

# Tungsten Carbide Burs

## for Aluminum and Non-Ferrous Metals



PFERD has optimized the ALU cut especially for stock removal of aluminum. This cut is characterized by its high stock removal performance on all grades of aluminum.

### Note

You can find the coated tungsten carbide ALU cut under tungsten carbide burs HICOAT™, coating HC-NFE, on pages 33-34.

Please request a copy of the PRAXIS "PFERD Tools for Use on Aluminum" for instructions and further information on working with aluminum.

### Application Examples

- Contouring.
- Bore deburring.
- Milling in preparation of build-up welding.
- Suitable for milling work (deburring, weld dressing, contouring etc.) Also suitable for work on small and miniature components in mould, machine and model construction.

#### ALU Cut



### Advantages of ALU Cut

- Reduces loading.
- Long tool life.
- Large chip volume and high stock removal performance.
- Can be used with cutting rates of up to 3,600 SFPM.
- Smooth running.

### Recommendations for Use

The use of grinding oil prevents chips adhering during work on soft aluminum alloys. This increases the tool life and improves the finish of the workpiece.

#### ALU PLUS Cut



### Advantages of ALU PLUS Cut

- Designed for maximum stock removal of non-ferrous metals, brass, copper, hard aluminum alloys, plastics, fibre-reinforced plastics and rubber.

### Recommended Rotational Speed Range

To determine the recommended cutting speed [SFPM], please proceed as follows:

- 1 Select the workpiece material that is to be processed.
- 2 Determine the type of application.

- 3 Select the cut.
- 4 Establish the cutting speed range.

To determine the recommended rotational speed [RPM], please proceed as follows:

- 5 Select the required bur diameter.
- 6 The cutting speed range and the bur diameter determine the recommended rotational speed range [RPM].

1 Workpiece Material/Colour Code		2 Application	3 Cut	4 Cutting Speed
Non-ferrous metals	Soft non-ferrous metals	Aluminum alloys, brass, copper, zinc	ALU	2,000 - 3,600 SFPM
			ALU PLUS	1,300 - 1,650 SFPM
	Hard non-ferrous metals	Bronze, titanium, hard aluminum alloys (high Si content)	ALU	2,650 - 3,600 SFPM
			ALU PLUS	2,000 - 3,600 SFPM
Plastics and other materials	Fibre-reinforced plastics (GRP/CRP), thermoplastics, hard rubber	ALU	1,300 - 1,650 SFPM	
		ALU PLUS	2,950 - 3,600 SFPM	
		ALU	1,650 - 3,600 SFPM	
		ALU PLUS	1,650 - 2,950 SFPM	
		ALU	1,650 - 3,600 SFPM	

### Example

Tungsten Carbide Bur, ALU Cut, Diameter: 1/2".

Coarse machining of hardened non-ferrous metals, e.g. bronze.

Cutting Speed: 2,000 - 3,600 SFPM

**Rotational Speed: 16,000 - 30,000 RPM**

5 Dia. [Inches]	6 Cutting Speed [SFPM]				
	1,300	1,650	2,000	2,950	3,600
	Rotational Speed [RPM]				
1/8	42,000	53,000	64,000	95,000	117,000
1/4	21,000	27,000	32,000	48,000	59,000
3/8	13,000	16,000	19,000	29,000	35,000
1/2	11,000	13,000	16,000	24,000	30,000
5/8	8,000	10,000	12,000	18,000	22,000