CRAZYDRILL by Mikron Tool Coolpilot

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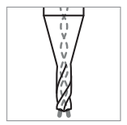
PILOT DRILLING AND SHORT DRILLING TOOLS
CRAZYDRILL COOLPILOT

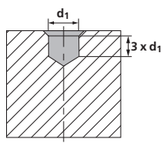
CrazyDrill Coolpilot - 3 x d - 90° countersink

RECOMMENDATION FOR USE
● Excellent | ◐ Good | ○ Acceptable | ⊠ Not recommended

P ⊠ | N ⊠ | S3 ●
M ● | S1 ● | H1 ⊠
K ⊠ | S2 ⊠ | H2 ⊠

DRILLING WITH THROUGH-TOOL COOLING | CUTTING DATA OVERVIEW





Materials group	Material	Mat. no.	DIN	AISI/ASTM/UNS	v_c [m/min] | [SFM] Low	Mid	High
P	Unalloyed carbon steel Rm < 800 N/mm²	1.0301	C10	AISI 1010			
		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/mm²	1.5752	15NiCr13	ASTM 3415 / AISI 3310			
		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/mm²	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	60 | **197**	80 | **262**	100 | **328**
		1.4105	X6CrMoS17	AISI 430F			
	Stainless steel martensitic	1.4034	X46Cr13	AISI 420C	60 | **197**	80 | **262**	100 | **328**
		1.4112	X90CrMoV18	AISI 440B			
	Stainless steel martensitic – PH	1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH	60 | **197**	80 | **262**	100 | **328**
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH			
	Stainless steel austenitic	1.4301	X5CrNi 18-10	AISI 304	60 | **197**	80 | **262**	100 | **328**
		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			
		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			
		3.4365	AlZnMgCu1.5	ASTM 7075			
	Aluminium alloy cast	3.2163	GD-AlSi9Cu3	ASTM A380			
		3.2381	GD-AlSi10Mg	UNS A03590			
	Copper	2.004	Cu-OF / CW008A	UNS C10100			
		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/mm²	2.0401	CuZn39Pb3 / CW614N	UNS C38500			
		2.102	CuSn6	UNS C51900			
	Bronze Rm < 600 N/mm²	2.0966	CuAl10Ni5Fe4	UNS C63000			
		2.096	CuAl9Mn2	UNS C63200			
S1	Super alloys	2.4856		Inconel 625	30 | **98**	40 | **131**	50 | **164**
		2.4668		Inconel 718			
		2.4617	NiMo28	Hastelloy B-2			
		2.4665	NiCr22Fe18Mo	Hastelloy X			
S2	Titanium pure	3.7035	Gr.2	ASTM B348 / F67			
		3.7065	Gr.4	ASTM B348 / F68			
	Titanium alloys	3.7165	TiAl6V4	ASTM B348 / F136			
		9.9367	TiAl6Nb7	ASTM F1295			
S3	CrCo alloys	2.4964	CoCr20W15Ni	Haynes 25	50 | **164**	70 | **230**	90 | **295**
			CrCoMo28	ASTM F1537			
H1	Hardened steel < 55 HRC	1.2510	100MnCrMoW4	AISI O1			
H2	Hardened steel ≥ 55 HRC	1.2379	X153CrMoV12	AISI D2			

