

Machining values for MEGA-Drill-Reamer



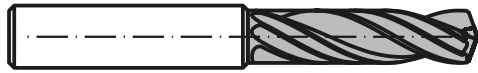
M2263, M2265

Material		Hardness Rockwell (HRc) Hardness Brinell (BHN) Tensile strength (N/mm ²)			Cutting speed (v _c) M2263, M2265		
		HRc	BHN	N/mm ²	m/min		
P	Non-alloyed steels, cast steels 1018, 1108-1161, 12L14, 1522-1572	up to 8 up to 15	up to 178 up to 205	up to 600 up to 700	262-328 230-295	80-100 70-90	
	Alloyed steels 5132, 4130, 8620, 4140, 4340, 5140, 6150	over 15 up to 27 up to 31	over 205 up to 266 up to 297	over 700 up to 900 up to 1000	197-262 197-230 131-197	60-80 60-70 40-60	
M	Stainless steels inox 17-4PH, 15-5PH	over 31	over 297	over 1000	131-164	40-50	
	Stainless and acid resistant steels (Cr-Ni-Alloys) 304, 316, 17CrNi16-2						
K ₁	Grey cast iron, grey cast iron alloys GG10-GG40, A48	up to 14 up to 24	up to 200 up to 250	up to 680 up to 850	230-295 197-262	70-90 60-80	
K ₂	Spheroidal graphite cast iron, cast iron with vermicular graphite, malleable iron GGG40-GGG80	over 24 up to 8	over 250 up to 178	over 850 up to 600	197-230 180-230	60-70 55-70	
		over 8	over 178	over 600	147-197	45-60	
N	Alluminium (Si content > 10%) 6061, 2025, 208, 360				262-328 ¹⁾	80-100 ¹⁾	
	Aluminium (Si content < 10%) 413, 385, A390				295-394 ¹⁾	90-120 ¹⁾	
	Copper, brass, bronze Beryllium copper, naval brass, AMPCO						
S	Titanium alloys TiAl4V						
	Nickel alloys Inconel 718, Rene 41, Waspolloy						
H	Chilled cast iron	38-48	350-450	1173-1527			
	Hardened steel	50-55		1614-1870			
		56-60					
		61-65					

¹⁾ only M2263

The guideline values for cutting speed v_c should be multiplied by the following correction factors K_{Fv} according to the drilling depth

Depth / Diameter ratio	K _{Fv}
1 x D	1.3
2 x D	1.2
3 x D	1.0
4 x D	1.0
5 x D	0.8
8 x D	0.7
12 x D	0.6



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Recommended feed (f) for diameter ranges									
0.118 to 0.197 in. 3 to 5 mm		0.197 to 0.316 in. 5 to 8 mm		0.316 to 0.472 in. 8 to 12 mm		0.472 to 0.630 in. 12 to 16 mm		0.630 to 0.787 in. 16 to 20 mm	
IPR		mm/rev	IPR	mm/rev	IPR	mm/rev	IPR	mm/rev	IPR
0.004-0.007	0.10-0.18	0.006-0.010	0.15-0.25	0.007-0.012	0.18-0.30	0.008-0.012	0.20-0.35		
0.004-0.007	0.10-0.18	0.006-0.010	0.15-0.25	0.007-0.012	0.18-0.30	0.008-0.012	0.20-0.35		
0.004-0.008	0.10-0.20	0.006-0.011	0.15-0.28	0.007-0.014	0.18-0.35	0.008-0.015	0.20-0.38		
0.004-0.008	0.10-0.20	0.006-0.011	0.15-0.28	0.007-0.014	0.18-0.35	0.008-0.015	0.20-0.38		
0.004-0.006	0.10-0.15	0.005-0.008	0.12-0.20	0.005-0.010	0.14-0.25	0.006-0.012	0.16-0.30		
0.004-0.006	0.10-0.15	0.005-0.008	0.12-0.20	0.005-0.010	0.14-0.25	0.006-0.012	0.16-0.30		
0.006-0.010	0.15-0.25	0.008-0.014	0.20-0.35	0.010-0.018	0.25-0.45	0.012-0.020	0.30-0.50		
0.006-0.010	0.15-0.25	0.008-0.014	0.20-0.35	0.010-0.018	0.25-0.45	0.012-0.020	0.30-0.50		
0.005-0.008	0.12-0.20	0.006-0.010	0.15-0.25	0.008-0.014	0.20-0.35	0.010-0.016	0.25-0.40		
0.004-0.007	0.10-0.18	0.006-0.010	0.15-0.25	0.007-0.012	0.18-0.30	0.008-0.014	0.20-0.35		
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