	3.7035	Gr.2	ASTM B348 / F67	40	1xd1	0.25xd1	0.012	0.024	0.030	0.040	0.045	0.060	0.075	0.090	0.120	0.150	0.180	
		3.7065	Gr.4	ASTM B348 / F68															
S <sub>2</sub>	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	20	1xd1	0.3xd1	0.020	0.030	0.040	0.050	0.055	0.070	0.080	0.100	0.140	0.160	0.200	
		9.9367	TiAl6Nb7	ASTM F1295															
S <sub>3</sub>	CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	30	4xd1	-	0.006	0.012	0.015	0.020	0.025	0.030	0.035	0.045	0.060	0.075	0.090	
			CrCoMo28	ASTM F1537															
H <sub>1</sub>	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1	30	4xd1	-	0.005	0.007	0.010	0.011	0.012	0.015	0.020	0.025	0.030	0.035	0.040	
		1.2379	X153CrMoV12	AISI D2															
H <sub>2</sub>	Hardened steel ≥ 55 HRC																		