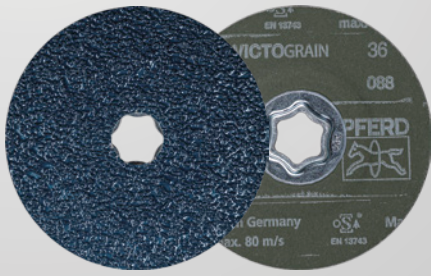
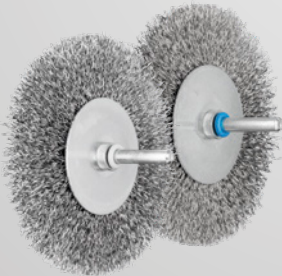
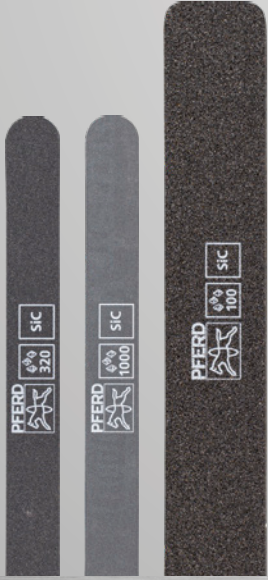
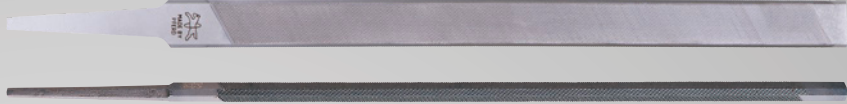


New in the PFERD product range

**YOU KNOW HOW.
 WE KNOW WOW!**



TRUST BLUE

New PFERD products and additions 2019–2021 to the range of the Tool Manual 23



New in the PFERD product range

Table of contents

This brochure contains all the new PFERD products and additions to the range which are not included in the PFERD Tool Manual 23. They are marked by a NI-symbol and are shown in the respective product groups in catalogue sections 1–9.

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NI! New in addition to the Tool Manual 23
 NI! New in 2021

You can find the gross prices for the new products in the 2021 price list; we would be happy to send it to you digitally.

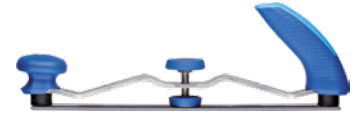
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Further information and valuable tool and application knowledge can be found at www.pferd.com. Visit us online and experience your added value with PFERD on all channels. Current product and theme brochures are available for download.

Adjustable holders for car body files

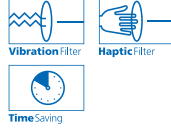
This ergonomic and particularly lightweight holder permits individual tensioning of car body file blades to match the surface contour of the workpiece.




Advantages:

- The bending radius of the file can be steplessly adjusted via the tensioning system.
- Particularly lightweight plastic design without plasticizer.
- Can be used in a focused manner or over a wide area as the car body file can be used curved as well as straight.
- Enables work with low levels of fatigue thanks to vibration-damping rubber pad.

PFERDVALUE:



Suitable for file length [mm]	Suitable for file length [inch]	EAN 4007220		Description
300	12	N! 111499	1	KFH 300
350	14	097915	1	KFH 350

Ergonomic file handle

Ergonomic file handle set, chain saw gauge

The set consists of an ergonomic file handle for chain saw files as well as two chain saw gauges: an angle of 25°/30° and an angle of 30°/35°. The chain saw gauge supports consistent sharpening results by providing the correct sharpening angle. It is attached to the stud of the ergonomic file handle FH 1 KSF.



Contents:


- 1 piece each:
- Ergonomic file handle FH 1 KSF
- Chain saw gauge KSSL 25/30
- Chain saw gauge KSSL 30/35

Ordering notes:

- The set is provided in sales-boosting individual packaging.

PFERDVALUE:



Suitable for chain saw file diameter [mm]	EAN 4007220		Description
4.0 / 4.5 / 4.8 / 5.16 / 5.5	N! 174906	1	SET FH1 KSSL 25/30-30/35

Depth gauge files

Depth gauge file for CHAIN SHARP CS-X





Rectangular file with cut on two sides. Suitable for the CHAIN SHARP CS-X chain saw sharpener.

Advantages:

- Stock removal rate is precisely tailored to the depth gauge.

Ordering notes:

- For the 1-piece packaging unit, please add "(1)" at the end of the description.

Profile	Length [mm]	Length [inch]	Cut	Packaging		Cross section [mm]	Suitable for	Description
								
4132	200	8	2	EAN 4007220				
				N! 174951	831335	9.0 x 6.0	CS-X-3,2, CS-X-4,0, CS-X 4,8, CS-X 5,16, CS-X 5,5	4132 200

New in the PFERD product range

Depth gauge files

1



Flat chain saw files for depth gauges

Rectangular file, tanged with two round uncut edges and cut on two sides. Shape F according to DIN 7262. Flat chain saw files are used to file the depth gauges of saw chains.

Advantages:

- Stock removal rate is precisely tailored to the depth gauge.

Ordering notes:

- For the 1-piece packaging unit, please add "(1)" at the end of the description.

Profile	Length [mm]	Length [inch]	Cut	Packaging		Cross section [mm]	Matching handle	Description
				1	10			
1213 ruk	150	6	2	N! 174920	011041	16.0 x 3.0	FH 3	1213 ruk 150 H2
	200	8	2	N! 174937	011058	20.0 x 3.5	FH 4/1	1213 ruk 200 H2



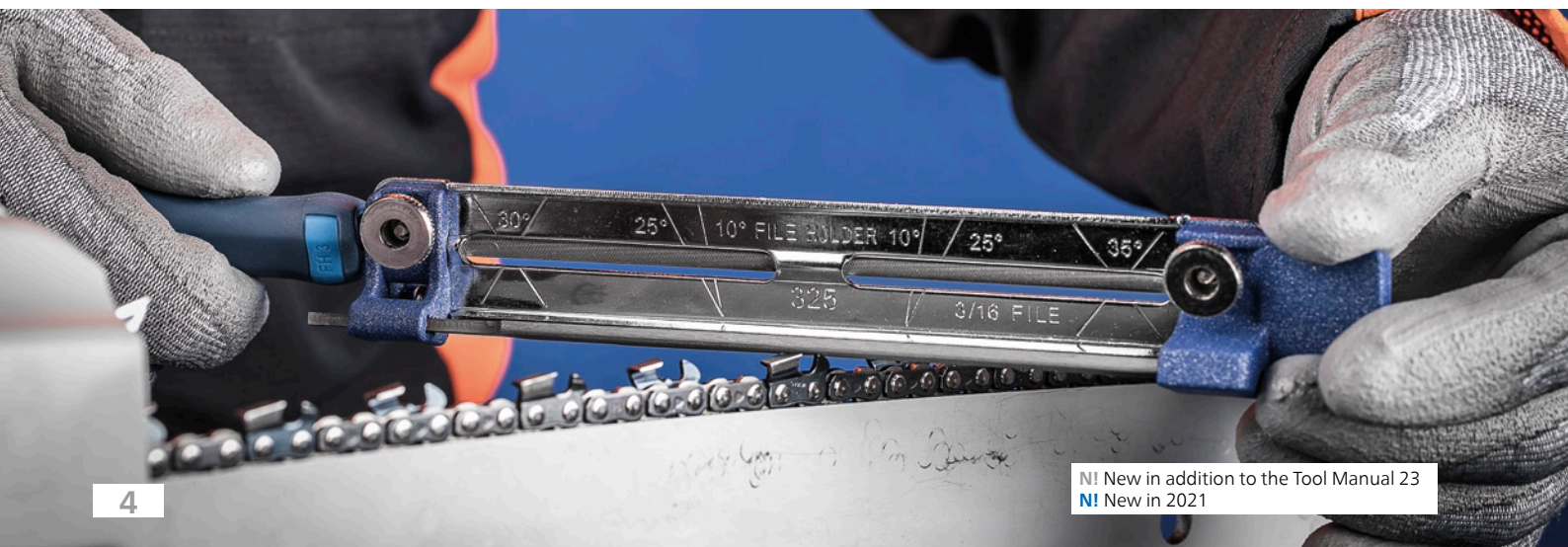
Chisel bit files

For servicing and sharpening saw chains with a square tooth base. For edge grinding saw chains. Available as a three square or flat file.

Advantages:

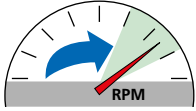
- The three square type is particularly suited to sharpening 3/8" chains.
- The flat type fulfills two functions: it can be used to sharpen the blade and also to reduce the depth gauge. Particularly recommended for beginners.

Profile	Length [mm]	Length [inch]	Cut	EAN 4007220	Cross section [mm]	Matching handle	1	Description
three square	175	7	2	N! 174968	4.6	FH 3	1	1250 DKT 175 (1)
flat	175	7	2	N! 174975	3.3 x 12.4	FH 3	1	1215 FLST 175 (1)

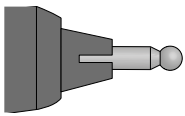


Recommendations for use:

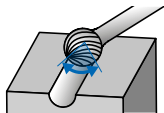
An optimum rotational speed and power output for the tool drive (pneumatic or electric grinders, flexible shaft drive) are required for cost-effective use of tungsten carbide burrs.



- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For cost-effective use of burrs with a shank diameter > 6 mm, a tool drive output of 300–500 watts is required when used at a higher rotational speed and cutting speed.
- Use the highest rotational speed possible within the recommended rotational speed and cutting speed ranges.
- For applications with low stock removal (deburring, chamfering, minor work on surfaces), the rotational speed can be increased by up to 100 % (this excludes tungsten carbide burrs with long shanks).

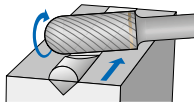


- Use only rigid clamping systems and drives as impacts on the tools and tool chatter lead to premature wear.



1/3 of the total surface

- The burr surface in contact with the workpiece must not exceed 1/3 of the total burr surface. Failure to comply with this recommendation will result in rough milling behaviour and possibly in broken teeth. If this cannot be avoided, we recommend using the TOUGH and TOUGH-S cuts.



In direction of rotation = fine finish

- In general, burrs are used counterrotationally or with a swinging motion. To achieve fine finishes, pass the tool rapidly over the workpiece in the direction of rotation.

Safety notes:



= 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!



Avoiding misuse

Figure	Consequences of misuse	Solution	Figure	Consequences of misuse	Solution
	The burr becomes clogged during use.	Use the correct cut for the material being machined. Use tools with a HICOAT coating or use grinding oil.		The shank breaks.	Only use rigid drives and undamaged clamping systems, and replace them if necessary.
	Pronounced discoloration can be seen in the transition between the toothed section and the shank.*	Observe the recommended rotational speeds and/or reduce the contact pressure and surface contact angle.	 	The clamping length is incorrect.	Do not choose a burr clamping depth that is too small. In general , the minimum clamping depth is 2/3 of the shank length (does not apply to burrs with long shanks).
	The toothed section detaches from the shank.			The shank bends on burrs with a long shank.	Observe the recommended rotational speeds and safety notes for burrs with a long shank.
	There are flying sparks.	Reduce the rotational speed and contact pressure and make sure that the surface contact angle is no more than 1/3 of the burr surface.		Signs of wear such as rough running and strong vibrations occur, as well as increased flying sparks.	Do not use burrs beyond the end of their service life. Use a new burr instead.
	Parts break off from the toothed section.	Avoid impact loads when using the tool.			

* On TC burrs designed for high-performance applications, blue discoloration is extremely difficult to avoid on account of the very high stock removal rate. However, this does not constitute a safety risk.

New in the PFERD product range

TC burrs – Types with long shanks

Tungsten carbide burrs with a long shank are ideal for cost-effectively machining small, hard-to-reach areas on components. Long-shank versions are available with the 3 PLUS, 5, STEEL and TOUGH cuts.

Tungsten carbide burrs with a long shank can be shortened if required. Tungsten carbide burrs with the designation **GL 75 mm** are made from solid tungsten carbide, which means they can only be shortened using diamond tools.

GL = total length (solid tungsten carbide)

SL = shank length (long steel shank)

Safety notes:

Not suitable for robotic or stationary applications. **Risk of bending.** Use only rigid clamping systems/drives.



= Observe the prescribed rotational speed!

Safety note – maximum rotational speed [RPM] for burrs with long shanks

When working with long-shank burrs, it is crucial that the burr is in contact with the workpiece (or inserted in the bore or slot to be machined) before the drive system is turned on. As a rule, the tool must remain in contact with the workpiece for as long as the machine is running. Failure to observe this procedure may result in shank failure (bending) and hence an increased risk of accidents. If continuous contact between the tool and the workpiece is not guaranteed, the **③ maximum idling speeds stated in the table must not be exceeded.**

For safety reasons, the maximum application speeds **② with contact with the workpiece** require a reduction in the recommended speed of tungsten carbide burrs with standard shanks. The reduced speeds are stated in the table below.

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

- ① Select the required burr diameter.
- ② For the maximum application speed [RPM] with contact with the workpiece, please refer to the right-hand side of the table.

Example:

TC burr, SL 150 mm,
3 PLUS cut,
burr dia. 12 mm.

Coarse stock removal on steels
up to 1,200 N/mm².

**Maximum application speed with contact
with the workpiece: 7,000 RPM**

① Burr dia. [mm]	③ Maximum idling speed [RPM] without contact with the workpiece		② Maximum application speed [RPM] with contact with the workpiece	
	Shank length [mm]			
	75	150	75	150
3	10,000	-	31,000	-
6	6,000	8,000	15,000	15,000
8	-	6,000	-	11,000
10	-	4,000	-	9,000
12	-	3,000	-	7,000



TC burrs for universal applications are suitable for fine and coarse stock removal on the key materials used in industrial manufacturing. They provide a good stock removal rate and are not specific to a particular material.

Advantages:

- Good stock removal rate through optimum matching of tungsten carbide, geometry, cut and available coating.
- Long tool life.
- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.
- High surface quality.

Materials that can be worked:

- Steel, cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

Applications:

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

Recommendations for use:

- 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

PFERDVALUE:

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



Waste Saving



Time Saving

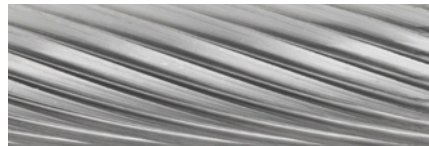


1 cut (C according to DIN 8033)



- Universal cut coarse.
- Machining of non-ferrous metals, steel and cast iron.
- High stock removal.

3 cut (MY according to DIN 8033)



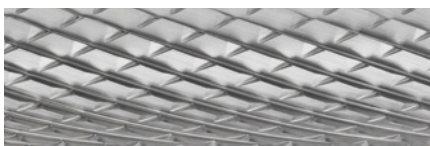
- Universal cut medium.
- Machining of cast iron, steel, stainless steel (INOX), nickel-based alloys and titanium alloys.
- High stock removal.
- Good surface.

3 PLUS cut (MX according to DIN 8033)



- Universal cut medium, cross cut.
- Similar to 3 cut, but with cross cut.
- Machining of cast iron, steel, stainless steel (INOX), nickel-based alloys and titanium alloys.
- High stock removal.

4 cut (MX according to DIN 8033)



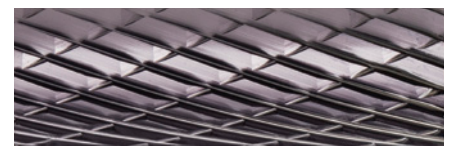
- Universal cut medium-fine, cross cut.
- Machining of stainless steel (INOX), steel and high-temperature-resistant materials such as nickel-based and cobalt-based alloys.
- High stock removal with short chips.
- Good surface.

5 cut (F according to DIN 8033)



- Universal cut fine.
- Fine machining of cast iron, steel, stainless steel (INOX) and high-temperature-resistant materials such as nickel-based and cobalt-based alloys.
- Good surface.

HICOAT coating HC-FEP for iron and steel materials



- High hardness and wear resistance.
- Effective chip removal through improved anti-adhesion characteristics.
- Very high resistance against thermal load.
- Increased service life.
- Also suitable for use at higher cutting speeds when compared with uncoated burrs.

New in the PFERD product range

TC burrs for universal applications

Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Determine the type of application.
- ❸ Select the cut.
- ❹ Establish the cutting speed range.

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

- ❺ Select the required burr diameter.
- ❻ The cutting speed range and the burr diameter determine the recommended rotational speed range.



❶ Material group		❷ Application	❸ Cut	❹ Cutting speed		
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	1	600–900 m/min	
				3 PLUS	450–600 m/min	
				3 PLUS HC-FEP	450–750 m/min	
	Hardened, heat-treated steels over 1,200 N/mm ² (> 38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel	Fine stock removal	5	450–600 m/min	
				Coarse stock removal	3	250–350 m/min
					4	
3 PLUS HC-FEP	250–450 m/min					
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	1	250–450 m/min	
				3	250–350 m/min	
				3 PLUS		
			Fine stock removal	4	250–450 m/min	
				5	350–450 m/min	
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys	Coarse stock removal	1	600–900 m/min	
		Brass, copper, zinc	Coarse stock removal	1	600–900 m/min	
			Fine stock removal	3	450–600 m/min	
	Hard non-ferrous metals	Bronze, titaniumum/titanium alloys, hard aluminium alloys (high Si content)	Coarse stock removal	3	250–350 m/min	
			Fine stock removal	4		
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys (engine and turbine construction)	Coarse stock removal	5	250–450 m/min	
				3 PLUS		
			Fine stock removal	4	350–600 m/min	
				5		
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	Coarse stock removal	1	600–900 m/min	
			3 PLUS	450–600 m/min		
		Fine stock removal	3	450–600 m/min		

Example:

TC burr,
3 PLUS cut,
burr dia. 12 mm.
Coarse stock removal on steels up to 1,200 N/mm².
Cutting speed: 450–600 m/min
Rotational speed range:
12,000–16,000 RPM

❺ Burr dia. [mm]	❻ Cutting speeds [m/min]					
	250	350	450	600	750	900
	Rotational speeds [RPM]					
1.5	53,000	74,000	95,000	127,000	159,000	191,000
2	40,000	56,000	72,000	95,000	119,000	143,000
3	27,000	37,000	48,000	64,000	80,000	95,000
4	20,000	28,000	36,000	48,000	60,000	72,000
6	13,000	19,000	24,000	32,000	40,000	48,000
8	10,000	14,000	18,000	24,000	30,000	36,000
10	8,000	11,000	14,000	19,000	24,000	29,000
12	7,000	9,000	12,000	16,000	20,000	24,000
16	5,000	7,000	9,000	12,000	15,000	18,000
20	4,000	6,000	7,000	10,000	12,000	14,000
25	3,000	4,000	6,000	8,000	10,000	11,000

Safety note:



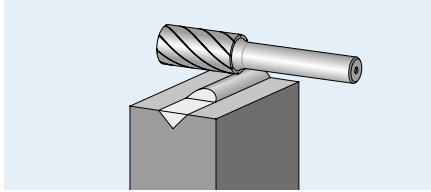
Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

Cylindrical shape ZYA without end cut

Cylindrical burr according to DIN 8032 with cut conforming to DIN 8033.

GL = total length (solid tungsten carbide)

SL = shank length (long steel shank)



Safety notes:



Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

PFERDVALUE:

HICOAT coating:

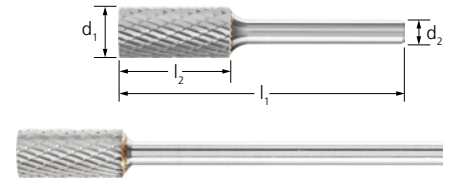


Waste Saving

Time Saving

Ordering notes:

- Please complete the description with the desired cut.



2



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut						Description	
				1	3	3 PLUS	3 PLUS HC-FEP	4	5		
				EAN 4007220							

Shank dia. 3 mm

2	10	3	40	-	-	233771	-	233788	233795	1	ZYA 0210/3 Z ...
3	13	3	43	-	-	233801	-	402627	233818	1	ZYA 0313/3 Z ...
6	7	3	37	-	-	233825	-	-	233832	1	ZYA 0607/3 Z ...
	13	3	43	-	-	233849	-	-	233856	1	ZYA 0613/3 Z ...

Long shank dia. of 3 mm, SL/GL 75 mm

3	13	3	75	-	-	779699	-	-	779644	1	ZYA 0313/3 Z ... GL 75
6	13	3	88	-	-	779606	-	-	779583	1	ZYA 0613/3 Z ... SL 75

Shank dia. 6 mm

4	13	6	55	-	-	045435	-	045459	045466	1	ZYA 0413/6 Z ...
6	16	6	55	-	045473	045480	835548	045503	045510	1	ZYA 0616/6 Z ...
8	20	6	60	-	045534	045541	-	045565	045572	1	ZYA 0820/6 Z ...
10	13	6	53	-	-	045596	-	045626	045640	1	ZYA 1013/6 Z ...
	20	6	60	045862	045855	045879	NI 222508	045916	045930	1	ZYA 1020/6 Z ...
	25	6	65	-	-	045978	-	046012	-	1	ZYA 1025/6 Z ...
12	25	6	65	045671	045657	045695	835555	045732	045756	1	ZYA 1225/6 Z ...
16	25	6	65	-	045787	045800	-	045848	-	1	ZYA 1625/6 Z ...

Long shank dia. of 6 mm, SL 150 mm

6	16	6	172	-	-	090114	-	-	-	1	ZYA 0616/6 Z ... SL 150
8	20	6	170	-	-	617632	-	-	-	1	ZYA 0820/6 Z ... SL 150
10	20	6	170	-	-	090121	-	-	-	1	ZYA 1020/6 Z ... SL 150
12	25	6	175	-	-	617649	-	-	-	1	ZYA 1225/6 Z ... SL 150

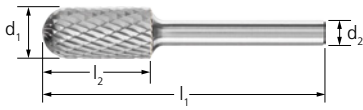
Shank dia. 8 mm

12	25	8	65	-	-	045701	-	-	-	1	ZYA 1225/8 Z ...
16	25	8	65	-	-	045817	-	-	-	1	ZYA 1625/8 Z ...



New in the PFERD product range

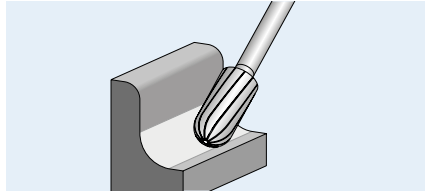
TC burrs for universal applications



Cylindrical shape with radius end WRC

Cylindrical burr with radius end according to DIN 8032 with cut conforming to DIN 8033. Combination of cylindrical and ball-shaped geometries.

GL = total length (solid tungsten carbide)
SL = shank length (long steel shank)



Ordering notes:

- Please complete the description with the desired cut.

Safety notes:



Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

PFERDVALUE:
HICOAT coating:



Waste Saving

Time Saving

d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut						Description
				1	3	3 PLUS	3 PLUS HC-FEP	4	5	
EAN 4007220										

Shank dia. 3 mm

2	10	3	40	-	-	049631	-	395837	049624	1	WRC 0210/3 Z ...
3	13	3	43	-	-	049662	-	393161	049648	1	WRC 0313/3 Z ...
6	13	3	43	-	-	049693	-	393178	049679	1	WRC 0613/3 Z ...

Long shank dia. of 3 mm, SL/GL 75 mm

3	13	3	75	-	-	779767	-	-	779750	1	WRC 0313/3 Z ... GL 75
6	13	3	88	-	-	779743	-	-	779729	1	WRC 0613/3 Z ... SL 75

Shank dia. 6 mm

4	13	6	55	-	-	046173	-	046197	-	1	WRC 0413/6 Z ...
6	16	6	55	046227	046210	046234	835562	046258	046265	1	WRC 0616/6 Z ...
8	20	6	60	046296	046289	046302	-	046326	046333	1	WRC 0820/6 Z ...
10	20	6	60	046371	046357	046388	N! 222546	046425	046449	1	WRC 1020/6 Z ...
	25	6	65	-	046708	046715	-	046746	-	1	WRC 1025/6 Z ...
12	25	6	65	046487	046463	046500	835579	046548	046562	1	WRC 1225/6 Z ...
16	25	6	65	046623	046609	046630	-	046678	-	1	WRC 1625/6 Z ...

Long shank dia. of 6 mm, SL 150 mm

6	16	6	172	-	-	090336	-	-	-	1	WRC 0616/6 Z ... SL 150
8	20	6	170	-	-	617656	-	-	-	1	WRC 0820/6 Z ... SL 150
10	20	6	170	-	-	090343	-	-	-	1	WRC 1020/6 Z ... SL 150
12	25	6	175	-	-	617663	-	-	-	1	WRC 1225/6 Z ... SL 150

Shank dia. 8 mm

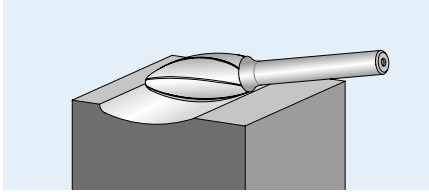
10	20	8	60	-	-	046395	-	-	-	1	WRC 1020/8 Z ...
12	25	8	65	-	-	046517	-	046555	-	1	WRC 1225/8 Z ...
16	25	8	65	-	-	046647	-	-	-	1	WRC 1625/8 Z ...



Flame shape B

Flame-shaped burr according to ISO 7755/8 with cut conforming to DIN 8033.

SL = shank length (long steel shank)



Safety notes:



Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

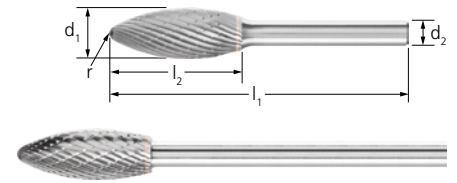
PFERDVALUE:

HICOAT coating:



Waste Saving

Time Saving



Ordering notes:

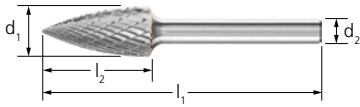
- Please complete the description with the desired cut.

d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut				Description	
					3	3 PLUS	3 PLUS HC-FEP	5		
					EAN 4007220					
Shank dia. 3 mm										
3	7	3	37	0.8	-	955482	-	049570	1	B 0307/3 Z ...
6	13	3	43	1.0	-	955499	-	049594	1	B 0613/3 Z ...
Shank dia. 6 mm										
8	20	6	60	1.5	046050	046067	-	-	1	B 0820/6 Z ...
10	25	6	65	1.7	-	955505	N! 222515	-	1	B 1025/6 Z ...
12	30	6	70	2.1	046098	046111	N! 222522	-	1	B 1230/6 Z ...
16	35	6	75	2.6	-	046142	-	-	1	B 1635/6 Z ...
Long shank dia. of 6 mm, SL 150 mm										
8	20	6	170	1.5	-	617755	-	-	1	B 0820/6 Z ... SL 150
10	25	6	175	1.7	-	090480	-	-	1	B 1025/6 Z ... SL 150
12	30	6	180	2.1	-	617779	-	-	1	B 1230/6 Z ... SL 150



New in the PFERD product range

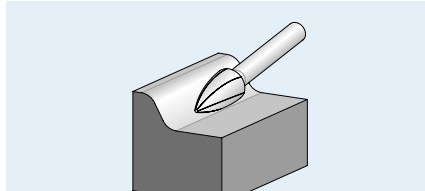
TC burrs for universal applications



Pointed tree shape SPG

Pointed tree-shaped burr according to DIN 8032 with cut conforming to DIN 8033, flattened tip.

GL = total length (solid tungsten carbide)
SL = shank length (long steel shank)



Ordering notes:

- Please complete the description with the desired cut.

Safety notes:



Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

PFERDVALUE:
HICOAT coating:



Waste Saving

Time Saving

d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut						Description
				1	3	3 PLUS	3 PLUS HC-FEP	4	5	
EAN 4007220										

Shank dia. 3 mm

3	7	3	37	-	-	049921	-	470626	049907	1	SPG 0307/3 Z ...
	13	3	43	-	-	049952	-	393208	049938	1	SPG 0313/3 Z ...
6	13	3	43	-	-	049983	-	393215	049969	1	SPG 0613/3 Z ...

Long shank dia. of 3 mm, SL/GL 75 mm

3	13	3	75	-	-	779972	-	-	779965	1	SPG 0313/3 Z ... GL 75
6	13	3	88	-	-	779828	-	-	779811	1	SPG 0613/3 Z ... SL 75

Shank dia. 6 mm

6	18	6	55	047934	047927	047941	835630	047965	047972	1	SPG 0618/6 Z ...
8	20	6	60	-	-	955512	-	-	955543	1	SPG 0820/6 Z ...
10	20	6	60	048016	047996	048023	N! 222591	048061	048085	1	SPG 1020/6 Z ...
12	25	6	65	048139	048115	048146	835654	048184	048207	1	SPG 1225/6 Z ...
	30	6	70	048368	048344	048382	-	048429	048443	1	SPG 1230/6 Z ...
16	30	6	70	048252	048238	048276	-	048313	-	1	SPG 1630/6 Z ...

Long shank dia. of 6 mm, SL 150 mm

6	18	6	172	-	-	090497	-	-	-	1	SPG 0618/6 Z ... SL 150
8	20	6	170	-	-	955611	-	-	-	1	SPG 0820/6 Z ... SL 150
10	20	6	170	-	-	090640	-	-	-	1	SPG 1020/6 Z ... SL 150
12	25	6	175	-	-	955628	-	-	-	1	SPG 1225/6 Z ... SL 150

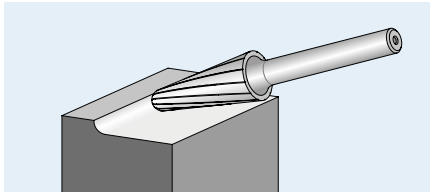
Shank dia. 8 mm

10	20	8	60	-	-	048030	-	-	-	1	SPG 1020/8 Z ...
12	25	8	65	-	-	048153	-	-	-	1	SPG 1225/8 Z ...
16	30	8	70	048269	-	048283	-	-	-	1	SPG 1630/8 Z ...



Conical shape with radius end KEL

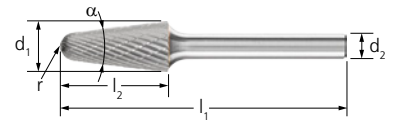
Conical burr with radius end according to DIN 8032 with cut conforming to DIN 8033.



Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:
HICOAT coating:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	r [mm]	Cut						Description
						1	3	3 PLUS	3 PLUS HC-FEP	4	5	
EAN 4007220												

Shank dia. 6 mm

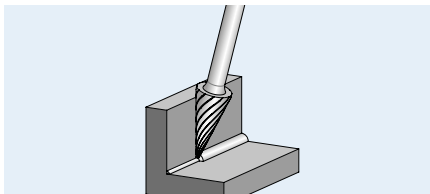
8	20	6	60	16°	1.25	-	-	955581	-	955604	-	1	KEL 0820/6 Z ...
10	20	6	60	14°	2.9	-	048467	048481	NI 222607	048504	-	1	KEL 1020/6 Z ...
12	25	6	65	14°	3.3	-	048528	048559	NI 222614	048597	-	1	KEL 1225/6 Z ...
	30	6	70	14°	2.6	048627	048603	048634	NI 222621	048672	048689	1	KEL 1230/6 Z ...
16	30	6	70	14°	4.8	-	-	048719	-	048733	-	1	KEL 1630/6 Z ...

Shank dia. 8 mm

12	25	8	65	14°	3.3	-	-	048566	-	-	-	1	KEL 1225/8 Z ...
	30	8	70	14°	2.6	-	-	048641	-	-	-	1	KEL 1230/8 Z ...

Conical pointed shape SKM

Conical pointed burr according to DIN 8032 with cut conforming to DIN 8033, flattened tip.



Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:
HICOAT coating:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	Cut						Description	
					1	3	3 PLUS	3 PLUS HC-FEP	4	5		
EAN 4007220												

Shank dia. 3 mm

3	7	3	37	21°	-	-	049839	-	-	049822	-	1	SKM 0307/3 Z ...
	11	3	41	14°	-	-	049853	-	451816	049846	-	1	SKM 0311/3 Z ...
6	13	3	43	25°	-	-	049877	-	-	049860	-	1	SKM 0613/3 Z ...

Shank dia. 6 mm

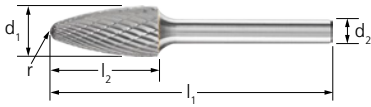
6	18	6	55	18°	047286	047279	047293	NI 222553	047316	047323	-	1	SKM 0618/6 Z ...
10	20	6	60	28°	-	047330	047354	NI 222560	047378	047385	-	1	SKM 1020/6 Z ...
12	25	6	65	26°	047415	047392	047422	NI 222577	047460	047477	-	1	SKM 1225/6 Z ...

Shank dia. 8 mm

12	25	8	65	26°	-	-	047439	-	-	-	-	1	SKM 1225/8 Z ...
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New in the PFERD product range

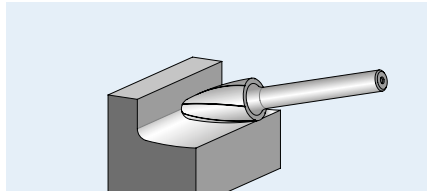
TC burrs for universal applications



Tree shape with radius end RBF

Tree-shaped burr with radius end according to DIN 8032 with cut conforming to DIN 8033.

GL = total length (solid tungsten carbide)
SL = shank length (long steel shank)



Safety notes:



Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

PFERDVALUE:
HICOAT coating:



Ordering notes:

- Please complete the description with the desired cut.

d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut						Description
					1	3	3 PLUS	3 PLUS HC-FEP	4	5	
EAN 4007220											

Shank dia. 3 mm

3	7	3	37	0.75	-	-	049891	-	-	049884	1	RBF 0307/3 Z ...
	13	3	43	0.75	-	-	955550	-	-	955567	1	RBF 0313/3 Z ...
6	13	3	43	1.5	-	-	050019	-	400722	049990	1	RBF 0613/3 Z ...

Long shank dia. of 3 mm, SL/GL 75 mm

3	7	3	75	0.75	-	-	780015	-	-	780008	1	RBF 0307/3 Z ... GL 75
6	13	3	88	1.5	-	-	779996	-	-	779989	1	RBF 0613/3 Z ... SL 75

Shank dia. 6 mm

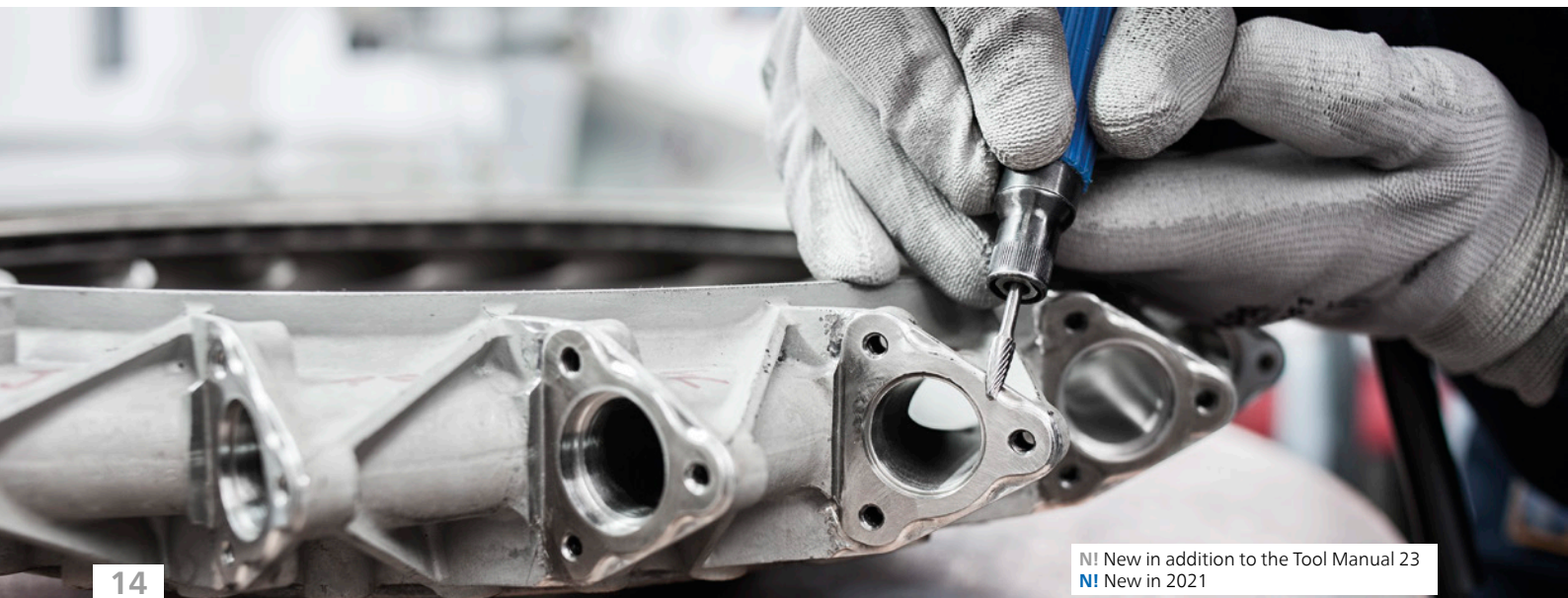
6	18	6	55	1.5	-	047590	047606	835616	047620	047637	1	RBF 0618/6 Z ...
8	20	6	60	1.2	-	047644	047651	-	047675	-	1	RBF 0820/6 Z ...
10	20	6	60	2.5	-	047682	047705	N! 222584	047729	047736	1	RBF 1020/6 Z ...
12	25	6	65	2.5	047774	047750	047781	835623	047828	047835	1	RBF 1225/6 Z ...
16	30	6	70	3.6	-	047859	047873	-	047910	-	1	RBF 1630/6 Z ...

Long shank dia. of 6 mm, SL 150 mm

6	18	6	172	1.5	-	-	090657	-	-	-	1	RBF 0618/6 Z ... SL 150
8	20	6	170	1.2	-	-	617731	-	-	-	1	RBF 0820/6 Z ... SL 150
10	20	6	170	2.5	-	-	090756	-	-	-	1	RBF 1020/6 Z ... SL 150
12	25	6	175	2.5	-	-	617748	-	-	-	1	RBF 1225/6 Z ... SL 150

Shank dia. 8 mm

12	25	8	65	2.5	-	-	047798	-	-	-	1	RBF 1225/8 Z ...
16	30	8	70	3.6	-	-	047880	-	-	-	1	RBF 1630/8 Z ...

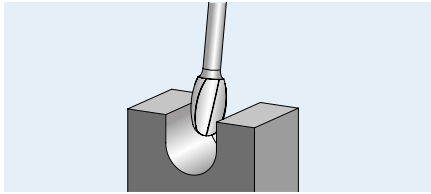


Oval shape TRE

Oval burr according to DIN 8032 with cut conforming to DIN 8033.

GL = total length (solid tungsten carbide)

SL = shank length (long steel shank)



Safety notes:



Please observe the reduced rotational speeds for long-shank versions. They can be found on page 6.

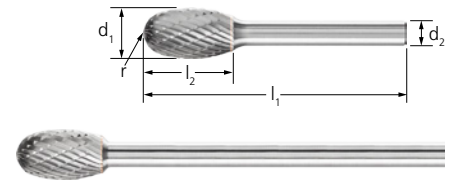
PFERDVALUE:

HICOAT coating:



Ordering notes:

- Please complete the description with the desired cut.



2



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut						Description
					1	3	3 PLUS	3 PLUS HC-FEP	4	5	
EAN 4007220											

Shank dia. 3 mm

3	7	3	37	1.2	-	-	049754	-	-	049747	1	TRE 0307/3 Z ...
6	10	3	40	2.8	-	-	050040	-	-	050026	1	TRE 0610/3 Z ...

Long shank dia. of 3 mm, SL/GL 75 mm

3	7	3	75	1.2	-	-	779804	-	-	779798	1	TRE 0307/3 Z ... GL 75
6	10	3	85	2.8	-	-	779781	-	-	779774	1	TRE 0610/3 Z ... SL 75

Shank dia. 6 mm

6	10	6	50	2.8	-	-	048771	N! 222638	-	048801	1	TRE 0610/6 Z ...
8	13	6	53	3.7	-	-	048894	-	048917	048924	1	TRE 0813/6 Z ...
10	16	6	56	4.0	-	-	048832	N! 222669	048856	-	1	TRE 1016/6 Z ...
12	20	6	60	5.0	048955	048931	048962	N! 222676	049006	049020	1	TRE 1220/6 Z ...
16	25	6	65	6.5	049075	-	049099	-	049136	-	1	TRE 1625/6 Z ...

Long shank dia. of 6 mm, SL 150 mm

6	10	6	160	2.8	-	-	090817	-	-	-	1	TRE 0610/6 Z ... SL 150
8	13	6	163	3.7	-	-	617700	-	-	-	1	TRE 0813/6 Z ... SL 150
10	16	6	166	4.0	-	-	090824	-	-	-	1	TRE 1016/6 Z ... SL 150
12	20	6	170	5.0	-	-	617724	-	-	-	1	TRE 1220/6 Z ... SL 150

Shank dia. 8 mm

12	20	8	60	5.0	-	-	048979	-	-	-	1	TRE 1220/8 Z ...
16	25	8	65	6.5	-	-	049105	-	-	-	1	TRE 1625/8 Z ...

New in the PFERD product range

TC burrs for universal applications

2




Set 1503 cut 3 PLUS



Set 1503 – 3 PLUS cut – contains 15 small tungsten carbide burrs in the most common shapes and dimensions for general applications. The sturdy plastic box protects the tools from dirt and damage.

Contents:

15 tungsten carbide burrs,
shank dia. 3 mm,
3 PLUS cut

1 piece each:

- ZYAS 0313/3 Z3 PLUS
- WRC 0313/3 Z3 PLUS
- SKM 0613/3 Z3 PLUS
- ZYAS 0613/3 Z3 PLUS
- WRC 0613/3 Z3 PLUS
- RBF 0307/3 Z3 PLUS
- KUD 0302/3 Z3 PLUS
- SPG 0313/3 Z3 PLUS
- RBF 0613/3 Z3 PLUS
- KUD 0403/3 Z3 PLUS
- SPG 0613/3 Z3 PLUS
- TRE 0307/3 Z3 PLUS
- KUD 0605/3 Z3 PLUS
- SKM 0311/3 Z3 PLUS
- TRE 0610/3 Z3 PLUS

Cut		Description
<p style="text-align: center;">3 PLUS</p> 		
<p style="text-align: center;">EAN 4007220</p>		
<p>Shank dia. 3 mm</p>		
<p style="text-align: center;">N! 157527</p>	1	1503 Z3 PLUS



Set 1504 cut 3 PLUS



Set 1504 – 3 PLUS cut – contains three small tungsten carbide burrs in the shapes and dimensions most commonly used in the workshop. The sturdy plastic box protects the tools from dirt and damage.

