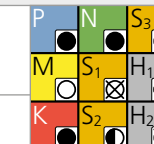
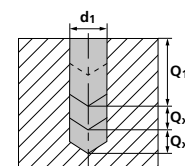
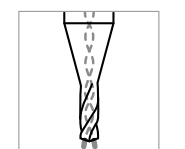


# CrazyDrill Cool XL 40 x d

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



## DRILLING WITH INTERNAL COOLING | CUTTING DATA OVERVIEW



Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	v <sub>c</sub>		Q <sub>1</sub>	Q <sub>x</sub>	f [mm/rev]					
					[m/min]				Ød1					
					Mid	High			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 f
P	Unalloyed carbon steel Rm < 800 N/mm <sup>2</sup>	1.0301	C10	AISI 1010	50	120	40xd1	-	0.060	0.075	0.090	0.110	0.120	0.130
		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	50	120	40xd1	-	0.060	0.075	0.090	0.110	0.120	0.130
		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	40	100	40xd1	-	0.050	0.060	0.075	0.095	0.110	0.120
		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	30	60	40xd1	-	0.045	0.055	0.065	0.080	0.095	0.100
		1.4105	X6CrMoS17	AISI 430F										
	Stainless steel martensitic	1.4034	X46Cr13	AISI 420C	40	80	40xd1	-	0.045	0.055	0.065	0.080	0.095	0.100
		1.4112	X90CrMoV18	AISI 440B										
	Stainless steel martensitic - PH	1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH										
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH										
	Stainless steel austenitic	1.4301	X5CrNi 18-10	AISI 304	30	60	5xd1	2xd1	0.045	0.055	0.065	0.080	0.095	0.100
		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	80	150	40xd1	-	0.100	0.110	0.130	0.150	0.170	0.180
		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	100	200	40xd1	-	0.070	0.100	0.120	0.160	0.190	0.200
		3.4365	AlZnMgCu1.5	ASTM 7075										
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380	80	150	40xd1	-	0.060	0.080	0.100	0.120	0.150	0.200
		3.2381	GD-AlSi10Mg	UNS A03590										
	Copper	2.004	Cu-OF / CW008A	UNS C10100	40	80	2xd1	2xd1	0.065	0.080	0.110	0.130	0.160	0.190
		2.0065	Cu-ETP / CW004A	UNS C11000										
	Brass lead free	2.0321	CuZn37 CW508L	UNS C27400	40	80	2xd1	2xd1	0.065	0.080	0.110	0.130	0.160	0.190
		2.036	CuZn40 CW509L	UNS C28000										
Brass, Bronze Rm < 400 N/mm <sup>2</sup>	2.0401	CuZn39Pb3 / CW614N	UNS C38500	50	120	40xd1	-	0.100	0.120	0.140	0.180	0.210	0.230	
	2.102	CuSn6	UNS C51900											
Bronze Rm < 600 N/mm <sup>2</sup>	2.0966	CuAl10Ni5Fe4	UNS C63000	40	80	40xd1	-	0.065	0.090	0.110	0.130	0.150	0.190	
	2.096	CuAl9Mn2	UNS C63200											
S <sub>1</sub>	Super alloys	2.4856		Inconel 625										
		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	25	50	3xd1	1xd1	0.030	0.040	0.055	0.070	0.080	0.100
		3.7065	Gr.4	ASTM B348 / F68										
S <sub>2</sub>	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136	20	40	5xd1	1xd1	0.030	0.040	0.055	0.070	0.080	0.100
		9.9367	TiAl6Nb7	ASTM F1295										
S <sub>3</sub>	CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	20	40	5xd1	2xd1	0.030	0.040	0.055	0.070	0.080	0.100
			CrCoMo28	ASTM F1537										
H <sub>1</sub>	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1	20	40	5xd1	1xd1	0.020	0.025	0.030	0.040	0.050	0.060
H <sub>2</sub>	Hardened steel ≥ 55 HRC	1.2379	X153CrMoV12	AISI D2										