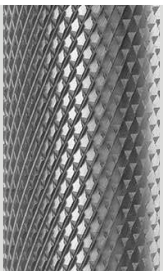
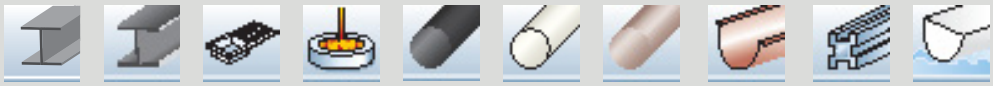
Fine Cut - Technical Resources

Extremely fine finishing and longer life alternative to mounted points

- Ensures excellent control even in difficult-to-reach areas.
- Delivers high-quality surface finishes with smooth operation.
- For use on: all types of steel including hardened steels < 70 HRC, nickel-based and cobalt-based alloys.



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	Fine machining = medium stock removal	2133-2953	650-900
	Hardened, heat-treated steels exceeding 1200 N/mm² (> 38 HRC)	Tool steels, tempered steels, alloyed steel, cast steels		1476-1969	450-600
Stainless steel	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Fine machining = medium stock removal	1476-1969	450-600
Non-ferrous metals	Hard-non-ferrous metals	Bronze, titanium/titanium alloys, hard alu-alloys (high Si content)	Fine machining = medium stock removal	1476-1969	450-600
	High-temperature resistant materials	Nickel based alloys, cobalt based alloys (aircraft engine and turbine construction)		2133-2461	650-750
Cast iron	Gray cast iron, white cast iron	Cast iron with flake graphite EN-GJL, with nodular graphite cast iron EN-GJS, white annealed cast iron EN-GJMW, black cast iron EN-GJMB	Fine machining = medium stock removal	2133-2461	650-750

Cutting speed						
SFM		1476	1969	2133	2461	2953
m/min		450	600	650	750	900
ø (in)	ø (mm)	Rotational speed (rpm)				
5/64	2	72,000	95,000	104,000	120,000	100,000
1/8	3	48,000	64,000	68,000	80,000	100,000
5/32	4	36,000	48,000	52,000	60,000	70,000
1/4	6	24,000	32,000	34,000	40,000	48,000
5/16	8	18,000	24,000	26,000	30,000	36,000
3/8	9.6	14,000	19,000	21,000	24,000	30,000
1/2	12	12,000	16,000	18,000	21,000	24,000
5/8	16	9,000	12,000	14,000	17,000	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").