Contents:

3 tungsten carbide burrs,
shank dia. 3 mm,
3 PLUS cut

1 piece each:

- ZYAS 0313/3 Z3 PLUS
- WRC 0313/3 Z3 PLUS
- RBF 0313/3 Z3 PLUS

Cut		Description
<p style="text-align: center;">3 PLUS</p> 		
<p style="text-align: center;">EAN 4007220</p>		
<p>Shank dia. 3 mm</p>		
<p style="text-align: center;">N! 225318</p>	1	1504 Z3 PLUS



With the innovative ALLROUND cut, PFERD has developed unique burrs for versatile use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron. The ALLROUND cut offers all the benefits of the tried-and-tested 3 PLUS cut, but its stock removal rate is up to 30 % higher for steel. It enables comfortable working with reduced vibration and less noise. They also offer significant time savings and a high economic value. PFERD also offers tungsten carbide burrs with ALLROUND cut with a high-quality HICOAT coating.

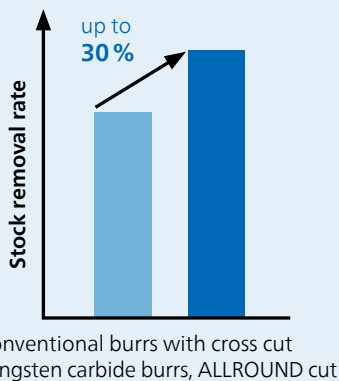
Advantages:

- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.

Materials that can be worked:

- Steel, cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

Performance values for applications on steel



Applications:

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

Recommendations for use:

- 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: from 300 watts.
- Please observe the rotational speed recommendations.

Matching tool drives:

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



Safety note:

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

PFERDVALUE:

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



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



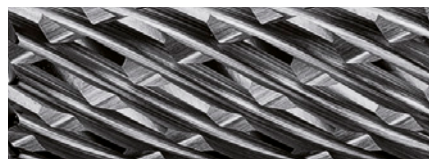
ALLROUND cut



Advantages:

- Significantly better stock removal rate than burrs with a conventional cross cut.
- Saves money and time through its very high stock removal rate on key materials.
- Comfortable working with reduced vibration and less noise.

ALLROUND cut with HICOAT coating HC-FEP



Advantages:

- High hardness and wear resistance.
- Effective chip removal through improved anti-adhesion characteristics.
- Very high resistance against thermal load.
- Increased service life.
- Also suitable for use at higher cutting speeds when compared with uncoated burrs.



New in the PFERD product range

TC burrs – ALLROUND cut for versatile use

Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Select the cut.
- ❸ Establish the cutting speed range.

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

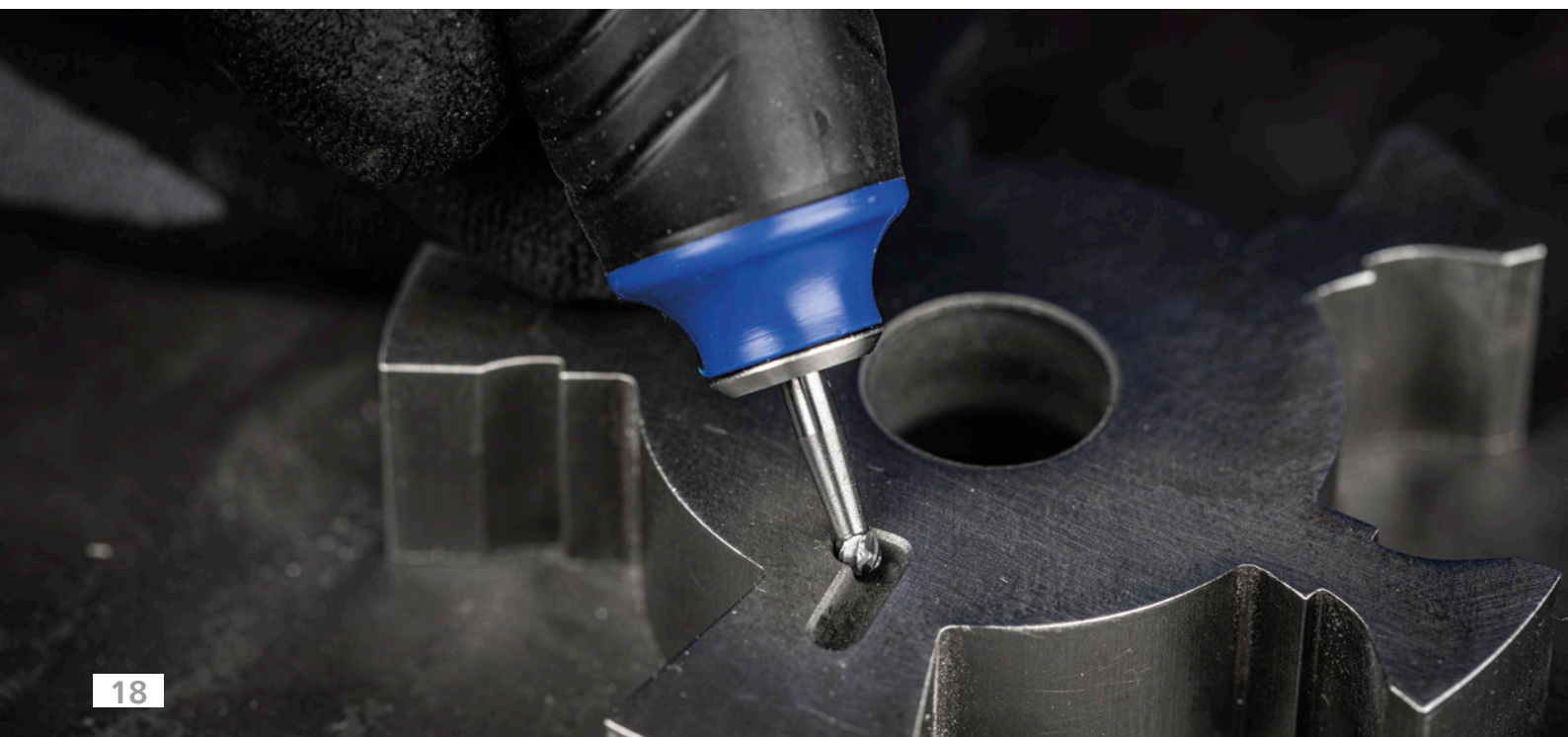
- ❹ Select the required burr diameter.
- ❺ The cutting speed range and the burr diameter determine the recommended rotational speed range.

❶ Material group		Application	❷ Cut	❸ Cutting speed	
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	ALLROUND	450–750 m/min	
			ALLROUND HC-FEP	450–900 m/min	
	Hardened, heat-treated steels over 1,200 N/mm ² (> 38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel	ALLROUND	250–450 m/min	
			ALLROUND HC-FEP	250–600 m/min	
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	ALLROUND	450–600 m/min
Non-ferrous metals	Soft non-ferrous metals	Brass, copper, zinc	Coarse stock removal	ALLROUND	450–750 m/min
	Hard non-ferrous metals	Bronze, titaniumum/titanium alloys, hard aluminium alloys (high Si content)	ALLROUND HC-FEP	450–900 m/min	
			ALLROUND	450–600 m/min	
			ALLROUND HC-FEP	450–750 m/min	
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	Coarse stock removal	ALLROUND	450–900 m/min

Example:

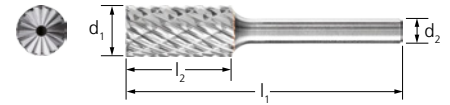
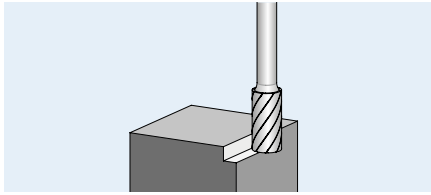
TC burr,
ALLROUND cut,
burr dia. 12 mm.
Coarse stock removal on steels
up to 1,200 N/mm².
Cutting speed: 450–750 m/min
Rotational speed range:
12,000–20,000 RPM

❹ Burr dia. [mm]	❺ Cutting speeds [m/min]				
	250	450	600	750	900
	Rotational speeds [RPM]				
3	27,000	48,000	64,000	80,000	95,000
6	13,000	24,000	32,000	40,000	48,000
8	10,000	18,000	24,000	30,000	36,000
10	8,000	14,000	19,000	24,000	29,000
12	7,000	12,000	16,000	20,000	24,000
16	5,000	9,000	12,000	15,000	18,000



Cylindrical shape ZYAS with end cut

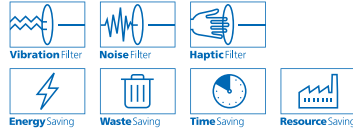
Cylindrical burr according to DIN 8032 with circumferential and end cut.





Ordering notes:

- Please complete the description with the desired cut.

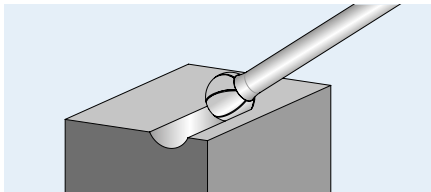
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		Description
				ALLROUND 	ALLROUND HC-FEP 	
				EAN 4007220		
Shank dia. 3 mm						
3	13	3	43	N! 391303	-	1 ZYAS 0313/3 ...
6	13	3	43	N! 391310	-	1 ZYAS 0613/3 ...
Shank dia. 6 mm						
6	16	6	55	092866	-	1 ZYAS 0616/6 ...
8	20	6	60	092897	-	1 ZYAS 0820/6 ...
10	20	6	60	092903	N! 221815	1 ZYAS 1020/6 ...
12	25	6	65	092941	N! 221860	1 ZYAS 1225/6 ...
16	25	6	65	092958	-	1 ZYAS 1625/6 ...

Ball shape KUD

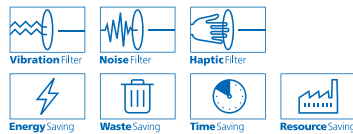
Ball-shaped burr according to DIN 8032.





Ordering notes:

- Please complete the description with the desired cut.

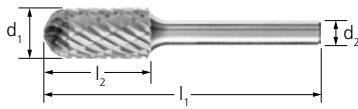
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		Description
				ALLROUND 	ALLROUND HC-FEP 	
				EAN 4007220		
Shank dia. 3 mm						
3	2	3	33	N! 391327	-	1 KUD 0302/3 ...
4	3	3	34	N! 391341	-	1 KUD 0403/3 ...
6	5	3	35	N! 391358	-	1 KUD 0605/3 ...
Shank dia. 6 mm						
6	5	6	45	093009	-	1 KUD 0605/6 ...
8	7	6	47	093030	-	1 KUD 0807/6 ...
10	9	6	49	093108	N! 221877	1 KUD 1009/6 ...
12	10	6	51	093115	N! 221907	1 KUD 1210/6 ...
16	14	6	54	093146	-	1 KUD 1614/6 ...

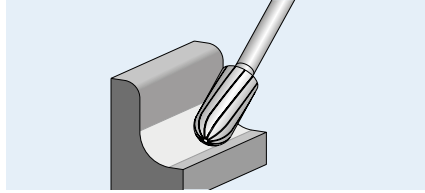
New in the PFERD product range

TC burrs – ALLROUND cut for versatile use



Cylindrical shape with radius end WRC

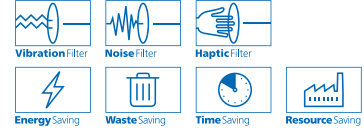
Cylindrical burr with radius end according to DIN 8032. Combination of cylindrical and ball-shaped geometries.



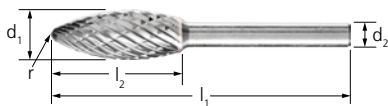
Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:

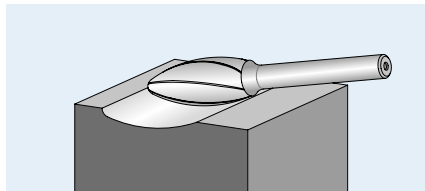


d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		Description
				ALLROUND 	ALLROUND HC-FEP 	
Shank dia. 3 mm						
3	13	3	43	N! 391365	-	1 WRC 0313/3 ...
6	13	3	43	N! 391372	-	1 WRC 0613/3 ...
Shank dia. 6 mm						
6	16	6	55	093153	-	1 WRC 0616/6 ...
8	20	6	60	093184	-	1 WRC 0820/6 ...
10	20	6	60	093191	N! 221938	1 WRC 1020/6 ...
12	25	6	65	093221	N! 221945	1 WRC 1225/6 ...
16	25	6	65	093238	-	1 WRC 1625/6 ...



Flame shape B

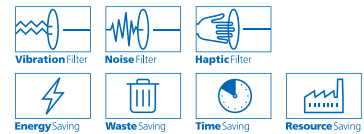
Flame-shaped burr according to ISO 7755/8.



Ordering notes:

- Please complete the description with the desired cut.

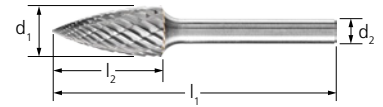
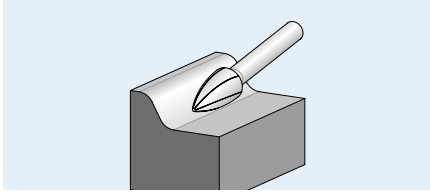
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		Description
					ALLROUND 	ALLROUND HC-FEP 	
Shank dia. 3 mm							
3	7	3	37	0.8	N! 391464	-	1 B 0307/3 ...
6	13	3	43	1.0	N! 391501	-	1 B 0613/3 ...
Shank dia. 6 mm							
8	20	6	60	1.5	093269	-	1 B 0820/6 ...
10	25	6	65	1.7	093276	N! 221952	1 B 1025/6 ...
12	30	6	70	2.1	093306	N! 221969	1 B 1230/6 ...
16	35	6	75	2.6	093313	-	1 B 1635/6 ...

Pointed tree shape SPG

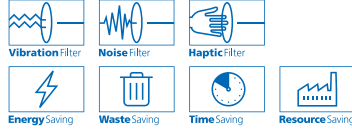
Pointed tree-shaped burr according to DIN 8032, flattened tip.





Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		Description
				ALLROUND	ALLROUND HC-FEP	
				 		
				EAN 4007220		

Shank dia. 3 mm

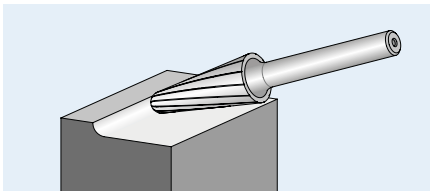
3	7	3	37	N! 391716	-	1	SPG 0307/3 ...
	13	3	43	N! 391723	-	1	SPG 0313/3 ...
6	13	3	43	N! 391730	-	1	SPG 0613/3 ...

Shank dia. 6 mm

6	18	6	55	093344	-	1	SPG 0618/6 ...
8	20	6	60	093351	-	1	SPG 0820/6 ...
10	20	6	60	093382	N! 221983	1	SPG 1020/6 ...
12	25	6	65	093399	N! 222003	1	SPG 1225/6 ...
16	30	6	70	093436	-	1	SPG 1630/6 ...

Conical shape with radius end KEL

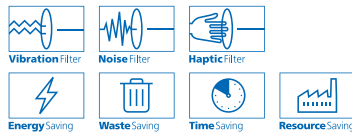
Conical burr with radius end according to DIN 8032.





Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:



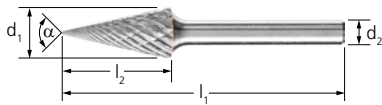
d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	r [mm]	Cut		Description
						ALLROUND	ALLROUND HC-FEP	
						 		
						EAN 4007220		

Shank dia. 6 mm

8	20	6	60	16°	1.25	093481	-	1	KEL 0820/6 ...
10	20	6	60	14°	2.9	093498	N! 222010	1	KEL 1020/6 ...
12	25	6	65	14°	3.3	093535	N! 222027	1	KEL 1225/6 ...
16	30	6	70	14°	4.8	093542	-	1	KEL 1630/6 ...

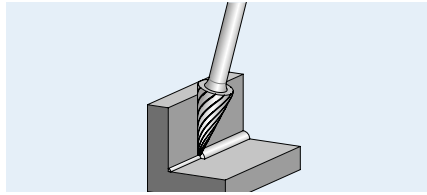
New in the PFERD product range

TC burrs – ALLROUND cut for versatile use



Conical pointed shape SKM

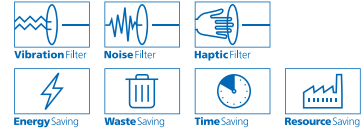
Conical pointed burr according to DIN 8032, flattened tip.



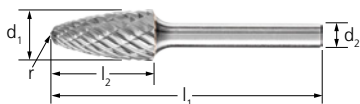
Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:

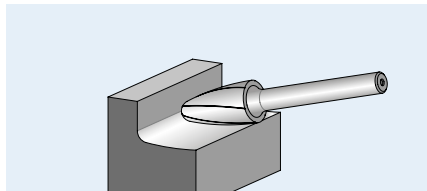


d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	Cut		Description
					ALLROUND	ALLROUND HC-FEP	
					EAN 4007220		
Shank dia. 3 mm							
3	7	3	37	21°	N! 391747	-	1 SKM 0307/3 ...
	11	3	41	14°	N! 391754	-	1 SKM 0311/3 ...
6	13	3	43	25°	N! 391761	-	1 SKM 0613/3 ...
Shank dia. 6 mm							
6	18	6	55	18°	093696	-	1 SKM 0618/6 ...
8	20	6	60	22°	093702	-	1 SKM 0820/6 ...
10	20	6	60	28°	093719	N! 222072	1 SKM 1020/6 ...
12	25	6	65	26°	093726	N! 222089	1 SKM 1225/6 ...



Tree shape with radius end RBF

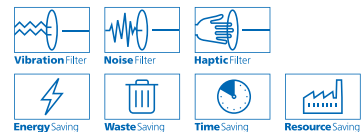
Tree-shaped burr with radius end according to DIN 8032.



Ordering notes:

- Please complete the description with the desired cut.

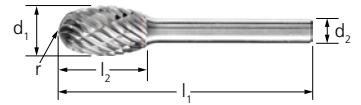
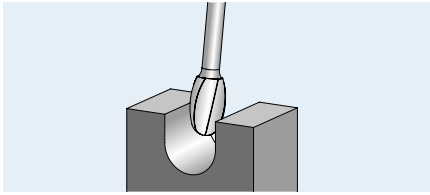
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		Description
					ALLROUND	ALLROUND HC-FEP	
					EAN 4007220		
Shank dia. 3 mm							
3	7	3	37	0.75	N! 391785	-	1 RBF 0307/3 ...
	13	3	43	0.75	N! 391891	-	1 RBF 0313/3 ...
6	13	3	43	1.5	N! 392010	-	1 RBF 0613/3 ...
Shank dia. 6 mm							
6	18	6	55	1.5	093580	-	1 RBF 0618/6 ...
8	20	6	60	1.2	093641	-	1 RBF 0820/6 ...
10	20	6	60	2.5	093658	N! 222041	1 RBF 1020/6 ...
12	25	6	65	2.5	093672	N! 222065	1 RBF 1225/6 ...
16	30	6	70	3.6	093689	-	1 RBF 1630/6 ...

Oval shape TRE

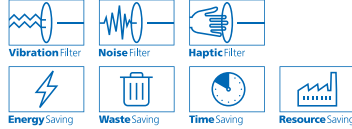
Oval burr according to DIN 8032.



Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		Description
					ALLROUND	ALLROUND HC-FEP	
					EAN 4007220		
Shank dia. 3 mm							
3	7	3	37	1.2	N! 392034	-	1 TRE 0307/3 ...
6	10	3	40	2.8	N! 392041	-	1 TRE 0610/3 ...
Shank dia. 6 mm							
6	10	6	50	2.8	093733	-	1 TRE 0610/6 ...
8	13	6	53	3.7	093740	-	1 TRE 0813/6 ...
10	16	6	56	4.0	093757	N! 222096	1 TRE 1016/6 ...
12	20	6	60	5.0	093764	N! 222133	1 TRE 1220/6 ...
16	25	6	65	6.5	093771	-	1 TRE 1625/6 ...

Set 1412 ALLROUND

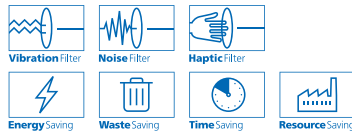
Set 1412 ALLROUND contains five tungsten carbide burrs for versatile use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

The burrs are secured at the shanks, facilitating the selection and withdrawal of the tools. Five further slots are available for other burrs.

Contents:

- 5 tungsten carbide burrs, shank dia. of 6 mm, ALLROUND cut
- 1 piece each:
 - ZYAS 1225/6 ALLROUND
 - KUD 1210/6 ALLROUND
 - WRC 1225/6 ALLROUND
 - SPG 1225/6 ALLROUND
 - RFB 1225/6 ALLROUND

PFERDVALUE:



Cut	Description
ALLROUND 	
EAN 4007220	
Shank dia. 6 mm	
N! 133576	1 1412 ALLROUND

New in the PFERD product range

TC burrs – ALLROUND cut for versatile use

2



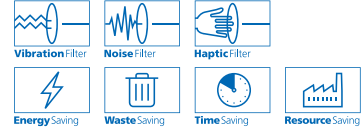

Set 1406 ALLROUND



The 1406 ALLROUND set contains three versatile tungsten carbide burrs for use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 tungsten carbide burrs, shank dia. 6 mm, ALLROUND cut
- 1 piece each:
 - ZYAS 0616/6 ALLROUND
 - WRC 0616/6 ALLROUND
 - RBF 0618/6 ALLROUND

PFERDVALUE:



Cut		Description
ALLROUND		
		
EAN 4007220		
Shank dia. 6 mm		
N! 226698	1	1406 ALLROUND



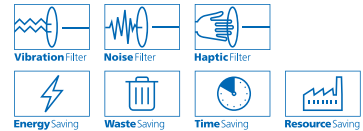
Set 1414 ALLROUND



The 1414 ALLROUND set contains three versatile tungsten carbide burrs for use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 tungsten carbide burrs, shank dia. 6 mm, ALLROUND cut
- 1 piece each:
 - ZYAS 1225/6 ALLROUND
 - WRC 1225/6 ALLROUND
 - RBF 1225/6 ALLROUND

PFERDVALUE:



Cut		Description
ALLROUND		
		
EAN 4007220		
Shank dia. 6 mm		
N! 226704	1	1414 ALLROUND

Set 1414 ALLROUND HC-FEP

The 1414 ALLROUND HC-FEP set contains three versatile tungsten carbide burrs with high-quality HICOAT coating for use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

3 tungsten carbide burrs,
shank dia. 6 mm,
ALLROUND cut HC-FEP

1 piece each:



- ZYAS 1225/6 ALLROUND HC-FEP
- WRC 1225/6 ALLROUND HC-FEP
- RBF 1225/6 ALLROUND HC-FEP

PFERDVALUE:



2



Cut		Description
ALLROUND HC-FEP 		
EAN 4007220		
Shank dia. 6 mm		
N! 226711	1	1414 ALLROUND HC-FEP



New in the PFERD product range

TC burrs – STEEL cut for steel and cast steel

With the innovative STEEL cut, PFERD has developed unique burrs for working with steel and cast steel. They are characterized by significantly increased aggressiveness and good guidance. Thus they ensure safe and precise work. The extremely high stock removal rate makes burrs with the STEEL cut impressive, with significant time savings and a high economic value. PFERD also offers tungsten carbide burrs with STEEL cut with a high-quality HICOAT coating.

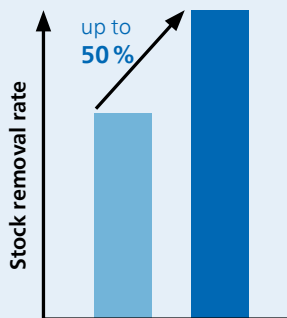
Advantages:

- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.

Applications:

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

Performance values for applications on steel and cast steel



- Conventional burrs with cross cut
- Tungsten carbide burrs, STEEL cut

Materials that can be worked:

- Steel
- Cast steel

Recommendations for use:

- 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: from 300 watts.
- Please observe the rotational speed recommendations.

Matching tool drives:

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

Safety note:

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

PFERDVALUE:

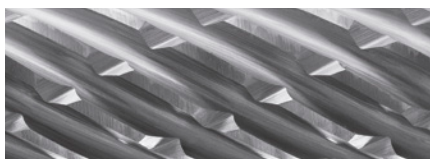
PFERDERGONOMICS recommends burrs with STEEL cut as an innovative tool solution for comfortable working with significantly reduced vibration and less noise.



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



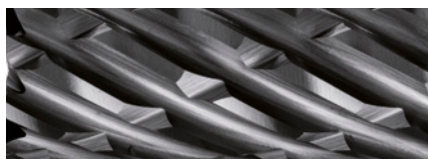
STEEL cut



Advantages:

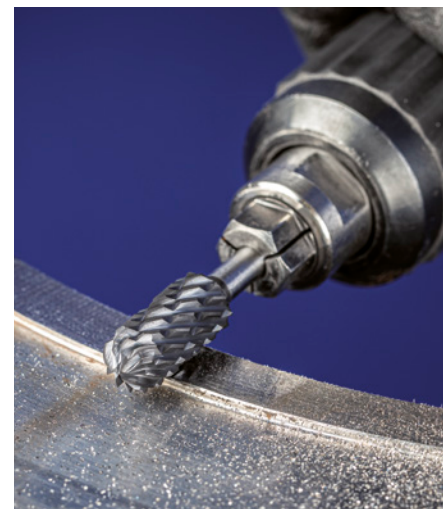
- Up to 50 % higher stock removal rate when used on steel and cast steel in comparison to conventional cross-cut burrs.
- Significantly increased aggressiveness, large chips and very good chip removal through the innovative tooth geometry.
- Workpiece is protected through much lower thermal load.

STEEL cut with HICOAT coating HC-FEP



Advantages:

- High hardness and wear resistance.
- Effective chip removal through improved anti-adhesion characteristics.
- Very high resistance against thermal load.
- Increased service life.
- Also suitable for use at higher cutting speeds when compared with uncoated burrs.



Recommended rotational speed range [RPM]

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

- ❶ Select the cut.
- ❷ Establish the cutting speed range.
- ❸ Select the required burr diameter.
- ❹ The cutting speed range and the burr diameter determine the recommended rotational speed range.

Safety note:



Please observe the reduced rotational speeds for burrs with a long shank. They can be found on page 6.

Material group		Application	❶ Cut	❷ Cutting speed	
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	STEEL	450–750 m/min
				STEEL HC-FEP	450–900 m/min
	Hardened, heat-treated steels over 1,200 N/mm ² (> 38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel		STEEL	450–750 m/min
				STEEL HC-FEP	450–900 m/min

Example:

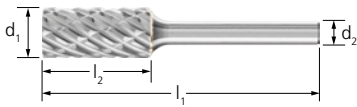
TC burr,
STEEL cut,
burr dia. 12 mm.
Cutting speed: 450–750 m/min
**Rotational speed range:
12,000–20,000 RPM**

❸ Burr dia. [mm]	❹ Cutting speeds [m/min]		
	450	750	900
	Rotational speeds [RPM]		
6	24,000	40,000	48,000
8	18,000	30,000	36,000
10	14,000	24,000	29,000
12	12,000	20,000	24,000
16	9,000	15,000	18,000



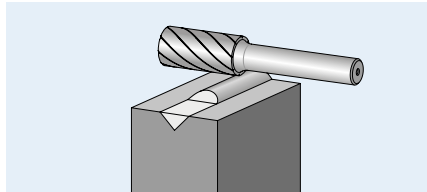
New in the PFERD product range

TC burrs – STEEL cut for steel and cast steel



Cylindrical shape ZYA without end cut

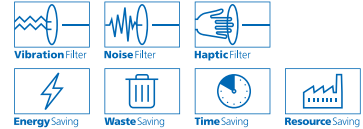
Cylindrical burr according to DIN 8032.



Ordering notes:

- Please complete the description with the desired cut.

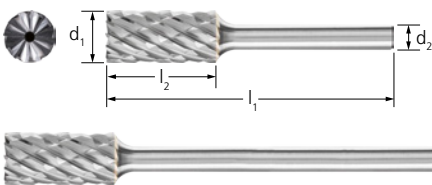
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM	Description
				STEEL	STEEL HC-FEP		
				 EAN 4007220			

Shank dia. 6 mm

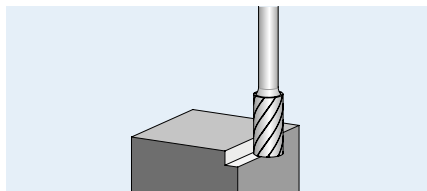
6	16	6	55	937198	-	24,000–40,000	1	ZYA 0616/6 ...
8	20	6	60	937211	-	18,000–30,000	1	ZYA 0820/6 ...
10	20	6	60	937235	N! 221662	14,000–24,000	1	ZYA 1020/6 ...
12	25	6	65	937242	N! 221655	12,000–20,000	1	ZYA 1225/6 ...
16	25	6	65	002360	-	9,000–15,000	1	ZYA 1625/6 ...



Cylindrical shape ZYAS with end cut

Cylindrical burr according to DIN 8032. Shape ZYAS with circumferential and end cut.

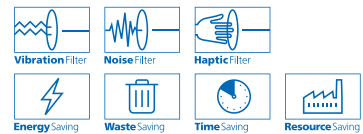
SL = shank length (long steel shank)



Safety notes:

- The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM	Description
				STEEL	STEEL HC-FEP		
				 EAN 4007220			

Shank dia. 6 mm

6	16	6	55	937259	-	24,000–40,000	1	ZYAS 0616/6 ...
8	20	6	60	937266	-	18,000–30,000	1	ZYAS 0820/6 ...
10	20	6	60	937310	N! 221600	14,000–24,000	1	ZYAS 1020/6 ...
12	25	6	65	937341	N! 221686	12,000–20,000	1	ZYAS 1225/6 ...
16	25	6	65	002889	-	9,000–15,000	1	ZYAS 1625/6 ...

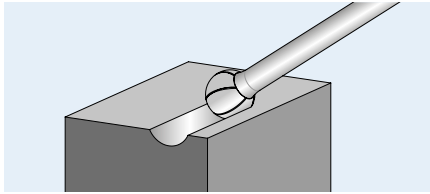
Long shank dia. of 6 mm, SL 150 mm

8	20	6	170	091173	-	11,000	1	ZYAS 0820/6 ... SL 150
10	20	6	170	091289	-	9,000	1	ZYAS 1020/6 ... SL 150
12	25	6	175	091982	-	7,000	1	ZYAS 1225/6 ... SL 150

Ball shape KUD

Ball-shaped burr according to DIN 8032.

SL = shank length (long steel shank)



Ordering notes:

- Please complete the description with the desired cut.

Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



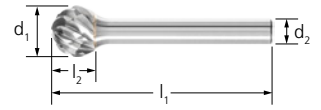
Waste Saving



Time Saving






Resource Saving



2



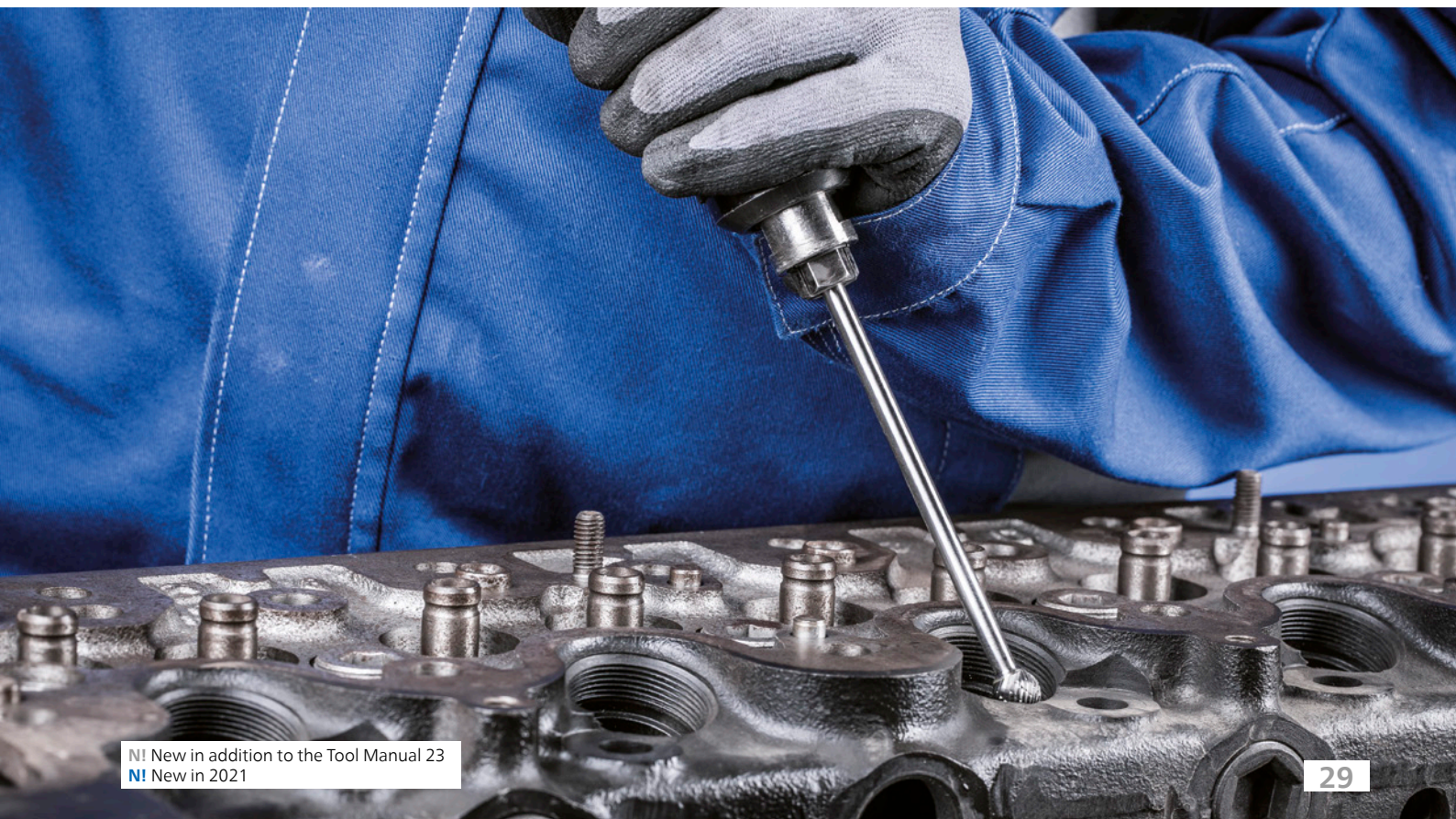
d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM		Description
				STEEL 	STEEL HC-FEP 			
				EAN 4007220				

Shank dia. 6 mm

6	5	6	45	936832	-	24,000–40,000	1	KUD 0605/6 ...
8	7	6	47	936849	-	18,000–30,000	1	KUD 0807/6 ...
10	9	6	49	936863	N! 221679	14,000–24,000	1	KUD 1009/6 ...
12	10	6	51	936870	N! 221693	12,000–20,000	1	KUD 1210/6 ...
16	14	6	54	003008	-	9,000–15,000	1	KUD 1614/6 ...

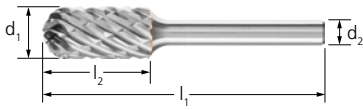
Long shank dia. of 6 mm, SL 150 mm

10	9	6	159	092002	-	9,000	1	KUD 1009/6 ... SL 150
12	10	6	160	087206	-	7,000	1	KUD 1210/6 ... SL 150



New in the PFERD product range

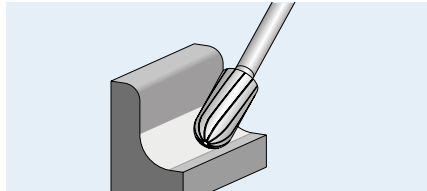
TC burrs – STEEL cut for steel and cast steel



Cylindrical shape with radius end WRC

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

SL = shank length (long steel shank)

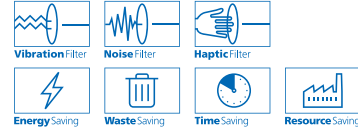


Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Ordering notes:

- Please complete the description with the desired cut.

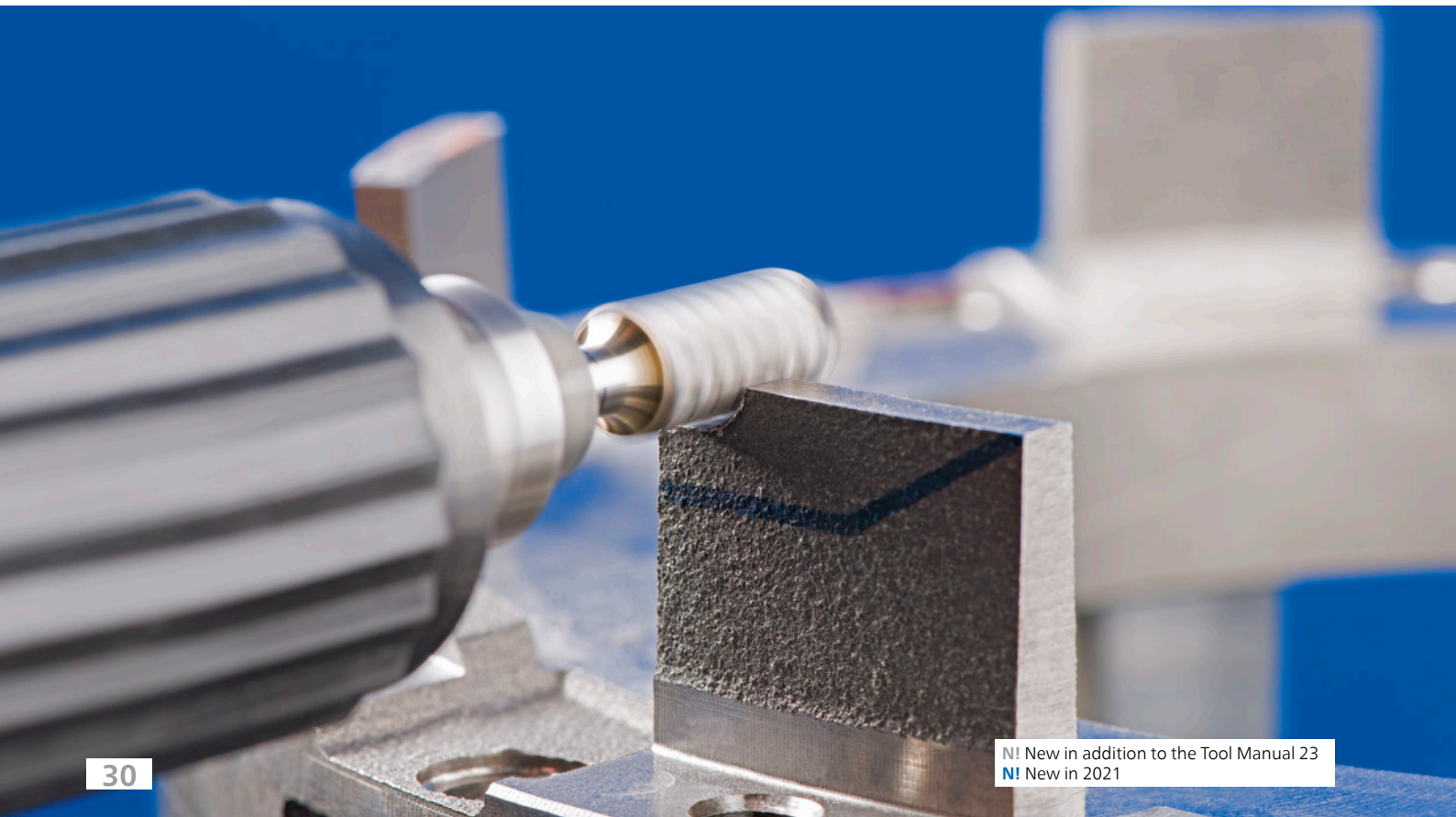
d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM		Description
				STEEL 	STEEL HC-FEP 			
				EAN 4007220				

Shank dia. 6 mm

6	16	6	55	937129	-	24,000–40,000	1	WRC 0616/6 ...
8	20	6	60	937150	-	18,000–30,000	1	WRC 0820/6 ...
10	20	6	60	937174	N! 222713	14,000–24,000	1	WRC 1020/6 ...
12	25	6	65	936696	N! 221570	12,000–20,000	1	WRC 1225/6 ...
16	25	6	65	003022	-	9,000–15,000	1	WRC 1625/6 ...

Long shank dia. of 6 mm, SL 150 mm

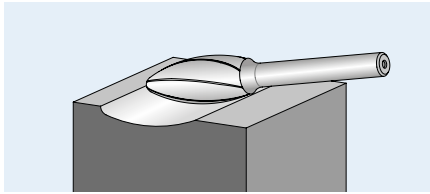
8	20	6	170	092309	-	11,000	1	WRC 0820/6 ... SL 150
10	20	6	170	092422	-	9,000	1	WRC 1020/6 ... SL 150
12	25	6	175	092439	-	7,000	1	WRC 1225/6 ... SL 150



Flame shape B

Flame-shaped burr according to ISO 7755/8.

SL = shank length (long steel shank)



Ordering notes:

- Please complete the description with the desired cut.

Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



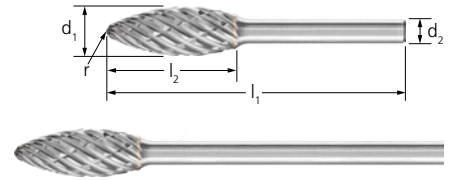
Waste Saving



Time Saving



Resource Saving



2



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		RPM		Description	
					STEEL 	STEEL HC-FEP 				
					EAN 4007220					

Shank dia. 6 mm

8	20	6	60	1.5	936719	-	18,000–30,000	1	B 0820/6 ...
10	25	6	65	1.7	092590	N! 221617	14,000–24,000	1	B 1025/6 ...
12	30	6	70	2.1	936764	N! 221624	12,000–20,000	1	B 1230/6 ...
16	35	6	75	2.6	003039	-	9,000–15,000	1	B 1635/6 ...

