

Machining values for MEGA-Quadro-Drill



M2175, M2178, M2182



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	Material	Hardness Rockwell (HRc) Hardness Brinell (BHN) Tensile strength (N/mm ²)			Cutting speed (v _c)		
		HRc	BHN	N/mm ²	M2175 M2178 M2182 SFM	m/min	
P	Non-alloyed steels, cast steels 1018, 1108-1161, 12L14, 1522-1572	up to 8	up to 178	up to 600	262-328	80-100	
		up to 15 over 15	up to 205 over 205	up to 700 over 700	230-295 197-262	70-90 60-80	
P	Alloyed steels 5132, 4130, 8620, 4140, 4340, 5140, 6150	up to 27	up to 266	up to 900	197-230	60-70	
		up to 31 over 31	up to 297 over 297	up to 1000 over 1000	131-197 131-164	40-60 40-50	
M	Stainless steels inox 17-4PH, 15-5PH				98-164	30-50	
	Stainless and acid resistant steels (Cr-Ni-Alloys) 304, 316, 17CrNi16-2				98-131	30-40	
K ₁	Grey cast iron, grey cast iron alloys GG10-GG40, A48	up to 14	up to 200	up to 680	230-295	70-90	
		up to 24 over 24	up to 250 over 250	up to 850 over 850	197-262 197-230	60-80 60-70	
K ₂	Spheroidal graphite cast iron, cast iron with vermicular graphite, malleable iron GGG40-GGG80	up to 8	up to 178	up to 600	246-295	75-90	
		over 8	over 178	over 600	213-262	65-80	
N	Alluminium (Si content > 10%) 6061, 2025, 208, 360						
	Aluminium (Si content < 10%) 413, 385, A390						
	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	131-230	40-70	
	Hardened steel	50-55		1614-1870			
		56-60					
		61-65					

The guideline values for cutting speed v_c should be multiplied by the following correction factors KF_v according to the drilling depth

Depth / Diameter ratio	KF _v
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

