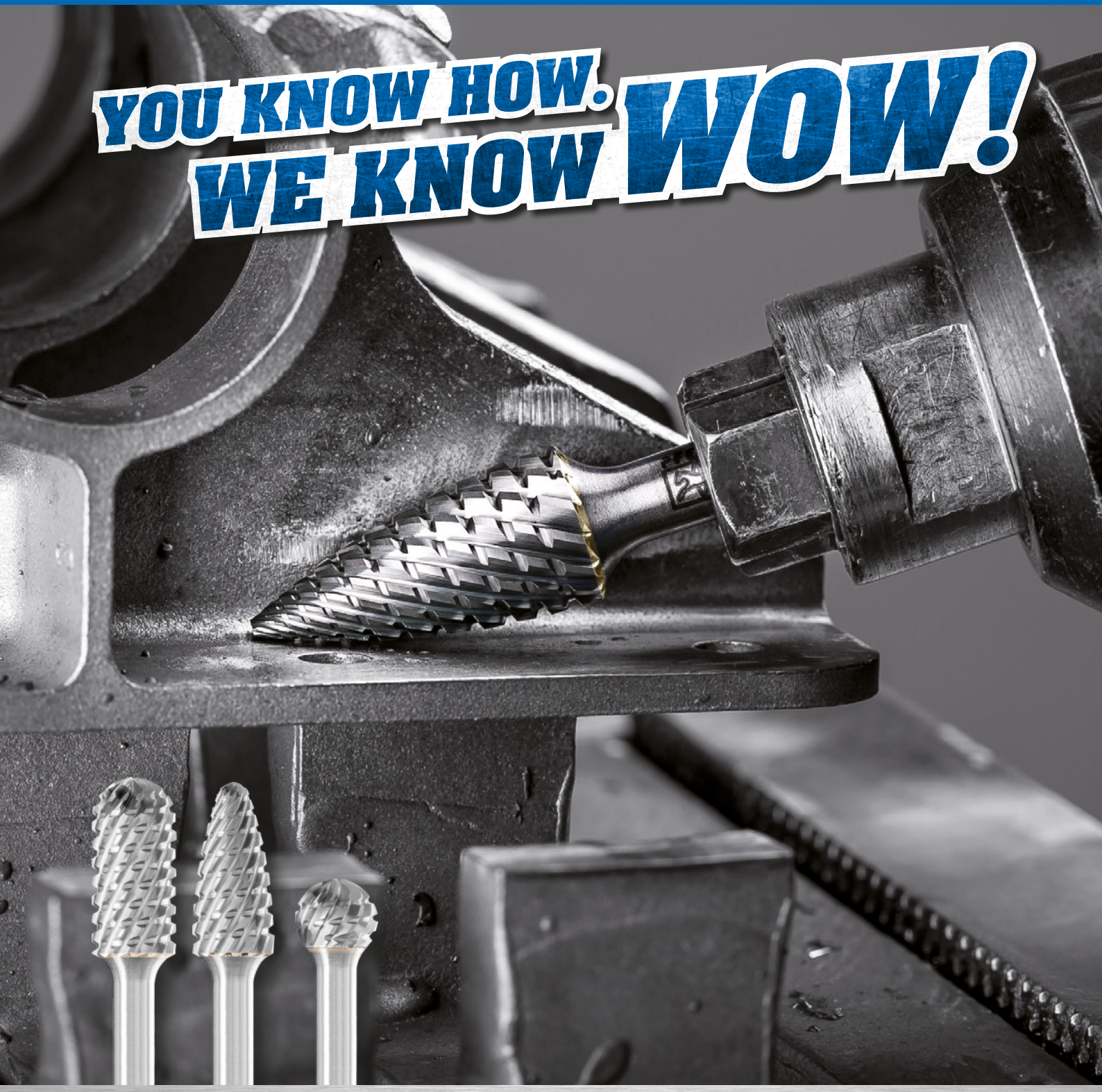
Tungsten carbide burrs with TITANIUM cut

Maximum stock removal on titanium

PFERD



TRUST BLUE

- Outstanding stock removal rate and tool life due to the innovative tooth geometry
- Significantly increased aggressiveness, large chips and very good chip removal
- Comfortable working with reduced vibration and less noise

Tungsten carbide burrs with TITANIUM cut
for use on titanium

The TITANIUM cut has been especially developed for work on hard titanium materials (tensile strength over 500 N/mm²). It is characterized by an extremely high stock removal rate on this material group, which has very challenging stock removal properties. Tungsten carbide burrs with the TITANIUM cut impress with their smooth milling with considerably reduced vibration and less noise.