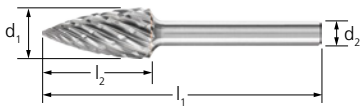
Long shank dia. of 6 mm, SL 150 mm

10	25	6	175	1.7	092446	-	9,000	1	B 1025/6 ... SL 150
12	30	6	180	2.1	092453	-	7,000	1	B 1230/6 ... SL 150



New in the PFERD product range

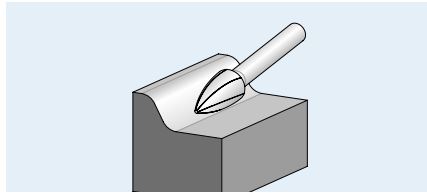
TC burrs – STEEL cut for steel and cast steel



Pointed tree shape SPG

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

SL = shank length (long steel shank)



Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



Waste Saving






Time Saving



Resource Saving

Ordering notes:

- Please complete the description with the desired cut.

d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM		Description
				STEEL 	STEEL HC-FEP 			
				EAN 4007220				

Shank dia. 6 mm

6	18	6	55	936979	-	24,000–40,000	1	SPG 0618/6 ...
8	20	6	60	936993	-	18,000–30,000	1	SPG 0820/6 ...
10	20	6	60	937013	N! 221716	14,000–24,000	1	SPG 1020/6 ...
12	25	6	65	937082	N! 221648	12,000–20,000	1	SPG 1225/6 ...
16	30	6	70	003046	-	9,000–15,000	1	SPG 1630/6 ...

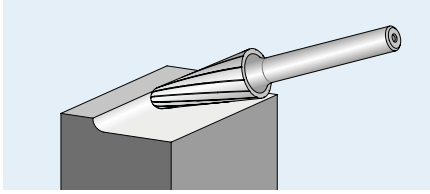
Long shank dia. of 6 mm, SL 150 mm

8	20	6	170	092460	-	11,000	1	SPG 0820/6 ... SL 150
10	20	6	170	092477	-	9,000	1	SPG 1020/6 ... SL 150
12	25	6	175	092484	-	7,000	1	SPG 1225/6 ... SL 150

Conical shape with radius end KEL

Conical burr with radius end according to DIN 8032.

SL = shank length (long steel shank)



Ordering notes:

- Please complete the description with the desired cut.

Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



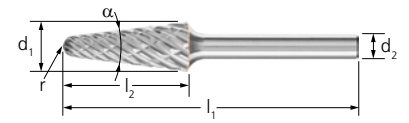
Waste Saving



Time Saving




Resource Saving



2



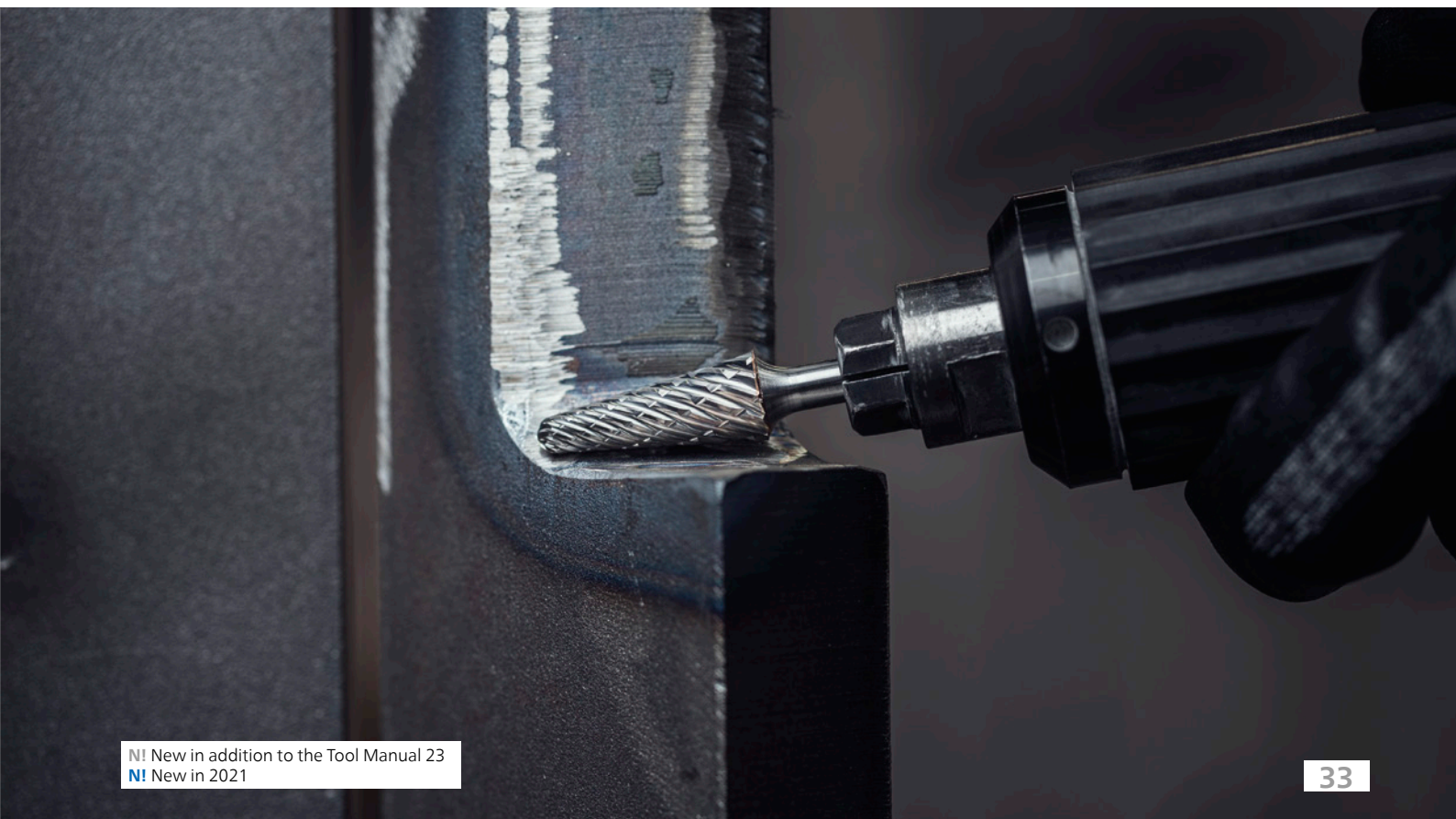
d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	r [mm]	Cut		RPM		Description	
						STEEL	STEEL HC-FEP				
						EAN 4007220					

Shank dia. 6 mm

10	20	6	60	14°	2.9	936771	NI 221587	14,000–24,000	1	KEL 1020/6 ...
12	30	6	70	14°	2.6	936818	NI 222904	12,000–20,000	1	KEL 1230/6 ...
16	30	6	70	14°	4.8	003053	-	9,000–15,000	1	KEL 1630/6 ...

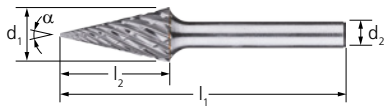
Long shank dia. of 6 mm, SL 150 mm

10	20	6	170	14°	2.9	092576	-	9,000	1	KEL 1020/6 ... SL 150
12	30	6	180	14°	2.6	092583	-	7,000	1	KEL 1230/6 ... SL 150



New in the PFERD product range

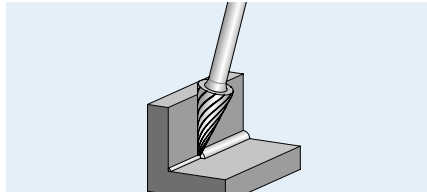
TC burrs – STEEL cut for steel and cast steel



Conical pointed shape SKM

Conical pointed burr according to DIN 8032, flattened tip.

SL = shank length (long steel shank)



Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



Waste Saving



Time Saving



Resource Saving

Ordering notes:

- Please complete the description with the desired cut.

d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	Cut		RPM	Description
					STEEL	STEEL HC-FEP		
								
					EAN 4007220			

Shank dia. 6 mm

6	18	6	55	18°	092736	-	24,000–40,000	1	SKM 0618/6 ...
8	20	6	60	22°	092774	-	18,000–30,000	1	SKM 0820/6 ...
10	20	6	60	28°	092781	NI 221747	14,000–24,000	1	SKM 1020/6 ...
12	25	6	65	26°	092859	NI 221754	12,000–20,000	1	SKM 1225/6 ...

Long shank dia. of 6 mm, SL 150 mm

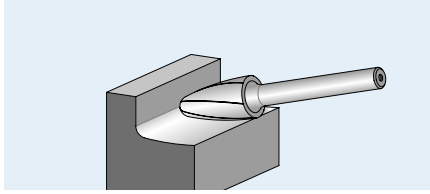
10	20	6	170	28°	092545	-	9,000	1	SKM 1020/6 ... SL 150
12	25	6	175	26°	092569	-	7,000	1	SKM 1225/6 ... SL 150



Tree shape with radius end RBF

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

SL = shank length (long steel shank)



Ordering notes:

- Please complete the description with the desired cut.

Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



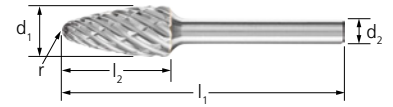
Waste Saving



Time Saving



Resource Saving



2



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		RPM		Description
					STEEL 	STEEL HC-FEP 			
EAN 4007220									

Shank dia. 6 mm

6	18	6	55	1.5	936887	-	24,000–40,000	1	RBF 0618/6 ...
8	20	6	60	1.2	936900	-	18,000–30,000	1	RBF 0820/6 ...
10	20	6	60	2.5	936924	N! 221631	14,000–24,000	1	RBF 1020/6 ...
12	25	6	65	2.5	936931	N! 221563	12,000–20,000	1	RBF 1225/6 ...
16	30	6	70	3.6	003060	-	9,000–15,000	1	RBF 1630/6 ...

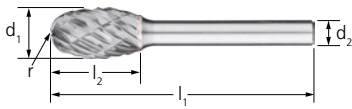
Long shank dia. of 6 mm, SL 150 mm

8	20	6	170	1.2	092491	-	11,000	1	RBF 0820/6 ... SL 150
10	20	6	170	2.5	092507	-	9,000	1	RBF 1020/6 ... SL 150
12	25	6	175	2.5	092514	-	7,000	1	RBF 1225/6 ... SL 150



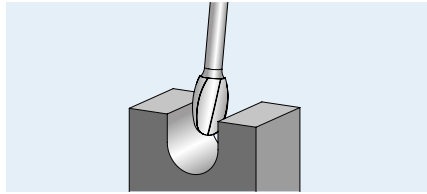
New in the PFERD product range

TC burrs – STEEL cut for steel and cast steel



Oval shape TRE

Oval burr according to ISO 7755/8.
SL = shank length (long steel shank)



Ordering notes:

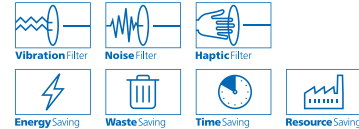
- Please complete the description with the desired cut.

Safety notes:



The rotational speeds for long-shank burrs relate to applications where the tool is in contact with the workpiece. More safety notes can be found on page 6.

PFERDVALUE:



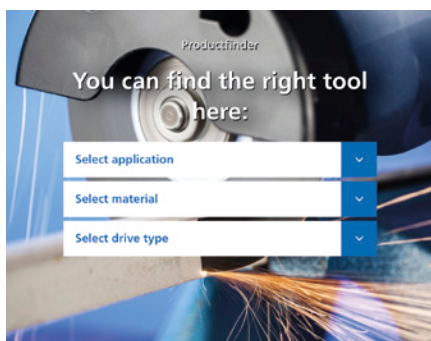
d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		RPM	Description
					STEEL	STEEL HC-FEP		
					EAN 4007220			

Shank dia. 6 mm

8	13	6	53	3.7	092637	-	18,000–30,000	1	TRE 0813/6 ...
10	16	6	56	4.0	092644	N! 221808	14,000–24,000	1	TRE 1016/6 ...
12	20	6	60	5.0	092682	N! 221778	12,000–20,000	1	TRE 1220/6 ...
16	25	6	65	6.5	092729	-	9,000–15,000	1	TRE 1625/6 ...

Long shank dia. of 6 mm, SL 150 mm

10	16	6	160	4.0	092521	-	9,000	1	TRE 1016/6 ... SL 150
12	20	6	170	5.0	092538	-	7,000	1	TRE 1220/6 ... SL 150



Online direct search and product finder

Use the direct search function on our website www.pferd.com to find suitable products for working on steel. Or use the PFERD product finder instead, where you can select suitable tools by entering the following criteria: material, drive type and application.



With the INOX cut, PFERD has developed innovative burrs for work on stainless steel (INOX). The INOX cut is characterized by an extremely high stock removal rate on all austenitic as well as rust- and acid-resistant steels. It creates significantly less vibration than a comparable cross cut. PFERD also offers tungsten carbide burrs with INOX cut with a high-quality HICOAT coating.

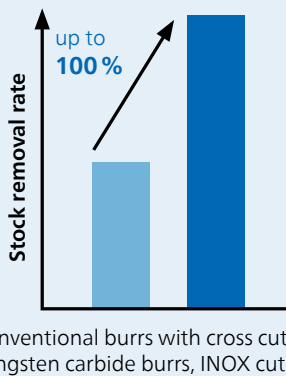
Advantages:

- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.

Materials that can be worked:

- Stainless steel (INOX)
- Soft titanium alloys (tensile strength < 500 N/mm²)

Performance values for applications on stainless steel (INOX)



Applications:

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

Recommendations for use:

- 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. The RPMs shown in the product tables on the product pages are for work on stainless steel (INOX) only.

Matching tool drives:

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

Safety note:

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

PFERDVALUE:

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



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



INOX cut



Advantages:

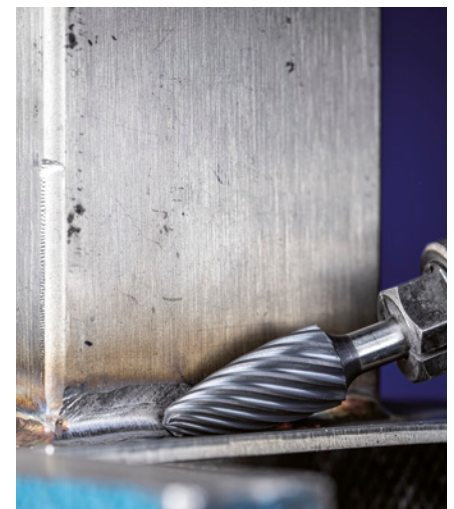
- Outstanding stock removal rate and tool life due to the innovative tooth geometry.
- Achieves high surface qualities through optimum chip formation.
- Prevents heat discolouration in the material due to the reduced heat generation.

INOX cut with HICOAT coating HC-FEP



Advantages:

- High hardness and wear resistance.
- Effective chip removal through improved anti-adhesion characteristics.
- Very high resistance against thermal load.
- Increased service life.
- Also suitable for use at higher cutting speeds when compared with uncoated burrs.



New in the PFERD product range

TC burrs – INOX cut for stainless steel (INOX)

Recommended rotational speed range [RPM]

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

- ❶ Select the material group to be machined.
- ❷ Select the cut.
- ❸ Establish the cutting speed range.
- ❹ Select the required burr diameter.
- ❺ The cutting speed range and the burr diameter determine the recommended rotational speed range.



More PFERD tools and information on working with stainless steel (INOX) can be found in our PRAXIS brochure "PFERD tools for use on stainless steel (INOX)" at www.pferd.com.

❶ Material group		Application	❷ Cut	❸ Cutting speed	
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	INOX	450–600 m/min
				INOX HC-FEP	450–750 m/min
Non-ferrous metals	Non-ferrous metals	Titanium/titanium alloys	Coarse stock removal	INOX	250–450 m/min
				INOX HC-FEP	250–600 m/min

Example:

TC burr,
INOX cut,
burr dia. 12 mm.
Coarse stock removal on stainless steel (INOX).

Cutting speed: 450–600 m/min

Rotational speed range:

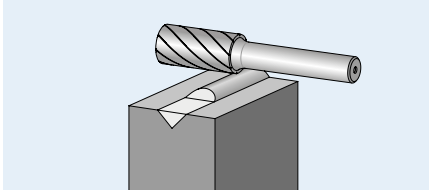
12,000–16,000 RPM

❹ Burr dia. [mm]	❺ Cutting speeds [m/min]			
	250	450	600	750
	Rotational speeds [RPM]			
3	27,000	48,000	64,000	80,000
4	20,000	36,000	48,000	72,000
5	16,000	29,000	40,000	48,000
6	13,000	24,000	32,000	40,000
8	10,000	18,000	24,000	30,000
10	8,000	14,000	19,000	24,000
12	7,000	12,000	16,000	20,000



Cylindrical shape ZYA without end cut

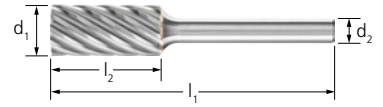
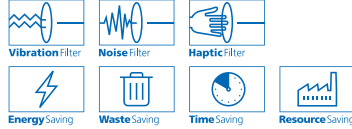
Cylindrical burr according to DIN 8032.



Ordering notes:

- Please complete the description with the desired cut.

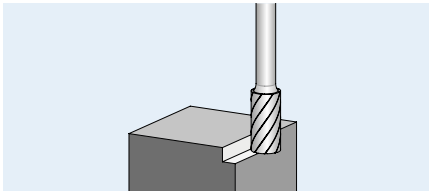
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM		Description
				INOX	INOX HC-FEP			
				 EAN 4007220				
Shank dia. 3 mm								
3	13	3	43	930380	-	27,000–64,000	1	ZYA 0313/3 ...
6	13	3	43	930403	-	13,000–32,000	1	ZYA 0613/3 ...
Shank dia. 6 mm								
6	16	6	55	900499	-	13,000–32,000	1	ZYA 0616/6 ...
8	20	6	60	952245	-	10,000–24,000	1	ZYA 0820/6 ...
10	20	6	60	952252	NI 222270	8,000–19,000	1	ZYA 1020/6 ...
12	25	6	65	900505	NI 222256	7,000–16,000	1	ZYA 1225/6 ...

Cylindrical shape ZYAS with end cut

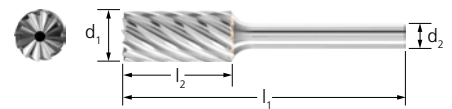
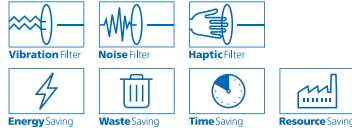
Cylindrical burr according to DIN 8032 with circumferential and end cut.



Ordering notes:

- Please complete the description with the desired cut.

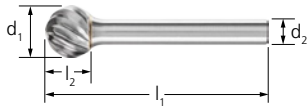
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM		Description
				INOX	INOX HC-FEP			
				 EAN 4007220				
Shank dia. 3 mm								
3	13	3	43	034453	-	27,000–64,000	1	ZYAS 0313/3 ...
6	13	3	43	034460	-	13,000–32,000	1	ZYAS 0613/3 ...
Shank dia. 6 mm								
6	16	6	55	034477	-	27,000–64,000	1	ZYAS 0616/6 ...
12	25	6	65	034484	NI 222249	7,000–16,000	1	ZYAS 1225/6 ...

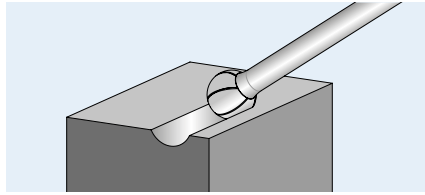
New in the PFERD product range

TC burrs – INOX cut for stainless steel (INOX)



Ball shape KUD

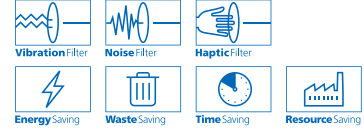
Ball-shaped burr according to DIN 8032.

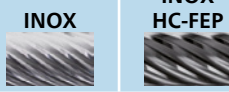


Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:



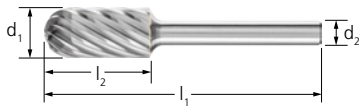
d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM	Description
				INOX	INOX HC-FEP		
				 EAN 4007220			

Shank dia. 3 mm

3	2	3	33	930434	-	27,000–64,000	1	KUD 0302/3 ...
4	3	3	34	034439	-	20,000–48,000	1	KUD 0403/3 ...
5	4	3	35	034446	-	16,000–40,000	1	KUD 0504/3 ...
6	5	3	35	930441	-	13,000–32,000	1	KUD 0605/3 ...

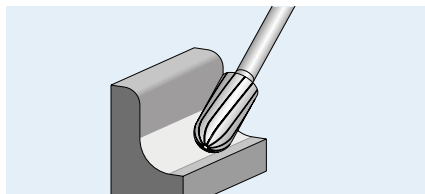
Shank dia. 6 mm

6	5	6	45	900536	-	13,000–32,000	1	KUD 0605/6 ...
8	7	6	47	952269	-	10,000–24,000	1	KUD 0807/6 ...
10	9	6	49	952276	NI 222348	8,000–19,000	1	KUD 1009/6 ...
12	10	6	51	900543	NI 222362	7,000–16,000	1	KUD 1210/6 ...



Cylindrical shape with radius end WRC

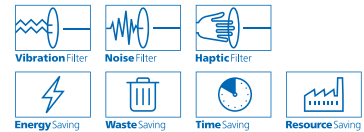
Cylindrical burr with radius end according to DIN 8032. Combination of cylindrical and ball-shaped geometries.

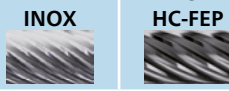


Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM	Description
				INOX	INOX HC-FEP		
				 EAN 4007220			

Shank dia. 3 mm

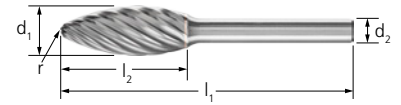
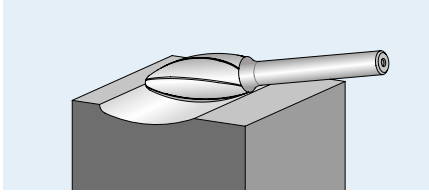
3	13	3	43	930410	-	27,000–64,000	1	WRC 0313/3 ...
6	13	3	43	930427	-	13,000–32,000	1	WRC 0613/3 ...

Shank dia. 6 mm

6	16	6	55	900512	-	13,000–32,000	1	WRC 0616/6 ...
8	20	6	60	952283	-	10,000–24,000	1	WRC 0820/6 ...
10	20	6	60	952290	NI 222317	8,000–19,000	1	WRC 1020/6 ...
12	25	6	65	900529	NI 222331	7,000–16,000	1	WRC 1225/6 ...

Flame shape B

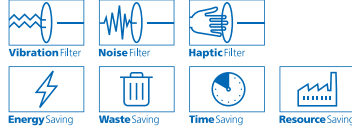
Flame-shaped burr according to ISO 7755/8.




Ordering notes:

- Please complete the description with the desired cut.

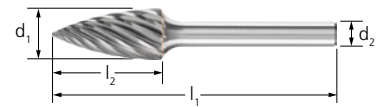
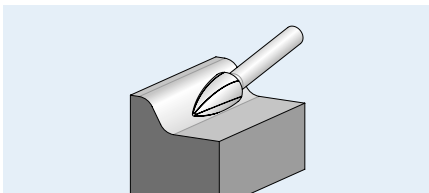
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		RPM		Description	
					INOX	INOX HC-FEP				
					EAN 4007220					
Shank dia. 6 mm										
8	20	6	60	1.5	952306	-	10,000–24,000	1	B 0820/6 ...	
10	25	6	65	1.7	952313	N! 222287	8,000–19,000	1	B 1025/6 ...	
12	30	6	70	2.1	930502	N! 222294	7,000–16,000	1	B 1230/6 ...	

Pointed tree shape SPG

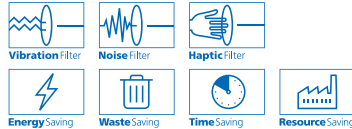
Pointed tree-shaped burr according to DIN 8032, flattened tip.




Ordering notes:

- Please complete the description with the desired cut.

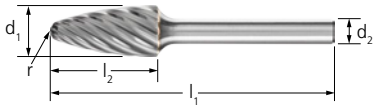
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		RPM		Description
				INOX	INOX HC-FEP			
				EAN 4007220				
Shank dia. 3 mm								
3	7	3	37	034491	-	27,000–64,000	1	SPG 0307/3 ...
	13	3	43	034507	-	27,000–64,000	1	SPG 0313/3 ...
6	13	3	43	034514	-	13,000–32,000	1	SPG 0613/3 ...
Shank dia. 6 mm								
6	18	6	55	936948	-	13,000–32,000	1	SPG 0618/6 ...
8	20	6	60	952320	-	10,000–24,000	1	SPG 0820/6 ...
10	20	6	60	952337	N! 222409	8,000–19,000	1	SPG 1020/6 ...
12	25	6	65	936894	N! 222430	7,000–16,000	1	SPG 1225/6 ...

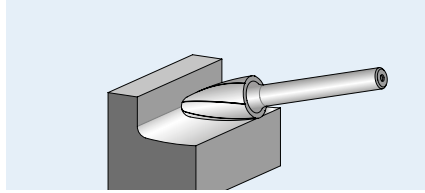
New in the PFERD product range

TC burrs – INOX cut for stainless steel (INOX)



Tree shape with radius end RBF

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



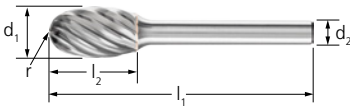
Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:

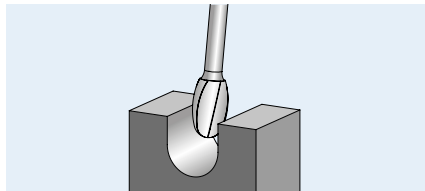


d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		RPM		Description
					INOX	INOX HC-FEP			
Shank dia. 3 mm									
3	13	3	43	0.75	930472	-	27,000–64,000	1	RBF 0313/3 ...
6	13	3	43	1.5	930489	-	13,000–32,000	1	RBF 0613/3 ...
Shank dia. 6 mm									
6	18	6	55	1.5	900550	-	13,000–32,000	1	RBF 0618/6 ...
8	20	6	60	1.2	952344	-	10,000–24,000	1	RBF 0820/6 ...
10	20	6	60	2.5	952351	NI 222386	8,000–19,000	1	RBF 1020/6 ...
12	25	6	65	2.5	900567	NI 222393	7,000–16,000	1	RBF 1225/6 ...



Oval shape TRE

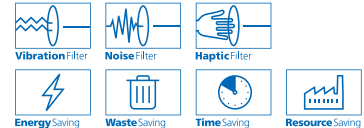
Oval burr according to DIN 8032.



Ordering notes:

- Please complete the description with the desired cut.

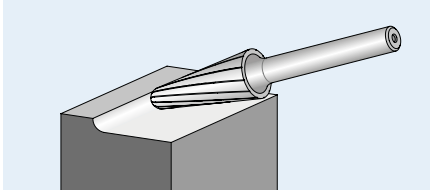
PFERDVALUE:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	r [mm]	Cut		RPM		Description
					INOX	INOX HC-FEP			
Shank dia. 6 mm									
8	13	6	53	3.7	952368	-	10,000–24,000	1	TRE 0813/6 ...
10	16	6	56	4.0	952375	NI 222478	8,000–19,000	1	TRE 1016/6 ...
12	20	6	60	5.0	930519	NI 222492	7,000–16,000	1	TRE 1220/6 ...

Conical shape with radius end KEL

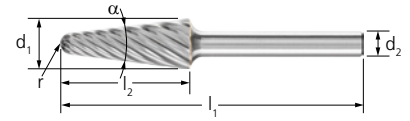
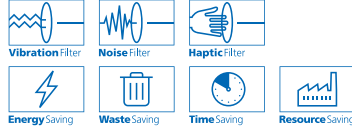
Conical burr with radius end according to DIN 8032.



Ordering notes:


- Please complete the description with the desired cut.

PFERDVALUE:



2



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	α	r [mm]	Cut		RPM		Description
						INOX	INOX HC-FEP			
						EAN 4007220				

Shank dia. 6 mm

8	20	6	60	16°	1.25	952382	-	10,000–24,000	1	KEL 0820/6 ...
10	20	6	60	14°	2.9	952399	NI 222454	8,000–19,000	1	KEL 1020/6 ...
12	30	6	70	14°	2.6	930496	NI 222461	7,000–16,000	1	KEL 1230/6 ...

New in the PFERD product range

TC burrs – ALU and NON-FERROUS cuts for aluminium/non-ferrous metals

When it comes to machining aluminium and non-ferrous metals, PFERD offers two high-performance cuts and a HICOAT coating which have been designed specifically for demanding machining tasks on long-chipping and lubricating materials.

Advantages:

- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.

Applications:

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

Matching tool drives:

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

Recommendations for use:

- 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 500 watts
- Please observe the rotational speed recommendations.

412 ALU grinding oil



Grinding oil can be used as an alternative to the HICOAT coating HC-NFE. **Grinding oil 412 ALU** in a 400 ml aerosol is particularly well suited: EAN 4007220791332. Detailed information on grinding oil 412 ALU can be found in our Tool Manual 23, catalogue section 4.

ALU cut



PFERD has further developed the ALU cut especially for stock removal on aluminium. This cut is characterized by its high stock removal rate.

Advantages:

- Extremely high stock removal rate.
- Large chips.
- Reduced material adhesion.
- Long tool life and smooth running.
- Can be used with cutting speeds of up to 1,100 m/min.

ALU cut with HICOAT coating HC-NFE



The use of burrs with the PFERD HICOAT coating HC-NFE prevents chips adhering during work on soft aluminium alloys. This increases the tool life and improves the surface quality of the workpiece.

Advantages:

- Mainly used for long-chipping and lubricating non-ferrous metals.
- Highest stock removal rate.
- Effective chip removal through improved anti-adhesion characteristics.
- Lower thermal loads.
- Longer service life.

Materials that can be worked:

- Aluminium
- Bronze
- Copper
- Brass
- Titanium
- Titanium alloys
- Zinc
- Fibre-reinforced plastics (GRP/CRP)
- Thermoplastics

PFERDVALUE:

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



Waste Saving



Time Saving

NON-FERROUS cut



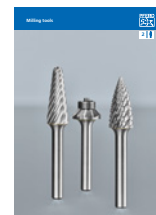
PFERD has developed the NON-FERROUS cut for universal use on non-ferrous metals and fibre-reinforced plastics. This cut is characterized by its high stock removal rate.

Advantages:

- Very good stock removal rate when used on non-ferrous metals such as brass and copper, plastics and fibre-reinforced plastics.

Materials that can be worked:

- Bronze
- Copper
- Brass
- Zinc
- Fibre-reinforced plastics (GRP/CRP)
- Thermoplastics.



TC burrs with NON-FERROUS cut can be found at www.pferd.com.



Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- 1 Select the material group to be machined.
- 2 Determine the type of application.
- 3 Select the cut.
- 4 Establish the cutting speed range.

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

- 5 Select the required burr diameter.
- 6 The cutting speed range and the burr diameter determine the recommended rotational speed range.

1 Material group		2 Application	3 Cut	4 Cutting speed
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys	Coarse stock removal	ALU 600–1,100 m/min
			Fine stock removal	ALU HC-NFE 600–1,300 m/min
		Brass, copper, zinc	Coarse stock removal	ALU 900–1,100 m/min
			Fine stock removal	ALU HC-NFE 900–1,300 m/min
			Coarse stock removal	ALU 600–1,100 m/min
			Fine stock removal	ALU HC-NFE 600–1,300 m/min
	Hard non-ferrous metals	Hard aluminium alloys (high Si content)	Coarse stock removal	ALU 600–1,100 m/min
			Fine stock removal	ALU HC-NFE 600–1,300 m/min
			Coarse stock removal	ALU 900–1,100 m/min
		Bronze	Coarse stock removal	ALU HC-NFE 900–1,300 m/min
			Fine stock removal	ALU 600–900 m/min
			Coarse stock removal	ALU HC-NFE 600–1,100 m/min
Plastics, other materials	Thermoplastics, fibre-reinforced plastics (GRP/CRP)	Coarse stock removal	NON-FERROUS 600–900 m/min	
			ALU 600–1,100 m/min	
		Fine stock removal	ALU HC-NFE 600–1,300 m/min	
			ALU 600–1,100 m/min	
			ALU HC-NFE 600–1,300 m/min	

Example:

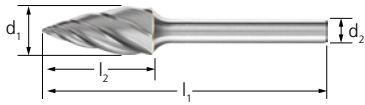
TC burr,
ALU cut,
burr dia. 12 mm.
Coarse stock removal on hard non-ferrous metals, e.g. bronze.
Cutting speed: 600–900 m/min
Rotational speed range:
16,000–24,000 RPM

5 Burr dia. [mm]	6 Cutting speeds [m/min]				
	450	600	900	1,100	1,300
	Rotational speeds [RPM]				
3	48,000	64,000	95,000	117,000	138,000
6	24,000	32,000	48,000	59,000	70,000
8	18,000	24,000	36,000	44,000	52,000
10	14,000	19,000	29,000	35,000	42,000
12	12,000	16,000	24,000	30,000	35,000
16	9,000	12,000	18,000	22,000	26,000



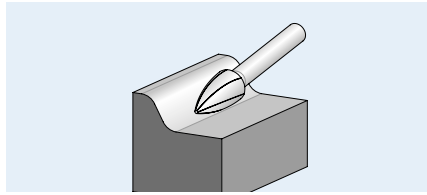
New in the PFERD product range

TC burrs – ALU and NON-FERROUS cuts for aluminium/non-ferrous metals



Pointed tree shape SPG

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



Ordering notes:

- Please complete the description with the desired cut.

PFERDVALUE:
HICOAT coating:



d ₁ [mm]	l ₂ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		Description
				ALU	ALU HC-NFE	
				 		
				EAN 4007220		

Shank dia. 3 mm

3	7	3	37	003350	-	1	SPG 0307/3 ...
	13	3	43	003435	-	1	SPG 0313/3 ...
6	13	3	43	003442	-	1	SPG 0613/3 ...

Shank dia. 6 mm

6	18	6	55	003503	-	1	SPG 0618/6 ...
8	20	6	60	003534	-	1	SPG 0820/6 ...
10	20	6	60	003558	-	1	SPG 1020/6 ...
12	25	6	65	003596	N! 222706	1	SPG 1225/6 ...



Tungsten carbide burrs with the MICRO cut are specifically designed for finishing and are used in areas in which mounted grinding points are usually used. They offer a higher stock removal rate and produce a high surface quality, particularly compared with conventionally milled surfaces. They also operate with low vibration and little noise. They maintain their geometry over their entire tool life, and are well suited to manual and machine applications. Almost all materials up to a hardness of 68 HRC can be machined.

Advantages:

- High surface quality.
- Unlike with mounted grinding points, there is no change in geometry due to wear and tear.
- Work on almost all materials up to 68 HRC.
- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.

Applications:

- Finishing
- Very fine cleaning work
- Corrections in tool and mould construction
- Sharpening cutting tools

Materials that can be worked:

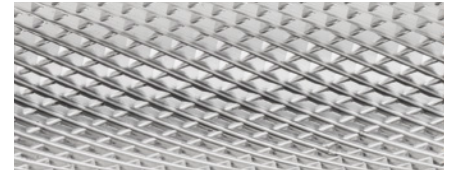
- Steel and cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

Recommendations for use:

- 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 applications
- Machine tools



PFERDVALUE:

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



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



New in the PFERD product range

TC burrs – MICRO cut for finishing work

Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Establish the cutting speed range.

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

- ❸ Select the required burr diameter.
- ❹ The cutting speed range and the burr diameter determine the recommended rotational speed range.

❶ Material group		Application	Cut	❷ Cutting speed	
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Fine stock removal	MICRO	600–750 m/min
	Hardened, heat-treated steels over 1,200 N/mm ² (> 38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel			450–600 m/min
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Fine stock removal	MICRO	450–600 m/min
Non-ferrous metals	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high Si content)	Fine stock removal	MICRO	450–600 m/min
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys (engine and turbine construction)			
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	Fine stock removal	MICRO	600–750 m/min

Example:

TC burr,
MICRO cut,
burr dia. of 10 mm.
Fine stock removal on steels
up to 1,200 N/mm².
Cutting speed: 600–750 m/min

**Rotational speed range:
19,000–24,000 RPM**

❸ Burr dia. [mm]	❹ Cutting speeds [m/min]		
	450	600	750
	Rotational speeds [RPM]		
2	72,000	95,000	120,000
3	48,000	64,000	80,000
4	36,000	48,000	60,000
6	24,000	32,000	40,000
8	18,000	24,000	30,000
10	14,000	19,000	24,000
12	12,000	16,000	20,000



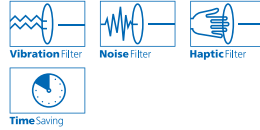
Set 1303 MICRO



The 1303 MICRO set contains three small tungsten carbide burrs for finishing in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 tungsten carbide burrs, shank dia. 3 mm, MICRO cut
- 1 piece each:
 - ZYA 0313/3 MICRO
 - WRC 0313/3 MICRO
 - RBF 0313/3 MICRO

PFERDVALUE:



Cut		Description
MICRO 		
EAN 4007220		
Shank dia. 3 mm		
N! 226667	1	1303 MICRO

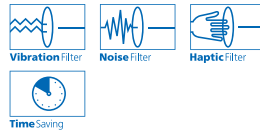
Set 1306 MICRO



The 1306 MICRO set contains three tungsten carbide burrs for finishing in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 tungsten carbide burrs, shank dia. 6 mm, MICRO cut
- 1 piece each:
 - ZYAS 0616/6 MICRO
 - WRC 0616/6 MICRO
 - RBF 0618/6 MICRO

PFERDVALUE:



Cut		Description
MICRO 		
EAN 4007220		
Shank dia. 6 mm		
N! 226674	1	1306 MICRO

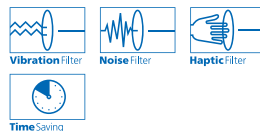
Set 1312 MICRO



The 1312 MICRO set contains three tungsten carbide burrs for finishing in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 tungsten carbide burrs, shank dia. 6 mm, MICRO cut
- 1 piece each:
 - ZYAS 1225/6 MICRO
 - WRC 1225/6 MICRO
 - RBF 1225/6 MICRO

PFERDVALUE:



Cut		Description
MICRO 		
EAN 4007220		
Shank dia. 6 mm		
N! 226681	1	1312 MICRO

New in the PFERD product range

TC copy burrs – for tool and mould construction

TC copy burrs by PFERD are the perfect tools for levelling elevations, such as weld seams. Thanks to the uncut area, the weld seam can be adjusted to the level of the surrounding surface without this being damaged. Copy milling burrs are used in particular in the repair of cutting and punching blades in tool and mould construction.

Advantages:

- Long tool life and high surface quality.
- The uncut area provides optimum contour guidance and protects the workpiece against damage.
- Reduction in processing time.

Materials that can be worked:

- Steel and cast steel
- Tool steels, hardened, heat-treated steels over 1,200 N/mm²

Applications:

- Levelling
- Work on weld seams

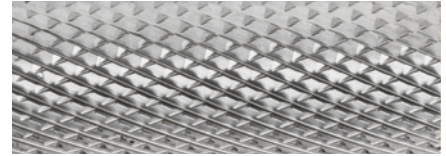
Recommendations for use:

- For accurate contour guidance, copy burrs can be used with guide aids.
- Please observe the rotational speed recommendations.

Matching tool drives:

- Straight grinders
- Flexible shaft drive

MICRO cut



TC copy burrs with MICRO cut were designed especially for fine stock removal and they produce an excellent surface quality. Almost all materials up to a hardness of 68 HRC can be machined.

Cut 4



TC copy burrs with cut 4 are designed for coarse stock removal.

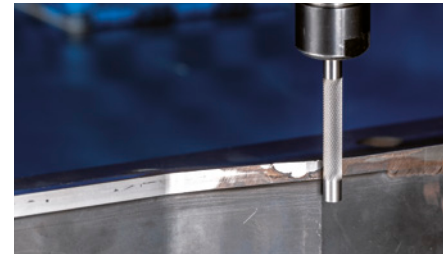
Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- 1 Select the material group to be machined.
- 2 Determine the type of application.
- 3 Select the cut.
- 4 Establish the cutting speed range.

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

- 5 Select the required burr diameter.
- 6 The cutting speed range and the burr diameter determine the recommended rotational speed range.



1 Material group		2 Application	3 Cut	4 Cutting speed
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Coarse stock removal	4	450–600 m/min
		Fine stock removal	MICRO	600–750 m/min
	Hardened, heat-treated steels over 1,200 N/mm ² (> 38 HRC)	Coarse stock removal	4	250–350 m/min
		Fine stock removal	MICRO	450–600 m/min

Example:

TC copy burr, MICRO cut, burr dia. 8 mm.
Fine stock removal on steels up to 1,200 N/mm².
Cutting speed: 600–750 m/min

Rotational speed range:
24,000–30,000 RPM

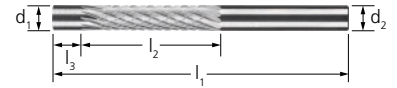
5 Burr dia. [mm]	6 Cutting speeds [m/min]				
	250	350	450	600	750
	Drehzahlen [RPM]				
3	27,000	37,000	48,000	64,000	80,000
6	13,000	19,000	24,000	32,000	40,000
8	10,000	14,000	18,000	24,000	30,000



Cylindrical shape ZYA without end cut

Cylindrical burr.

Ordering notes:

- Please complete the description with the desired cut.



d ₁ [mm]	l ₂ [mm]	l ₃ [mm]	d ₂ [mm]	l ₁ [mm]	Cut		Description
					MICRO	4	
					 		
					EAN 4007220		

Shank dia. 3 mm

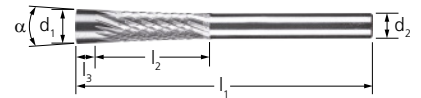
3	25	7	3	65	N! 244838	N! 244845	1	ZYA 0325/3 ... 7MM KFS
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Shank dia. 6 mm

6	30	7	6	70	N! 244982	N! 244890	1	ZYA 0630/6 ... 7MM KFS
8	30	7	6	77	N! 244906	N! 244913	1	ZYA 0830/6 ... 7MM KFS



Inverted cones WKN without end cut

Inverted cone-shaped burr, tapered towards the shank. Inverted cones WKN are especially well-suited for processing punching tools that are used for processing aluminium.



Ordering notes:

- Please complete the description with the desired cut.

d ₁ [mm]	l ₂ [mm]	l ₃ [mm]	d ₂ [mm]	l ₁ [mm]	α	Cut		Description
						MICRO	4	
						 		
						EAN 4007220		

Shank dia. 6 mm

8	26	7	6	73	4°	N! 244937	N! 244920	1	WKN 0826/6 ... 7MM KFS
---	----	---	---	----	----	------------------	------------------	---	------------------------

Products made to order

As a tool manufacturer with over 200 years of experience, PFERD can call on comprehensive expertise in the manufacture of tool solutions. The findings from our internal research and development, as well as from day-to-day practice on site with our customers, contribute to the development of each individual PFERD tool. Our production plant in Marienheide, Germany, works with state-of-the-art technology and there are many ways in which we can respond to individual needs.

Further TC copy burr cuts and dimensions are available as made-to-order products. For the production of these types of burrs, the uncut and cut lengths must be defined. Please note: The transition area may be up to 8 mm long!