f [mm/rev] | **[IPR]**

Materials group	Material	Mat. no.	Ød1 1.0 mm | **.039"** Low	Mid	High	1.25 mm | **.049"** Low	Mid	High	**1/16"** 1.5 mm | **.059"** Low	Mid	High	**3/32"** 2.0 mm | **.079"** Low	Mid	High	2.5 mm | **.098"** Low	Mid	High	**1/8"** 3.0 mm | **.118"** Low	Mid	High	**5/32"** 4.0 mm | **.158"** Low	Mid	High	**3/16" - 7/32"** 5.0 mm | **.197"** Low	Mid	High	**1/4"** 6.0 mm | **.236"** Low	Mid	High
P	Unalloyed carbon steel Rm < 800 N/mm²	1.0301																												
		1.0401																												
		1.1191																												
		1.0044																												
		1.0715																												
	Low alloyed steel Rm > 900 N/mm²	1.5752																												
		1.7131																												
		1.3505																												
		1.7225																												
		1.2842																												
	High alloyed tool steel Rm < 1200 N/mm²	1.2379																												
		1.2436																												
		1.3343																												
		1.3355																												
M	Stainless steel ferritic	1.4016	0.010	0.020	0.030	0.013	0.025	0.038	0.015	0.030	0.045	0.020	0.040	0.060	0.025	0.050	0.075	0.030	0.060	0.090	0.040	0.080	0.120	0.050	0.100	0.150	0.060	0.120	0.180
		1.4105	**.0004**	**.0008**	**.0012**	**.0005**	**.0010**	**.0015**	**.0006**	**.0012**	**.0018**	**.0008**	**.0016**	**.0024**	**.0010**	**.0020**	**.0030**	**.0012**	**.0024**	**.0035**	**.0016**	**.0031**	**.0047**	**.0020**	**.0039**	**.0059**	**.0024**	**.0047**	**.0071**
	Stainless steel martensitic	1.4034	0.030	0.040	0.050	0.038	0.050	0.063	0.045	0.060	0.075	0.060	0.080	0.100	0.075	0.100	0.125	0.090	0.120	0.150	0.120	0.160	0.200	0.150	0.200	0.250	0.180	0.240	0.300
		1.4112	**.0012**	**.0016**	**.0020**	**.0015**	**.0020**	**.0025**	**.0018**	**.0024**	**.0030**	**.0024**	**.0031**	**.0039**	**.0030**	**.0039**	**.0049**	**.0035**	**.0047**	**.0059**	**.0047**	**.0063**	**.0079**	**.0059**	**.0079**	**.0098**	**.0071**	**.0094**	**.0118**
	Stainless steel martensitic – PH	1.4542	0.020	0.030	0.040	0.025	0.038	0.050	0.030	0.045	0.060	0.040	0.060	0.080	0.050	0.075	0.100	0.060	0.090	0.120	0.080	0.120	0.160	0.100	0.150	0.200	0.120	0.180	0.240
		1.4545	**.0008**	**.0012**	**.0016**	**.0010**	**.0015**	**.0020**	**.0012**	**.0018**	**.0024**	**.0016**	**.0024**	**.0031**	**.0020**	**.0030**	**.0039**	**.0024**	**.0035**	**.0047**	**.0031**	**.0047**	**.0063**	**.0039**	**.0059**	**.0079**	**.0047**	**.0071**	**.0094**
	Stainless steel austenitic	1.4301	0.020	0.030	0.040	0.025	0.038	0.050	0.030	0.045	0.060	0.040	0.060	0.080	0.050	0.075	0.100	0.060	0.090	0.120	0.080	0.120	0.160	0.100	0.150	0.200	0.120	0.180	0.240
		1.4435	**.0008**	**.0012**	**.0016**	**.0010**	**.0015**	**.0020**	**.0012**	**.0018**	**.0024**	**.0016**	**.0024**	**.0031**	**.0020**	**.0030**	**.0039**	**.0024**	**.0035**	**.0047**	**.0031**	**.0047**	**.0063**	**.0039**	**.0059**	**.0079**	**.0047**	**.0071**	**.0094**
		1.4441																											
		1.4539																											
K	Cast iron	0.6020																											
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N	Aluminium alloy wrought	3.2315																											
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	Copper	2.004																											
		2.0065																											
	Brass lead free	2.0321																											
		2.036																											
	Brass, Bronze Rm < 400 N/mm²	2.0401																											
		2.102																											
	Bronze Rm < 600 N/mm²	2.0966																											
		2.096																											
S1	Super alloys	2.4856	0.010	0.015	0.020	0.013	0.019	0.025	0.015	0.023	0.030	0.020	0.030	0.040	0.025	0.038	0.050	0.030	0.045	0.060	0.040	0.060	0.080	0.050	0.075	0.100	0.060	0.090	0.120
		2.4668	**.0004**	**.0006**	**.0008**	**.0005**	**.0007**	**.0010**	**.0006**	**.0009**	**.0012**	**.0008**	**.0012**	**.0016**	**.0010**	**.0015**	**.0020**	**.0012**	**.0018**	**.0024**	**.0016**	**.0024**	**.0031**	**.0020**	**.0030**	**.0039**	**.0024**	**.0035**	**.0047**
		2.4617																											
		2.4665																											
S2	Titanium pure	3.7035																											
		3.7065																											
	Titanium alloys	3.7165																											
		9.9367																											
S3	CrCo alloys	2.4964	0.020	0.030	0.040	0.025	0.038	0.050	0.030	0.045	0.060	0.040	0.060	0.080	0.050	0.075	0.100	0.060	0.090	0.120	0.080	0.120	0.160	0.100	0.150	0.200	0.120	0.180	0.240
			.0008	**.0012**	**.0016**	**.0010**	**.0015**	**.0020**	**.0012**	**.0018**	**.0024**	**.0016**	**.0024**	**.0031**	**.0020**	**.0030**	**.0039**	**.0024**	**.0035**	**.0047**	**.0031**	**.0047**	**.0063**	**.0039**	**.0059**	**.0079**	**.0047**	**.0071**	**.0094**
H1	Hardened steel < 55 HRC	1.2510																											
H2	Hardened steel ≥ 55 HRC	1.2379																											

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