Advantages:

- Outstanding stock removal rate and tool life due to the innovative tooth geometry.
- Significantly increased aggressiveness, large chips and very good chip removal.
- Comfortable working with reduced vibration and less noise.

Materials that can be worked:

- Titanium
- Hard titanium alloys

Applications:

- Milling out
- Levelling
- Deburring
- Cutting out holes
- Surface work
- Work on weld seams

Recommendations for use:

- Determine the rotational speed in each case depending on the titanium alloy you need to machine.
- Reduce the rotational speed if excessive flying sparks occur. Depending on the titanium alloy you are machining, flying sparks may not be entirely avoidable.
- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burrs, work with higher rotational/cutting speeds. Power recommendation for tool drives:
  - Shank diameter of 3 mm: 75 to 300 watts
  - Shank diameter of 6 mm: from 300 watts
- Please observe the rotational speed recommendations.

Matching tool drives:

- Flexible shaft drive
- Straight grinder
- Robot
- Machine tools

Safety notes:

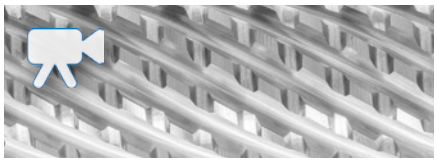
- The very high stock removal rate can cause discolouration on the shank. This does not constitute a safety risk.

 = Wear eye protection!

 = Wear hearing protection!

 = Wearing protective gloves is recommended. Handle the tool drive with both hands.

 = Observe the recommended rotational speed, especially when using burrs with long shanks!



PFERDVALUE:

PFERDERGONOMICS recommends burrs with TITANIUM cut as an innovative tool solution for comfortable working with significantly reduced vibration and less noise.

PFERDEFFICIENCY recommends burrs with TITANIUM cut for long fatigue-free and resource-saving work with perfect results in a very short period of time.

Tungsten carbide burrs with TITANIUM cut
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Recommended rotational speed range [RPM]

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

❶ Refer to the table for the cutting speed.
❷ Select the required burr diameter.
❸ The cutting speed range and the burr diameter determine the recommended rotational speed range.

Material group			Application	Cut	❶ Cutting speed
Non-ferrous metals	Hard non-ferrous metals	Hard titanium alloys	Coarse stock removal	TITANIUM	250–450 m/min

Example:
TC burr,
TITANIUM cut,
burr dia. of 12 mm.
Coarse stock removal on hard titanium alloys.
Cutting speed: 250–450 m/min
Rotational speed range:
7,000–12,000 RPM

❷ Burr dia. [mm]	❸ Cutting speeds [m/min]	
	250	450
	Rotational speeds [RPM]	
3	27,000	48,000
4	20,000	36,000
5	16,000	29,000
6	13,000	24,000
12	7,000	12,000

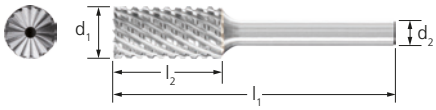
Note:

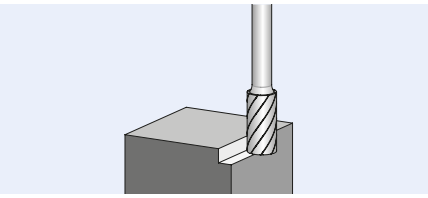
For soft titanium alloys (tensile strength under 500 N/mm²), we recommend tungsten carbide burrs with the INOX cut. The special tooth geometry on these burrs prevents the flutes becoming clogged, particularly for soft, lubricating materials (see Tool Manual 23, catalogue section 2, page 44).

Tungsten carbide burrs with TITANIUM cut
for use on titanium

Cylindrical shape ZYAS with end cut

Cylindrical burr according to DIN 8032 with cut on circumference and end.





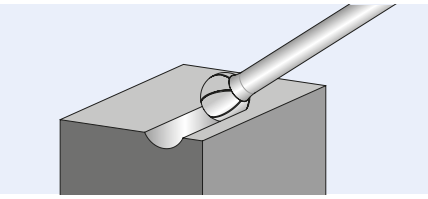
PFERDVALUE:

Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut TITANIUM EAN 4007220	RPM		Description
Shank dia. 3 mm							
3	13	3	43	034217	27,000–48,000	1	ZYAS 0313/3 TITANIUM
6	13	3	43	034224	13,000–24,000	1	ZYAS 0613/3 TITANIUM
Shank dia. 6 mm							
6	16	6	55	034248	13,000–24,000	1	ZYAS 0616/6 TITANIUM
12	25	6	65	034255	7,000–12,000	1	ZYAS 1225/6 TITANIUM

Ball shape KUD

Ball-shaped burr according to DIN 8032.