Please contact us for further information. Your PFERD sales representative will be happy to provide you with further assistance.



New in the PFERD product range

HSS rotary cutters – for fine and coarse stock removal

HSS rotary cutters have a special tooth geometry and ensure high quality. They can also be used cost-effectively with low-power tool drives at low rotational speeds.

Advantages:

- Highly aggressive.
- Can be used at low rotational speeds.
- Very robust tooth cutting edges due to the toughness of the high-speed steel (HSS).
- Reduced wear on the tool drive due to impact-free work without chatter marks, thanks to the high concentricity.

Materials that can be worked:

- Steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

Applications:

- Deburring
- Machining contours
- Machining edges (chamfering, rounding)
- Milling out
- Work on weld seams
- Cutting out holes
- Levelling

Recommendations for use:

- Use HSS rotary cutters if your drive unit does not allow for high rotational speeds.
- When used on soft materials, HSS rotary cutters can be an economical alternative to tungsten carbide burrs.
- In contrast to tungsten carbide burrs, HSS rotary cutters need to be used with lower rotational speeds.
- The recommended rotational speeds and cutting speeds for the 3 cut can be used for HSS rotary cutters with a special cut.
- Antenna burrs and light-metal burrs are an exception to this. The specific rotational speeds and cutting speeds for these tools can be found in our Tool Manual 23, catalogue section 2, pages 96–97.
- If the smallest area of the burr diameter is being used, the recommended rotational speed can be increased accordingly.

Matching tool drives:

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

Safety notes:



= 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!

ALU cut



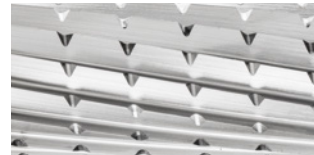
- Machining of soft non-ferrous metals, brass, copper, aluminium alloys, plastics, fibre-reinforced plastics and rubber.
- Rotational speed range of 4,000 to 6,000 RPM depending on the burr diameter.

1 cut



- Machining of steel, cast steel and stainless steel (INOX).
- Rotational speed range of 1,200 to 23,900 RPM depending on the burr diameter.

2 cut with chip breaker




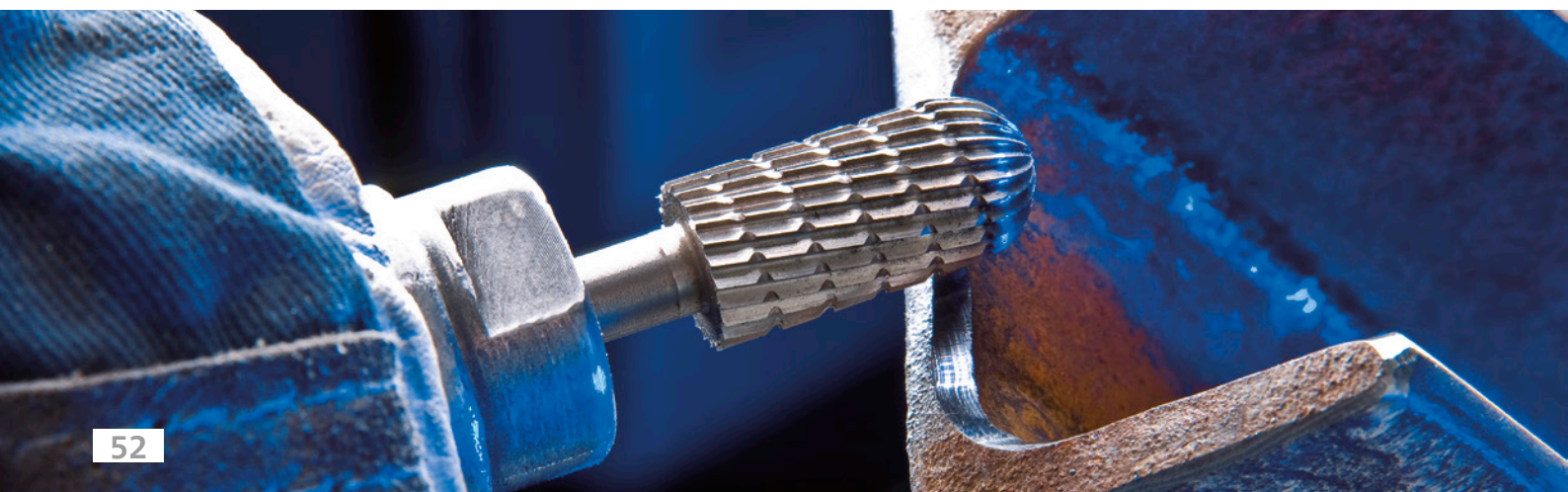
- Machining of steel, cast steel and cast iron, stainless steel (INOX), non-ferrous metals and plastics.
- Rotational speed range of 1,200 to 13,200 RPM depending on the burr diameter.

Z3 cut with chip breaker



- Machining of steel, cast steel and cast iron.
- Rotational speed range of 1,200 to 7,900 RPM depending on the burr diameter.

 The whole range of HSS rotary cutters incl. ALU cut, 1 cut and 2 cut can be found at www.pferd.com.





Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Determine the type of application.
- ❸ Select the cut.
- ❹ Establish the cutting speed range.

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

- ❺ Select the required cutter diameter.
- ❻ The cutting speed range and the burr diameter determine the recommended rotational speed range.

❶ Material group		❷ Application	❸ Cut	❹ Cutting speed	
Steel, cast steel	Steels up to 1,200 N/mm ² (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	2	60–80 m/min
				3	
			Fine stock removal	SP	
				3	
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	1	60–80 m/min
				Fine stock removal	1
			2		60–80 m/min
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys, brass, copper, zinc	Coarse stock removal	ALU	200–300 m/min
				1	
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	Coarse stock removal	2	60–80 m/min
				3	
Plastics, other materials	Fibre-reinforced thermoplastics and duroplastics, hard rubber, wood		Fine stock removal	SP	80–100 m/min
				3	
Plastics, other materials	Fibre-reinforced thermoplastics and duroplastics, hard rubber, wood		Coarse stock removal	ALU	200–300 m/min
				1	
			Fine stock removal	1	250–300 m/min
2	200–250 m/min				

Example:

HSS rotary cutter,
2 cut,
cutter dia. of 12 mm.
Coarse stock removal on steels
up to 1,200 N/mm².
Cutting speed: 60–80 m/min
Rotational speed range: 1,600–2,200 RPM

❺ Cutter dia. [mm]	❻ Cutting speeds [m/min]					
	60	80	100	200	250	300
	Rotational speeds [RPM]					
1.6	12,000	16,000	19,900	39,800	49,800	59,700
2.3	8,400	11,100	13,900	27,700	34,600	41,600
3.0	6,400	8,500	10,700	21,200	26,600	31,900
3.2	6,000	8,000	10,000	19,900	24,900	29,900
4.0	4,800	6,400	8,000	16,000	19,900	23,900
4.2	4,500	6,100	7,600	15,200	18,900	22,800
5.0	3,900	5,100	6,400	12,800	16,000	19,100
5.2	3,800	4,900	6,200	12,300	15,400	18,400
6.0	3,200	4,300	5,400	10,700	13,300	16,000
6.2	3,100	4,200	5,200	10,300	12,900	15,500
7.0	2,800	3,700	4,600	9,100	11,400	13,700
8.0	2,400	3,200	4,000	8,000	10,000	12,000
8.2	2,300	3,100	3,900	7,800	9,800	11,700
10.0	2,000	2,600	3,200	6,400	8,000	9,600
12.0	1,600	2,200	2,700	5,400	6,700	8,000
14.0	1,400	1,900	2,300	4,600	5,700	6,900
16.0	1,200	1,600	2,000	4,000	5,000	6,000
20.0	900	1,300	1,600	3,200	4,000	4,800

New in the PFERD product range

HSS rotary cutters – for fine and coarse stock removal

2






Set 85 Z3

The 85 Z3 set contains three HSS rotary cutters for fine and coarse stock removal in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 HSS rotary cutters, shank dia. 6 mm, 3 cut
- 1 piece each:
 - A 0616ST/6 Z3
 - C 0616/6 Z3
 - K 0618/6 Z3

Cut		Description
3 		
EAN 4007220		
Shank dia. 6 mm		
NI 229637	1	85 Z3





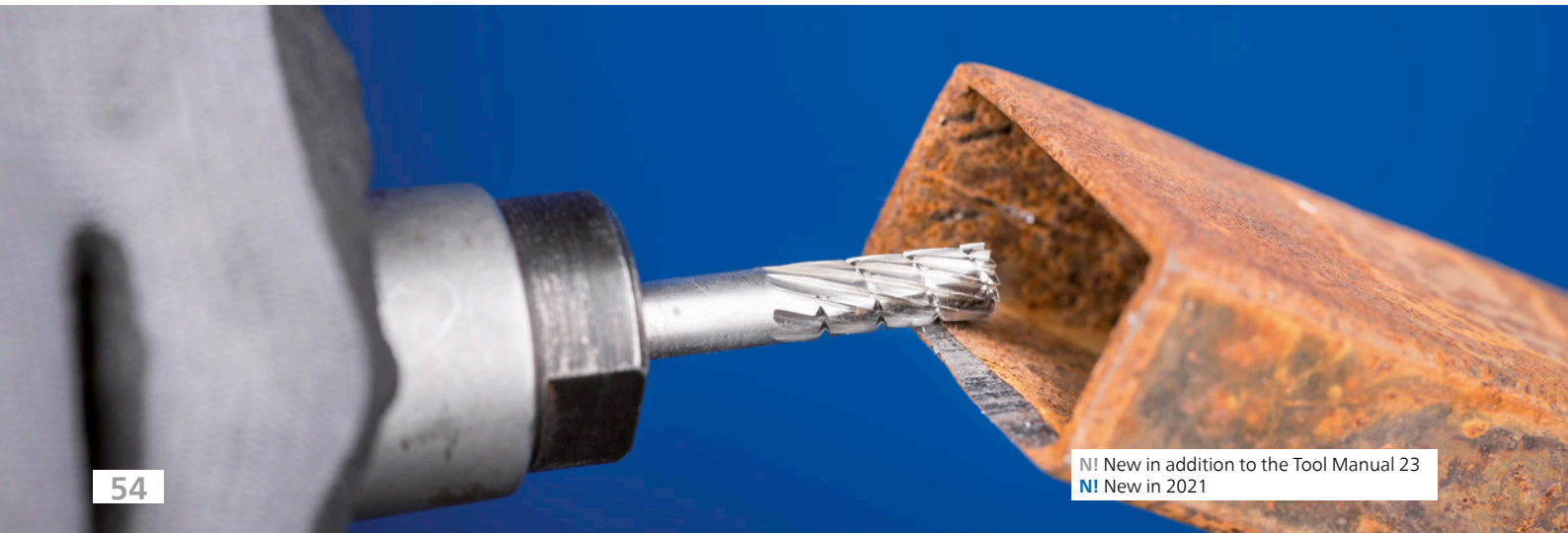
Set 86 Z3

The 86 Z3 set contains three HSS rotary cutters for fine and coarse stock removal in the most common shapes and dimensions. The sturdy plastic box protects the tools from dirt and damage.

Contents:

- 3 HSS rotary cutters, shank dia. 6 mm, 3 cut
- 1 piece each:
 - A 1225ST/6 Z3
 - C 1225/6 Z3
 - K 1225/6 Z3

Cut		Description
3 		
EAN 4007220		
Shank dia. 6 mm		
NI 229941	1	86 Z3



The innovative **ALUMASTER** High Speed Disc is a unique tool with an extremely high stock removal rate. It is ideal for processing aluminium as it does not generate hazardous or explosive dust. It consists of specially developed tungsten carbide cutting inserts, which are fixed to the High Speed Disc.

Advantages:

- Does not generate hazardous or explosive dust.
- An extraction system is not required.
- Cost-effective and eco-friendly alternative to grinding wheels and flap discs of comparable weight.
- Innovative and robust cut geometry:
 - The highest degree of safety
 - Extreme durability
 - Comfortable work
- Specially developed, turnable and replaceable tungsten carbide cutting inserts.
- Exceptionally high stock removal rate.

Materials that can be worked:

- Aluminium alloys
- Brass, copper, zinc
- Bronze
- Plastics
- Fibre-reinforced duroplastics (GRP, CRP)

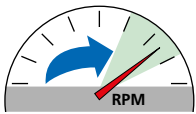
Industries:

- Shipbuilding and yacht construction
- Wagon construction
- Silo and container construction
- Vehicle construction

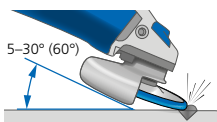


Recommendations for use:

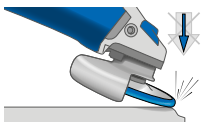
The tool has primarily been designed for use on aluminium, wrought aluminium alloys and cast aluminium. Non-ferrous metals with a relatively low strength and fibre-reinforced plastics can also be machined. This must be checked for the specific application on a case-by-case basis.



- An optimum rotational speed and power output for the tool drive are required for cost-effective use of the **ALUMASTER** High Speed Disc.
 - **HSD-F and HSD-R 115/125 types:**
Max. 13,300 RPM
Pneumatic angle grinders: power output of 1,000 watts or more
Electric angle grinders: rated output of 1,400 watts or more
 - **HSD-R 50 type:**
Max. 25,000 RPM
Pneumatic angle grinders: power output of 350 watts or more
Pneumatic straight grinder: power output of 350 watts or more
Electric straight grinders: rated output of 500 watts or more



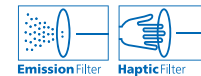
- Use the **ALUMASTER** High Speed Disc HSD-F at an angle of 5–30°, or up to 60° in special cases.
- Do not push the tool deep into the workpiece. The milling disc is not a cutting tool.



- Do not exert unnecessarily high forces on the angle grinder. The **ALUMASTER** High Speed Disc already works with low forces.
- When machining workpiece edges, cut along the edge, never across the edge.
- Do not decelerate the tool on the workpiece. The cutting inserts may break.

PFERDVALUE:

PFERDERGONOMICS recommends **ALUMASTER** High Speed Discs as an innovative tool solution for processing aluminium as they do not generate hazardous or explosive dust.



PFERDEFFICIENCY recommends **ALUMASTER** High Speed Discs for long fatigue-free and resource-saving work with perfect results in a very short period of time.




New in the PFERD product range

ALUMASTER High Speed Disc



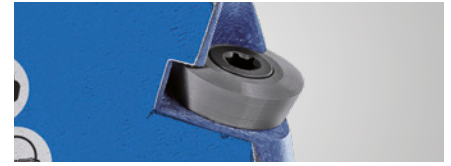
The fast way to the best tool

Description	Applications	Matching tool drives	Tool
 <p>The HSD-F 115/125 type was specially developed for use on angle grinders with a diameter of 115/125 mm and for flat use.</p>	<ul style="list-style-type: none"> ■ Milling out ■ Work on weld seams ■ Work on fillet welds ■ Work on edges/chamfering ■ Surface work 	<p>Pneumatic angle grinder PWT 26/120 HV M14</p> <p>Ordering data: EAN 4007220071205</p>  <p>Electric angle grinder UWER 18/110 SI</p> <p>Ordering data: EAN 4007220957127</p> 	<p>ALUMASTER High Speed Disc HSD-F 115/125</p>  <p>See Tool Manual 23, catalogue section 2, page 102.</p>
 <p>The HSD-R 115/125 type is a refinement of HSD-F and is also suitable for applications such as peripheral milling and milling out root welds.</p>	<ul style="list-style-type: none"> ■ Milling out ■ Work on weld seams ■ Work on fillet welds ■ Work on edges/chamfering ■ Surface work ■ Milling out root welds ■ Peripheral milling 	<p>Pneumatic angle grinder PWT 26/120 HV M14</p> <p>Ordering data: EAN 4007220071205</p>  <p>Electric angle grinder UWER 18/110 SI</p> <p>Ordering data: EAN 4007220957127</p> 	<p>ALUMASTER High Speed Disc HSD-R 115/125</p>  <p>See page 58.</p>
 <p>Due to its small size, the HSD-R 50 type is highly suitable for working on hard-to-reach areas and delicate components. Thanks to the specially developed holder, the ALUMASTER High Speed Disc HSD-R 50 cannot only be used on angle grinders (mounting dia. 10 mm), but also on straight grinders and flexible shaft drives.</p>	<ul style="list-style-type: none"> ■ Milling out ■ Work on weld seams ■ Work on fillet welds ■ Work on edges/chamfering ■ Surface work ■ Milling out root welds ■ Peripheral milling 	<p>Flexible shaft drive Mammoth Electronic ME 22/240</p> <p>Ordering data: EAN 4007220101681</p>  <p>Pneumatic straight grinder PGAS 7/250 E-HV</p> <p>Ordering data: EAN 4007220948880</p>  <p>Pneumatic angle grinder PWSA 5/210 HV</p> <p>Ordering data: EAN 4007220177075</p> 	<p>ALUMASTER High Speed Disc HSD-R 50</p>  <p>Arbor BO 8/10 HSD-R 50</p>  <p>ALUMASTER High Speed Disc HSD-R 50 in combination with BO 8/10 HSD-R 50 arbor</p>  <p>See page 59.</p>

Detailed information and the matching tool drives can be found in our Tool Manual 23, catalogue section 9.

ALUMASTER with HICOAT coating

PFERD also offers the cutting inserts with a premium-quality HICOAT coating for lubricating aluminium casting alloys with a silicon content of 5–10 %, abrasive aluminium casting alloys with a silicon content of over 15 % and for other abrasive materials or non-ferrous metals. This prevents tool clogging and abrasive wear, even in use on these particularly demanding materials.



Advantages:

- Extremely hard.
- Very low friction coefficient.
- Very low tendency towards adhesion.
- Improved surface quality.
- Reduced burr formation.

Materials that can be worked:

- Lubricating aluminium casting alloys with silicon contents of 5–10 %
- Sticky, greasy materials
- Abrasive aluminium casting alloys with silicon contents of > 15 %
- Abrasive materials such as fibre-reinforced plastics (FRP)
- Non-ferrous alloys of higher strength than aluminium (bronze, brass, etc.)

Selecting suitable cutting inserts:


To determine the most suitable cutting insert, please proceed as follows:


- Select the material group to be machined.
- Select the cutting inserts.


① Material group			② Cutting inserts	
			High-performance application	Universal application
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys	HICOAT	uncoated
		Brass, copper, zinc	HICOAT	uncoated
	Hard non-ferrous metals	Hard aluminium alloys (high Si content)	HICOAT	-
		Bronze	HICOAT	-
Plastics		Fibre-reinforced plastics (GRP/CRP), thermoplastics	HICOAT	-


Safety notes:


- It is essential to tighten the flange nut using the appropriate tool, such as a face pin wrench. Clamping systems which are designed to be tightened without the use of an additional tool, i.e. which are tightened by hand, are not permissible. Suitable clamping nuts can be found in our Tool Manual 23, catalogue section 9.
- Tighten the mounting bolts of the cutting inserts using the Torx key provided. If used properly, it is designed to provide a tightening torque of around 4 Nm. Alternatively, use a torque spanner with a tightening torque of 4 Nm.
- Loose cutting inserts may break during use. Therefore, **check regularly whether they are attached securely.**
- Do not use damaged cutting inserts! They may break!
- Only use original accessories from PFERD.


 = CE-marked


 = Do not use if damaged!


 = Do not use for cutting!

 = Wear eye protection!

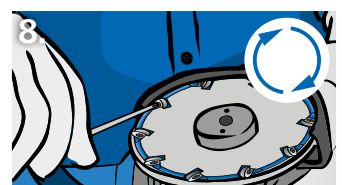
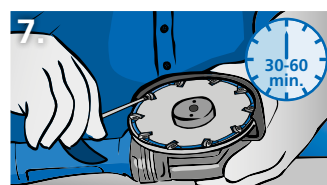
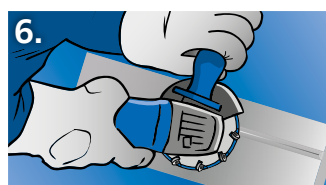
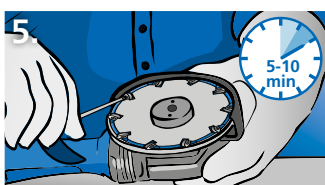
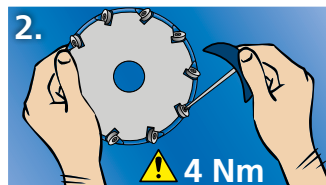
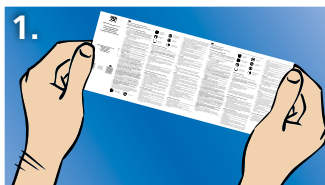
 = Wear gloves!

 = Wear hearing protection!

 = Follow the safety instructions!

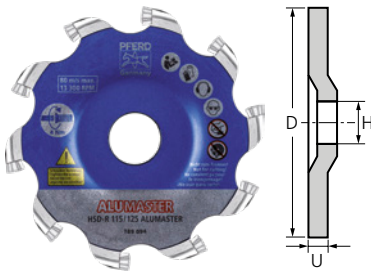
 = Observe the contact angle of 5–60° (**ALUMASTER HSD-F!**)

 4 Nm  **Tighten the bolts!**



New in the PFERD product range

ALUMASTER High Speed Disc



ALUMASTER High Speed Disc HSD-R

Special tool for processing aluminium alloys using an angle grinder. Also suitable for peripheral milling and milling out root welds.

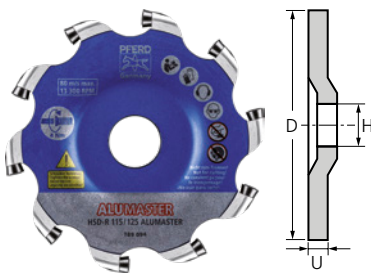
Contents:

- ALUMASTER High Speed Disc HSD-R 115/125 incl. mounted tungsten carbide cutting inserts
- Torx key, plastic box

PFERDVALUE:



D [mm]	H [mm]	U [mm]	Max. RPM	EAN 4007220	Description
115	22.23	8.0	13,300	N! 107461	1 HSD-R 115/125 ALUMASTER



ALUMASTER High Speed Disc HSD-R HICOAT

Special tool for processing particularly challenging aluminium alloys using an angle grinder. The cutting inserts come with a HICOAT coating. Also suitable for peripheral milling and milling out root welds.

Contents:

- ALUMASTER High Speed Disc HSD-R 115/125 HICOAT incl. mounted tungsten carbide cutting inserts
- Torx key, plastic box

PFERDVALUE:



D [mm]	H [mm]	U [mm]	Max. RPM	EAN 4007220	Description
115	22.23	8.0	13,300	N! 107515	1 HSD-R 115/125 ALUMASTER HICOAT



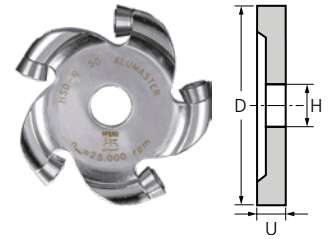
ALUMASTER High Speed Disc HSD-R 50


Special tool for processing aluminium alloys. With the specially developed arbor, it cannot only be used on angle grinders (mounting dia. 10 mm), but also on straight grinders and flexible shaft drives. It is highly suitable for working on hard-to-reach areas and delicate components. Due to the tool diameter of 49 mm, guards are not obligatory.

Contents:

- ALUMASTER High Speed Disc HSD-R 50 incl. mounted tungsten carbide cutting inserts
- Torx key, plastic box

PFERDVALUE:



D [mm]	H [mm]	U [mm]	Max. RPM	EAN 4007220		Description
49	10	8.0	25,000	N! 156858	1	HSD-R 50 ALUMASTER

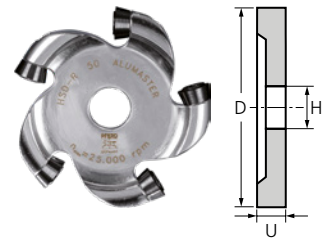
ALUMASTER High Speed Disc HSD-R 50 HICOAT


Special tool for processing particularly challenging aluminium alloys. With the specially developed arbor, it cannot only be used on angle grinders (mounting dia. 10 mm), but also on straight grinders and flexible shaft drives. The cutting inserts come with a HICOAT coating. It is highly suitable for working on hard-to-reach areas and delicate components. Due to the tool diameter of 49 mm, guards are not obligatory.

Contents:

- ALUMASTER High Speed Disc HSD-R 50 HICOAT incl. mounted tungsten carbide cutting inserts
- Torx key, plastic box

PFERDVALUE:

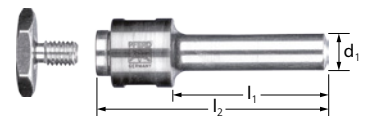



D [mm]	H [mm]	U [mm]	Max. RPM	EAN 4007220		Description
49	10	8.0	25,000	N! 156865	1	HSD-R 50 ALUMASTER HICOAT

Arbor

Arbor for ALUMASTER High Speed Disc HSD-R 50

Suitable for use on flexible shaft drives and straight grinders.

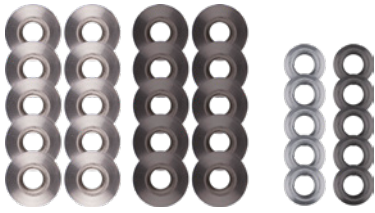


d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	Suitable for	EAN 4007220		Description
8	33	50	HSD-R 50	N! 156919	1	BO 8/10 HSD-R 50



New in the PFERD product range

ALUMASTER High Speed Disc – Accessories




Cutting insert sets, HICOAT cutting insert sets

Cutting insert sets for **ALUMASTER** High Speed Disc.

Ordering notes:

- The sets are available with or without HICOAT coating.

D [mm]	Contents [pcs.]	Suitable for	EAN 4007220		Description
8	5	ALUMASTER HSD-R 50	N! 156872	1	WSP-A-8R 50 ALUMASTER
			N! 156889	1	WSP-A-8R 50 ALUMASTER HICOAT
	10	ALUMASTER HSD-R 115/125	N! 107492	1	WSP-A-8R 115/125 ALUMASTER
			N! 107522	1	WSP-A-8R 115/125 ALUMASTER HICOAT
12	10	ALUMASTER HSD-F 115/125	018583	1	WSP-A-12R 115/125 ALUMASTER
			061220	1	WSP-A-12R 115/125 ALUMASTER HICOAT



ALUMASTER service set, ALUMASTER HICOAT service set


For exchanging individual cutting inserts on the **ALUMASTER** High Speed Disc.

Set contains:

- 2 cutting inserts
- 2 bolts
- 1 TORX key

Ordering notes:

- The sets are available with or without HICOAT coating.

Suitable for	EAN 4007220		Description
ALUMASTER HSD-R 50	N! 156896	1	ASS-R8 50 ALUMASTER
	N! 156902	1	ASS-R8 50 ALUMASTER HICOAT
ALUMASTER HSD-R 115/125	N! 107539	1	ASS-R8 115/125 ALUMASTER
	N! 107546	1	ASS-R8 115/125 ALUMASTER HICOAT
ALUMASTER HSD-F 115/125	061237	1	ASS-R12 115/125 ALUMASTER
	061244	1	ASS-R12 115/125 ALUMASTER HICOAT

Hole saws are made from tough, shatter-proof, sturdy HSS bimetal. The saw teeth are made from high-quality M42 (Co8) material. A selection of the most common HSS hole saws is available as sets for tradespeople, fitters, electricians and mechanics. PFERD supplies hole saws with diameters above 150 mm for use in ventilation and pipework installation.

Advantages:

- Cost-effective sawing of round cut-outs.
- Chattering during sawing is prevented by the alternating tooth pitch.
- High concentricity.
- Good chip removal.
- The hole saw is conveniently centred and guided via the replaceable HSS pilot drill.
- Hole saw arbor is supplied with an ejection spring for improved ejection of the sawn material.

Materials that can be worked:

- Steel
- Stainless steel (INOX)
- Aluminium
- Copper, bronze, brass
- Plastics
- Wood

Applications:

- Cutting out holes

Recommendations for use:

- Observe the recommended rotational speed.
- Clamp the pilot drill in the hole saw arbor and make sure that it projects at least 3 mm (1/8") over the teeth of the hole saw.
- When cutting metals, use a high-quality cutting oil, if possible. This facilitates smooth running and lengthens the hole saw service life.

Exception: When working on aluminium, use kerosene instead of cutting oil.

- HSS hole saws are suitable for work on stainless steel (INOX). In order to avoid corrosion, remove any particles which develop during work from the workpiece. Clean the workpiece chemically or mechanically (etching/polishing, etc.).
- Make sure that all the teeth are applied evenly. To prevent tooth breakage, avoid swinging movements during sawing.
- Avoid overheating the saw.

Matching tool drives:

- Power drill



2



Safety notes:

- When using shank extensions, the recommended hole saw rotational speed must not be exceeded. Risk of accidents!



= Wear eye protection!



= Follow the safety instructions!

Example applications for HSS hole saws and TC hole cutters

Dia. [mm]	Applications
25.0	Plumbing and heating pipes
30.0	Plumbing and heating pipes
32.0	Sink fittings with dia. 32 mm
35.0	Plumbing and heating pipes, hollow wall junction boxes, halogen spots
40.0	Plumbing and waste pipes
45.0	Water and heating pipes

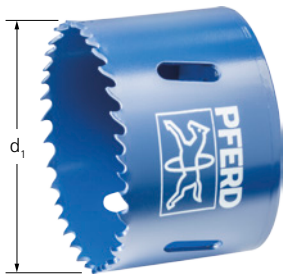
Dia. [mm]	Applications
50.0	Water and heating pipes with insulation
55.0	Built-in lights with dia. 55 mm
60.0	Built-in lights with dia. 60 mm
68.0	Pattress boxes with dia. 68 mm
70.0	Hollow wall junction boxes with dia. 70 mm
74.0	Hollow wall junction boxes with dia. 74 mm

Dia. [mm]	Applications
80.0	Distribution boxes, built-in lights, cable opening covers with dia. 80 mm
90.0	Built-in lights with dia. 90 mm
105.0	Waste air pipes
152.0–210.0	Ventilation pipes



New in the PFERD product range

HSS hole saws



HSS hole saws

Hole saws made from tough, shatter-proof, sturdy HSS bimetal for cutting out holes.

Thread:


LS 14–LS 30 = 1/2–20 UNF
LS 32–LS 210 = 5/8-18 UNF

Matching arbors:


LS 14–LS 30 = LSS 1, LSS 4
LS 32–LS 210 = LSS 2

Ordering notes:

- Please refer to the table below for the maximum cutting depth.
- Please order hole saw arbors separately. Detailed information and ordering data on hole saw arbors can be found on page 64.

d ₁ [mm]	d ₁ [inch]	EAN 4007220	Max. cutting depth [mm]	Max. cutting depth [inch]	Rec. RPM Steel	Rec. RPM Stainless steel (INOX)	Rec. RPM Non- ferrous metals	Rec. RPM Plastics		Description
14	9/16	319086	34	1 5/16	620	310	800	1,000	1	LS 14
16	5/8	062319	34	1 5/16	550	275	730	880	1	LS 16
17	11/16	319093	36	1 7/16	520	260	680	820	1	LS 17
19	3/4	062326	36	1 7/16	460	230	600	740	1	LS 19
20	-	062333	36	1 7/16	425	210	560	700	1	LS 20
21	13/16	319109	36	1 7/16	410	205	540	670	1	LS 21
22	7/8	062340	36	1 7/16	390	195	520	640	1	LS 22
24	15/16	319116	36	1 7/16	360	180	470	580	1	LS 24
25	1	062357	36	1 7/16	350	175	470	560	1	LS 25
27	1 1/16	062364	36	1 7/16	325	160	435	520	1	LS 27
29	1 1/8	062371	36	1 7/16	300	150	400	480	1	LS 29
30	1 3/16	062388	36	1 7/16	285	145	380	470	1	LS 30
32	1 1/4	062395	36	1 7/16	275	140	360	440	1	LS 32
33	1 5/16	062401	36	1 7/16	260	135	345	420	1	LS 33
35	1 3/8	062418	36	1 7/16	250	125	330	400	1	LS 35
37	1 7/16	319123	36	1 7/16	235	115	310	370	1	LS 37
38	1 1/2	062425	36	1 7/16	230	115	300	370	1	LS 38
40	1 9/16	319130	36	1 7/16	215	110	280	350	1	LS 40
41	1 5/8	062432	36	1 7/16	210	105	280	340	1	LS 41
43	1 11/16	319147	31	1 1/4	200	100	260	330	1	LS 43
44	1 3/4	062449	31	1 1/4	195	95	260	320	1	LS 44
46	1 13/16	319154	31	1 1/4	185	90	250	300	1	LS 46
48	1 7/8	062456	31	1 1/4	180	90	240	290	1	LS 48
51	2	062463	31	1 1/4	170	85	230	270	1	LS 51
52	2 1/16	319161	31	1 1/4	165	80	220	270	1	LS 52
54	2 1/8	062470	31	1 1/4	160	80	210	260	1	LS 54
57	2 1/4	062487	31	1 1/4	150	75	200	250	1	LS 57
59	2 5/16	319178	31	1 1/4	145	70	190	240	1	LS 59
60	2 3/8	062494	31	1 1/4	140	70	190	230	1	LS 60
64	2 1/2	062500	31	1 1/4	135	65	180	220	1	LS 64
65	2 9/16	319185	31	1 1/4	135	60	180	220	1	LS 65
67	2 5/8	062517	31	1 1/4	130	65	170	210	1	LS 67
68	2 11/16	500811	31	1 1/4	130	65	170	210	1	LS 68
70	2 3/4	062524	31	1 1/4	125	60	160	200	1	LS 70
73	2 7/8	062531	31	1 1/4	120	60	160	190	1	LS 73
76	3	062548	31	1 1/4	115	55	150	180	1	LS 76
79	3 1/8	062555	31	1 1/4	110	55	140	180	1	LS 79
83	3 1/4	062562	31	1 1/4	105	50	140	170	1	LS 83
86	3 3/8	319192	31	1 1/4	100	50	130	160	1	LS 86
89	3 1/2	062579	31	1 1/4	95	45	130	160	1	LS 89
92	3 5/8	062586	31	1 1/4	95	45	120	150	1	LS 92
95	3 3/4	062593	31	1 1/4	90	45	120	150	1	LS 95
98	3 7/8	319208	31	1 1/4	90	45	120	140	1	LS 98
102	4	062609	31	1 1/4	85	40	110	140	1	LS 102

Continued on next page


d ₁ [mm]	d ₁ [inch]	EAN 4007220	Max. cutting depth [mm]	Max. cutting depth [inch]	Rec. RPM Steel	Rec. RPM Stainless steel (INOX)	Rec. RPM Non- ferrous metals	Rec. RPM Plastics		Description
105	4 1/8	062616	31	1 1/4	80	40	110	130	1	LS 105
111	4 3/8	319222	31	1 1/4	75	35	100	130	1	LS 111
114	4 1/2	062623	31	1 1/4	75	35	100	120	1	LS 114
121	4 3/4	319239	31	1 1/4	70	35	90	120	1	LS 121
127	5	319246	31	1 1/4	65	30	80	110	1	LS 127
140	5 1/2	319253	31	1 1/4	60	30	75	100	1	LS 140
152	6	319260	31	1 1/4	55	25	70	90	1	LS 152
160	6 5/16	N! 235645	31	1 1/4	52	23	67	85	1	LS 160
168	6 5/8	N! 235638	31	1 1/4	50	23	63	82	1	LS 168
177	7	N! 235652	31	1 1/4	47	22	60	77	1	LS 177
210	8 1/4	N! 235669	31	1 1/4	40	18	50	65	1	LS 210



New in the PFERD product range

HSS hole saws – Accessories

LSS 1 

LSS 2 

LSS 4 

Hole saw arbors LSS


Hole saw arbors are designed for mounting the hole saw and the pilot drill.

Purpose of the ejection spring

It prevents the sawn-out material from becoming jammed between the inner walls of the hole saw and the drill. The spring force ejects the material. Should this effect not be required for a particular application, e.g. pipes that are already installed, the spring can easily be removed manually without the help of tools.




Ordering notes:

- Available in three sizes.
- Select the appropriate arbor, taking into account the hole saw diameter and available tool drive.
- Hole saw arbors LSS 1 and LSS 2 are supplied with the HSS pilot drill LSB 6/60 and an ejection spring.
- Hole saw arbors LSS 4 are supplied with the HSS pilot drill LSB 6/90 and an ejection spring.

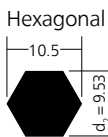
Suitable for hole saws	d ₂ [mm]	d ₂ [inch]	Shank type	EAN 4007220	Thread		Description
LS 14–30	9.53	3/8	hexagonal	062630	1/2–20 UNF	1	LSS 1
LS 32–210	9.53	3/8	hexagonal	062647	5/8–18 UNF	1	LSS 2
LS 14–30	6.35	1/4	round	062661	1/2–20 UNF	1	LSS 4


Shank shapes

The adjacent tables provide information on the arbor shapes and dimensions for the LSS hole saw arbors and LSB pilot drills. The matching hole saws and hole saw arbors are indicated.

PFERD hole saw arbor	Shank dia. [mm]	Shank dia. [inch]	Shank shape	For PFERD hole saws
LSS 1	9.53	3/8		LS 14 to LS 30
LSS 2	9.53	3/8		LS 32 to LS 210
LSS 4	6.35	1/4		LS 14 to LS 30

Shank dimensions [mm]

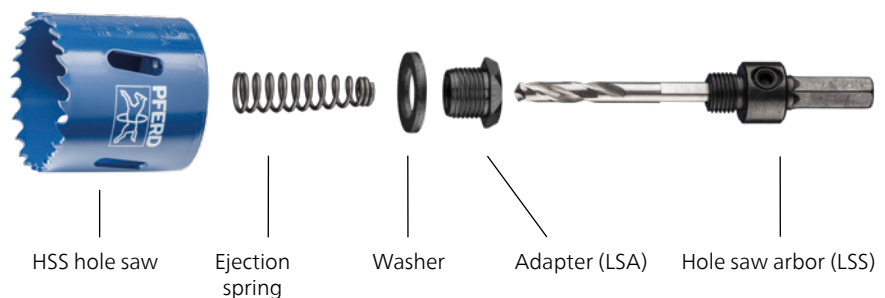


PFERD pilot drill	Shank dia. [mm]	Shank dia. [inch]	Shank shape	For PFERD hole saw arbor
LSB 6/60	6.35	1/4		LSS 1, LSS 2
LSB 6/90	6.35	1/4		LSS 4

Ejection spring

All hole saw arbors are delivered with an ejection spring for better ejection of the sawn material.

Before using the tool, this ejection spring can be installed/removed without additional tools if required. Screw the ejection spring onto the drill from the side with the smaller diameter up to its limit. It is also possible to use the ejection spring with the LSA adapter and washer (see diagram).



Quick-mounting system for hole saws, adapter sets

PFERD offers a clamping system for easily and quickly using HSS hole saws. The quick-mounting system and the two three-part adapter sets, which have been tailored to the hole saw diameter, enable PFERD HSS hole saws to be used easily and conveniently on all conventional power drills.

Advantages:

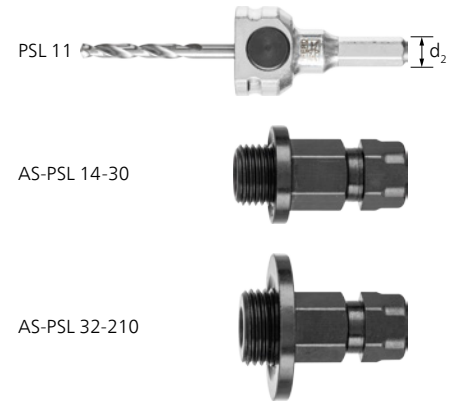
- Easily and quickly swap different hole saws.
- After the application is completed, the hole saw and quick-mounting system can be separated without the use of additional tools by simply pressing a button.
- Interchangeable HSS pilot drill.


Recommendations for use:

- Screw the adapters quickly and easily into the desired hole saw and clamp them in the quick-mounting system.

Ordering notes:

- Adapter set AS-PSL 14-30 is available for a hole saw diameter of 14–30 mm, and adapter set AS-PSL 32-210 is available for a hole saw diameter of 32–210 mm. Both adapter sets contain three adapters with the same dimensions.
- The quick-mounting system PSL 11 will be delivered with an HSS pilot drill.



Suitable for hole saws	Suitable for hole saws	EAN 4007220	d ₂ [mm]	d ₂ [inch]		Description
LS 14–210	hexagonal	900185	11	7 1/16	1	PSL 11
LS 14–30	-	900215	-	-	1	AS-PSL 14-30
LS 32–210	-	900192	-	-	1	AS-PSL 32-210

Example combination



HSS hole saw LS 44

Adapter from adapter set AS-PSL 32-210

Quick-mounting system PSL 11

LS 44 with adapter AS-PSL 32-210 and quick-mounting system PSL 11


HSS pilot drill LSB

HSS pilot drills for HSS hole saw arbors and quick-mounting systems for hole saws.

Ordering notes:

- Hole saw arbors LSS 1 and LSS 2 are supplied with the HSS pilot drill LSB 6/60.
- Hole saw arbors LSS 4 are supplied with the HSS pilot drill LSB 6/90.
- The HSS pilot drill LSB 6/90 can be used for the quick-mounting system PSL 11.



Suitable for hole saws	Suitable arbors	d ₂ [mm]	d ₂ [inch]	Suitable for hole saws	EAN 4007220		Description
LS 14–210	LSS 1, LSS 2	6.35	1/4	round	319284	1	LSB 6/60
	LSS 4	6.35	1/4	round	062708	1	LSB 6/90

New in the PFERD product range

Drilling and countersink tools



Drilling tools with cross grinding for industrial uses. Fully ground, right-hand turning versions that produce precise drill holes thanks to their high concentricity and exact centring. PFERD offers spiral drills in the STEEL (118° point angle) and INOX (135° point angle) types.

Advantages:

- Very good chip removal.
- High concentricity.
- Exact centring and low feed force thanks to cross grinding.

Applications:

- Drilling

Recommendations for use:

- Observe the recommended rotational speed.
- When drilling metals, use a high-quality cutting oil or cooling lubricant, if possible. This facilitates smooth running and extends the drill tool life. Exception: when working on aluminium, use kerosene instead of cutting oil.
- In order to avoid corrosion, remove any particles which develop when working on stainless steel (INOX) from the workpiece. Clean the workpiece chemically or mechanically (etching/polishing, etc.).

Safety notes:



= Wear eye protection!



= Follow the safety instructions!

Matching tool drives:

- Power drills
- Column drills
- Machine tools
- Robot

HSSG (M2) STEEL 118° type



- Suitable for universal use on steel, cast steel, grey cast iron, annealed cast iron, bronze, brass, aluminium.
- Easy centring.
- Long tool life.
- Good chip removal.

