

CrazyDrill Pilot - 2 x d - 90° coutersink

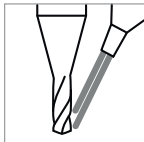
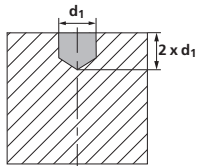
RECOMMENDATION FOR USE

● Excellent | ● Good | ○ Acceptable | ⊗ Not recommended

P	N	S ₃
M	S ₁	H ₁
K	S ₂	H ₂

DRILLING WITH EXTERNAL COOLING | CUTTING DATA OVERVIEW

Materials group	Material	AISI/ASTM/UNS	v _c [m/min] [SFM]	f [mm/rev] [IPR]										
				Ød1 0.4 mm .016" f	Ød1 0.8 mm .032" f	Ød1 1.0 mm .039" f	Ød1 1.5 mm .059" f	Ød1 2.0 mm .079" f	Ød1 2.5 mm .098" f	Ød1 3.0 mm .118" f	Ød1 4.0 mm .158" f	Ød1 5.0 mm .197" f	Ød1 6.0 mm .236" f	
P	Unalloyed carbon steel Rm < 800 N/mm²	AISI 1010	32 – 64 105 – 210	0.008 .00031	0.044 .0017	0.064 .0025	0.112 .0044	0.144 .0057	0.168 .0066	0.192 .0076	0.224 .0088	0.248 .0098	0.272 .0107	
		AISI 1015												
		AISI 1045												
		AISI 1020												
	Low alloyed steel Rm > 900 N/mm²	ASTM 3415 / AISI 3310	32 – 64 105 – 210	0.008 .00031	0.044 .0017	0.064 .0025	0.096 .0038	0.120 .0047	0.136 .0054	0.152 .0060	0.176 .0069	0.192 .0076	0.208 .0082	
		AISI 5115												
		AISI 52100												
		AISI 4140												
	High alloyed tool steel Rm < 1200 N/mm²	AISI D2	24 – 48 79 – 158	0.008 .00031	0.016 .0006	0.040 .0016	0.064 .0025	0.088 .0035	0.104 .0041	0.120 .0047	0.144 .0057	0.160 .0063	0.176 .0069	
AISI D4/D6														
AISI M2 / UNS T11302														
M	Stainless steel ferritic	AISI 430 / UNS S43000	20 – 40 66 – 131	0.008 .00031	0.009 .00035	0.024 .0009	0.048 .0019	0.064 .0025	0.072 .0028	0.080 .0031	0.096 .0038	0.104 .0041	0.112 .0044	
		AISI 430F												
		AISI 420C												
	Stainless steel martensitic	AISI 440B	24 – 48 79 – 158	0.008 .00031	0.016 .0006	0.040 .0016	0.064 .0025	0.088 .0035	0.104 .0041	0.120 .0047	0.144 .0057	0.160 .0063	0.176 .0069	
		AISI 630 / ASTM 17-4 PH												
	Stainless steel martensitic – PH	ASTM 15-5 PH	16 – 32 53 – 105	0.008 .00031	0.009 .00035	0.016 .0006	0.040 .0016	0.056 .0022	0.064 .0025	0.072 .0028	0.088 .0035	0.096 .0038	0.104 .0041	
		AISI 304												
	Stainless steel austenitic	AISI 316L	16 – 32 53 – 105	0.008 .00031	0.009 .00035	0.016 .0006	0.040 .0016	0.056 .0022	0.064 .0025	0.072 .0028	0.088 .0035	0.096 .0038	0.104 .0041	
		AISI 316LM												
AISI 904L														
K	Cast iron	ASTM 30	40 – 80 131 – 263	0.008 .00031	0.040 .0016	0.064 .0025	0.096 .0038	0.120 .0047	0.120 .0047	0.120 .0047	0.160 .0063	0.160 .0063	0.160 .0063	
		ASTM 40B												
		ASTM 60-40-18												
		ASTM 80-60-03												



