Heavy Duty Cut - Technical Resources

Extremely aggressive cross cut geometry designed for maximum stock removal and for heavy deburring

- Fast metal removal with optimized cutting geometry for demanding applications.
- Developed for tough grinding conditions like shipyards and foundries.
- For use on: ferrous metals including cast iron, steel < 60 HRC, copper, brass, and bronze.

Application

Steel	Hardened Steel	Stainless	Cast Iron	Titanium	Cermet	Nickel	Copper, Copper Alloys	Aluminum	Plastics GRP/CRP
●		○	●	○		○	○		

● = Optimal
○ = Good

Recommended Operating Speeds

The operating speeds listed below serve as a guide for using tungsten carbide burs, based on bur head diameter.

Material groups			Application	Cutting speed	
				SFPM	m/min
Steel, cast steel	Non-hardened, non-heat treated steels up to 1200 N/mm² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steels	Coarse machining = high stock removal with impact load	820-2953	250-900
	Hardened, heat treated steels exceeding 1200 N/mm² (> 38 HRC)	Tool steels, tempered steels, alloyed steels, cast steels	Coarse machining = high stock removal with impact load	820-1148	250-350
Non-Ferrous metals	High-temperature resistant materials	Nickel based alloys cabalt based alloys (aircraft engine and turbine construction)	Coarse machining = high stock removal with impact load	820-1476	250-450
Cast iron	Gray cast iron, white cast iron	Cast-iron with flake graphite EN-GJL (GG), with nodular graphite cast iron EN-GJS (GGG), white anneales cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	Coarse machining = high stock removal with impact load	820-1969	250-600

Cutting speed					
SFM		820	1640	1969	2953
m/min		250	500	600	900
Ø (in)	Ø (mm)	Rotational speed (rpm)			
1/4	6	13,000	27,000	32,000	48,000
5/16	8	10,000	20,000	24,000	36,000
3/8	9.6	8,000	16,000	19,000	30,000
1/2	12	7,000	13,000	16,000	24,000
5/8	16	5,000	10,000	12,000	18,000

Recommended speeds are based on standard shank length burs up to 1 ¾", with maximum overhang of 3/8".
Max operating speed of 15,000 rpm for extended shanks (>1 ¾").