HSSE Co5 (M35) INOX 135° type



- Particularly well suited for tough and hard materials, such as alloyed and high-strength steel, stainless steel (INOX).
- Robust tip profile.
- Very long tool life.
- Good chip removal.
- Very good temperature resistance due to Co content.



Example applications for STEEL/INOX HSS spiral drills

Dia. [mm]	Applications
1.6	Core hole for M2 thread
2.5	Drilled hole dia. for blind and special blind rivets dia. 2.4 mm
3.1	Drilled hole dia. for blind and special blind rivets dia. 3.0 mm
3.3	Core hole for M4 thread and drilled hole dia. for blind and special blind rivets dia. 3.2 mm
3.5	Core hole for metric fine thread MF 4 x 0.5 mm
4.0	Core hole for metric fine thread MF 4.5 x 0.5 mm
4.1	Drilled hole dia. for blind and special blind rivets dia. 4.0 mm
4.2	Core hole for M5 thread
4.5	Core hole for metric fine thread MF 5 x 0.5 mm
5.0	Core hole for M6 thread and metric fine thread MF 5.5 x 0.5 mm
5.1	Drilled hole dia. for blind and special blind rivets dia. 5.0 mm

Dia. [mm]	Applications
5.2	Drilled hole dia. for blind and special blind rivets dia. 5.1 mm
5.3	Drilled hole dia. for blind and special blind rivets dia. 5.2 mm
5.5	Core hole for metric fine thread MF 6 x 0.5 mm
6.0	Core hole for M7 thread
6.5	Core hole for metric fine thread MF 7 x 0.5 and drilled hole dia. for blind and special blind rivets dia. 6.4 mm
6.8	Core hole for M8 thread
7.0	Core hole for metric fine thread MF 8 x 1 mm
7.5	Core hole for metric fine thread MF 8 x 0.5 mm
8.0	Core hole for metric fine thread MF 9 x 1 mm
8.5	Core hole for M10 thread and metric fine thread MF 9 x 0.5 mm
9.0	Core hole for metric fine thread MF 10 x 1 mm

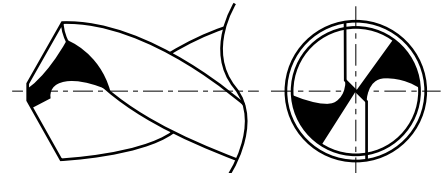
Dia. [mm]	Applications
9.5	Core hole for metric fine thread MF 10 x 0.5 mm
10.0	Core hole for metric fine thread MF 11 x 1 mm
10.2	Core hole for M12 thread
10.5	Core hole for metric fine thread MF 12 x 1.5 mm
11.0	Core hole for metric fine thread MF 12 x 1 mm
11.5	Core hole for metric fine thread MF 12 x 0.5 mm and metric fine thread MF 13 x 1.5 mm
12.0	Core hole for M14 thread and metric fine thread MF 13 x 1 mm
12.5	Core hole for metric fine thread MF 13 x 0.5 mm and metric fine thread MF 14 x 1.5 mm
13.0	Core hole for metric fine thread MF 14 x 1 mm

New in the PFERD product range

Drilling tools – HSS spiral drills

Fully ground spiral drill with cross grinding

PFERD drills are completely ground spiral drills: they are precision ground both in the chip flute and the guide chamfer as well as at the drill tip. They also have cross grinding. This drill is suitable for highly precise positioning on the workpiece and supports centring during drilling. This grinding finish even cuts at the centre of the drill tip and reduces the feed forces during use. Spiral drills with cross grinding are suitable for purposes including machining of difficult-to-machine materials like chromium-nickel steel.



2



Recommended rotational speed range [RPM]

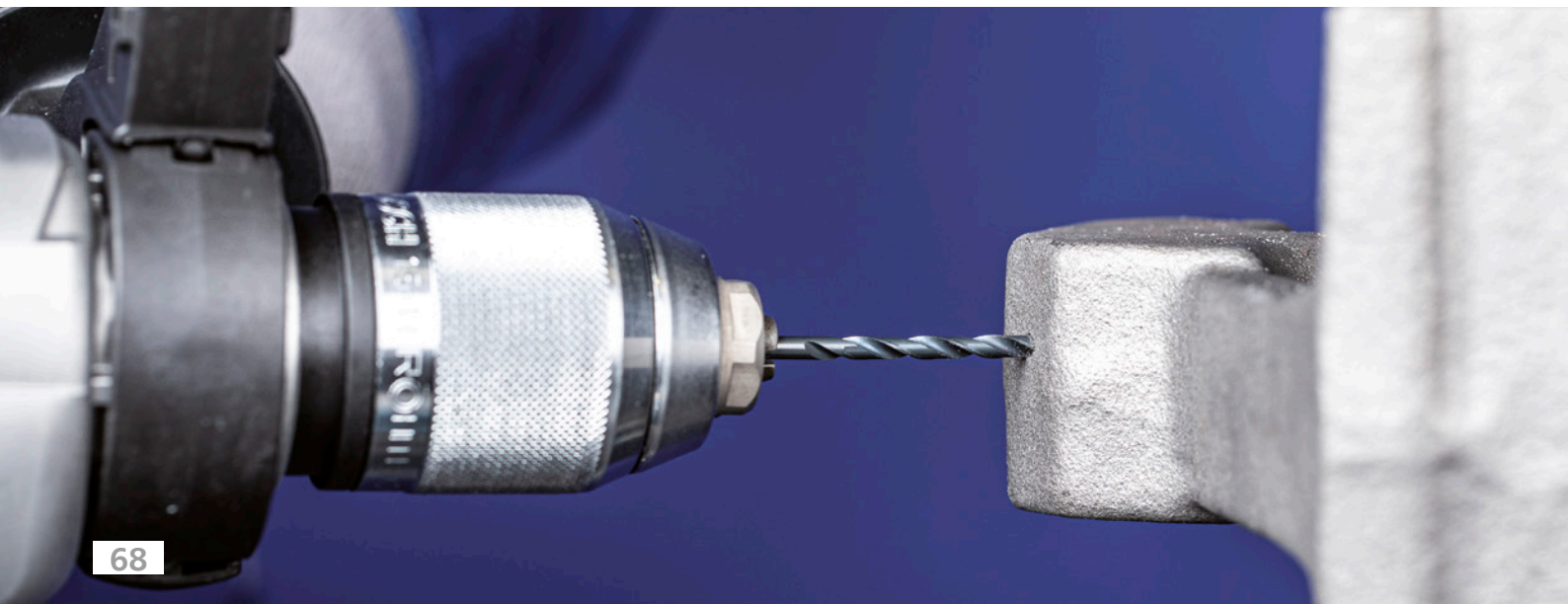
To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Select the type.
- ❸ Establish the cutting speed range.

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

- ❹ Select the required diameter.
- ❺ The cutting speed range and the diameter determine the recommended rotational speed range.

❶ Material group			❷ Type	❸ Cutting speed
Steel, cast steel	Steels up to 700 N/mm ² (< 220 HB)	Construction steels, carbon steels, tool steels, alloyed and non-alloyed steels, case-hardened steels, cast steel	STEEL	25–35 m/min
	Steels over 700 N/mm ² (> 220 HB)		STEEL INOX	20–25 m/min
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	INOX	10–20 m/min
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys Brass, copper, zinc	STEEL INOX	30–60 m/min
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high Si content)	STEEL INOX	25–50 m/min
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	STEEL	10–25 m/min
			INOX	
Plastics, other materials	Fibre-reinforced thermoplastics and duroplastics, hard rubber, wood		STEEL	15–40 m/min
			INOX	



Example:

Spiral drill,
SPB DIN 338 HSSG N 12,0 STEEL,
Tool dia. 12 mm.
Steels up to 700 N/mm²
Cutting speed: 25–35 m/min.

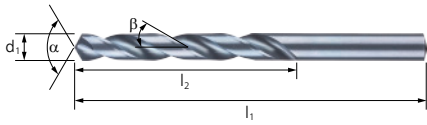
Rotational speed range: 650–950 RPM

④ Tool dia. [mm]	⑤ Cutting speeds [m/min]								
	10	15	20	25	30	35	40	50	60
	Rotational speeds [RPM]								
1.00	3,200	4,800	6,350	7,950	9,550	11,150	12,750	15,900	19,100
1.50	2,100	3,200	4,250	5,300	6,350	7,450	8,500	10,600	12,750
1.60	2,000	3,000	4,000	5,000	6,000	7,000	8,000	10,000	12,000
2.00	1,600	2,400	3,200	4,000	4,800	5,550	6,350	7,950	9,550
2.50	1,250	1,900	2,550	3,200	3,800	4,450	5,100	6,350	7,650
3.00	1,050	1,600	2,100	2,650	3,200	3,700	4,250	5,300	6,350
3.10	1,000	1,550	2,050	2,600	3,100	3,600	4,100	5,150	6,200
3.30	950	1,450	1,950	2,400	2,900	3,400	3,850	4,850	5,800
3.40	900	1,400	1,900	2,350	2,800	3,300	3,750	4,700	5,600
3.50	900	1,350	1,800	2,300	2,750	3,200	3,650	4,550	5,450
3.60	900	1,350	1,800	2,250	2,650	3,100	3,550	4,450	5,300
4.00	800	1,200	1,600	2,000	2,400	2,800	3,200	4,000	4,800
4.10	800	1,150	1,550	1,950	2,350	2,750	3,100	3,900	4,650
4.20	800	1,150	1,550	1,900	2,300	2,650	3,050	3,800	4,550
4.40	750	1,100	1,450	1,800	2,200	2,550	2,900	3,600	4,350
4.50	700	1,050	1,400	1,750	2,100	2,500	2,850	3,550	4,250
5.00	650	950	1,250	1,600	1,900	2,250	2,550	3,200	3,800
5.10	650	950	1,250	1,550	1,900	2,200	2,500	3,150	3,750
5.20	650	950	1,250	1,550	1,850	2,150	2,450	3,050	3,700
5.30	600	900	1,200	1,500	1,800	2,100	2,400	3,000	3,600
5.50	600	850	1,150	1,450	1,750	2,050	2,300	2,900	3,450
6.00	550	800	1,050	1,350	1,600	1,850	2,100	2,650	3,200
6.50	500	750	1,000	1,250	1,450	1,700	1,950	2,450	2,950
6.80	450	700	950	1,200	1,400	1,650	1,900	2,350	2,800
7.00	450	700	900	1,150	1,350	1,600	1,800	2,300	2,750
7.50	450	650	850	1,050	1,250	1,500	1,700	2,100	2,550
8.00	400	600	800	1,000	1,200	1,400	1,600	2,000	2,400
8.50	400	550	750	950	1,100	1,300	1,500	1,850	2,250
9.00	350	550	700	900	1,050	1,250	1,400	1,750	2,100
9.50	350	500	650	850	1,000	1,150	1,350	1,700	2,000
10.00	300	500	650	800	950	1,100	1,250	1,600	1,900
10.20	300	500	650	800	950	1,100	1,250	1,600	1,900
10.50	300	450	600	750	900	1,050	1,200	1,500	1,800
11.00	300	450	600	700	850	1,000	1,150	1,450	1,750
11.50	300	400	550	700	850	1,000	1,100	1,400	1,700
12.00	250	400	550	650	800	950	1,050	1,350	1,600
12.50	250	400	500	650	800	900	1,000	1,300	1,550
13.00	250	350	500	600	750	850	1,000	1,250	1,450



New in the PFERD product range

Drilling tools – HSS spiral drills





DIN 338 HSSG N STEEL spiral drills

High-performance drilling tools in the STEEL in HSSG (M2) type for industrial uses. Fully ground, right-hand turning version with cross grinding.

Materials that can be worked:

steel, aluminium, brass, bronze, cast, plastics



d ₁ [mm]	l ₂ [mm]	l ₁ [mm]	α	Helix angles β	Type		Description
					STEEL  EAN 4007220		
1.00	12	34	118°	25–30°	N! 164570	10	SPB DIN 338 HSSG N 1,0 STEEL
1.50	18	40	118°	25–30°	N! 166345	10	SPB DIN 338 HSSG N 1,5 STEEL
1.60	20	43	118°	25–30°	N! 169315	10	SPB DIN 338 HSSG N 1,6 STEEL
2.00	24	49	118°	25–30°	N! 166383	10	SPB DIN 338 HSSG N 2,0 STEEL
2.50	30	57	118°	25–30°	N! 166413	10	SPB DIN 338 HSSG N 2,5 STEEL
3.00	33	61	118°	25–30°	N! 166536	10	SPB DIN 338 HSSG N 3,0 STEEL
3.10	36	65	118°	25–30°	N! 166550	10	SPB DIN 338 HSSG N 3,1 STEEL
3.30	36	65	118°	25–30°	N! 166581	10	SPB DIN 338 HSSG N 3,3 STEEL
3.40	39	70	118°	25–30°	N! 166888	10	SPB DIN 338 HSSG N 3,4 STEEL
3.50	39	70	118°	25–30°	N! 166895	10	SPB DIN 338 HSSG N 3,5 STEEL
3.60	39	70	118°	25–30°	N! 166901	10	SPB DIN 338 HSSG N 3,6 STEEL
4.00	43	75	118°	25–30°	N! 166949	10	SPB DIN 338 HSSG N 4,0 STEEL
4.10	43	75	118°	25–30°	N! 166956	10	SPB DIN 338 HSSG N 4,1 STEEL
4.20	43	75	118°	25–30°	N! 166994	10	SPB DIN 338 HSSG N 4,2 STEEL
4.40	47	80	118°	25–30°	N! 167007	10	SPB DIN 338 HSSG N 4,4 STEEL
4.50	47	80	118°	25–30°	N! 167014	10	SPB DIN 338 HSSG N 4,5 STEEL
5.00	52	86	118°	25–30°	N! 167021	10	SPB DIN 338 HSSG N 5,0 STEEL
5.10	52	86	118°	25–30°	N! 167038	10	SPB DIN 338 HSSG N 5,1 STEEL
5.20	52	86	118°	25–30°	N! 167045	10	SPB DIN 338 HSSG N 5,2 STEEL
5.30	52	86	118°	25–30°	N! 167052	10	SPB DIN 338 HSSG N 5,3 STEEL
5.50	57	93	118°	25–30°	N! 167069	10	SPB DIN 338 HSSG N 5,5 STEEL
6.00	57	93	118°	25–30°	N! 167076	10	SPB DIN 338 HSSG N 6,0 STEEL
6.50	63	101	118°	25–30°	N! 167083	10	SPB DIN 338 HSSG N 6,5 STEEL
6.80	69	109	118°	25–30°	N! 167090	10	SPB DIN 338 HSSG N 6,8 STEEL
7.00	69	109	118°	25–30°	N! 167106	10	SPB DIN 338 HSSG N 7,0 STEEL
7.50	69	109	118°	25–30°	N! 167113	10	SPB DIN 338 HSSG N 7,5 STEEL
8.00	75	117	118°	25–30°	N! 167120	10	SPB DIN 338 HSSG N 8,0 STEEL
8.50	75	117	118°	25–30°	N! 167137	10	SPB DIN 338 HSSG N 8,5 STEEL
9.00	75	125	118°	25–30°	N! 167151	10	SPB DIN 338 HSSG N 9,0 STEEL
9.50	81	125	118°	25–30°	N! 167168	10	SPB DIN 338 HSSG N 9,5 STEEL
10.00	87	133	118°	25–30°	N! 167175	10	SPB DIN 338 HSSG N 10,0 STEEL
10.20	87	133	118°	25–30°	N! 167182	5	SPB DIN 338 HSSG N 10,2 STEEL
10.50	87	133	118°	25–30°	N! 167199	5	SPB DIN 338 HSSG N 10,5 STEEL
11.00	94	142	118°	25–30°	N! 167205	5	SPB DIN 338 HSSG N 11,0 STEEL
11.50	94	142	118°	25–30°	N! 167212	5	SPB DIN 338 HSSG N 11,5 STEEL
12.00	101	151	118°	25–30°	N! 167229	5	SPB DIN 338 HSSG N 12,0 STEEL
12.50	101	151	118°	25–30°	N! 167236	5	SPB DIN 338 HSSG N 12,5 STEEL
13.00	101	151	118°	25–30°	N! 167243	5	SPB DIN 338 HSSG N 13,0 STEEL

DIN 338 HSSG N STEEL spiral drills, 19-piece set

The set contains 19 HSS spiral drills in the STEEL in HSSG (M2) type for industrial uses. The sturdy plastic box protects the tools from dirt and damage. The securing of the HSS spiral drills facilitates the selection and withdrawal of the tools.



Contents:

19 HSS spiral drills,
STEEL in HSSG (M2) type,
dia. 1.0 to 10.0 mm, graduations in 0.5 mm

Materials that can be worked:

steel, aluminium, brass, bronze, cast, plastics



Type		Description
STEEL 		
EAN 4007220		
N! 168172	1	SET SPB DIN 338 HSSG N 1-10 STEEL 19

DIN 338 HSSG N STEEL spiral drills, 25-piece set

The set contains 25 HSS spiral drills in the STEEL in HSSG (M2) type for industrial uses. The sturdy plastic box protects the tools from dirt and damage. The securing of the HSS spiral drills facilitates the selection and withdrawal of the tools.



Contents:

25 HSS spiral drills,
STEEL in HSSG (M2) type
dia. 1.0 to 13.0 mm, graduations in 0.5 mm

Materials that can be worked:

steel, aluminium, brass, bronze, cast, plastics

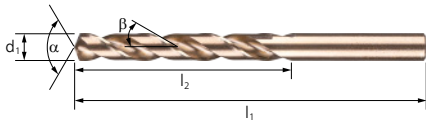


Type		Description
STEEL 		
EAN 4007220		
N! 168189	1	SET SPB DIN 338 HSSG N 1-13 STEEL 25



New in the PFERD product range

Drilling tools – HSS spiral drills





DIN 338 HSSE N INOX spiral drills

High-performance drilling tools in the INOX in HSSE-Co5 (M35) type for industrial uses. Fully ground, right-hand turning version with cross grinding.

Materials that can be worked:

steel, stainless steel (INOX), aluminium, brass, bronze, cast, titanium, plastics



d ₁ [mm]	l ₂ [mm]	l ₁ [mm]	α	Helix angles β	Type INOX 		Description
					EAN 4007220		
1.00	12	34	135°	36°	N! 167267	10	SPB DIN 338 HSSE N 1,0 INOX
1.50	18	40	135°	36°	N! 167274	10	SPB DIN 338 HSSE N 1,5 INOX
1.60	20	43	135°	36°	N! 167281	10	SPB DIN 338 HSSE N 1,6 INOX
2.00	24	49	135°	36°	N! 167298	10	SPB DIN 338 HSSE N 2,0 INOX
2.50	30	57	135°	36°	N! 167304	10	SPB DIN 338 HSSE N 2,5 INOX
3.00	33	61	135°	36°	N! 167311	10	SPB DIN 338 HSSE N 3,0 INOX
3.10	36	65	135°	36°	N! 167328	10	SPB DIN 338 HSSE N 3,1 INOX
3.30	36	65	135°	36°	N! 167342	10	SPB DIN 338 HSSE N 3,3 INOX
3.40	39	70	135°	36°	N! 167366	10	SPB DIN 338 HSSE N 3,4 INOX
3.50	39	70	135°	36°	N! 167380	10	SPB DIN 338 HSSE N 3,5 INOX
3.60	39	70	135°	36°	N! 167403	10	SPB DIN 338 HSSE N 3,6 INOX
4.00	43	75	135°	36°	N! 167410	10	SPB DIN 338 HSSE N 4,0 INOX
4.10	43	75	135°	36°	N! 167441	10	SPB DIN 338 HSSE N 4,1 INOX
4.20	43	75	135°	36°	N! 167465	10	SPB DIN 338 HSSE N 4,2 INOX
4.40	47	80	135°	36°	N! 167670	10	SPB DIN 338 HSSE N 4,4 INOX
4.50	47	80	135°	36°	N! 167694	10	SPB DIN 338 HSSE N 4,5 INOX
5.00	52	86	135°	36°	N! 167717	10	SPB DIN 338 HSSE N 5,0 INOX
5.10	52	86	135°	36°	N! 167724	10	SPB DIN 338 HSSE N 5,1 INOX
5.20	52	86	135°	36°	N! 167731	10	SPB DIN 338 HSSE N 5,2 INOX
5.30	52	86	135°	36°	N! 167748	10	SPB DIN 338 HSSE N 5,3 INOX
5.50	57	93	135°	36°	N! 167755	10	SPB DIN 338 HSSE N 5,5 INOX
6.00	57	93	135°	36°	N! 167762	10	SPB DIN 338 HSSE N 6,0 INOX
6.50	63	101	135°	36°	N! 167779	10	SPB DIN 338 HSSE N 6,5 INOX
6.80	69	109	135°	36°	N! 167786	10	SPB DIN 338 HSSE N 6,8 INOX
7.00	69	109	135°	36°	N! 167984	10	SPB DIN 338 HSSE N 7,0 INOX
7.50	69	109	135°	36°	N! 167991	10	SPB DIN 338 HSSE N 7,5 INOX
8.00	75	117	135°	36°	N! 168028	10	SPB DIN 338 HSSE N 8,0 INOX
8.50	75	117	135°	36°	N! 169322	10	SPB DIN 338 HSSE N 8,5 INOX
9.00	75	125	135°	36°	N! 168042	10	SPB DIN 338 HSSE N 9,0 INOX
9.50	81	125	135°	36°	N! 168059	10	SPB DIN 338 HSSE N 9,5 INOX
10.00	87	133	135°	36°	N! 168073	10	SPB DIN 338 HSSE N 10,0 INOX
10.20	87	133	135°	36°	N! 168080	5	SPB DIN 338 HSSE N 10,2 INOX
10.50	87	133	135°	36°	N! 168097	5	SPB DIN 338 HSSE N 10,5 INOX
11.00	94	142	135°	36°	N! 168103	5	SPB DIN 338 HSSE N 11,0 INOX
11.50	94	142	135°	36°	N! 168110	5	SPB DIN 338 HSSE N 11,5 INOX
12.00	101	151	135°	36°	N! 168127	5	SPB DIN 338 HSSE N 12,0 INOX
12.50	101	151	135°	36°	N! 168141	5	SPB DIN 338 HSSE N 12,5 INOX
13.00	101	151	135°	36°	N! 168165	5	SPB DIN 338 HSSE N 13,0 INOX

DIN 338 HSSE N INOX spiral drills, 19-piece set

The set contains 19 HSS spiral drills in the INOX in HSSE-Co5 (M35) type for industrial uses. The sturdy plastic box protects the tools from dirt and damage. The securing of the HSS spiral drills facilitates the selection and withdrawal of the tools.

Contents:

19 HSS spiral drills,
INOX in HSSE-Co5 (M35) type,
dia. 1.0 to 10.0 mm, graduations in 0.5 mm



Materials that can be worked:

steel, stainless steel (INOX), aluminium, brass,
bronze, cast, titanium, plastics



2



Type		Description
INOX		
		
EAN 4007220		
N! 168196	1	SET SPB DIN 338 HSSE N 1-10 INOX 19

DIN 338 HSSE N INOX spiral drills, 25-piece set

The set contains 25 HSS spiral drills in the INOX in HSSE-Co5 (M35) type for industrial uses. The sturdy plastic box protects the tools from dirt and damage. The securing of the HSS spiral drills facilitates the selection and withdrawal of the tools.



Contents:

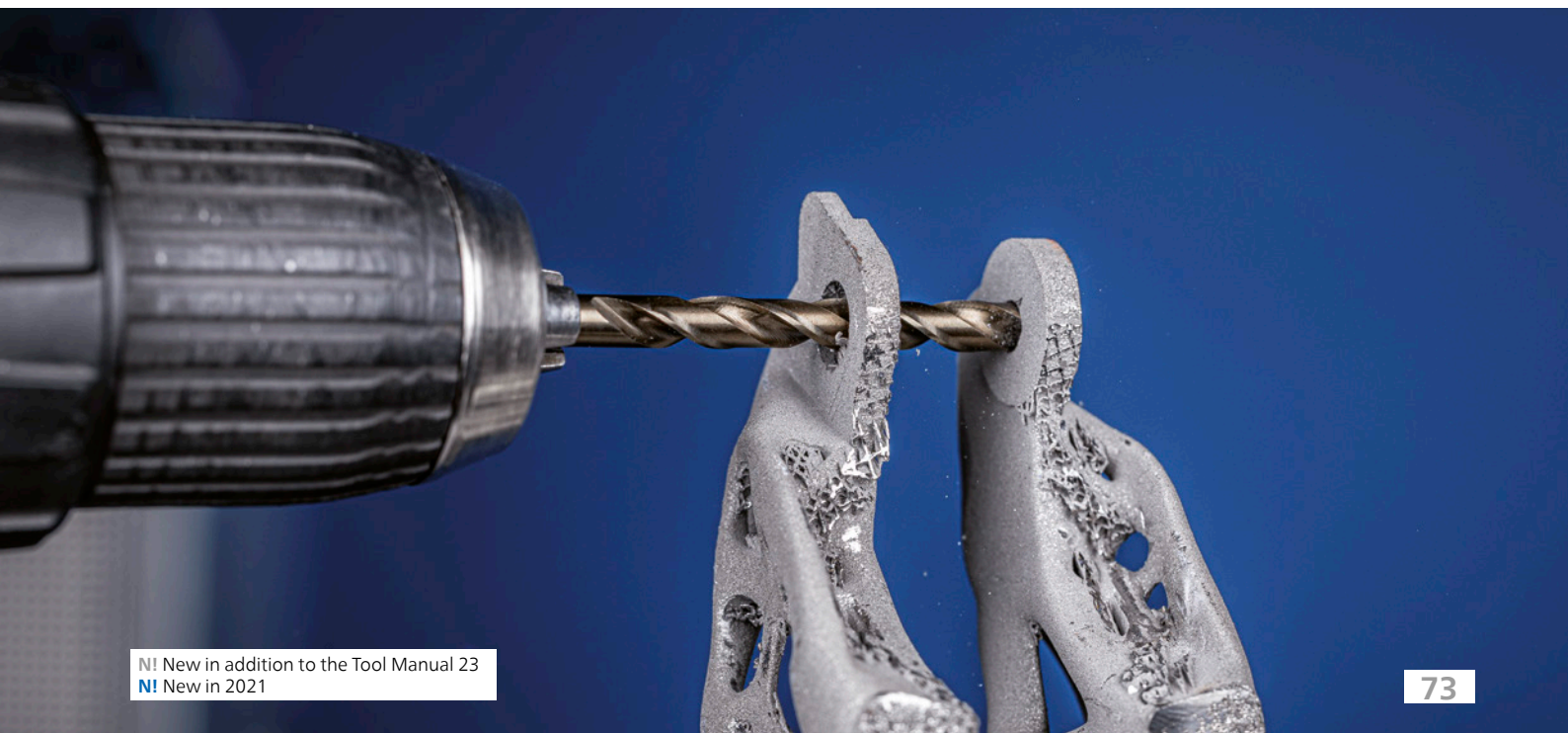
25 HSS spiral drills,
INOX in HSSE-Co5 (M35) type
dia. 1.0 to 13.0 mm, graduations in 0.5 mm

Materials that can be worked:

steel, stainless steel (INOX), aluminium, brass,
bronze, cast, titanium, plastics



Type		Description
INOX		
		
EAN 4007220		
N! 168202	1	SET SPB DIN 338 HSSE N 1-13 INOX 25



New in the PFERD product range

Drilling tools – HSS step drills

Sturdy high-performance tools for burr-free drilling and deburring of sheet metal, pipes and profiles. Materials up to 4 mm thick can be drilled and deburred easily in a single step. PFERD also offers step drills with a high-quality HICOAT coating. To ensure reliable torque transmission, all step drills have a three-surface shaft.

Advantages:

- Drilling and deburring in a single step.
- Completely smooth running and a high cutting performance.
- The high-quality drill tip ensures effortless centring and drilling.
- The tool taper makes it easier to pull back from drilled plates.
- Chips which do not break are neatly removed as with a spiral drill.
- Built-up edges and cold welding on the blades are prevented.

Materials that can be worked:

- Steel
- Cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Plastics
- Other materials

Applications:

- Drilling
- Deburring

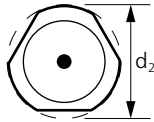
Recommendations for use:

- Use HSS step drills on sheets, pipes and profiles with a maximum thickness of 4 mm.
- Please refer to the table for the recommended rotational speeds.

Matching tool drives:

- Power drills
- Column drills

Safety note:



To ensure reliable torque transmission, step drills have a three-surface shaft.

HSS type



- Use cutting oil/compressed air as a coolant and lubricant in the case of step drills without a coating.

HSS HICOAT HC-FEP type



- Step drills with a HICOAT coating can also be used without the addition of coolants.
- Particularly suitable for work on stainless steel (INOX).



Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Select the type.
- ❸ Establish the cutting speed range.

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

- ❹ Select the required diameter.
- ❺ The cutting speed range and the diameter determine the recommended rotational speed range.

❶ Material group		❷ Type	❸ Cutting speed
Steel, cast steel	Steels up to 700 N/mm ²	Construction steels, carbon steels, tool steels, alloyed and non-alloyed steels, case-hardened steels, cast steel	HSS HICOAT HC-FEP
	Steels over 700 N/mm ²		HSS HICOAT HC-FEP
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	HICOAT HC-FEP
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys Brass, copper, zinc	HSS HICOAT HC-FEP
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high Si content)	HICOAT HC-FEP
Plastics, other materials	Fibre-reinforced thermoplastics and duroplastics, hard rubber, wood		HSS
			HICOAT HC-FEP

Example:

HSS step drills
STB HSS 04-30/10,
Step dia. 4–30 mm.
Steels up to 700 N/mm².
Cutting speed: 20–30 m/min

Rotational speed range: 2,400–200 RPM

❹ Step dia. [mm]	❺ Cutting speeds [m/min]		
	10	20	30
	Rotational speeds [RPM]		
4.00	800	1,600	2,400
5.00	640	1,280	1,920
6.00	530	1,060	1,600
7.00	460	920	1,400
8.00	400	800	1,200
9.00	350	700	1,060
10.00	320	640	960
11.00	290	580	880
12.00	270	540	820
14.00	230	460	700
15.00	210	420	640
16.00	200	400	600
18.00	180	360	540
20.00	160	320	480
21.00	150	300	460
22.00	140	280	420
24.00	130	260	400
26.00	120	240	360
27.00	120	240	360
28.00	110	220	340
30.00	100	200	300
33.00	90	180	280
34.00	90	180	280
36.00	90	180	280
37.00	90	180	280
39.00	80	160	240



New in the PFERD product range

Drilling tools – HSS step drills



HSS step drills

HSS step drills for drilling and deburring thin sheets, pipes and profiles made from various materials. To ensure reliable torque transmission, all step drills have a three-surface shaft.



Drill bit dia. range [mm]	No. of drill steps	d ₂ [mm]	l ₁ [mm]	Type		Description
				HSS		
						
				EAN 4007220		
4–12	9	6	65	N! 165867	1	STB HSS 04-12/6
4–20	9	8	75	N! 165874	1	STB HSS 04-20/8
4–30	14	10	100	N! 165881	1	STB HSS 04-30/10
4–39	13	10	107	N! 165898	1	STB HSS 04-39/10
6–37	12	10	100	N! 165904	1	STB HSS 06-37/10

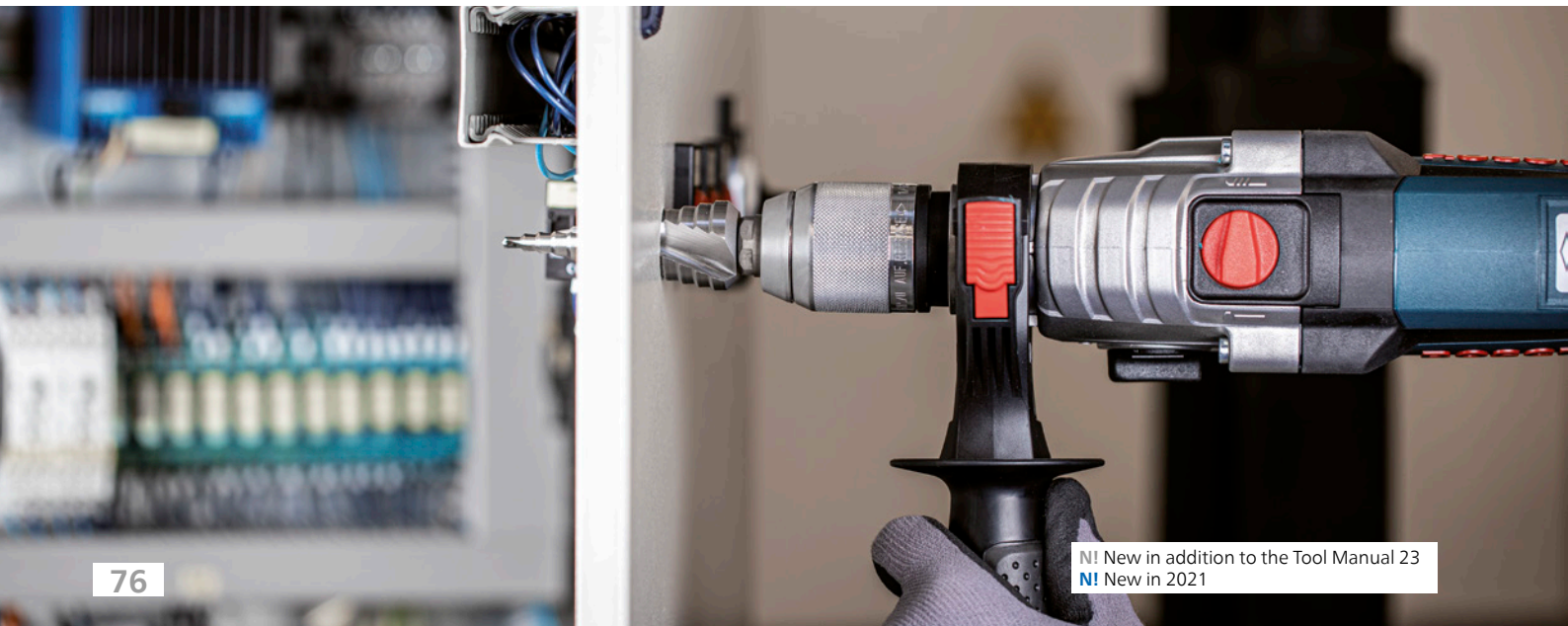


HSS step drills, 3-piece set

The set includes three HSS step drills in the versions 4–12 mm (9 steps), 4–20 mm (9 steps), 4–30 mm (14 steps) for industrial uses. To ensure reliable torque transmission, all step drills have a three-surface shaft.

The sturdy plastic box protects the tools from dirt and damage. The securing of the HSS step drills facilitates the selection and withdrawal of the tools.

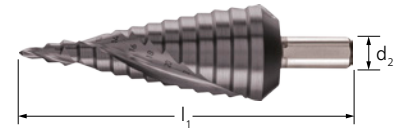
Contents [pcs.]	Type		Description
	HSS		
			
	EAN 4007220		
3	N! 166109	1	SET STB HSS 3





HSS step drills with HICOAT coating HC-FEP

HSS step drills with premium HICOAT coating HC-FEP are wear resistant and versatile as they can be used to process steel, stainless steel (INOX), non-ferrous metals, thermoplastics and duroplastics. To ensure reliable torque transmission, all step drills have a three-surface shaft.

Step drills with a HICOAT coating HC-FEP provide good high-temperature hardness and resistance to oxidation. They can therefore also be used on hard materials without the addition of coolants.





Drill bit dia. range [mm]	No. of drill steps	d ₂ [mm]	l ₁ [mm]	Type		Description
				HC-FEP		
				 EAN 4007220		
4–12	9	6	65	N! 166031	1	STB HSS 04-12/6 HC-FEP
4–20	9	8	75	802755	1	STB HSS 04-20/8 HC-FEP
4–30	14	10	100	802762	1	STB HSS 04-30/10 HC-FEP
4–39	13	10	107	N! 166079	1	STB HSS 04-39/10 HC-FEP
6–37	12	10	100	N! 166086	1	STB HSS 06-37/10 HC-FEP

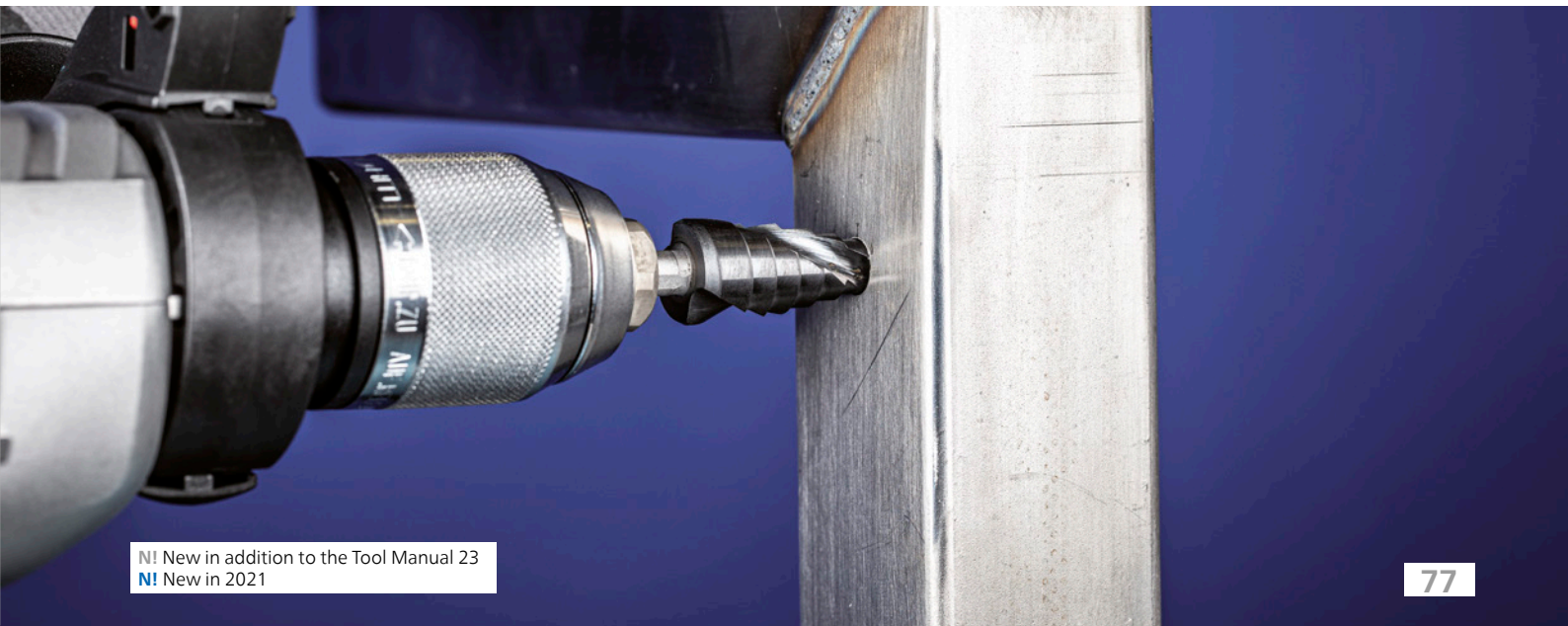
HSS step drills with HICOAT coating HC-FEP, 3-piece set

The set includes three HSS step drills in the versions 4–12 mm (9 steps), 4–20 mm (9 steps), 4–30 mm (14 steps) with a premium HICOAT coating HC-FEP for industrial uses. To ensure reliable torque transmission, all step drills have a three-surface shaft.

The sturdy plastic box protects the tools from dirt and damage. The securing of the HSS step drills facilitates the selection and withdrawal of the tools.



Contents [pcs.]	Type		Description
	HC-FEP		
	 EAN 4007220		
3	N! 166123	1	SET STB HSS HC-FEP 3



New in the PFERD product range

Countersink tools – HSS conical countersinks

Conical countersinks from PFERD are characterized by their particularly sharp right-hand blades that are able to achieve very good results, even at low cutting speeds. The various types allow for countersinking and deburring when machining various types of materials, even in industrial environments. To ensure reliable torque transmission, conical countersinks have a three-surface shaft from a countersink diameter of 28 mm.

PFERD also offers conical countersinks with a premium HICOAT coating. Tapered countersinks with a HICOAT coating provide good high-temperature hardness and resistance to oxidation. They can therefore also be used on hard materials without the addition of coolants.

Advantages:

- Very high stock removal rate and optimum chip removal.
- Burr-free results, even with low cutting speeds.
- Long tool life.
- High surface quality of the workpiece.

Materials that can be worked:

- Steel
- Cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron
- Plastics
- Other materials

Applications:

- Chamfering
- Deburring
- Countersinking

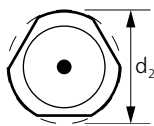
Recommendations for use:

- Select the appropriate type depending on the countersink angle required and the material to be machined.
- Use cutting oil or compressed air as a coolant and lubricant.
- Please refer to the table for the recommended rotational speeds.

Matching tool drives:

- Power drills
- Column drills
- Machine tools
- Robot

Safety note:



To ensure reliable torque transmission, conical countersinks have a three-surface shaft from a countersink diameter of 28 mm.

HSS countersinks 90°



- Particularly well suited for producing countersinks for 90° screws.

HSS countersinks 60°



- Particularly well suited for countersinking and deburring.

HSS type



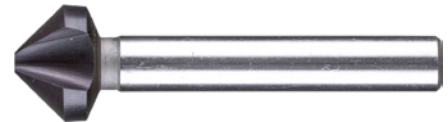
- HSS countersink that is suitable for universal use on almost all materials.

HSS E Co5 (M35) type

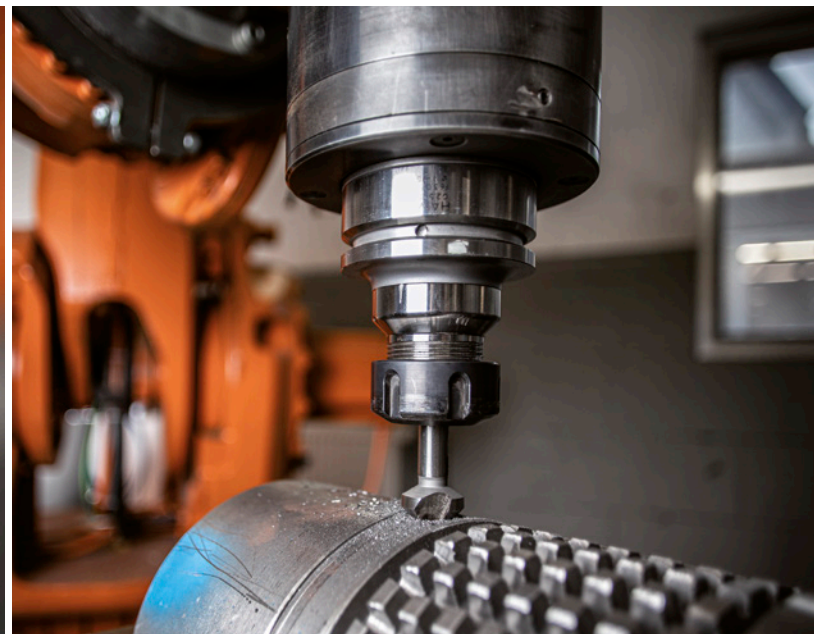


- HSS countersink that is suitable for universal use on almost all materials.
- Long tool life.
- Very good temperature resistance due to Co content.