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d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut TITANIUM EAN 4007220	RPM		Description
Shank dia. 3 mm							
3	2	3	33	034149	27,000–48,000	1	KUD 0302/3 TITANIUM
4	3	3	34	034163	20,000–36,000	1	KUD 0403/3 TITANIUM
5	4	3	35	034170	16,000–29,000	1	KUD 0504/3 TITANIUM
6	5	3	35	034187	13,000–24,000	1	KUD 0605/3 TITANIUM
Shank dia. 6 mm							
6	5	6	45	034194	13,000–24,000	1	KUD 0605/6 TITANIUM
12	10	6	51	034200	7,000–12,000	1	KUD 1210/6 TITANIUM

Tungsten carbide burrs with TITANIUM cut
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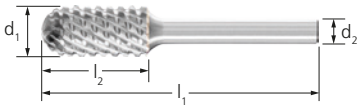
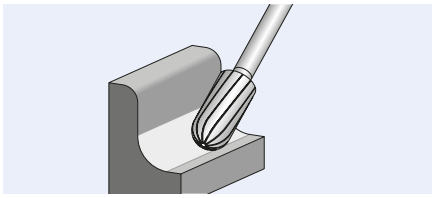
Cylindrical shape with radius end WRC

Cylindrical burr with radius end according to DIN 8032. Combination of cylindrical and ball-shaped geometries.





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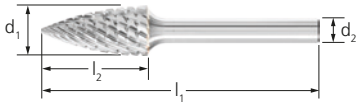
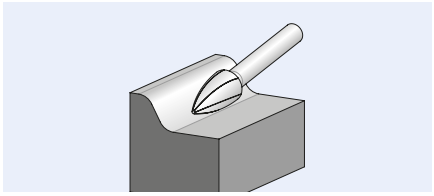
d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut TITANIUM EAN 4007220	RPM		Description
Shank dia. 3 mm							
3	13	3	43	034309	27,000–48,000	1	WRC 0313/3 TITANIUM
6	13	3	43	034316	13,000–24,000	1	WRC 0613/3 TITANIUM
Shank dia. 6 mm							
6	16	6	55	034330	13,000–24,000	1	WRC 0616/6 TITANIUM
12	25	6	65	034347	7,000–12,000	1	WRC 1225/6 TITANIUM

Pointed tree shape SPG

Pointed tree-shaped burr according to DIN 8032, flattened tip.





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d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	Cut TITANIUM EAN 4007220	RPM		Description
Shank dia. 3 mm							
3	7	3	37	034323	27,000–48,000	1	SPG 0307/3 TITANIUM
	13	3	43	034392	27,000–48,000	1	SPG 0313/3 TITANIUM
6	13	3	43	034408	13,000–24,000	1	SPG 0613/3 TITANIUM
Shank dia. 6 mm							
6	18	6	55	034415	13,000–24,000	1	SPG 0618/6 TITANIUM
12	25	6	65	034422	7,000–12,000	1	SPG 1225/6 TITANIUM

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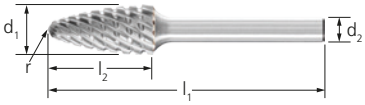
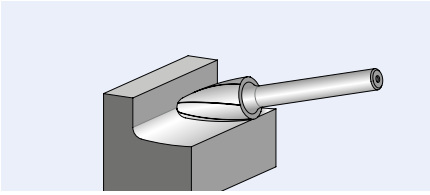
Tree shape with radius end RBF

Tree-shaped burr with radius end according to DIN 8032.





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d_1 [mm]	l_2 [mm]	d_2 [mm]	l_1 [mm]	r [mm]	Cut TITANIUM EAN 4007220	RPM		Description
Shank dia. 3 mm								
3	13	3	43	0.75	034354	27,000–48,000	1	RBF 0313/3 TITANIUM
6	13	3	43	1.5	034361	13,000–24,000	1	RBF 0613/3 TITANIUM
Shank dia. 6 mm								
6	18	6	55	1.5	034378	13,000–24,000	1	RBF 0618/6 TITANIUM
12	25	6	65	2.5	034385	7,000–12,000	1	RBF 1225/6 TITANIUM

High-capacity burrs from PFERD

Tungsten carbide burrs with TITANIUM cut belong to the PFERD product range „Tungsten carbide burrs for high performance applications“. The specific tool design for work on various materials or specific applications ensures outstanding stock removal characteristics and a long tool life.

Test the high-capacity burrs from PFERD now also with STEEL, INOX, CAST, PLAST, ALLROUND, ALU and NON-FERROUS cuts. The whole product range of material and application-specific tungsten carbide burrs for high-performance applications can be found at **www.pferd.com**.