Non-Ferrous Cut - Technical Resources

Non-ferrous cut for rapid stock removal of softer materials including plastic

- Wide flute design to prevent loading and material buildup.
- Optimized for softer non-ferrous materials and plastics.
- Delivers smooth cutting action with reduced heat buildup.
- For use on: aluminum alloys, copper, brass, plastics, and fiber-reinforced plastic (GRP/CRP).

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
Non-ferrous metals	Soft non-ferrous metals	Alu alloys, brass, copper, zinc	Coarse machining = high stock removal	1969-2953	600-900
			Fine machining = low stock removal	1969-2953	600-900
	Hard non-ferrous metals	Bronze, titanium, hard aluminum alloys (high Si content)	Coarse machining = high stock removal	1969-2953	600-900
			Fine machining = low stock removal	1969-2953	600-900
Plastics, other materials	Fiber-reinforced plastic (GRP/CRP) thermoplastics, hard rubber		Coarse machining = high stock removal	1640-2953	500-900
			Fine machining = low stock removal	1640-2953	500-900

Cutting speed				
SFM		1640	1969	2953
m/min		500	600	900
Ø (in)	Ø(mm)	Rotational speed (rpm)		
5/64	2	80,000	95,000	100,000
1/8	3	53,000	64,000	100,000
5/32	4	40,000	48,000	70,000
1/4	6	27,000	32,000	48,000
5/16	8	20,000	24,000	36,000
3/8	9.6	16,000	19,000	30,000
1/2	12	13,000	16,000	24,000
5/8	16	10,000	12,000	18,000
3/4	20	8,000	10,000	15,000
1	25	6,000	8,000	12,000

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").