HSS HICOAT HC-FEP type



- HSS countersink that is suitable for universal use on almost all materials.
- Very long tool life thanks to premium HICOAT coating.
- Can also be used without coolants and lubricants.





Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Select the type.
- ❸ Establish the cutting speed range.

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

- ❹ Select the required diameter.
- ❺ The cutting speed range and the diameter determine the recommended rotational speed range.

❶ Material group		❷ Type	❸ Cutting speed
Steel, cast steel	Non-alloyed construction steels up to 700 N/mm ²	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	15–20 m/min
	Alloyed construction steels over 700 N/mm ²	Tool steels, tempering steels, alloyed steels, cast steel	10–15 m/min
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	10–15 m/min
Non-ferrous metals	Soft non-ferrous metals	Aluminium alloys, brass, copper, zinc	15–20 m/min
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high Si content)	10–20 m/min
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	10 m/min
Plastics, other materials	Fibre-reinforced thermoplastics and duroplastics, hard rubber, wood		10–15 m/min

Example:

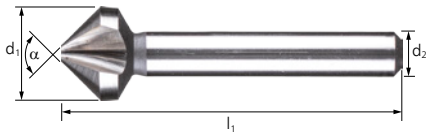
Conical countersink
KES HSS DIN 335 90°,
countersink dia. 28.0 mm.
Steels up to 700 N/mm².
Cutting speed: 15–20 m/min

Rotational speed range: 170–220 RPM

❹ Countersink dia. [mm]	❺ Cutting speeds [m/min]		
	10	15	20
	Rotational speeds [RPM]		
4.30	800	1,200	1,600
5.00	640	960	1,280
5.30	640	960	1,280
6.00	530	800	1,060
6.30	530	800	1,060
7.00	460	680	920
8.00	400	600	800
8.30	400	600	800
10.00	320	470	640
10.40	320	470	640
11.50	280	420	560
12.40	260	390	520
12.50	260	390	520
15.00	210	320	420
16.00	190	290	380
16.50	190	290	380
19.00	170	260	340
20.00	150	230	300
20.50	150	230	300
23.00	140	210	280
25.00	130	200	260
28.00	110	170	220
31.00	100	150	200
37.00	90	140	180
40.00	80	120	160

New in the PFERD product range



Countersink tools – HSS conical countersinks



HSS DIN 335 C 90° conical countersinks

High-performance countersink tools with a countersink angle of 90° for countersinking 90° screws for all common materials such as steel, cast steel and non-ferrous metals. To ensure reliable torque transmission, conical countersinks have a three-surface shaft from a countersink diameter of 28 mm.

Materials that can be worked:
steel, cast steel, stainless steel (INOX),
non-ferrous metals, cast iron, plastics, other
materials

d ₁ [mm]	d ₂ [mm]	l ₁ [mm]	α	Type		Description
				HSS		
						
				EAN 4007220		
4.30	4.00	40	90°	N! 164617	1	KES HSS DIN 335 C90° 4,3
5.00	4.00	40	90°	N! 166352	1	KES HSS DIN 335 C90° 5,0
5.30	4.00	40	90°	N! 166369	1	KES HSS DIN 335 C90° 5,3
6.00	5.00	45	90°	N! 166376	1	KES HSS DIN 335 C90° 6,0
6.30	5.00	45	90°	N! 166390	1	KES HSS DIN 335 C90° 6,3
7.00	6.00	50	90°	N! 166406	1	KES HSS DIN 335 C90° 7,0
8.00	6.00	50	90°	N! 166468	1	KES HSS DIN 335 C90° 8,0
8.30	6.00	50	90°	N! 166475	1	KES HSS DIN 335 C90° 8,3
10.00	6.00	50	90°	N! 166505	1	KES HSS DIN 335 C90° 10,0
10.40	6.00	50	90°	N! 166598	1	KES HSS DIN 335 C90° 10,4
11.50	8.00	56	90°	N! 166666	1	KES HSS DIN 335 C90° 11,5
12.40	8.00	56	90°	N! 166673	1	KES HSS DIN 335 C90° 12,4
15.00	10.00	60	90°	N! 166703	1	KES HSS DIN 335 C90° 15,0
16.50	10.00	60	90°	N! 166765	1	KES HSS DIN 335 C90° 16,5
19.00	10.00	63	90°	N! 166772	1	KES HSS DIN 335 C90° 19,0
20.50	10.00	63	90°	N! 166789	1	KES HSS DIN 335 C90° 20,5
23.00	10.00	67	90°	N! 166833	1	KES HSS DIN 335 C90° 23,0
25.00	10.00	67	90°	N! 166840	1	KES HSS DIN 335 C90° 25,0
28.00	12.00	71	90°	N! 166857	1	KES HSS DIN 335 C90° 28,0
31.00	12.00	71	90°	N! 166864	1	KES HSS DIN 335 C90° 31,0
37.00	12.00	90	90°	N! 166871	1	KES HSS DIN 335 C90° 37,0
40.00	15.00	80	90°	N! 166918	1	KES HSS DIN 335 C90° 40,0





HSS DIN 335 C 90° conical countersink sets

The sets include high-performance countersink tools with a countersink angle of 90° for countersinking 90° screws for all common materials such as steel, cast steel and non-ferrous metals. The sturdy plastic box protects the tools from dirt and damage.

Materials that can be worked:
steel, cast steel, stainless steel (INOX),
non-ferrous metals, cast iron, plastics, other
materials

Ordering notes:
■ Select the set depending on the number of
types required.

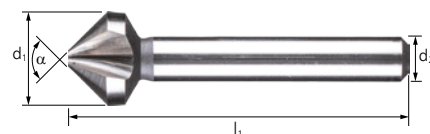
Contents [pcs.]	Contents tool dia. [mm]	Type		Description
		HSS		
				
		EAN 4007220		
3	6.3 / 10.4 / 16.5	N! 168523	1	SET KES HSS DIN 335 C90° 3
5	6.3 / 10.4 / 16.5 / 20.5 / 25.0	N! 168585	1	SET KES HSS DIN 335 C90° 5
6	6.3 / 8.3 / 10.4 / 12.4 / 16.5 / 20.5	N! 168691	1	SET KES HSS DIN 335 C90° 6



HSSE DIN 335 C 90° conical countersinks, Co5 type

High-performance countersink tools with a countersink angle of 90° for countersinking 90° screws for particularly tough and hard materials such as alloyed and high-strength steel and stainless steel (INOX). To ensure reliable torque transmission, conical countersinks have a three-surface shaft from a countersink diameter of 28 mm. Long tool life and temperature-resistant type due to Co content.

Materials that can be worked:

steel, cast steel, stainless steel (INOX), non-ferrous metals, cast iron, plastics, other materials



d ₁ [mm]	d ₂ [mm]	l ₁ [mm]	α	Type		Description
				HSSE		
						
				EAN 4007220		
4.30	4.00	40	90°	N! 167250	1	KES HSSE DIN 335 C90° 4,3
5.00	4.00	40	90°	N! 167335	1	KES HSSE DIN 335 C90° 5,0
5.30	4.00	40	90°	N! 167359	1	KES HSSE DIN 335 C90° 5,3
6.00	5.00	45	90°	N! 167373	1	KES HSSE DIN 335 C90° 6,0
6.30	5.00	45	90°	N! 167397	1	KES HSSE DIN 335 C90° 6,3
8.00	6.00	50	90°	N! 167427	1	KES HSSE DIN 335 C90° 8,0
8.30	6.00	50	90°	N! 167434	1	KES HSSE DIN 335 C90° 8,3
10.00	6.00	50	90°	N! 167458	1	KES HSSE DIN 335 C90° 10,0
10.40	6.00	50	90°	N! 167472	1	KES HSSE DIN 335 C90° 10,4
11.50	8.00	56	90°	N! 167687	1	KES HSSE DIN 335 C90° 11,5
12.40	8.00	56	90°	N! 168004	1	KES HSSE DIN 335 C90° 12,4
15.00	10.00	60	90°	N! 168035	1	KES HSSE DIN 335 C90° 15,0
16.50	10.00	60	90°	N! 168134	1	KES HSSE DIN 335 C90° 16,5
19.00	10.00	63	90°	N! 168219	1	KES HSSE DIN 335 C90° 19,0
20.50	10.00	63	90°	N! 168226	1	KES HSSE DIN 335 C90° 20,5
23.00	10.00	67	90°	N! 168233	1	KES HSSE DIN 335 C90° 23,0
25.00	10.00	67	90°	N! 168240	1	KES HSSE DIN 335 C90° 25,0
28.00	12.00	71	90°	N! 168257	1	KES HSSE DIN 335 C90° 28,0
31.00	12.00	71	90°	N! 168264	1	KES HSSE DIN 335 C90° 31,0

HSSE DIN 335 C 90° conical countersink sets, Co5 type

The sets include high-performance countersink tools with a countersink angle of 90° for countersinking 90° screws for particularly tough and hard materials such as alloyed and high-strength steel and stainless steel (INOX). Long tool life and temperature-resistant type due to Co content. The sturdy plastic box protects the tools from dirt and damage.



Materials that can be worked:

steel, cast steel, stainless steel (INOX), non-ferrous metals, cast iron, plastics, other materials

Ordering notes:

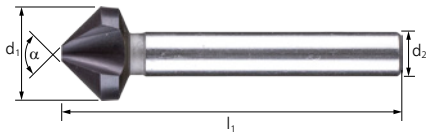
- Select the set depending on the number of types required.



Contents [pcs.]	Contents tool dia. [mm]	Type		Description
		HSSE		
				
		EAN 4007220		
3	6.3 / 10.4 / 16.5	N! 168714	1	SET KES HSSE DIN 335 C90° 3
5	6.3 / 10.4 / 16.5 / 20.5 / 25.0	N! 168738	1	SET KES HSSE DIN 335 C90° 5
6	6.3 / 8.3 / 10.4 / 12.4 / 16.5 / 20.5	N! 168745	1	SET KES HSSE DIN 335 C90° 6

New in the PFERD product range

Countersink tools – HSS conical countersinks with HICOAT coating HC-FEP





HSS DIN 335 C 90° conical countersinks with HICOAT coating HC-FEP

High-performance countersink tools with a countersink angle of 90° for countersinking 90° screws for particularly tough and hard materials such as alloyed and high-strength steel and stainless steel. To ensure reliable torque transmission, conical countersinks have a three-surface shaft from a countersink diameter of 28 mm. Thanks to the HICOAT coating HC-FEP, they have high hardness and wear resistance. They are very temperature resistant and have a particularly long tool life. They can also be used in a higher cutting speed range and without coolants and lubricants.

Materials that can be worked:

steel, cast steel, stainless steel (INOX), non-ferrous metals, cast iron, plastics, other materials

d ₁ [mm]	d ₂ [mm]	l ₁ [mm]	α	Type		Description
				HC-FEP  EAN 4007220		
6.30	5.00	45	90°	N! 073728	1	KES HSS DIN 335 C90° HC-FEP 6,3
8.30	6.00	50	90°	N! 168295	1	KES HSS DIN 335 C90° HC-FEP 8,3
10.40	6.00	50	90°	N! 168301	1	KES HSS DIN 335 C90° HC-FEP 10,4
12.40	8.00	56	90°	N! 168318	1	KES HSS DIN 335 C90° HC-FEP 12,4
15.00	10.00	60	90°	N! 168325	1	KES HSS DIN 335 C90° HC-FEP 15,0
16.50	10.00	60	90°	N! 168356	1	KES HSS DIN 335 C90° HC-FEP 16,5
19.00	10.00	63	90°	N! 168387	1	KES HSS DIN 335 C90° HC-FEP 19,0
20.50	10.00	63	90°	N! 168417	1	KES HSS DIN 335 C90° HC-FEP 20,5
23.00	10.00	67	90°	N! 168455	1	KES HSS DIN 335 C90° HC-FEP 23,0
25.00	10.00	67	90°	N! 168462	1	KES HSS DIN 335 C90° HC-FEP 25,0
31.00	12.00	71	90°	N! 168479	1	KES HSS DIN 335 C90° HC-FEP 31,0



HSS DIN 335 C 90° conical countersink sets with HICOAT coating HC-FEP



The sets include high-performance countersink tools with a countersink angle of 90° for countersinking 90° screws for particularly tough and hard materials such as alloyed and high-strength steel and stainless steel (INOX). Thanks to the HICOAT coating HC-FEP, they have high hardness and wear resistance. They are very temperature resistant and have a particularly long tool life. They can also be used in a higher cutting speed range and without coolants and lubricants. The sturdy plastic box protects the tools from dirt and damage.

Materials that can be worked:

steel, cast steel, stainless steel (INOX), non-ferrous metals, cast iron, plastics, other materials

Ordering notes:

- Select the set depending on the number of types required.

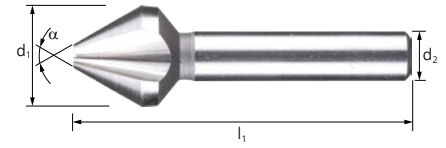
Contents [pcs.]	Contents tool dia. [mm]	Type		Description
		HC-FEP  EAN 4007220		
3	6.3 / 10.4 / 16.5	N! 168752	1	SET KES HSS DIN 335 C90° 3 HC-FEP
5	6.3 / 10.4 / 16.5 / 20.5 / 25.0	N! 168769	1	SET KES HSS DIN 335 C90° 5 HC-FEP
6	6.3 / 8.3 / 10.4 / 12.4 / 16.5 / 20.5	N! 168776	1	SET KES HSS DIN 335 C90° 6 HC-FEP



HSS DIN 334 C 60° conical countersinks

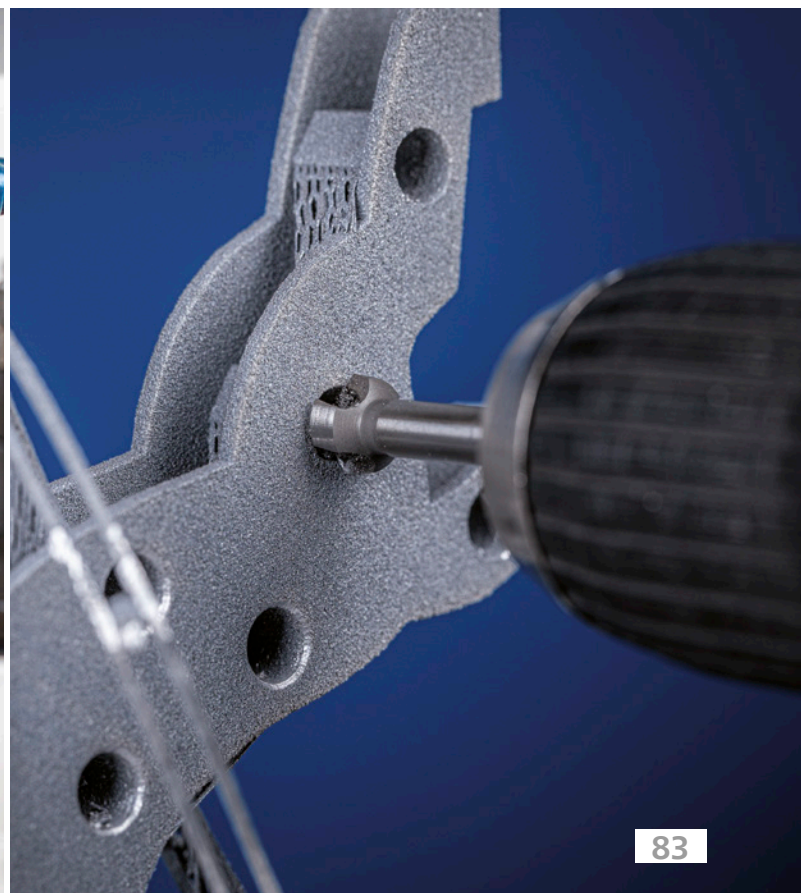
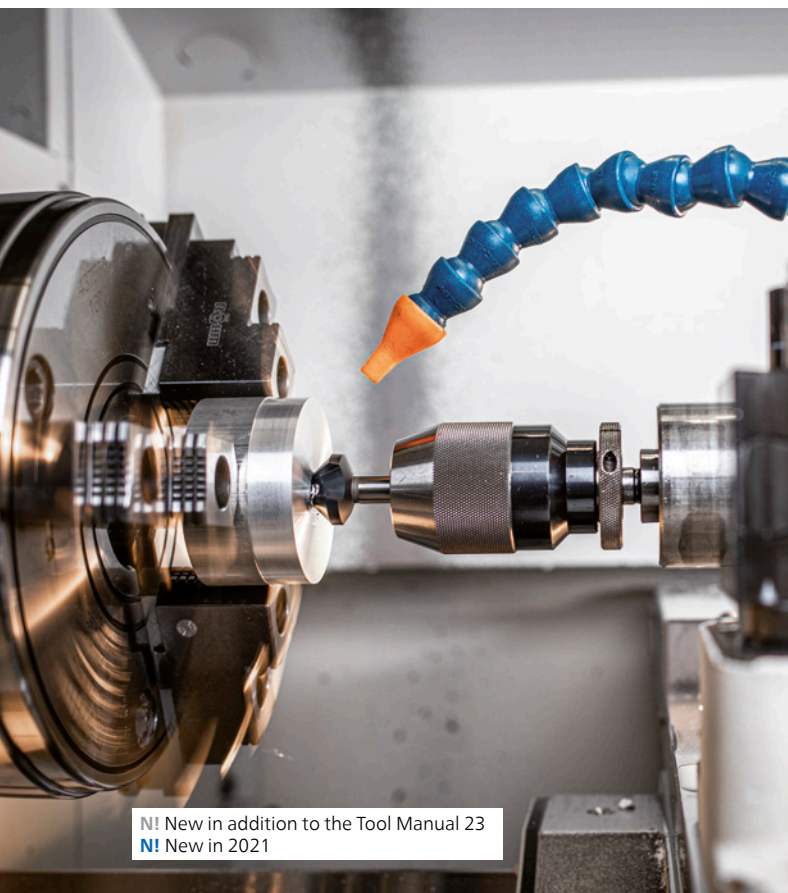
High-performance countersink tools with a countersink angle of 60° for deburring all common materials such as steel, cast steel and non-ferrous metals.

Materials that can be worked:

steel, cast steel, stainless steel (INOX), non-ferrous metals, cast iron, plastics, other materials



d ₁ [mm]	d ₂ [mm]	l ₁ [mm]	α	Type		Description
				HSS		
						
				EAN 4007220		
6.30	5.00	45	60°	N! 168783	1	KES HSS DIN 334 C60° 6,3
8.00	6.00	50	60°	N! 168790	1	KES HSS DIN 334 C60° 8,0
10.00	6.00	50	60°	N! 168806	1	KES HSS DIN 334 C60° 10,0
12.50	8.00	56	60°	N! 168813	1	KES HSS DIN 334 C60° 12,5
16.00	10.00	63	60°	N! 168837	1	KES HSS DIN 334 C60° 16,0
20.00	10.00	67	60°	N! 168844	1	KES HSS DIN 334 C60° 20,0
25.00	10.00	71	60°	N! 168851	1	KES HSS DIN 334 C60° 25,0



New in the PFERD product range

Countersink tools – HSS flat countersinks

High-performance flat countersinks made from HSS according to DIN 373 for countersinking cylinder head and hexagon screws as well as nuts. Flat countersinks have a cylindrical design. The cylindrical pin in the relevant quality grades of fine, medium or tapping hole ensures coaxial alignment of the countersink to the bore.

Advantages:

- Very high stock removal rate.
- Optimum chip removal.
- Burr-free results.
- Long tool life.
- Smooth operation.
- Good surface quality.

Materials that can be worked:

- Steel
- Cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron
- Plastics
- Other materials

Recommendations for use:

- Please observe the recommended rotational speed.

Matching tool drives:

- Power drills
- Column drills
- Machine tools
- Robot

Applications:

- Produce flat countersinks in the quality grades fine (F), medium (M) and tapping hole (GKL).

Quality grade fine (F)



- Flat countersinks with the quality grade of fine are suitable for producing flat countersinks at through holes or blind holes in the tolerance range of fine with high mounting accuracy.

Quality grade medium (M)



- Flat countersinks with the quality grade medium are suitable for producing flat countersinks at through holes or blind holes in the tolerance range of medium with extended mounting accuracy.

For tapping hole (GKL)



- Flat countersinks for the tapping hole are suitable for producing flat countersinks at core holes for female threads.



Recommended rotational speed range [RPM]

To determine the recommended cutting speed range [m/min], please proceed as follows:

- ❶ Select the material group to be machined.
- ❷ Select the type.
- ❸ Establish the cutting speed range.

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

- ❹ Select the required diameter.
- ❺ The cutting speed range and the diameter determine the recommended rotational speed range.

❶ Material group			❷ Type		❸ Cutting speed	
Steel, cast steel	Steels up to 700 N/mm ²		Construction steels, carbon steels, tool steels, alloyed and non-alloyed steels, case-hardened steels, cast steel	fine (F)		10–20 m/min
		medium (M)				
		tapping hole (GKL)				
	Steels over 700 N/mm ²	fine (F)		10–15 m/min		
		medium (M)				
		tapping hole (GKL)				
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	fine (F)		10–15 m/min	
			medium (M)			
			tapping hole (GKL)			
Non-ferrous metals	Soft non-ferrous metals		Aluminium alloys Brass, copper, zinc	fine (F)		15–20 m/min
				medium (M)		
				tapping hole (GKL)		
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminium alloys (high Si content)		fine (F)		10–20 m/min
				medium (M)		
				tapping hole (GKL)		
Cast iron	Grey cast iron, white cast iron		Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	fine (F)		10 m/min
				medium (M)		
				tapping hole (GKL)		
Plastics, other materials	Fibre-reinforced thermoplastics and duroplastics, hard rubber, wood	fine (F)		10–15 m/min		
		medium (M)				
		tapping hole (GKL)				

Example:

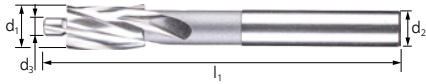
Flat countersink
FLS HSS DIN 373 15,0 F,
Flat countersink dia. 15 mm.
Steels up to 700 N/mm².
Cutting speed: 10–20 m/min

Rotational speed range: 220–440 RPM

❹ Countersink dia. [mm]	❺ Cutting speeds [m/min]		
	10	15	20
	Rotational speeds [RPM]		
6.00	530	795	1,060
8.00	400	600	800
10.00	320	480	640
11.00	290	435	580
15.00	220	330	440
18.00	180	270	360
20.00	160	240	320

New in the PFERD product range

Countersink tools – HSS flat countersinks





HSS DIN 373 flat countersink quality grade fine for through hole

High-performance countersink tools for through holes with the quality grade fine (F) according to ISO 273.

Materials that can be worked:

steel, cast steel, stainless steel (INOX),
non-ferrous metals, cast iron, plastics, other materials

d ₁ [mm]	d ₂ [mm]	d ₃ [mm]	l ₁ [mm]	Type		Description
				F		
						
				EAN 4007220		
6	5	3.2	71	N! 168868	1	FLS HSS DIN 373 6,0 F
8	5	4.3	71	N! 168912	1	FLS HSS DIN 373 8,0 F
10	8	5.3	80	N! 168929	1	FLS HSS DIN 373 10,0 F
11	8	6.4	80	N! 168936	1	FLS HSS DIN 373 11,0 F
15	12.5	8.4	100	N! 168943	1	FLS HSS DIN 373 15,0 F
18	12.5	10.5	100	N! 168950	1	FLS HSS DIN 373 18,0 F
20	12.5	13.0	100	N! 168981	1	FLS HSS DIN 373 20,0 F





HSS DIN 373 flat countersink quality grade medium for through hole

High-performance countersink tools for through holes with the quality grade medium (M) according to ISO 273.

Materials that can be worked:

steel, cast steel, stainless steel (INOX),
non-ferrous metals, cast iron, plastics, other materials

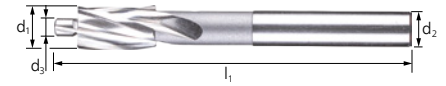
d ₁ [mm]	d ₂ [mm]	d ₃ [mm]	l ₁ [mm]	Type		Description
				M		
						
				EAN 4007220		
6	5	3.4	71	N! 169025	1	FLS HSS DIN 373 6,0 M
8	5	4.5	71	N! 169087	1	FLS HSS DIN 373 8,0 M
10	8	5.5	80	N! 169100	1	FLS HSS DIN 373 10,0 M
11	8	6.6	80	N! 169124	1	FLS HSS DIN 373 11,0 M
15	12.5	9.0	100	N! 169155	1	FLS HSS DIN 373 15,0 M
18	12.5	11.0	100	N! 169162	1	FLS HSS DIN 373 18,0 M
20	12.5	13.5	100	N! 169179	1	FLS HSS DIN 373 20,0 M

HSS DIN 373 flat countersinks for tapping hole

High performance countersink tools with guide pins for the tapping hole (GKL).

Materials that can be worked:

steel, cast steel, stainless steel (INOX),
 non-ferrous metals, cast iron, plastics, other
 materials



d ₁ [mm]	d ₂ [mm]	d ₃ [mm]	l ₁ [mm]	Type		Description
				GKL		
				EAN 4007220		
6	5.0	2.5	71	N! 169186	1	FLS HSS DIN 373 6,0 GKL
8	5.0	3.3	71	N! 169193	1	FLS HSS DIN 373 8,0 GKL
10	8.0	4.2	80	N! 169209	1	FLS HSS DIN 373 10,0 GKL
11	8.0	5.0	80	N! 169216	1	FLS HSS DIN 373 11,0 GKL
15	12.5	6.8	100	N! 169223	1	FLS HSS DIN 373 15,0 GKL
18	12.5	8.5	100	N! 169278	1	FLS HSS DIN 373 18,0 GKL
20	12.5	10.2	100	N! 169308	1	FLS HSS DIN 373 20,0 GKL



New in the PFERD product range

Grinding points for saw chains



Grinding points for saw chains

The grinding points for saw chains are outstandingly well suited for mechanical sharpening of saw chains using the PFERD CHAIN SHARP HHG chain saw sharpener.

Advantages:

- Good grinding performance and stock removal rate.
- Cost and time savings due to shorter grinding times.
- Precise sharpening of saw chain teeth due to high dimensional stability.

Applications:

- Sharpening

Recommendations for use:

- Note the recommendations for use and safety information for your sharpener.
 - The following chains can be sharpened:
 - Grinding point dia. 3.8 mm for chain pitch 1/4"
 - Grinding point dia. 4.3 mm for chain pitch 1/4", 3/8" LP*
 - Grinding point dia. 5.0 mm for chain pitch .325"
 - Grinding point dia. 5.5 mm for chain pitch 3/8"
 - Grinding point dia. 5.7 mm for chain pitch 3/8", .404"
 - Grinding point dia. 6.9 mm for depth gauge
- *LP = Low Profile

Matching tool drives:

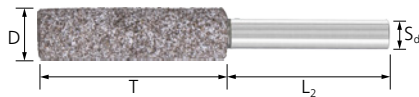
- Sharpeners

Ordering notes:

- Please select the appropriate grinding point diameter to match your chain.


Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 10 mm.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.



Cylindrical mounted point for saw chains

The cylindrical shape ZY is optimized for sharpening saw chains.

D x T [mm]	Grit size	Suitable for chain pitch [inch]	Opt. RPM	Max. RPM		Description
	80					
	EAN 4007220					
Shank dia. 3 x 25 mm [S_d x L₂]						
3.8 x 16	N! 381922	1/4	25,000	62,800	3	CS-G ZY 3,816 3 AWN 80 M5V
4.3 x 16	N! 381946	1/4, 3/8 LP*	25,000	55,400	3	CS-G ZY 4,316 3 AWN 80 M5V
5.0 x 20	N! 381960	.325	25,000	56,100	3	CS-G ZY 5,020 3 AWN 80 M5V
5.5 x 20	N! 381984	3/8	25,000	50,900	3	CS-G ZY 5,520 3 AWN 80 M5V
5.7 x 20	N! 382004	3/8, .404	25,000	49,100	3	CS-G ZY 5,720 3 AWN 80 M5V
6.9 x 20	N! 382028	for depth gauge	25,000	40,500	3	CS-G ZY 6,920 3 AWN 80 M5V

*LP = Low Profile

Grinding discs for saw chains

The grinding discs for saw chains are outstandingly well suited for mechanical sharpening of saw chains using chain sharpeners.

Advantages:

- Good grinding performance and stock removal rate.
- Long tool life.
- Careful grinding of the saw chain teeth.
- Precise sharpening of saw chain teeth due to high dimensional stability.

Applications:

- Sharpening

Recommendations for use:

- Note the recommendations for use and safety information for your sharpener.
 - The following chains can be sharpened:
 - Wheel thickness 3.2 mm for chain pitch 1/4", 3/8" LP*, .325"
 - Wheel thickness 4.7 mm for chain pitch 3/8", .404"
 - Wheel thickness 6.0 mm for depth gauge
- *LP = Low Profile

Matching tool drives:

- Sharpeners

Ordering notes:

- Please select the appropriate wheel thickness to match your chain.

Safety notes:

- The maximum permitted peripheral speed is 35 m/s.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- Before clamping, the grinding disc must be ring tested to make sure that it does not have any cracks (undamaged grinding discs give a clear tone).

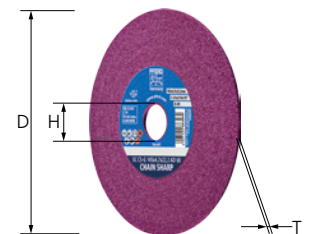



3



Grinding discs for saw chains

The grinding discs are optimized for sharpening saw chains.



D x T [mm]	H [mm]	Grit size	Suitable for chain pitch [inch]	Max. RPM		Description
		60				
		EAN 4007220				
Dark-red aluminium oxide (AD)						
145 x 3.2	22.2	N! 382882	1/4, 3/8 LP*, .325	4,600	1	SC CS-G 145x3,2x22,2 AD 60J7V
145 x 4.7	22.2	N! 383070	3/8, .404	4,600	1	SC CS-G 145x4,7x22,2 AD 60J7V
145 x 6.0	22.2	N! 383148	for depth gauge	4,600	1	SC CS-G 145x6,0x22,2 AD 60J7V

*LP = Low Profile

New in the PFERD product range


Dressing tools



Grinding wheel dresser

Ideal accessory for PFERD bench grinding wheels if the wheel is clogged or its shape has changed.

The dressing roller consists of hardened steel discs with U-shaped teeth. Wave washers between the tooth discs make the tooth roller stable and robust. For high peripheral speeds, the dresser has a spindle with an integrated grease fitting to guarantee a long tool life.


Overall length [mm]	Roll width [mm]	Roll dia. [mm]	EAN 4007220	Max. wheel dia. [mm]	Max. wheel thickness [mm]		Description
435	39	55	N! 138700	500	63	1	AR 55x39x12

3




Replacement roller


The replaceable roller for the grinding wheel dresser AR 55x39x12 can be used until the teeth are worn.

Roll width [mm]	Roll dia. [mm]	EAN 4007220		Description
39	55	N! 138717	1	ER 55x39x12



Replacement spindle


The greaseable spindle for the grinding wheel dresser AR 55x39x12 is a spare part if the axle does become worn.

Roll width [mm]	Axis dia. [mm]	EAN 4007220		Description
39	12	N! 138724	1	EA 12x39



Grinding wheel dresser

The SiC grinding wheel dresser is a low-cost alternative for dressing bench grinding wheels. A stainless steel tube protects the SiC rod from breaking, making the tool more robust.

Overall length [mm]	Dia. [mm]	EAN 4007220		Description
250	22	N! 138731	1	AR 22x250



The wide range of COMBICLICK fibre discs offers the best tool for any grinding application, from coarse to fine.

Advantages:

- Innovative quick-mounting system guarantees convenient handling and cool grinding.
- High profitability thanks to long tool life and very high stock removal rate.
- Consistent surface finish thanks to high-quality abrasives.

Applications:

- Levelling
- Deburring
- Surface work
- Work on edges
- Work on weld seams
- Step-by-step fine grinding

Recommendations for use:

- Use COMBICLICK fibre discs with COMBICLICK backing pads on commercially available angle grinders.
- Use grinding oil which is suitable for the material in order to considerably increase the tool life and abrasive performance of the tools. More detailed information and ordering data for grinding oils can be found in our Tool Manual 23, catalogue section 4, page 155.
- For particularly flexible performance when face-down grinding, use fibre discs with a diameter of 125 mm.

Matching tool drives:

- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order COMBICLICK backing pads separately. More detailed information and ordering data for backing pads can be found on page 93.
- When ordering, please state the EAN or the full description.
- **Ordering example:**
EAN 4007220217986
CC-FS 125 CO-ALU 60
- **Ordering example explanation:**
CC-FS = COMBICLICK fibre disc
125 = Outer diameter D [mm]
CO = Abrasive
ALU = Bond type
60 = Grit size

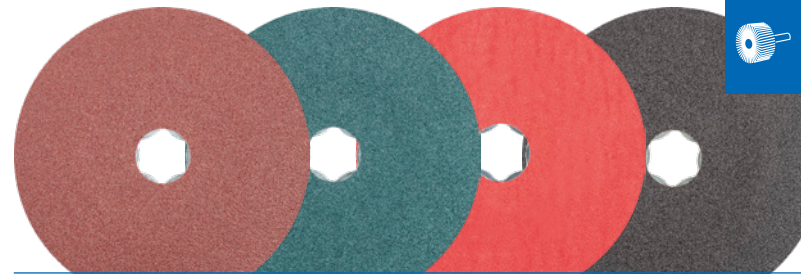
Safety notes:

- The maximum permitted peripheral speed is 80 m/s.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.



Accessories:

- COMBICLICK backing pads



The fast way to the best tool

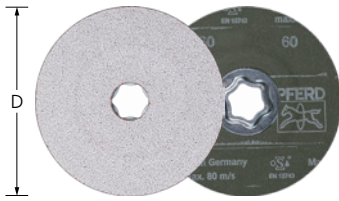
Material group ▼		Abrasive ▶	Alu- minium oxide A	Zirconia Alumi- na Z	Ceramic oxide grain CO	VICTO- GRAIN VICTO COOL	VICTO- GRAIN COOL VICTO GRAIN	Silicon carbide SiC	Alu- minium oxide A-COOL	Ceramic oxide grain CO-COOL	Ceramic oxide grain CO-ALU
Steel, cast steel	Non-hardened, non-heat- treated steels	Construction steels, carbon steels, tool steels, non-alloyed steels, cast steel	●	○	●	●	○				
	Hardened, heat- treated steels	Tool steels, tempering steels, alloyed steels, cast steel	○	●	●	●	○				
Stainless steel (INOX)	Rust and acid- resistant steels	Austenitic and ferritic stainless steels		○		○	●		●	●	
Non- ferrous metals	Soft non-ferrous metals, non- ferrous metals	Soft aluminium alloys	○						●	○	●
		Brass, copper, zinc	○	○	○						●
	Hard non- ferrous metals	Hard aluminium alloys	○	○	○			○			●
		Bronze, titanium		○	○		●	●		●	
	High-temper- ature-resistant materials	Nickel-based and cobalt-based alloys		○	○		●		●		
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	●	○	●	●					
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●					●			

● = Highly suitable

○ = Suitable

New in the PFERD product range

COMBICLICK fibre discs CC-FS



Ceramic oxide grain CO-ALU type

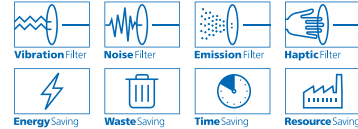
For aggressive grinding with an excellent stock removal rate for machining non-ferrous metals. Consistently high performance due to self-sharpening ceramic oxide grain.


Adhesion-reducing additives in the coating significantly reduce the chip adhesion and therefore reduce clogging of the fibre discs.

Abrasive:
Ceramic oxide grain CO-ALU

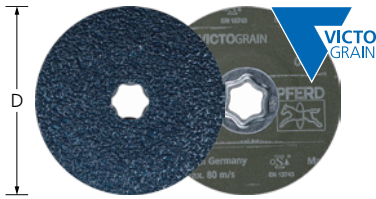
Ordering notes:
■ Please complete the description with the desired grit size.

PFERDVALUE:



D [mm]	Grit size			Max. RPM		Description
	36	60	80			
	EAN 4007220					
115	N! 217931	N! 217955	N! 217962	13,300	25	CC-FS 115 CO-ALU ...
125	N! 217979	N! 217986	N! 217993	12,200	25	CC-FS 125 CO-ALU ...

4

VICTOGRAIN type

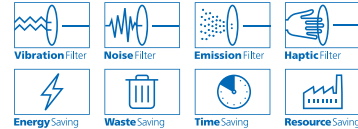
For extremely aggressive grinding with an extremely high tool life and an outstanding stock removal rate on steel and hard materials.

Outstanding, constant high performance thanks to the VICTOGRAIN abrasive grain.

Abrasive:
VICTOGRAIN

Recommendations for use:
■ Use powerful angle grinders.

PFERDVALUE:



D [mm]	EAN 4007220	Max. RPM		Description
100	N! 176245	15,300	25	CC-FS 100 VICTOGRAIN 36
115	N! 176290	13,300	25	CC-FS 115 VICTOGRAIN 36
125	N! 176320	12,200	25	CC-FS 125 VICTOGRAIN 36
180	N! 176368	8,500	25	CC-FS 180 VICTOGRAIN 36



CC-GT, CC-H-GT types

With these backing pads, COMBICLICK tools can be used on commercially available angle grinders.

The different hardnesses are colour-coded:

CC-GT (medium) = black

CC-H-GT (hard) = blue



Advantages:

- The geometry of the cooling slots significantly reduces the thermal load.
- High economic efficiency due to minimized tool change times.

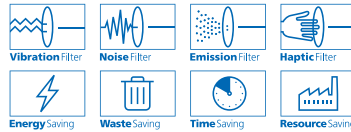
Recommendations for use:


- Type CC-H-GT is mainly used to work on stainless steel (INOX). It features very high edge strength, which enables a higher contact pressure.

Safety notes:

- The maximum peripheral speed is 80 m/s.
- For backing pads with a diameter of 180 mm, do not apply too high a contact pressure in order to prevent the backing pad from overstretching.

PFERDVALUE:



Suitable for CC dia. [mm]	Thread	Hardness	Suitable for machine types	EAN 4007220	Max. RPM		Description
100	M10	medium	Angle grinders 100, spindle M10	836200	15,300	1	CC-GT 100 M10
115, 125	M14	medium	Angle grinders 115 / 125, spindle M14	725764	13,300	1	CC-GT 115-125 M14
		medium	Angle grinders 115 / 125, spindle 5/8"	725771	13,300	1	CC-GT 115-125 5/8
	5/8	hard	Angle grinders 115 / 125, spindle M14	835869	13,300	1	CC-H-GT 115-125 M14
		hard	Angle grinders 115 / 125, spindle 5/8"	841419	13,300	1	CC-H-GT 115-125 5/8
125	M14	medium	Angle grinders 125, spindle M14	NI 223413	12,200	1	CC-GT 125 M14
		medium	Angle grinders 125, spindle 5/8"	NI 223468	12,200	1	CC-GT 125 5/8
	5/8	hard	Angle grinders 125, spindle M14	NI 223451	12,200	1	CC-H-GT 125 M14
		hard	Angle grinders 125, spindle 5/8"	NI 223475	12,200	1	CC-H-GT 125 5/8
180	M14	medium	Angle grinders 180, spindle M14	725788	8,500	1	CC-GT 180 M14
		medium	Angle grinders 180, spindle 5/8"	725795	8,500	1	CC-GT 180 5/8



New in the PFERD product range

Fibre discs FS

The wide range of fibre discs offers the best tool for any grinding application, from coarse to fine. PFERD fibre discs are manufactured in compliance with ISO 16057 in shape A1, type F, under the designation "vulcanized fibre disc".

Advantages:

- High profitability thanks to long tool life and very high stock removal rate.
- Consistent surface finish thanks to high-quality abrasives.
- Optimum adaptation to contours thanks to high flexibility.

Applications:

- Levelling
- Deburring
- Surface work
- Work on edges
- Work on weld seams
- Step-by-step fine grinding

Recommendations for use:

- Use fibre discs conforming to ISO 15636 with backing pads on commercially available angle grinders.

- Use grinding oil which is suitable for the material in order to considerably increase the tool life and abrasive performance of the tools. More detailed information and ordering data for grinding oils can be found in our Tool Manual 23, catalogue section 4, page 155.

Matching tool drives:

- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order backing pads separately. More detailed information and ordering data for backing pads can be found in our Tool Manual 23, catalogue section 4, page 24.
- When ordering, please state the EAN or the full description.

- **Ordering example:**
EAN 4007220218884
FS 115-22 CO-ALU 60
- **Ordering example explanation:**
FS = Fibre disc
115 = Outer diameter D [mm]
22 = Centre hole diameter H [mm]
CO = Abrasive
ALU = Bond type
60 = Grit size

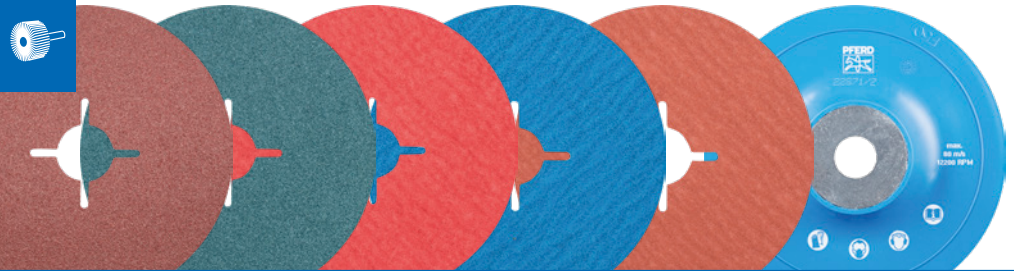
Safety notes:

- The maximum permitted peripheral speed is 80 m/s.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.