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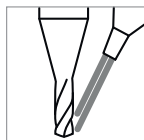
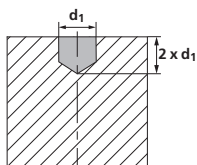
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DRILLING WITH EXTERNAL COOLING | CUTTING DATA OVERVIEW

Materials group	Material	AISI/ASTM/UNS	v _c [m/min] [SFM]	f [mm/rev] [IPR]									
				Ød1 0.4 mm .016"	Ød1 0.8 mm .032"	Ød1 1.0 mm .039"	Ød1 1.5 mm .059"	Ød1 2.0 mm .079"	Ød1 2.5 mm .098"	Ød1 3.0 mm .118"	Ød1 4.0 mm .158"	Ød1 5.0 mm .197"	Ød1 6.0 mm .236"
				f	f	f	f	f	f	f	f	f	f
N	Aluminium alloy wrought	ASTM 6351 ASTM 7075	80 – 160 263 – 525	0.008 .00031	0.040 .0016	0.080 .0031	0.096 .0038	0.120 .0047	0.160 .0063	0.160 .0063	0.200 .0079	0.200 .0079	0.200 .0079
	Aluminium alloy cast	ASTM A380 UNS A03590	64 – 120 210 – 394	0.012 .0005	0.064 .0025	0.088 .0035	0.128 .0050	0.160 .0063	0.200 .0079	0.200 .0079	0.224 .0088	0.224 .0088	0.224 .0088
	Copper	UNS C10100 UNS C11000	40 – 80 131 – 263	0.012 .0005	0.024 .0009	0.048 .0019	0.064 .0025	0.080 .0031	0.112 .0044	0.128 .0050	0.144 .0057	0.160 .0063	0.176 .0069
	Brass lead free	UNS C27400 UNS C28000	40 – 80 131 – 263	0.016 .0006	0.032 .0013	0.064 .0025	0.080 .0031	0.096 .0038	0.128 .0050	0.144 .0057	0.160 .0063	0.176 .0069	0.192 .0076
	Brass, Bronze Rm < 400 N/mm²	UNS C38500 UNS C51900	56 – 120 184 – 394	0.012 .0005	0.048 .0019	0.080 .0031	0.096 .0038	0.120 .0047	0.160 .0063	0.160 .0063	0.200 .0079	0.200 .0079	0.200 .0079
	Bronze Rm < 600 N/mm²	UNS C63000 UNS C63200	32 – 56 105 – 184	0.008 .00031	0.040 .0016	0.064 .0025	0.080 .0031	0.096 .0038	0.120 .0047	0.120 .0047	0.160 .0063	0.160 .0063	0.160 .0063
S ₁	Super alloys	Inconel 625											
		Inconel 718											
		Hastelloy B-2											
Hastelloy X													
S ₂	Titanium pure	ASTM B348 / F67	10 – 32 32 – 105	0.008 .00031	0.024 .0009	0.032 .0013	0.048 .0019	0.056 .0022	0.064 .0025	0.064 .0025	0.080 .0031	0.080 .0031	0.096 .0038
		ASTM B348 / F68											
S ₃	Titanium alloys	ASTM B348 / F136	10 – 44 32 – 144	0.008 .00031	0.064 .0025	0.072 .0028	0.088 .0035	0.096 .0038	0.100 .0039	0.104 .0041	0.112 .0044	0.120 .0047	0.120 .0047
		ASTM F1295											
H ₁	Hardened steel < 55 HRC	AISI O1	16 – 32 53 – 105	0.008 .00031	0.006 .00024	0.008 .00031	0.012 .0005	0.016 .0006	0.020 .0008	0.024 .0009	0.032 .0013	0.040 .0016	0.048 .0019
H ₂	Hardened steel ≥ 55 HRC	AISI D2											



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