

# Tungsten carbide burrs

TC burrs for GRP/CRP



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Tungsten carbide burrs with PLAST, FVK and FVKS cuts are suitable for trimming and contour milling of a wide range of fibre-reinforced plastics (GRP/CRP).

Burrs with end cut (BS) or with center drill (ZBS) allow combined drilling and cutting tasks.

The special tooth geometry allows high feed rates due to the low resistance. In addition these burrs are characterized by smooth milling.

### Application examples:

- Trimming
- Contour milling
- Creating cut-outs
- Deburring

### Recommendations for use:

- The design with special end cut (BS) is particularly suitable for machine and robot use, while the version with center drill (ZBS) is used for manual applications. It allows secure drilling on almost all surface conditions.
- Select a burr diameter greater than the thickness of the material to be machined, to avoid impacts and chattering with the risk of damaging or breaking the tool.
- Increase the rotational speed if the tool tends to chatter.
- If necessary, reduce the rotational speed and contact pressure if melting occurs.

### Cut PLAST



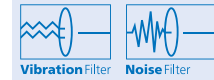
Tungsten carbide burrs with the PLAST cut are particularly suitable for use on less hard glass- and carbon-fibre-reinforced duroplastics (GRP and CRP  $\leq 40\%$  fibre content) and fibre-reinforced thermoplastics.

The cut (similar to PCD milling) minimizes delamination and fraying.

### Advantages:

- Particularly suitable for GRP and CRP  $\leq 40\%$  fibre content
- Minimizes delamination and fraying due to the special cut that is similar to PCD mills
- Very suitable for machine use and robot use
- Very low cutting force
- High feed rates

PFERDERGONOMICS® recommends burrs with PLAST cut as an innovative tool solution for comfortable working with significantly reduced vibration and lower noise.



### Cut FVK



### Cut FVKS



Tungsten carbide burrs with FVK and FVKS cuts can be used on hard glass- and carbon-fibre-reinforced duroplastics (GRP and CRP  $> 40\%$  fibre content).

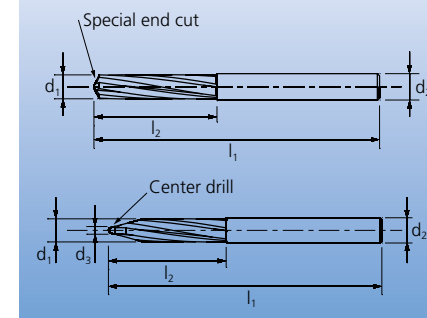
Due to its high concentricity, the FVK cut is suitable for tool machines and manual applications.

The FVKS cut is suitable for use on machines and robots with high feed rates. It is characterized by smooth milling and produces a smooth cut edge.

### Advantages:

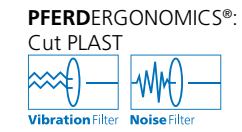
- Particularly suitable for GRP and CRP  $> 40\%$  fibre content
- The FVKS cut produces smooth edges and is characterized by smooth milling

### Cylindrical shape ZYA

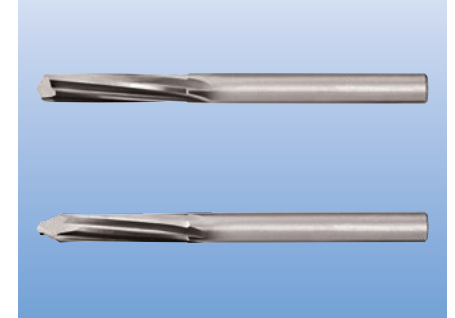


Cylindrical burr.

**Ordering example:**  
EAN 4007220050217  
ZYA 0625/6 BS FVK  
Please complete the description with the desired cut.



### Cylindrical shape ZYA



Description	Cut			Shank dia. $d_2$ [mm]	Center drill $d_3$ [mm]	Burr dia. x length $d_1 \times l_2$ [mm]	Overall length $l_1$ [mm]	
	PLAST	FVK	FVKS					
EAN 4007220								

Shank dia. 6 mm with end cut								
ZYA 0625/6 BS	900413	050217	808900	6	-	6 x 25	65	1
Shank dia. 8 mm with end cut								
ZYA 0825/8 BS	900468	050231	808917	8	-	8 x 25	65	1
Shank dia. 6 mm with center drill								
ZYA 0625/6 ZBS	900451	869048	869055	6	2.5	6 x 25	65	1
Shank dia. 8 mm with center drill								
ZYA 0825/8 ZBS	900475	869079	869086	8	3	8 x 25	65	1

### Recommended rotational speed range

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

- 1 Select the material group to be machined
- 2 Select the cut
- 3 Refer to the table for the cutting speed range
- 4 Select the required burr diameter
- 5 The cutting speed range and the burr diameter determine the recommended rotational speed range

1 Material groups	Application	2 Cut	3 Cutting speed
Plastics, other materials	Fibre-reinforced plastics (GRP/CRP), fibre content $\leq 40\%$ , thermoplastics Trimming, contour milling, creating cut-outs, deburring	PLAST	450–900 m/min
		FVK	
		FVKS	

**Example:**  
TC burr,  
Cut PLAST,  
Burr dia. 8 mm.  
Trimming of plastics.  
Cutting speed: 450–900 m/min  
**Rotational speed: 18,000–36,000 RPM**

4 Burr dia. [mm]	5 Cutting speed [m/min]	
	450	900
	Rotational speed [RPM]	
6	24,000	48,000
8	18,000	36,000

More PFERD tools and a large number of application tips on working with plastics can be found in our PRAXIS brochure "PFERD tools for use on plastics". Please contact us.



**PFERDVIDEO**  
You will receive more information here or at [www.pferd.com](http://www.pferd.com)