Accessories:

- Backing pads



The fast way to the best tool

Material group ▼		Abrasive ▶	Alu- minium oxide A	Zirconia Alumina Z	Ceramic oxide grain CO	VICTO- GRAIN VICTO COOL	VICTO- GRAIN COOL VICTO GRAIN	Alu- minium oxide A-COOL	Zirco- nia Alu- mina Z-COOL	Ceramic oxide grain CO-COOL	Ceramic oxide grain CO-ALU
Steel, cast steel	Non-hardened, non-heat-treated steels	Construction steels, carbon steels, tool steels, non- alloyed steels, cast steel	●	○	●	●	○				
	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed steels, cast steel	○	●	●	●	○				
Stainless steel (INOX)	Rust and acid- resistant steels	Austenitic and ferritic stainless steels		○		○	●	●	●	●	
Non- ferrous metals	Soft non-ferrous metals, non- ferrous metals	Soft aluminium alloys	○					●	○	○	●
		Brass, copper, zinc	○	○	○						●
	Hard non-ferrous metals	Hard aluminium alloys	○	○	○						●
		Bronze, titanium		○	○		●		●	●	
High-temper- ature-resistant materials	Nickel-based and cobalt-based alloys		○	○		●		●	●		
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN- GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	●	○	●	●					
		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●								

● = Highly suitable

○ = Suitable

Ceramic oxide grain CO-ALU type

For aggressive grinding with excellent stock removal rate for machining non-ferrous metals. Consistently high performance due to self-sharpening ceramic oxide grain.

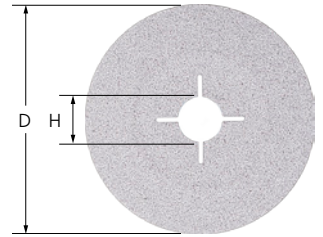
Adhesion-reducing additives in the coating significantly reduce the chip adhesion and therefore reduce clogging of the fibre discs.

Abrasive:

Ceramic oxide grain CO-ALU

Ordering notes:

- Please complete the description with the desired grit size.



D [mm]	H [mm]	Grit size			Max. RPM		Description
		36	60	80			
EAN 4007220							
100	16	N! 218839	N! 218846	N! 218853	15,300	25	FS 100-16 CO-ALU ...
115	22	N! 218860	N! 218884	N! 218891	13,300	25	FS 115-22 CO-ALU ...
125	22	N! 218907	N! 218945	N! 218983	12,200	25	FS 125-22 CO-ALU ...
180	22	N! 219003	N! 219058	N! 219065	8,500	25	FS 180-22 CO-ALU ...

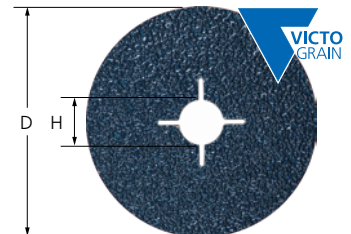
VICTOGRAIN type

For extremely aggressive grinding with an extremely high tool life and an outstanding stock removal rate on steel and hard materials.

Outstanding, constant high performance thanks to the **VICTOGRAIN** abrasive grain.

Abrasive:

VICTOGRAIN



D [mm]	H [mm]	EAN 4007220	Max. RPM		Description
100	16	N! 176191	15,300	25	FS 100-16 VICTOGRAIN 36
115	22	N! 176207	13,300	25	FS 115-22 VICTOGRAIN 36
125	22	N! 176214	12,200	25	FS 125-22 VICTOGRAIN 36
180	22	N! 176238	8,500	25	FS 180-22 VICTOGRAIN 36



New in the PFERD product range

COMBIDISC – Abrasive discs CD, CDR

The COMBIDISC product range contains a wide selection of grinding tools for surface finishing. From coarse machining and surface texturing to face-down mirror polishing – the range provides the best tool, even for complicated applications.

Advantages:

- High profitability thanks to quick tool changes.
- Great convenience thanks to simple handling and low-vibration working.
- No operational disruptions caused by sticking, slipping or disengaging.

Applications:

- Roughening
- Levelling
- Deburring
- Surface work
- Work on edges
- Polishing
- Cleaning
- Sharpening
- Work on weld seams
- Structuring surfaces
- Step-by-step fine grinding

Recommendations for use:

- Use COMBIDISC grinding tools with arbors or abrasive disc holders on flexible shaft drives with angle handpieces, compressed-air or electric angle grinders.
- Use grinding oil which is suitable for the material in order to considerably increase the tool life and abrasive performance of the tools. More detailed information and ordering data for grinding oils can be found in our Tool Manual 23, catalogue section 4, page 155.

Matching tool drives:

- Flexible shaft drives
- Straight grinders
- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order arbors or COMBIDISC abrasive disc holders separately. More detailed information and ordering data can be found on www.pferd.com.
- When ordering, please state the EAN or the full description.
- **Ordering example:**
EAN 4007220**266175**
CD 38 A **180**
- **Ordering example explanation:**
CD = COMBIDISC abrasive discs
38 = Outer diameter D₁ [mm]
A = Abrasive
180 = Grit size

Safety notes:

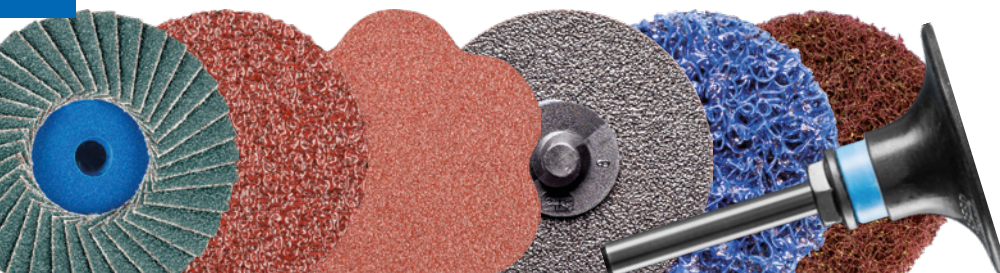
- The maximum permitted peripheral speed is 50 m/s.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.



Accessories:

- Arbors for COMBIDISC Mini-POLIFAN
- COMBIDISC abrasive disc holders
- DUST REMOVER

4



The fast way to the best tool

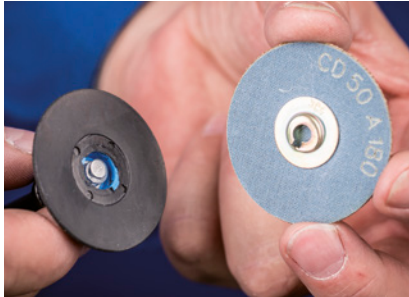
Material group ▼		Abrasive ►	Aluminium oxide A, A-PLUS, A-FLEX, A-CONTOUR, A-FORTE	Aluminium oxide A Compact grain	Zirconia alumina Z
Steel, cast steel	Non-hardened, non-heat-treated steels	Construction steels, carbon steels, tool steels, non-alloyed steels, cast steel	●		○
	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed steels, cast steel	○	●	●
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels		●	○
Non-ferrous metals	Soft non-ferrous metals, non-ferrous metals	Soft aluminium alloys	○		
		Brass, copper, zinc	●		○
	Hard non-ferrous metals	Hard aluminium alloys	●		○
		Bronze, titanium			○
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys			○
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite EN-GJL (GG), with nodular graphite/nodular cast iron EN-GJS (GGG), white annealed cast iron EN-GJMW (GTW), black cast iron EN-GJMB (GTS)	●		○
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●		

● = Highly suitable

○ = Suitable

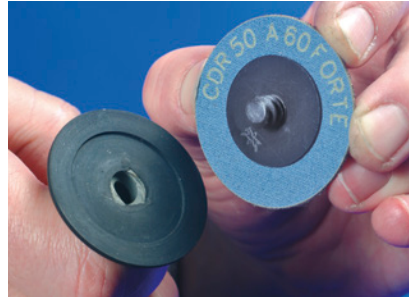
PFERD offers two alternative clamping systems:

CD system



Tool side: Threaded connection with female thread (metal/plastic)
Also suitable for the following systems used on the market: PSG, Power Lock Type II "turn on", SocAtt, Turn-On

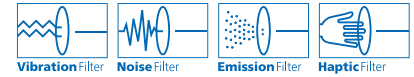
CDR system



Tool side: Threaded connection with male thread (plastic)
Also suitable for the following systems used on the market: Roloc™, Lockit, Speed Lok TR, Power Lock Type III, Fastlock-System B, Roll-On

PFERDVALUE:

PFERDERGONOMICS recommends COMBIDISC tools as a solution to sustainably reduce vibration, noise and dust levels produced by tools and to improve working comfort.



PFERDEFFICIENCY recommends COMBIDISC tools to reduce tool change and setup times.



Recommended rotational speed range

Example:

CD 50 A-COOL 60

Application:

Grinding stainless steel (INOX)

Cutting speed: 20–25 m/s

Rotational speed: 7,600–9,500 RPM

D ₁ [mm]	Cutting speed [m/s]								
	5	10	15	20	25	30	35	40	50
Rotational speeds [RPM]									
20	4,700	9,500	14,300	19,000	23,800	28,600	33,400	38,100	47,700
25	3,800	7,600	11,400	15,200	19,000	22,900	26,700	30,500	38,100
38	2,500	5,000	7,500	10,000	12,500	15,000	17,500	20,100	25,100
50	1,900	3,800	5,700	7,600	9,500	11,400	13,300	15,200	19,000
75	1,200	2,500	3,800	5,000	6,300	7,600	8,900	10,100	12,700



Silicon carbide SiC	Aluminium oxide A-COOL	Ceramic oxide grain CO-COOL	VICTO GRAIN-COOL	Diamond abrasive discs	POLICLEAN discs	Non-woven discs PNER, VRH, VRW
		•	•		•	•
		•	•		○	○
	•	•	•		•	•
	•	○			•	•
					•	•
○					•	•
•		•	•	•	○	•
		•	•	•	○	•
					•	•
•				•	•	•

New in the PFERD product range

COMBIDISC – Abrasive discs CDR



RS type

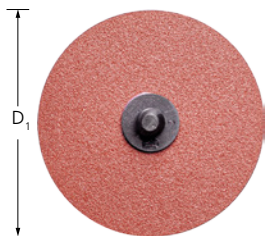
RS type COMBIDISC abrasive discs are outstandingly well suited for weld dressing of backwards repair welds, e.g. in cases, slots and grooves on engines and for processing welded-on combustor plates. Unlike on conventional abrasive discs, the abrasive coating is on the underside of the tool, which allows backwards working.

Advantages:

- Ideal for use in extremely difficult to reach locations.
- Convenient and safe backward working.

Recommendations for use:

- Move the tool to the location to be worked. To grind, do not push it onto the surface, pull it towards yourself.
- To ensure optimum utilization of the grinding surface using the SBHR 20 or SBHR 25 abrasive disc holder.
- Always use the RS abrasive discs at the specified optimum rotational speed and do not adhere to the maximum permitted rotational speeds of the SBHR 20 or SBHR 25 holder.



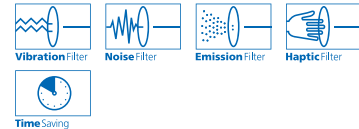
RS aluminium oxide A-PLUS type

For universal applications from coarse to fine grinding, with a high stock removal rate and long tool life.

Abrasive:
Aluminium oxide A-PLUS

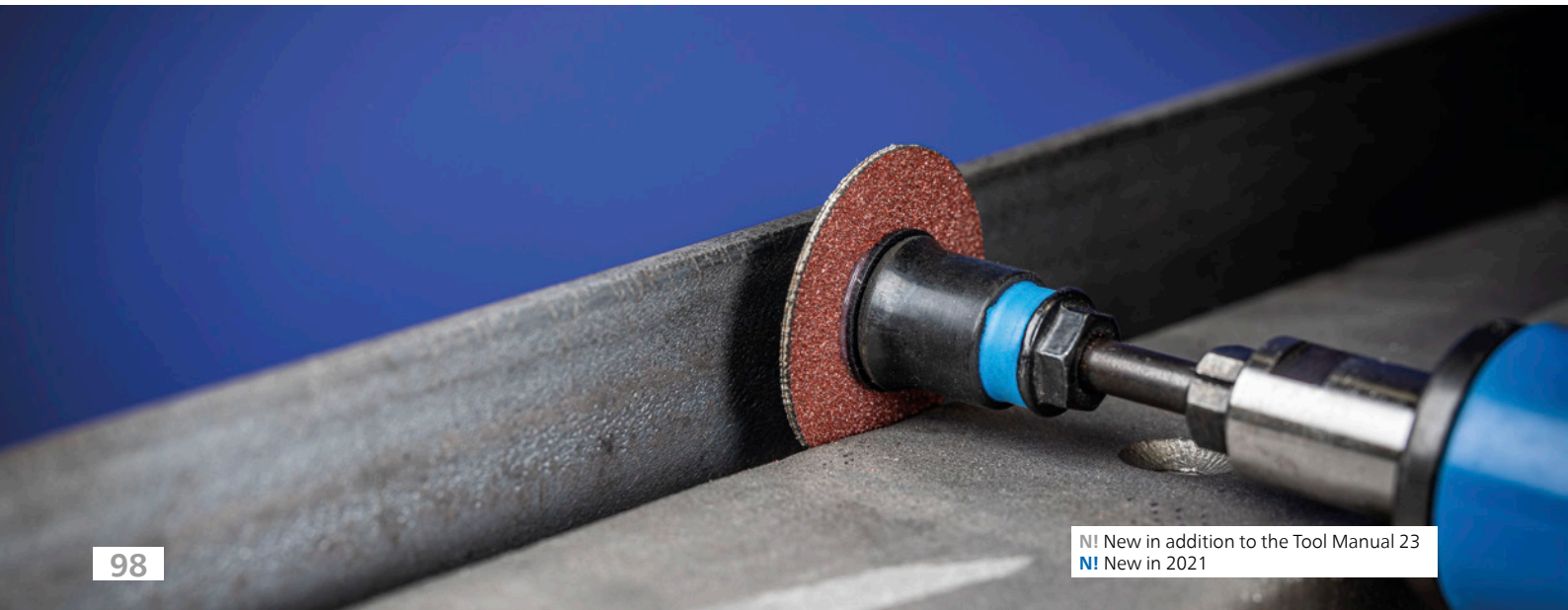
Ordering notes:
■ Please complete the description with the desired grit size.

PFERDVALUE:



D ₁ [mm]	Grit size			Opt. RPM		Description
	60 PLUS	80 PLUS	120 PLUS			
	EAN 4007220					

CDR system							
38	N! 241967	N! 241974	N! 241981	10,000–16,000	100	CDR 38 A ... RS	
50	N! 242001	N! 242025	N! 242391	8,000–13,000	100	CDR 50 A ... RS	
75	N! 242407	N! 242414	N! 242421	5,000–9,000	50	CDR 75 A ... RS	



Midget fibre discs RS ceramic ceramic oxide grain CO-COOL type

For aggressive grinding with maximum stock removal rate on hard materials which do not conduct heat well. Consistently high performance due to self-sharpening ceramic oxide grain.

Active grinding additives in the coating substantially improve the stock removal rate, prevent clogging and result in cooler grinding.

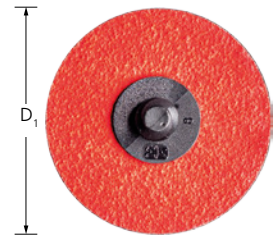
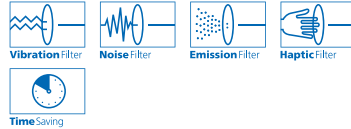
Abrasive:


Ceramic oxide grain CO-COOL

Ordering notes:

- Please complete the description with the desired grit size.

PFERDVALUE:



D ₁ [mm]	Grit size			Opt. RPM		Description
	50	80	120			
	EAN 4007220					

CDR system



38	N! 074671	N! 222829	N! 222843	10,000–16,000	100	CDFR 38 CO-COOL ... RS
50	N! 241783	N! 241790	N! 241806	3,800–13,000	100	CDFR 50 CO-COOL ... RS
75	N! 241813	N! 241820	N! 241844	2,500–9,000	50	CDFR 75 CO-COOL ... RS

Silicon carbide SiC type

For universal grinding work on components made from aluminium, copper, bronze, titanium and fibre-reinforced plastics.

Particularly recommended for use on titanium alloys.

Ideally suited to use in the aeronautical industry, especially where SiC is the only approved abrasive, e.g. for use on engine components.

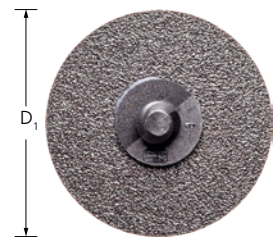
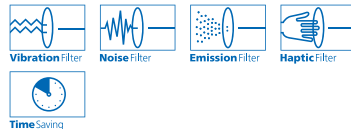
Abrasive:


Silicon carbide SiC

Ordering notes:

- Please complete the description with the desired grit size.

PFERDVALUE:



D ₁ [mm]	Grit size			Opt. RPM		Description
	60	80	120			
	EAN 4007220					

CDR system

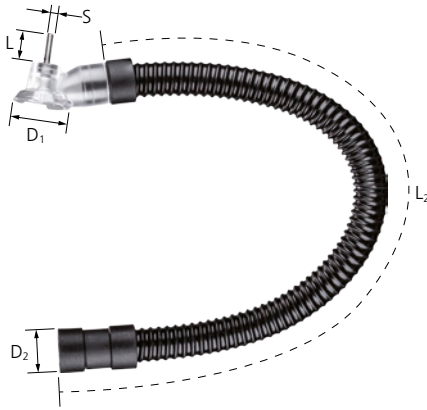


38	N! 241851	N! 241868	N! 241875	10,000–16,000	100	CDR 38 SiC ... RS
50	N! 241882	N! 241899	N! 241912	3,800–13,000	100	CDR 50 SiC ... RS
75	N! 241929	N! 241936	N! 241943	2,500–9,000	50	CDR 75 SiC ... RS



New in the PFERD product range

COMBIDISC – DUST REMOVER



DUST REMOVER

With the COMBIDISC DUST REMOVER, grinding dust can be extracted very effectively from places where something is ground. It can be universally used with all dust extraction systems (portable or stationary). The DUST REMOVER can be used with CD and CDR backing pads.

Advantages:

- Clean work environment with less dust.
- Compatible with all drive systems.
- Flexible tube for easy accessibility.

Recommendations for use:

- To guarantee effective extraction, the volumetric flow rate has to be at least 300 m³/h.
- Reducing the rotational speed increases the effectiveness of extraction.

Matching tool drives:

- Flexible shaft drives
- Straight grinders
- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order arbors or COMBIDISC abrasive disc holders separately. More detailed information and ordering data can be found in our Tool Manual 23, catalogue section 4, page 43.
- When ordering, please state the EAN or the full description.


Safety notes:

- The maximum permitted peripheral speed is 50 m/s.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.



Accessories:

- CD and CDR abrasive disc holders with a diameter of 50 mm or 75 mm.

D ₁ [mm]	S [mm]	L [mm]	Thread	D ₂ [mm]	L ₂ [mm]	EAN 4007220	Matching arbor		Description
50	6	27	1/4-20 UNC	37	600	N! 158074	CD/CDR 50	1	CD DUST REMOVER CD-DR 50
75	6	27	1/4-20 UNC	37	600	N! 158081	CD/CDR 75	1	CD DUST REMOVER CD-DR 75



For more detailed information about the COMBIDISC product range, please refer to our brochure "COMBIDISC grinding tools" at www.pferd.com.



Fine grinding and polishing tools can be found at www.pferd.com.



The comprehensive range of pneumatic drum belts offers the best solutions for many applications, from aggressive grinding to fine grinding and also for polishing.

Advantages:

- Excellent economic efficiency due to high abrasive performance and long tool life.
- High tear strength with optimum flexibility.
- The rubber tube of the grinding drum yields flexibly under higher contact pressure, which reduces heat build-up and wear of the abrasive belts.

Applications:

- Structuring surfaces
- Polishing
- Step-by-step fine grinding

Recommendations for use:

- The air pressure of the pneumatic drum should be adjusted at the beginning of the grinding or polishing process.
 - The drum must be pumped up at least so far that the belts do not slip.
 - Use an air pump or compressed air gun for this purpose.
- To easily change the abrasive or polishing belts, discharge the air from the drum and refill after changing the belt.
- Short belts of the non-woven type perform best at a recommended cutting speed of 5–15 m/s.

Matching tool drives:

- Drum grinders

Ordering notes:

- Please complete the description with the desired grit size.

Safety notes:

- Observe the safety notes "Safety notes for the correct use of abrasive belts" provided by the German Abrasives Association (VDS). You can find this information at www.pferd.com.



Accessories:

- Pneumatic drum



Aluminium oxide A compact grain type

Outstandingly suited to fine and very fine grinding, and for step-by-step preparations for polishing.

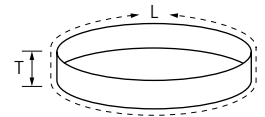
The self-sharpening compact grain facilitates a very long tool life and achieves consistent surface roughness throughout the entire tool life.

Abrasive:

Aluminium oxide A compact grain

Ordering notes:

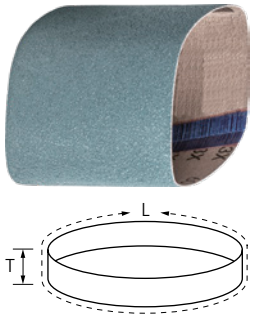
- Please complete the description with the desired grit size.



L [mm]	T [mm]	Grit size									Description	
		120	180	240	320	400	600	800	1000	1200		
EAN 4007220												
282	100	NI 149447	NI 149836	NI 149843	NI 149850	NI 149867	NI 149874	NI 149881	NI 149898	NI 149904	5	BA 100/282 A ... CK

New in the PFERD product range

Belts for pneumatic drums




Zirconia alumina Z type

For coarse grinding work with a high stock removal rate and a long tool life.

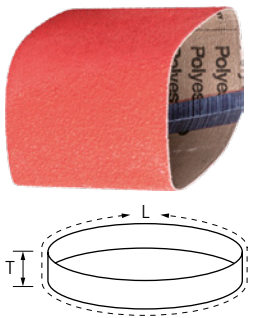
Abrasive:
Zirconia alumina Z

Ordering notes:

- Please complete the description with the desired grit size.

L [mm]	T [mm]	Grit size				Description
		40	60	80		
EAN 4007220						
282	100	N! 149416	N! 149423	N! 149430	5	BA 100/282 Z ...

4

Ceramic oxide grain CO-COOL type


For aggressive grinding with the highest stock removal rates on hard materials which do not conduct heat well. Consistently high performance due to self-sharpening ceramic oxide grain.

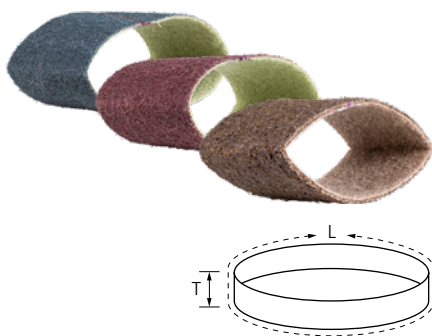
Active grinding additives in the coating substantially improve the stock removal rate, prevent clogging and result in cooler grinding.

Abrasive:
Ceramic oxide grain CO-COOL

Ordering notes:

- Please complete the description with the desired grit size.

L [mm]	T [mm]	Grit size					Description
		40	60	80	120		
EAN 4007220							
282	100	N! 149300	N! 786307	N! 788295	N! 786314	5	BA 100/282 CO-COOL ...



Non-woven type

Suitable for universal work on surfaces such as metal constructions, e.g. removal of rough grinding traces, removal of oxidation and light deburring work. Achieve matt and satin-finished surfaces.

Abrasive:
Aluminium oxide A
Available POLIVLIES grit sizes:
100 G = coarse (yellow-brown)
180 M = medium (red-brown)
240 F = fine (blue)

Recommendations for use:

- For the best results, use at a recommended cutting speed of 5–15 m/s.

Ordering notes:

- Please complete the description with the desired grit size.

L [mm]	T [mm]	Grit size				Description
		100 G	180 M	240 F		
EAN 4007220						
282	100	N! 146415	N! 146422	N! 146910	2	VB 100/282 A ...

Felt type

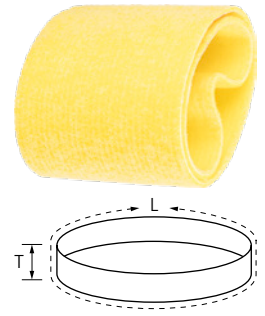
Suitable for polishing with polishing paste bars and grinding pastes on large surfaces.


Recommendations for use:

- For the polishing process, apply pre-polishing and high-gloss polishing successively.
- When changing the polishing paste, also replace the polishing belt in order not to introduce any contaminants from the previous work step.
- For the best results, use at a recommended cutting speed of 5–15 m/s.

Accessories:

- Grinding and polishing pastes



L [mm]	T [mm]	EAN 4007220		Description
282	100	N! 146408	2	P-BA 100/282

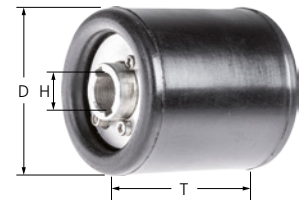
Pneumatic drums

Pneumatic drums

The pneumatic grinding drum is suitable for short belts with a width of 100 mm and a length of 282 mm. The rubber tube of the grinding drum yields under higher contact pressure, which is why the abrasive belt adapts very well to the surface to be machined and the contact area increases.


Recommendations for use:

- The air pressure of the pneumatic drum should be adjusted at the beginning of the grinding or polishing process.
 - The drum must be pumped up at least so far that the belts do not slip.
 - Use an air pump or compressed air gun for this purpose.
- To easily change the abrasive or polishing belts, discharge the air from the drum and refill after changing the belt.



4

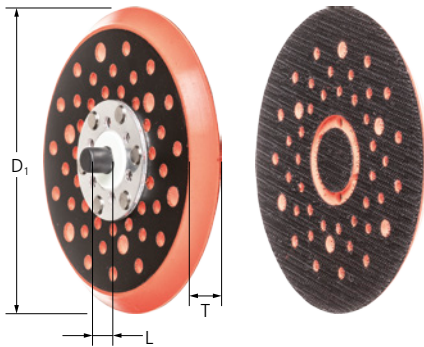


Suitable for short belts [mm]	D [mm]	T [mm]	H [mm]	EAN 4007220	Max. RPM		Description
100 x 282	90	100	19	N! 158142	3,800	1	PSW 90x100



New in the PFERD product range

Velcro-backed abrasive disc holder



Velcro-backed abrasive disc holder

Grinding dust can be extracted very effectively thanks to multiple holes in the velcro-backed abrasive disc holder. It can be used on many different eccentric orbital sanders with a 5/16" thread. This backing pad offers special advantages when used with velcro-backed abrasive discs of the NET type.

Advantages:

- Clean work environment with less dust.
- Versatile thanks to multiple holes.
- Compatible with many eccentric orbital sanders and velcro-backed abrasive discs.
- Extremely strong and durable hook-and-loop fastening system.

Recommendations for use:

- Using the protective pad for KSS-PP velcro-backed abrasive disc holders is recommended in order to increase the tool life of the backing pad.

Matching tool drives:

- Eccentric orbital sanders

Ordering notes:

- When ordering, please state the EAN or the full description.

Safety notes:


- Read the safety notes of the drive system.



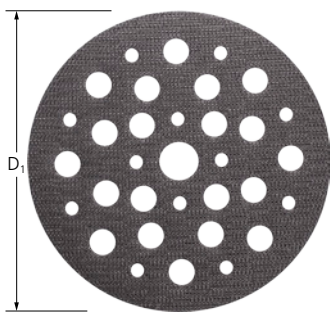
Accessories:

- Protective pad for KSS-PP velcro-backed abrasive disc holders

4

D ₁ [mm]	T [mm]	L [mm]	Thread	EAN 4007220	Suitable for velcro-backed abrasive discs dia. [mm]		Description
125	10	9	5/16 -24 UNF	N! 158098	125	1	KSS-H 125-5/16
150	10	9	5/16 -24 UNF	N! 158104	150	1	KSS-H 150-5/16

Protective pad for velcro-backed abrasive disc holders



Protective pad for velcro-backed abrasive disc holders

This protective pad protects backing pads against premature wear and can be universally used for all velcro-backed abrasive disc backing pads. Thanks to multiple holes in the protective pad for velcro-backed abrasive disc holders, grinding dust can be extracted very effectively.

Advantages:

- Protects backing pads against premature wear.
- Clean work environment with less dust.
- Versatile thanks to multiple holes.
- Compatible with many eccentric orbital sanders and velcro-backed abrasive discs.
- Extremely strong and durable hook-and-loop fastening system.

Recommendations for use:

- Replace this protective pad in good time to increase the tool life of the backing pad.

Matching tool drives:

- Eccentric orbital sanders

Ordering notes:

- When ordering, please state the EAN or the full description.


Safety notes:

- Read the safety notes of the drive system.



Accessories:

- Velcro-backed abrasive disc holder

D ₁ [mm]	EAN 4007220	Suitable for velcro-backed abrasive discs dia. [mm]		Description
125	N! 158111	125	5	KSS-PP 125
150	N! 158128	150	5	KSS-PP 150

Flexible sanding sticks are very well suited for machining components with lots of contours, hard-to-reach areas and narrow slots. They are excellently suited for use in engine construction and turbine construction as well as in tool and mould-making. The range consists of an extensive selection of grits from grit size 80 to 1,000, meaning that different surface qualities from rough to very fine can be successively achieved.

Advantages:

- Highly flexible, enabling optimum adjustment to the contour.

Materials that can be worked:

- Can be used on nearly all materials.

Applications:

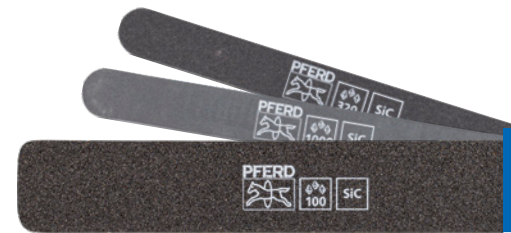
- Roughening
- Deburring
- Surface work
- Step-by-step fine grinding

Recommendations for use:

- Use the flexible sanding sticks with moderate pressure.
- They are optimally suited if only SiC is approved for machining, for example for drive parts in the aviation industry.

Ordering notes:

- When ordering, please state the EAN or the full description.
- Ordering example:**
EAN 4007220172896
SF-R 180-19-5 SiC **80**
- Ordering example explanation:**
SF-R = Sanding stick with radius
180-19-5 = Dimensions
SiC = Abrasive
80 = Grit size



4

Flexible sanding sticks SF/SF-R

For machining components with lots of contours, hard-to-reach areas and narrow slots.

Abrasive:

Silicon carbide SiC

Ordering notes:

- Please complete the description with the desired grit size.



L x B x H [mm]	Grit size							Description
	80	100	120	180	240	320	1000	
EAN 4007220								
SF-R – with radius								
147 x 15 x 5	N! 172988	N! 173015	N! 173022	N! 173039	N! 173053	N! 173060	N! 173077	10 SF-R 147-15-5 SiC ...
180 x 19 x 5	N! 172896	N! 172902	N! 172926	N! 172933	N! 172957	N! 172964	N! 172971	10 SF-R 180-19-5 SiC ...
SF – without radius								
180 x 28 x 5	N! 173084	N! 173107	N! 173114	N! 173121	N! 173145	N! 173152	N! 173169	10 SF 180-28-5 SiC ...



New in the PFERD product range

POLINOX unitized wheels PNER

POLINOX unitized wheels PNER and unitized discs PNER consist of multiple heavily compressed, non-woven layers, which are bonded together by a special grain/resin system.

This particular bond results in non-woven products with a very good surface finish, high stock removal rate and long tool life. These properties are particularly apparent when deburring, blending, finishing and polishing soft metals, alloyed and high-alloy steels, in addition to titanium alloys.

Four different types are available:

Type	Colour code	Properties
Soft		Soft variant with outstanding adaptability. At the same time, durability, abrasive performance and very high surface quality are all maintained. Ideally suited to machining contours.
Medium-soft		Medium-soft variant with increased edge strength and extended tool life, for tough blending and polishing applications. Well suited to machining contours.
Medium-hard		Medium-hard variant with increased edge strength and extended tool life, for tough deburring and cleaning applications.
Hard		Hard variant with very high stock removal rate, good edge strength and long tool life, for tough deburring and polishing applications.



4



Comparison table

PFERD PNER				3M	Standard Abrasives	Norton	BIBIELLE
Type	Colour code	Abrasive	Grain				
Soft		SiC	Fine	EXL 2S fine	532	UW1-2SF or Nex-2SF	BUH 2SF
		A	Coarse	EXL 2A medium	521	UW1-2AM or Nex-2AM	BUH 2AM
Medium-soft		SiC	Fine	EXL 4S fine or SST 3S fine	632	UW1-4SF	BUH 3SF
		A	Fine	EXL 4A fine or SST 3A fine	631	UW1-4AF	-
Medium-hard		A	Fine	Cut & polish 5A fine or SST 5A fine	731	UW1-6AF or Nex-6AF	-
Hard		A	Fine	Cut & polish 7A medium or 9A medium	821	UW1-8AM or Nex-8AM	BUH 6AM
		A	Coarse	Cut & polish 7A coarse or 9A coarse	811	UW1-8AC or Nex-8AC	BUH 8AC



Advantages:

- High profitability thanks to high abrasive performance and long tool life.
- For achieving very good surface quality standards.
- Perfect adaptation to contours thanks to free profiling.

Applications:

Cleaning

- Universal cleaning before painting.
- Removal of rust, scratches, coatings, heavy scaling, oxide layers of aluminium and heat discolouration.

Deburring

- Deburring of gear components, aircraft wing spars and turbine blade edges.
- Removal of heavy burrs, in addition to moderate blemishes and scratches.
- Edge breaking and rounding.

Blending

- Blending and finishing work on engine blade surfaces, turbine blades and rotor blades.
- Removal of smaller blemishes, scratches and joints on cast workpieces.

Polishing

- Polishing of fillet welds on turbine blades and aircraft parts.
- Polishing of soft metals before the coating process, and of hardened steel when repairing moulds and dies.
- Polishing and finishing of surgical instruments and implants.

Recommendations for use:

- Considerably reduce cutting speed for work on materials with poor heat-conducting properties, e.g. titanium and stainless steel.
- For best performance, use with a recommended cutting speed of 15–35 m/s. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and tool wear.

Matching tool drives:

- Flexible shaft drives
- Straight grinders
- Bench grinders

Ordering notes:

- When ordering, please state the EAN or the full description.
- **Ordering example:**
EAN 4007220355473
PNER-H 7506-6 A G
- **Ordering example explanation:**
PNER = POLINOX unitized wheels
H = Type
7506 = Outer diameter D x width T [mm]
6 = Centre hole diameter H [mm]
A = Abrasive
G = Grit size

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

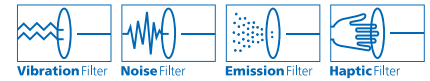


Accessories:

- Arbor for POLINOX unitized wheels

PFERDVALUE:

PFERDERGONOMICS recommends POLINOX unitized wheels PNER to sustainably reduce vibration, noise and dust levels produced by tools and to improve working comfort.



Recommended rotational speed range

Example:

PNER-H 7506-6 A G

Cutting speed: 25 m/s

Rotational speed: 6,300 RPM

Tool dia. [mm]	Cutting speed [m/s]						
	15	20	25	30	32	35	50
	Rotational speeds [RPM]						
25	11,400	15,200	19,000	22,900	24,400	26,700	38,100
50	5,700	7,600	9,500	11,400	12,200	13,300	19,000
75	3,800	5,000	6,300	7,600	8,100	8,900	12,700
100	2,800	3,800	4,700	5,700	6,100	6,600	9,500
115	2,400	3,300	4,100	4,900	5,300	5,800	8,300
125	2,200	3,000	3,800	4,500	4,800	5,300	7,600
150	1,900	2,500	3,100	3,800	4,000	4,400	6,300

New in the PFERD product range

POLINOX unitized wheels PNER



PNER type

Type for straight grinders, flexible shafts and bench grinders:
Particularly suitable for work on smaller surfaces.

Type for speed-adjustable angle grinders and fillet weld grinders:
They are especially suitable for work on fillet welds and very hard-to-reach slots or indentations.

Abrasive:

Aluminium oxide A
Silicon carbide SiC

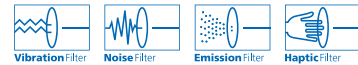
Recommendations for use:

- Grinding wheels with a diameter of 150 mm can also be used on bench grinders, for reworking surgical instruments, for example.

Ordering notes:

- An adapter is included with the 150 x 25 mm diameter grinding wheels, which allows the centre hole diameter to be reduced from 25.4 mm to 20 mm.
- Please complete the description with the desired hardness grade.

PFERDVALUE:



D [mm]	T [mm]	H [mm]	Grit size	Abrasives	Type				Opt. RPM	Max. RPM	Suitable arbors	Description
					W (soft)	MW (medium-soft)	MH (medium-hard)	H (hard)				
EAN 4007220												

Type for straight grinders, flexible shafts and bench grinders

25	25	6	coarse	A	-	-	-	440438	19,000	30,500	BO PNER 25 S6	10	PNER... 2525-6 A G	
			fine	A	-	-	440452	440445	19,000	30,500	BO PNER 25 S6	10	PNER... 2525-6 A F	
50	3	6	fine	A	-	-	-	505700	9,500	15,300	BO 6/6 3-10	10	PNER... 5003-6 A F	
				coarse	A	NI 136775	-	-	NI 136812	6,400	10,200	BO 6/6 3-10	10	PNER... 7503-6 A G
			fine	A	-	-	NI 136805	505717	6,400	10,200	BO 6/6 3-10	10	PNER... 7503-6 A F	
				SiC	NI 136782	NI 136799	-	-	6,400	10,200	BO 6/6 3-10	10	PNER... 7503-6 SiC F	
				coarse	A	476307	-	-	355473	6,400	10,200	BO 6/6 3-10	5	PNER... 7506-6 A G
					A	-	355534	355503	-	6,400	10,200	BO 6/6 3-10	5	PNER... 7506-6 A F
75	3	6	coarse	A	476314	-	-	355480	6,400	10,200	BO 6/6 3-10	5	PNER... 7513-6 A G	
				A	-	355565	355510	-	6,400	10,200	BO 6/6 3-10	5	PNER... 7513-6 A F	
			fine	SiC	476338	355589	-	-	6,400	10,200	BO 6/6 3-10	5	PNER... 7513-6 SiC F	
				coarse	A	-	-	-	355497	3,200	5,100	BO 12/20 10-50	1	PNER... 15025-25,4 A G
					A	-	476291	355527	-	3,200	5,100	BO 12/20 10-50	1	PNER... 15025-25,4 A F
				SiC	355633	355602	-	-	3,200	5,100	BO 12/20 10-50	1	PNER... 15025-25,4 SiC F	

Type for angle grinders and fillet weld grinders

125	6	22.23	coarse	A	-	-	-	833179	4,500	6,100	-	5	PNER... 12506-22,2 A G
				A	-	833148	833155	833162	4,500	6,100	-	5	PNER... 12506-22,2 A F
			SiC	-	833131	-	-	4,500	6,100	-	5	PNER... 12506-22,2 SiC F	
150	3	25.4	fine	A	-	-	-	895733	3,800	5,100	-	5	PNER... 15003-25,4 A F
				SiC	-	895719	895726	-	3,800	5,100	-	5	PNER... 15003-25,4 SiC F
	6	25.4	fine	A	-	-	-	895764	3,800	5,100	-	5	PNER... 15006-25,4 A F
				SiC	895740	895757	-	-	3,800	5,100	-	5	PNER... 15006-25,4 SiC F



NI! New in addition to the Tool Manual 23
NI! New in 2021

Diamond grinding points for grey and nodular cast iron

Diamond grinding points with grit size D 852 are exceptionally well suited to machining grey cast iron and nodular cast iron (GG and GGG or GJL and GJS).

Advantages:

- Outstanding tool life.
- Fast, aggressive grinding with the highest possible stock removal rate.
- Easy and quick elimination of metal contamination thanks to diamond as a super-hard abrasive.
- Low dust load due to the dimensional stability of the grinding tool (no tool wear).

Materials that can be worked:

grey/nodular cast iron (GG/GJL, GGG/GJS)

Applications:

grinding out, weld dressing, deburring

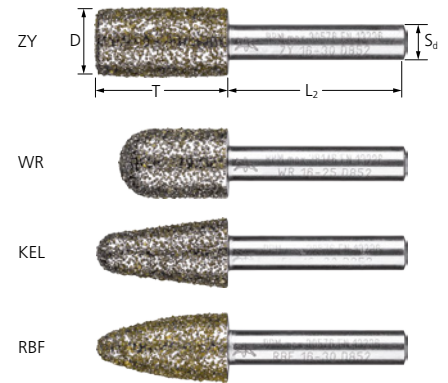
Recommendations for use:


- Dry grinding: 30–50 m/s

Matching tool drives:

flexible shaft drive, straight grinder, stationary machines

PFERDVALUE:



D x T [mm]	S _d [mm]	L ₂ [mm]	Grit size		Description
			D 852		
			EAN 4007220		
Cylindrical shape ZY					
16.0 x 30	8	40	103708	1	DZY-N 16-30/8 D 852
20.0 x 30	8	40	103753	1	DZY-N 20-30/8 D 852
24.0 x 30	8	40	N! 157435	1	DZY-N 24-30/8 D 852
Cylindrical shape with radius end WR					
10.0 x 20	6	40	097366	1	DWR-N 10-20/6 D 852
12.0 x 25	6	40	097373	1	DWR-N 12-25/6 D 852
16.0 x 25	8	40	097472	1	DWR-N 16-25/8 D 852
20.0 x 30	8	40	N! 157503	1	DWR-N 20-30/8 D 852
24.0 x 30	8	40	N! 157510	1	DWR-N 24-30/8 D 852
Conical shape with radius end KEL					
12.0 x 25	6	40	N! 157541	1	DKEL-N 12-25/6 D 852
16.0 x 30	8	40	097489	1	DKEL-N 16-30/8 D 852
20.0 x 30	8	40	N! 157534	1	DKEL-N 20-30/8 D852
24.0 x 30	8	40	N! 157565	1	DKEL-N 24-30/8 D 852
Tree shape with radius end RBF					
12.0 x 25	6	40	102800	1	DRBF-N 12-25/6 D 852
16.0 x 30	8	40	103692	1	DRBF-N 16-30/8 D 852
20.0 x 30	8	40	N! 157572	1	DRBF-N 20-30/8 D 852

New in the PFERD product range

Cut-off wheels – Universal Line PSF ★★★☆☆



PSF STEELOX ★★★☆☆

Cut-off wheel for steel and stainless steel (INOX) with high cutting performance and long tool life.

Advantages:

- Universally suitable for steel and stainless steel (INOX).
- Fast work progress thanks to high cutting performance.
- High economic efficiency due to long tool life.
- Thin cut-off wheels are ideal for cordless angle grinders.
- N! Packaging unit of 10 pieces in a handy cardboard box.

