

# Machining values for GIGA-Drill



## M2195



M2195

Material		Hardness Rockwell (HRc) Hardness Brinell (BHN) Tensile strength (N/mm <sup>2</sup> )			Cutting speed (v <sub>c</sub> ) M2195			
		HRc	BHN	N/mm <sup>2</sup>	SFM	m/min		
P	Non-alloyed steels, cast steels 1018, 1108-1161, 12L14, 1522-1572	up to 8 up to 15 over 15	up to 178 up to 205 over 205	up to 600 up to 700 over 700				
	Alloyed steels 5132, 4130, 8620, 4140, 4340, 5140, 6150	up to 27 up to 31 over 31	up to 266 up to 297 over 297	up to 900 up to 1000 over 1000				
M	Stainless steels inox 17-4PH, 15-5PH							
	Stainless and acid resistant steels (Cr-Ni-Alloys) 304, 316, 17CrNi16-2							
K <sub>1</sub>	Grey cast iron, grey cast iron alloys GG10-GG40, A48	up to 14 up to 24 over 24	up to 200 up to 250 over 250	up to 680 up to 850 over 850	230-295 197-262 197-230	70-90 60-80 60-70		
K <sub>2</sub>	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				295-984	90-300		
	Aluminium (Si content < 10 %) 413, 385, A390				328-1312	100-400		
	Copper, brass, bronze Beryllium copper, naval brass, AMPCO				230-984	70-300		
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						

The guideline values for cutting speed v<sub>c</sub> should be multiplied by the following correction factors K<sub>Fv</sub> according to the drilling depth

Depth / Diameter ratio	K <sub>Fv</sub>
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