Materials that can be worked:

steel, stainless steel (INOX)

Applications:

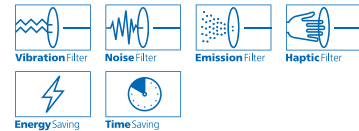
cutting of sheet metal, profiles and solid material, cutting out holes

Abrasive:

Aluminium oxide A

PFERDVALUE:

Thin cut-off wheels:



D [mm]	T/U [mm]	EAN 4007220	H [mm]	Max. RPM		Description
Flat type EHT (shape 41) 						
76	0.8	060889	10.0	20,100	25	EHT 76-0,8 PSF STEELOX/10,0
	1.0	060940	10.0	20,100	25	EHT 76-1,0 PSF STEELOX/10,0
105	1.0	098493	16.0	14,500	25	EHT 105-1,0 PSF STEELOX/16,0
115	1.0	560266	22.23	13,300	25	EHT 115-1,0 PSF STEELOX
		N! 152973	22.23	13,300	10	EHT 115-1,0 PSF STEELOX (10)
	1.6	538135	22.23	13,300	25	EHT 115-1,6 PSF STEELOX
	2.4	523025	22.23	13,300	25	EHT 115-2,4 PSF STEELOX
	125	1.0	560372	22.23	12,200	25
N! 153185			22.23	12,200	10	EHT 125-1,0 PSF STEELOX (10)
1.6		538142	22.23	12,200	25	EHT 125-1,6 PSF STEELOX
2.0		667958	22.23	12,200	25	EHT 125-2,0 PSF STEELOX
2.4		523049	22.23	12,200	25	EHT 125-2,4 PSF STEELOX
150	1.6	581223	22.23	10,200	25	EHT 150-1,6 PSF STEELOX
180	1.6	581230	22.23	8,500	25	EHT 180-1,6 PSF STEELOX
	2.5	523063	22.23	8,500	25	EHT 180-2,5 PSF STEELOX
230	1.9	581216	22.23	6,600	25	EHT 230-1,9 PSF STEELOX
	2.0	702239	22.23	6,600	25	EHT 230-2,0 PSF STEELOX
	2.5	523087	22.23	6,600	25	EHT 230-2,5 PSF STEELOX
Depressed-centre type EH (shape 42) 						
100	2.4	523018	16.0	15,300	25	EH 100-2,4 PSF STEELOX/16,0
115	2.4	523032	22.23	13,300	25	EH 115-2,4 PSF STEELOX
125	2.4	523056	22.23	12,200	25	EH 125-2,4 PSF STEELOX
180	2.5	523070	22.23	8,500	25	EH 180-2,5 PSF STEELOX
230	2.5	523094	22.23	6,600	25	EH 230-2,5 PSF STEELOX





The perfect tool
for any application!

**YOU KNOW HOW.
WE KNOW WOW!**

You are the professional!

You excel when it comes to the cutting and processing of surfaces. With PFERD your results will be even better. With individual advice and the innovative tools from PFERD, you will bring the wow factor to your work results, economic efficiency and ergonomics.

Discover our product range with thin cut-off wheels for industrial users now on www.pferd.com/cut-off-wheels

New in the PFERD product range

NITOCUT cutting system

NITOCUT

NITOCUT is the first manual cutting system in the world for a peripheral speed of 100 m/s. The cut-off wheel developed by PFERD is characterized by its top cutting performance and outstanding tool life. The NITOCUT cutting system allows faster working and up to four times more cuts as well as a higher insertion depth than the cut-off wheels common on the market with the dimensions 125 x 1.0 mm. The unique cutting system meets the highest quality and safety standards.

Advantages:

- Ultimate cutting performance and tool life due to significantly increased cutting speed.
- High insertion depth.
- Unique, convenient cutting experience.
- Extremely high cut-off wheel reliability thanks to innovative fibreglass reinforcement.

Recommendations for use:

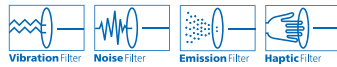
- The 100 m/s cutting system can be used like any conventional angle grinders.

Safety notes:

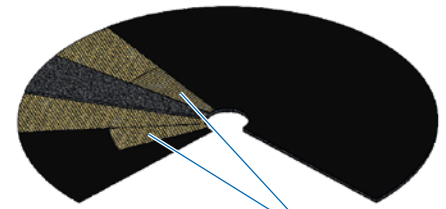
- Common cut-off wheels achieve a peripheral speed of a maximum of 80 m/s. They must not be used on the NITOCUT angle grinder.
- In order to prevent misuse, the specially produced angle grinder only allows the assembly of NITOCUT cut-off wheels.

PFERDVALUE:

PFERDERGONOMICS recommends the NITOCUT cutting system in order to sustainably reduce the vibration, noise and dust development that result during use and improve working comfort.



PFERDEFFICIENCY recommends the NITOCUT cutting system for working for long periods with low levels of fatigue, whilst saving resources and achieving perfect results as quickly as possible.



Additional fibreglass reinforcement in the flange area

6



CERAMIC SGP NITOCUT STEELOX ★★★★★

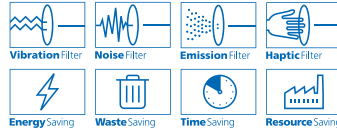
High-performance cut-off wheel for steel and stainless steel (INOX) with ultimate cutting performance and an excellent tool life.


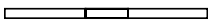
Materials that can be worked:
steel, stainless steel (INOX)

Applications:
cutting of large cross sections, cutting of profiles and solid material, cutting of thin sheet metal, cutting out holes

Abrasive:
Ceramic oxide grain CO

PFERDVALUE:



D [mm]	T/U [mm]	EAN 4007220	H [mm]	Max. RPM		Description
Flat type EHT (shape 41) 						
150	1.6	N! 219942	25.4	12,800	25	EHT 150-1,6 CERAMIC SGP NITOCUT STEELOX/25,4

NITOCUT pneumatic angle grinder



Special features:

- Only suitable for 150 mm NITOCUT cut-off wheels.
- Very powerful turbine motor.
- Constant power delivery due to the centrifugal governor.
- Spindle lock pin for tool change with one key.

Included in delivery:

1/2" female connecting thread, 2 keys, 1 clamping nut, 1 clamping flange, guard, anti-vibration handle.

PWT 26/150 HV NITOCUT

12,000 RPM / 2,600 watts



PFERDVALUE:



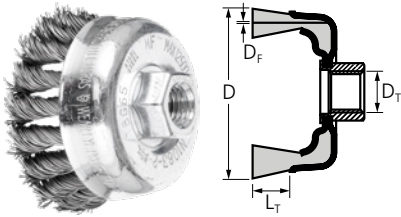
Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption at idling speed [m ³ /min]	Air consumption under load [m ³ /min]	Spindle thread	Inner dia. of air supply hose [mm]	Tool mounting [mm]	Net weight [kg]
PWT 26/150 HV NITOCUT	N! 224038	bottom	lever	0.90	2.25	M14	16	25.4	2,200

You can find further information on the PWT 26/150 HV NITOCUT angle grinder on page 125.



New in the PFERD product range

Cup brushes, knotted



TBG

Aggressive brush. Excellent for heavy-duty brushing such as deburring, cleaning and derusting on large surfaces.

Advantages:



- Aggressive brushing effect due to the very stiff wire knots.

Recommendations for use:

- For optimum results, use on powerful angle grinders.

Ordering notes:

- For the 5-piece packaging unit, please specify the description without "POS".
- DIA type brushes are supplied with 1 piece per PU.
- Grit size DIA 270 = D 64, Grit size DIA 400 = D 46

D [mm]	L _T [mm]	D _T	D _f [mm]	Knots [pcs.]	Packaging		Rec. RPM	Max. RPM	Description
									
					EAN 4007220				

Steel wire (ST)

65	22	M14x2	0.35	18	153437	955079	6,300–12,500	12,500	POS TBG 65/M14 ST 0,35
			0.50	18	579121	955086	6,300–12,500	12,500	POS TBG 65/M14 ST 0,50
			0.80	18	579138	-	6,300–12,500	12,500	POS TBG 65/M14 ST 0,80
80	20	M14x2	0.50	20	806654	955093	5,000–10,000	10,000	POS TBG 80/M14 ST 0,50
100	25	M14x2	0.50	24	806661	955109	4,500–9,000	9,000	POS TBG 100/M14 ST 0,50

Stainless steel wire (INOX)

All INOX brushes are degreased.

65	22	M14x2	0.35	18	220740	955116	5,000–12,500	12,500	POS TBG 65/M14 INOX 0,35
			0.50	18	598016	955123	5,000–12,500	12,500	POS TBG 65/M14 INOX 0,50
80	20	M14x2	0.35	20	806678	955130	4,000–10,000	10,000	POS TBG 80/M14 INOX 0,35
			0.50	20	003671	003688	4,000–10,000	10,000	POS TBG 80/M14 INOX 0,50
100	25	M14x2	0.35	24	806685	955147	3,600–9,000	9,000	POS TBG 100/M14 INOX 0,35
			0.50	24	003701	003718	3,600–9,000	9,000	POS TBG 100/M14 INOX 0,50

Stainless steel wire (INOX) diamond (DIA)

65	22	M14x2	0.50	18	-	N! 160121	1,500–3,700	12,500	TBG 65/M14 INOX 0,50 DIA 270
100	38	M14x2	0.50	24	-	107881	1,000–2,400	9,000	TBG 100/M14 INOX 0,50 DIA 270
					-	107874	1,000–2,400	9,000	TBG 100/M14 INOX 0,50 DIA 400



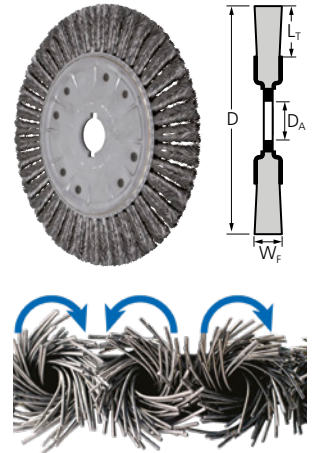
RBG CT, COMBITWIST, stationary


Very aggressive and robust brush that is able to withstand high mechanical loads. Suitable for all heavy-duty stationary and automated brushing, e.g. deburring work.

Advantages:

- Aggressive brushing effect due to the very stiff wire knots.
- Can be used with all common stationary drive systems and bench grinders thanks to the variable arbor hole diameter.
- Maximum economic efficiency due to extremely high tool life as well as increased stock removal.
- High level of comfort thanks to smooth running with no brush recoiling.
- Suitable for work on corners and edges as the knots are less likely to unravel.

PFERDVALUE:



D [mm]	W _F [mm]	L _T [mm]	D _A [mm]	Knots [pcs.]	D _F [mm]	Keyway [mm]	Packaging	Rec. RPM	Max. RPM	Description
							 EAN 4007220			

Steel wire (ST) – COMBITWIST type

350	20	56	50.8	80	0.50	6.3 x 12.7	N! 223758	700–3,000	3,600	RBG 35020/50,8 CT ST 0,50
380	20	67	50.8	80	0.50	6.3 x 12.7	N! 223765	700–3,000	3,600	RBG 38020/50,8 CT ST 0,50



Adapter pair AM 50,8/...:

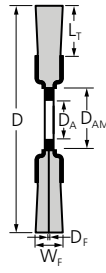
Reduces the arbor hole diameters to the required dimensions. Suitable for wheel brushes with a brush diameter as from 150 mm in the wide and composite types.

For more information:

Detailed information on accessories can be found in our Tool Manual 23, catalogue section 8.

New in the PFERD product range

Wheel brushes, crimped



RBU, slim


Excellent for medium-duty hand-held or automated brushing of workpieces with large surfaces.

Advantages:

- Can be used with all common stationary drive systems and bench grinders thanks to the variable arbor hole diameter.
- Can be packed as wide rollers without gaps because of their special design.
- Highly flexible, enabling optimal adjustment to the workpiece contour.

Ordering notes:

- Please order adapter set AK 32 separately.
- Wheel brushes with arbor hole diameter 31.8 mm can be used with adapter set AK 32.

D [mm]	W _F [mm]	L _T [mm]	D _A [mm]	D _{AM} [mm]	D _F [mm]	Packaging		Rec. RPM	Max. RPM	Description
										
						EAN 4007220				

Steel wire (ST)

100	12	24	14.0	-	0.15	597866	-	4,000–6,000	8,000	RBU 10012/14,0 ST 0,15
					0.30	597873	-	4,000–6,000	8,000	RBU 10012/14,0 ST 0,30
125	12	32	14.0	-	0.30	806791	-	4,000–6,000	8,000	RBU 12512/14,0 ST 0,30
150	12	28	22.2	31.8	0.25	530412	-	3,000–4,500	6,000	RBU 15012/22,2 ST 0,25
180	12	43	22.2	31.8	0.30	658734	-	3,000–4,500	6,000	RBU 18012/22,2 ST 0,30
200	16	44	22.2	31.8	0.25	530436	-	3,000–4,500	6,000	RBU 20016/22,2 ST 0,25
250	20	70	22.2	31.8	0.25	530443	-	1,800–2,700	3,600	RBU 25020/22,2 ST 0,25

Stainless steel wire (INOX) All INOX brushes are degreased.

125	12	32	14.0	-	0.30	806807	-	3,200–5,200	8,000	RBU 12512/14,0 INOX 0,30
150	12	28	22.2	31.8	0.30	597880	-	2,400–3,900	6,000	RBU 15012/22,2 INOX 0,30
180	12	43	22.2	31.8	0.30	658796	-	2,400–3,900	6,000	RBU 18012/22,2 INOX 0,30
200	16	44	22.2	31.8	0.30	597910	-	2,400–3,900	6,000	RBU 20016/22,2 INOX 0,30
250	20	70	22.2	31.8	0.30	597927	-	1,400–2,300	3,600	RBU 25020/22,2 INOX 0,30

Silicon carbide (SiC) plastic filament

100	12	22	12.0	-	1.00	597903	-	3,200–5,200	8,000	RBU 10012/12,0 SiC 80 1,00
					0.90	220870	-	3,200–5,200	8,000	RBU 10012/12,0 SiC 180 0,90
150	16	32	12.0	31.8	1.00	530467	-	2,400–3,900	8,000	RBU 15016/12,0 SiC 80 1,00
					0.90	220894	-	2,400–3,900	8,000	RBU 15016/12,0 SiC 180 0,90
200	16	32	22.2	31.8	1.00	530474	-	1,800–2,900	4,500	RBU 20016/22,2 SiC 80 1,00
					0.90	220917	-	1,800–2,900	4,500	RBU 20016/22,2 SiC 180 0,90
250	16	38	22.2	31.8	1.00	530481	-	1,400–2,300	3,600	RBU 25016/22,2 SiC 80 1,00
					0.90	220948	-	1,400–2,300	3,600	RBU 25016/22,2 SiC 180 0,90

Ceramic oxide grain (CO) plastic filament

100	12	22	12.0	-	1.10	837269	-	3,200–5,200	8,000	RBU 10012/12,0 CO 120 1,10
150	16	28	12.0	31.8	1.10	837276	-	2,400–3,900	6,000	RBU 15016/12,0 CO 120 1,10
200	16	38	22.2	31.8	1.10	837283	-	1,800–2,900	4,500	RBU 20016/22,2 CO 120 1,10

Diamond (DIA) plastic filament

100	12	19	16	-	0.35	-	N! 159293	2,000–5,000	12,000	RBU 10012/16,0 DIA 600 0,35
150	12	29	31.8	-	0.35	-	N! 159859	1,000–3,500	6,000	RBU 15012/31,8 DIA 600 0,35
200	12	38	50.8	-	0.35	-	N! 159866	900–1,500	4,500	RBU 20012/50,8 DIA 600 0,35

Nylon plastic filament

100	12	22	12.0	-	0.40	899298	-	3,200–5,200	8,000	RBU 10012/12,0 Nylon 0,40
150	16	32	12.0	31.8	0.40	899304	-	3,200–5,200	8,000	RBU 15016/12,0 Nylon 0,40
200	16	32	22.2	31.8	0.40	899311	-	2,400–3,900	6,000	RBU 20016/22,2 Nylon 0,40

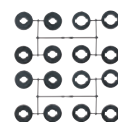


Arbor BO 8/12-14 100-125
(EAN 4007220107843): For crimped wheel brushes with a diameter of 100–125 mm and a D_A / D_{AM} of 12 mm and 14 mm.

BO 12/22,2 150-180
(EAN 4007220107850): For knotted and crimped wheel brushes with a diameter of 150–180 mm and a D_A of 22.2 mm.



BO 12/22,2 200
(EAN 4007220107867): For knotted and crimped wheel brushes with a diameter of 200 mm and a D_A of 22.2 mm.



Adapter set AK 32
(EAN 4007220608593): Arbor hole diameters contained in the set in mm (inch): 20 / 18 / 14 / 12 / 25.4 (1) / 22.2 (7/8) / 16 (5/8) / 12.7 (1/2).

For more information:

Detailed information on accessories can be found in our Tool Manual 23, catalogue section 8.

RBUs, wide, universal use

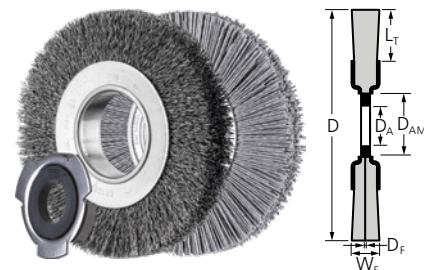
Excellent for medium-duty hand-held or automated brushing of workpieces with large surfaces. Developed for universal use in the workshop.

Advantages:

- Can be used with all common stationary drive systems and bench grinders thanks to the variable arbor hole diameter.

Ordering notes:

- Diameters of 150–250 mm are supplied together with adapter set AK 32-2.
- Diameters of 100–125 mm are supplied with a variable arbor hole.



D [mm]	W _F [mm]	L _T [mm]	D _A [mm]	D _{AM} [mm]	D _F [mm]	Packaging	Rec. RPM	Max. RPM	Description
									
EAN 4007220									

Steel wire (ST)

100	20	25	12/14/18/22.2/25.4	30.0	0.30	956236	4,000–6,000	8,000	POS RBU 10020/14,0 ST 0,30
	28	25	12/14/18/22.2/25.4	30.0	0.30	956243	4,000–6,000	8,000	POS RBU 10028/14,0 ST 0,30
125	20	30	12/14/18/22.2/25.4	30.0	0.30	956250	3,000–4,500	6,000	POS RBU 12520/14,0 ST 0,30
	28	30	12/14/18/22.2/25.4	30.0	0.30	956274	3,000–4,500	6,000	POS RBU 12528/14,0 ST 0,30
150	25	25	AK 32-2	50.8	0.20	956281	3,000–4,500	6,000	POS RBU 15025/AK32-2 ST 0,20
	25	25	AK 32-2	50.8	0.30	956304	3,000–4,500	6,000	POS RBU 15025/AK32-2 ST 0,30
	38	25	AK 32-2	50.8	0.20	956298	3,000–4,500	6,000	POS RBU 15038/AK32-2 ST 0,20
	38	25	AK 32-2	50.8	0.30	956311	3,000–4,500	6,000	POS RBU 15038/AK32-2 ST 0,30
180	25	40	AK 32-2	50.8	0.20	956335	3,000–4,500	6,000	POS RBU 18025/AK32-2 ST 0,20
	25	40	AK 32-2	50.8	0.30	956342	3,000–4,500	6,000	POS RBU 18025/AK32-2 ST 0,30
	38	40	AK 32-2	50.8	0.30	956359	3,000–4,500	6,000	POS RBU 18038/AK32-2 ST 0,30
200	25	50	AK 32-2	50.8	0.20	956366	2,300–3,400	4,500	POS RBU 20025/AK32-2 ST 0,20
	25	50	AK 32-2	50.8	0.30	956373	2,300–3,400	4,500	POS RBU 20025/AK32-2 ST 0,30
	38	50	AK 32-2	50.8	0.30	956380	2,300–3,400	4,500	POS RBU 20038/AK32-2 ST 0,30
250	30	46	AK 32-2	50.8	0.20	N! 224229	1,400–2,300	3,600	POS RBU 25030/AK32-2 ST 0,20
	30	46	AK 32-2	50.8	0.30	N! 224267	1,400–2,300	3,600	POS RBU 25030/AK32-2 ST 0,30

Stainless steel wire (INOX)

100	20	25	12/14/18/22.2/25.4	30.0	0.30	956397	3,200–5,200	8,000	POS RBU 10020/14,0 INOX 0,30
	28	25	12/14/18/22.2/25.4	30.0	0.30	956403	3,200–5,200	8,000	POS RBU 10028/14,0 INOX 0,30
125	20	30	12/14/18/22.2/25.4	30.0	0.30	956410	2,400–3,900	6,000	POS RBU 12520/14,0 INOX 0,30
	28	30	12/14/18/22.2/25.4	30.0	0.30	956434	2,400–3,900	6,000	POS RBU 12528/14,0 INOX 0,30
150	25	25	AK 32-2	50.8	0.20	956441	2,400–3,900	6,000	POS RBU 15025/AK32-2 INOX 0,20
	25	25	AK 32-2	50.8	0.30	956465	2,400–3,900	6,000	POS RBU 15025/AK32-2 INOX 0,30
	38	25	AK 32-2	50.8	0.20	956458	2,400–3,900	6,000	POS RBU 15038/AK32-2 INOX 0,20
	38	25	AK 32-2	50.8	0.30	956472	2,400–3,900	6,000	POS RBU 15038/AK32-2 INOX 0,30
180	25	40	AK 32-2	50.8	0.20	956489	2,400–3,900	6,000	POS RBU 18025/AK32-2 INOX 0,20
	25	40	AK 32-2	50.8	0.30	956496	2,400–3,900	6,000	POS RBU 18025/AK32-2 INOX 0,30
	38	40	AK 32-2	50.8	0.30	956502	2,400–3,900	6,000	POS RBU 18038/AK32-2 INOX 0,30
200	25	50	AK 32-2	50.8	0.20	956519	1,800–2,900	4,500	POS RBU 20025/AK32-2 INOX 0,20
	25	50	AK 32-2	50.8	0.30	956526	1,800–2,900	4,500	POS RBU 20025/AK32-2 INOX 0,30
	38	50	AK 32-2	50.8	0.30	956533	1,800–2,900	4,500	POS RBU 20038/AK32-2 INOX 0,30
250	30	46	AK 32-2	50.8	0.20	N! 224298	1,400–2,300	3,600	POS RBU 25030/AK32-2 INOX 0,20
	30	46	AK 32-2	50.8	0.30	N! 224311	1,400–2,300	3,600	POS RBU 25030/AK32-2 INOX 0,30

Silicon carbide (SiC) plastic filament

150	25	25	AK 32-2	50.8	0.55	069707	2,400–3,900	6,000	POS RBU 15025/AK32-2 SiC 120 0,55
					1.10	069691	2,400–3,900	6,000	POS RBU 15025/AK32-2 SiC 120 1,10
					0.55	069714	2,400–3,900	6,000	POS RBU 15025/AK32-2 SiC 320 0,55
200	25	50	AK 32-2	50.8	1.10	069721	2,400–3,900	6,000	POS RBU 20025/AK32-2 SiC 120 1,10
250	30	46	AK 32-2	50.8	1.10	N! 224328	1,400–2,300	3,600	POS RBU 25030/AK32-2 SiC 120 1,10

Suitable arbors can be found on page 116.



Adapter set AK 32-2 (EAN 4007220806890): Arbor hole dia. contained in the set in mm (inch): 31.75 / 20 / 18 / 14 / 12 / 25.4 (1) / 22.2 (7/8) / 19.2 (.750) / 16 (5/8) / 12.7 (1/2).

Note: Adapter pairs AM 50,8 for brushes with a D_{AM} of 50.8 mm can be used in applications involving high levels of heat and forces.

New in the PFERD product range

Composite brushes

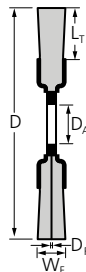
Composite brushes from PFERD have been specifically developed for industrial, automated use. They are suitable for a variety of applications and their variable clamping options mean that they can be used on many different drive systems. This offers the advantage that the workpiece can be produced and finished on the same machine. As a result, labour-intensive, manual work is reduced and reproducible results are achieved with short cycle times.

The standard type of composite brushes is suitable for tasks requiring aggressive brushing behaviour. The FLEX type is more flexible than the standard type due to its longer trim length on wheel brushes and the special arrangement of the filament on composite disc brushes, and it is particularly well suited to work on irregular surfaces.

For efficient use, numerous application parameters such as the processing time and feed rate must be coordinated with each other and the suitable brush must be selected. PFERD offers a wide range of products for the various applications. Our experienced sales representatives and technical advisers will be happy to help or visit you. Our worldwide sales addresses can be found at: www.pferd.com



Composite – Wheel brushes, crimped



RBUP

Particularly aggressive brush. Its plastic filament makes this product particularly suitable for deburring complicated components such as cylinder heads or gear toothings. Developed specially for industrial use.

Advantages:

- Long tool life and aggressive brushing effect due to a very high filament density.
- Extremely smooth operation due to even distribution of the filament material.

Recommendations for use:

- Use CO as the filament material for particularly aggressive work and a high workpiece surface quality.
- Select the REC type (rectangular filament) for aggressive work with SiC as the filament material.

Ordering notes:

- Please complete the description with the desired grit size and filament material diameter (D_f).
- Please order adapter pairs APM 50,8 separately.

PFERDVALUE:



D [mm]	W _F [mm]	L _T [mm]	D _A [mm]	Grit size / D _F [mm]					Rec. RPM	Max. RPM	IP	Description
				80 1.10	80 1.14	120 0.55	120 1.10	320 0.55				
EAN 4007220												

Silicon carbide (SiC) plastic filament

150	25	32	50.8	-	956588	-	-	-	900–1,500	3,600	1	RBUP 15025/50,8 REC SiC ...
				956618	-	-	956649	956670				900–1,500
200	25	32	50.8	-	956595	-	-	-	900–1,500	3,600	1	RBUP 20025/50,8 REC SiC ...
				956625	-	-	956656	956687				900–1,500
250	25	38	50.8	-	956601	-	-	-	900–1,500	3,600	1	RBUP 25025/50,8 REC SiC ...
				956632	-	039175	956663	956694				900–1,500

Ceramic oxide grain (CO) plastic filament

150	13	32	50.8	N!	159873	-	-	N!	159880	-	900–1,500	3,600	1	RBUP 15013/50,8 CO ...
	25	32	50.8		956700	-	-	-	-	900–1,500				3,600
200	13	32	50.8	N!	159910	-	-	N!	159941	-	900–1,500	3,600	1	RBUP 20013/50,8 CO ...
	25	32	50.8		956717	-	-	-	-	900–1,500				3,600
250	25	38	50.8		956724	-	-	-	-	900–1,500	3,600	1	RBUP 25025/50,8 CO ...	



Arbor BO 12/22,2 150-180 (EAN 4007220**107850**): For knotted and crimped wheel brushes with a diameter of 150–180 mm and a D_A of 22.2 mm.



BO 12/22,2 200 (EAN 4007220**107867**): For knotted and crimped wheel brushes with a diameter of 200 mm and a D_A of 22.2 mm.

Note: Adapter pair AM 50,8/22,2 (EAN 4007220**806906**) is required to use the product with arbors.



Adapter pair AM 50,8/22,2 ...: Reduces the arbor hole diameters to the required dimensions. Suitable for wheel brushes with a brush diameter as from 150 mm in the wide and composite types.

RBUP, FLEX

Particularly flexible brush. Its plastic filament makes this product particularly suitable for deburring complicated components such as cylinder heads or gear toothing. Developed specially for industrial use.

Advantages:

- Long tool life and aggressive brushing effect due to a very high filament density.
- Extremely smooth operation due to even distribution of the filament material.
- Highly flexible, enabling optimal adjustment to the workpiece contour and less heat build-up.

Recommendations for use:

- Use CO as the filament material for particularly aggressive work and a high workpiece surface quality.
- Select the REC type (rectangular filament) for aggressive work with SiC as the filament material.

Ordering notes:

- Please complete the description with the desired grit size and filament material diameter (D_f).
- Packaging unit: 1 piece
- Brushes with the addition of REC have a wire thickness of 1.14 mm x 2.3 mm.

PFERDVALUE:



D [mm]	W _F [mm]	L _T [mm]	D _A [mm]	Keyway [mm]	Grit size / D _F [mm]					Rec. RPM	Max. RPM	Description
					80 1.10	120 0.55	120 1.10	180 0.90	320 0.55			
EAN 4007220												

Silicon carbide (SiC) plastic filament – FLEX type

200	25	57	50.8	-	039298	-	-	-	-	900–1,500	3,600	RBUP 20025/50,8 REC SiC... FLEX
					038840	-	039151	-	038895	900–1,500	3,600	RBUP 20025/50,8 SiC ... FLEX
250	25	83	50.8	-	038505	-	-	-	-	900–1,500	3,600	RBUP 25025/50,8 REC SiC... FLEX
					038499	-	038871	-	039168	900–1,500	3,600	RBUP 25025/50,8 SiC ... FLEX
300	13	60	50.8	6.3 x 12.7	-	-	-	-	N! 160053	500–800	1,800	RBUP 30013/50,8 SiC ... FLEX
					038772	-	038765	038741	-	500–800	1,800	RBUP 30025/50,8 SiC ... FLEX
350	25	89	50.8	6.3 x 12.7	038710	-	-	038680	-	500–800	1,800	RBUP 35025/50,8 SiC ... FLEX

Ceramic oxide grain (CO) plastic filament – FLEX type

200	13	57	50.8	-	N! 159897	-	N! 159903	-	-	900–1,500	3,600	RBUP 20013/50,8 CO ... FLEX
250	13	70	50.8	6.3 x 12.7	N! 159965	N! 159972	N! 159989	-	-	900–1,500	3,600	RBUP 25013/50,8 CO ... FLEX
300	13	60	50.8	6.3 x 12.7	N! 159996	-	N! 160022	-	-	500–800	1,800	RBUP 30013/50,8 CO ... FLEX
					038796	-	038802	-	-	500–800	1,800	RBUP 30025/50,8 CO ... FLEX
350	13	89	50.8	6.3 x 12.7	N! 160060	-	N! 160077	-	-	500–800	1,800	RBUP 35013/50,8 CO ... FLEX
					038826	-	038819	-	-	500–800	1,800	RBUP 35025/50,8 CO ... FLEX



BO 12/22,2 200

(EAN 4007220107867):
For knotted and crimped wheel brushes with a diameter of 200 mm and a D_A of 22.2 mm.

Note:

Adapter pair AM 50.8/22,2
(EAN 4007220806906) is required to use the product with arbors.



Adapter pair AM 50.8/...:

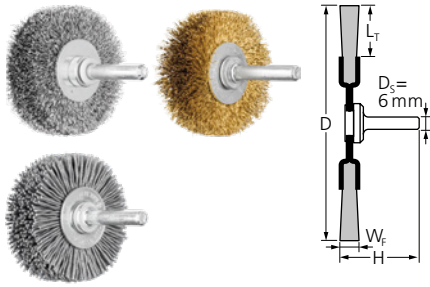
Reduces the arbor hole diameters to the required dimensions. Suitable for wheel brushes with a brush diameter as from 150 mm in the wide and composite versions.

For more information:

Detailed information on accessories can be found in our Tool Manual 23, catalogue section 8.

New in the PFERD product range

Shank mounted wheel brushes, crimped



RBUS

Universally suitable for cleaning, derusting, smoothing, cleaning of weld seams, light deburring, and removal of corrosion and paint.

Advantages:



- Highly flexible, enabling optimal adjustment to the workpiece contour.

Ordering notes:

- For POS type, please add "POS" to the description.

Recommendations for use:

- For the best results, use a tool drive with a minimum output of 300 watts.

D [mm]	W _F [mm]	L _T [mm]	D _F [mm]	H [mm]	Packaging		Rec. RPM	Max. RPM	Description
					10x 				
					EAN 4007220				

Steel wire (ST)

20	4	3	0.20	37	-	152980	10,000–15,000	20,000	RBUS 2004/6 ST 0,20
30	6	7	0.20	40	531808	153017	10,000–15,000	20,000	RBUS 3006/6 ST 0,20
	9	7	0.20	42	-	899250	10,000–15,000	20,000	RBUS 3009/6 ST 0,20
40	9	9	0.20	46	-	153048	9,000–13,500	18,000	RBUS 4009/6 ST 0,20
50	4	9	0.20	41	-	806593	7,500–11,300	15,000	RBUS 5004/6 ST 0,20
	10	13	0.20	50	-	104767	7,500–11,300	15,000	RBUS 5010/6 ST 0,20
	15	13	0.20	50	531822	153079	7,500–11,300	15,000	RBUS 5015/6 ST 0,20
60	10	15	0.20	50	-	104781	7,500–11,300	15,000	RBUS 6010/6 ST 0,20
	15	15	0.20	50	-	658437	7,500–11,300	15,000	RBUS 6015/6 ST 0,20
70	4	9	0.20	41	-	806609	7,500–11,300	15,000	RBUS 7004/6 ST 0,20
	10	19	0.30	50	-	658444	7,500–11,300	15,000	RBUS 7010/6 ST 0,30
	15	19	0.30	50	894606	153109	7,500–11,300	15,000	RBUS 7015/6 ST 0,30
80	4	10	0.20	41	-	806616	6,000–9,000	12,000	RBUS 8004/6 ST 0,20
	15	19	0.30	50	-	153130	6,000–9,000	12,000	RBUS 8015/6 ST 0,30
100	10	25	0.30	50	894613	658451	6,000–9,000	12,000	RBUS 10010/6 ST 0,30
	15	25	0.20	51	-	N! 384107	6,000–9,000	12,000	RBUS 10015/6 ST 0,20
	15	25	0.30	51	-	N! 384046	6,000–9,000	12,000	RBUS 10015/6 ST 0,30
	20	25	0.20	54	-	N! 384206	6,000–9,000	12,000	RBUS 10020/6 ST 0,20
	20	25	0.30	54	-	N! 384152	6,000–9,000	12,000	RBUS 10020/6 ST 0,30

Stainless steel wire (INOX)

20	4	3	0.20	37	-	153000	8,000–13,000	20,000	RBUS 2004/6 INOX 0,20
30	6	7	0.20	40	531884	153031	8,000–13,000	20,000	RBUS 3006/6 INOX 0,20
	9	7	0.20	42	-	899267	8,000–13,000	20,000	RBUS 3009/6 INOX 0,20
40	9	9	0.20	46	-	153062	7,200–11,700	18,000	RBUS 4009/6 INOX 0,20
50	4	9	0.20	41	-	806623	6,000–9,800	15,000	RBUS 5004/6 INOX 0,20
	10	13	0.20	50	-	104774	6,000–9,800	15,000	RBUS 5010/6 INOX 0,20
	15	13	0.20	50	531891	153093	6,000–9,800	15,000	RBUS 5015/6 INOX 0,20
60	10	15	0.20	50	-	104798	6,000–9,800	15,000	RBUS 6010/6 INOX 0,20
	15	15	0.20	50	-	658468	6,000–9,800	15,000	RBUS 6015/6 INOX 0,20
70	4	9	0.20	41	-	806630	6,000–9,800	15,000	RBUS 7004/6 INOX 0,20
	10	19	0.20	50	-	597835	6,000–9,800	15,000	RBUS 7010/6 INOX 0,20
	15	19	0.15	50	-	597842	6,000–9,800	15,000	RBUS 7015/6 INOX 0,15
80	15	19	0.30	50	894620	153123	6,000–9,800	15,000	RBUS 7015/6 INOX 0,30
	4	10	0.20	41	-	806647	4,800–7,800	12,000	RBUS 8004/6 INOX 0,20
	10	19	0.20	50	-	578919	4,800–7,800	12,000	RBUS 8010/6 INOX 0,20
	15	19	0.15	50	-	597859	4,800–7,800	12,000	RBUS 8015/6 INOX 0,15
100	15	19	0.30	50	-	153154	4,800–7,800	12,000	RBUS 8015/6 INOX 0,30
	10	25	0.30	50	894637	658475	4,800–7,800	12,000	RBUS 10010/6 INOX 0,30
	15	25	0.20	51	-	N! 360590	4,800–7,800	12,000	RBUS 10015/6 INOX 0,20
	15	25	0.30	51	-	N! 384220	4,800–7,800	12,000	RBUS 10015/6 INOX 0,30
	20	25	0.20	54	-	N! 360750	4,800–7,800	12,000	RBUS 10020/6 INOX 0,20
20	25	0.30	54	-	N! 360736	4,800–7,800	12,000	RBUS 10020/6 INOX 0,30	

Continued on next page

D [mm]	W _F [mm]	L _T [mm]	D _F [mm]	H [mm]	Packaging		Rec. RPM	Max. RPM	Description
					10x	1			
					EAN 4007220				

Brass wire (MES)

20	4	3	0.20	37	-	152997	8,000–13,000	20,000	RBU 2004/6 MES 0,20
30	6	7	0.20	40	-	153024	8,000–13,000	20,000	RBU 3006/6 MES 0,20
40	9	9	0.20	46	-	153055	7,200–11,700	18,000	RBU 4009/6 MES 0,20
50	15	13	0.20	50	-	153086	6,000–9,800	15,000	RBU 5015/6 MES 0,20
70	15	19	0.30	50	-	153116	6,000–9,800	15,000	RBU 7015/6 MES 0,30
80	15	19	0.30	50	-	153147	4,800–7,800	12,000	RBU 8015/6 MES 0,30

Silicon carbide (SiC) plastic filament

50	4	10	0.55	50	-	936511	6,000–9,800	15,000	RBU 5004/6 SiC 120 0,55
	10	13	0.90	50	-	104750	6,000–9,800	15,000	RBU 5010/6 SiC 180 0,90
	15	13	0.90	50	531945	220610	6,000–9,800	15,000	RBU 5015/6 SiC 180 0,90
70	8	19	0.55	50	-	936528	6,000–9,800	15,000	RBU 7008/6 SiC 120 0,55
	15	19	0.90	50	894644	220627	6,000–9,800	15,000	RBU 7015/6 SiC 180 0,90
80	8	19	0.55	50	-	936535	4,800–7,800	12,000	RBU 8008/6 SiC 120 0,55
	15	19	0.90	50	-	220634	4,800–7,800	12,000	RBU 8015/6 SiC 180 0,90

Ceramic oxide grain (CO) plastic filament

50	4	10	0.55	50	-	936542	6,000–9,800	15,000	RBU 5004/6 CO 120 0,55
	15	13	1.10	50	-	899342	6,000–9,800	15,000	RBU 5015/6 CO 120 1,10
70	8	19	0.55	50	-	936559	6,000–9,800	15,000	RBU 7008/6 CO 120 0,55
	15	19	1.10	50	-	899359	6,000–9,800	15,000	RBU 7015/6 CO 120 1,10
80	8	19	0.55	50	-	936566	4,800–7,800	12,000	RBU 8008/6 CO 120 0,55
	15	19	1.10	50	-	899366	4,800–7,800	12,000	RBU 8015/6 CO 120 1,10

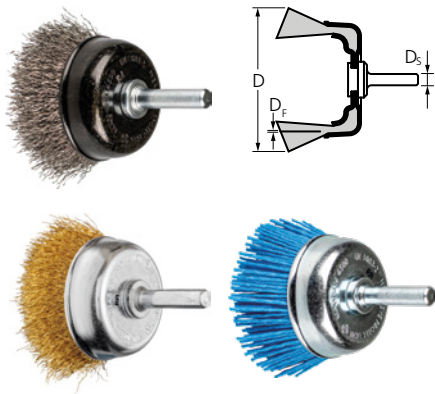


N! New in addition to the Tool Manual 23
N! New in 2021



New in the PFERD product range

Universal shank mounted cup brushes, crimped



TBU, for power drills


Universally suitable for cleaning, derusting and smoothing, as well as removal of corrosion and paint. Particularly suitable for brushing on large, flat and easily accessible surfaces due to facedown use with the entire brush face applied to the workpiece. Specially developed for use with low rotational speeds on cordless drills and power drills.

Advantages:

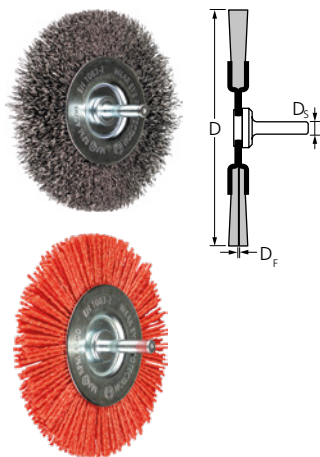
- Highly flexible, enabling optimal adjustment to the workpiece contour.

Recommendations for use:

- For the best results, use a tool drive with a minimum output of 300 watts.

D [mm]	D _s [mm]	D _f [mm]	EAN 4007220	Max. RPM		Description
Steel wire (ST)						
50	6	0.30	NI 353615	4,500	1	POS TBU 50/6 ST 0,30 UNIVERSAL (1)
Stainless steel wire (INOX)						
50	6	0.30	NI 353622	4,500	1	POS TBU 50/6 INOX 0,30 UNIVERSAL (1)
Brass wire (MES)						
50	6	0.20	NI 353639	4,500	1	POS TBU 50/6 MES 0,20 UNIVERSAL (1)
Plastic filament, coarse (RED)						
50	6	1.27	NI 353646	4,500	1	POS TBU 50/6 RED 80 UNIVERSAL (1)
Plastic filament, fine (BLUE)						
50	6	1.10	NI 353653	4,500	1	POS TBU 50/6 BLUE 180 UNIVERSAL (1)

Universal shank mounted wheel brushes, crimped



RBU, for power drills


Universally suitable for cleaning, derusting, smoothing, cleaning of weld seams, light deburring, and removal of corrosion and paint. Specially developed for use with low rotational speeds on cordless drills and power drills.

Advantages:

- Highly flexible, enabling optimal adjustment to the workpiece contour.

Recommendations for use:

- For the best results, use a tool drive with a minimum output of 300 watts.

D [mm]	D _s [mm]	D _f [mm]	EAN 4007220	Max. RPM		Description
Steel wire (ST)						
100	6	0.30	NI 353660	4,500	1	POS RBU 10012/6 ST 0,30 UNIVERSAL (1)
Plastic filament, coarse (RED)						
100	6	1.27	NI 353677	4,500	1	POS RBU 10010/6 RED 80 UNIVERSAL (1)
Plastic filament, fine (BLUE)						
100	6	1.10	NI 353684	4,500	1	POS RBU 10010/6 BLUE 180 UNIVERSAL (1)





Special features:

- Light and easy to handle.
- Elastically suspended spindle.
- Low-vibration use.
- Is held like a pen.

PGAS 2/600 E-HV

- Dead man's switch using safety lever valve.

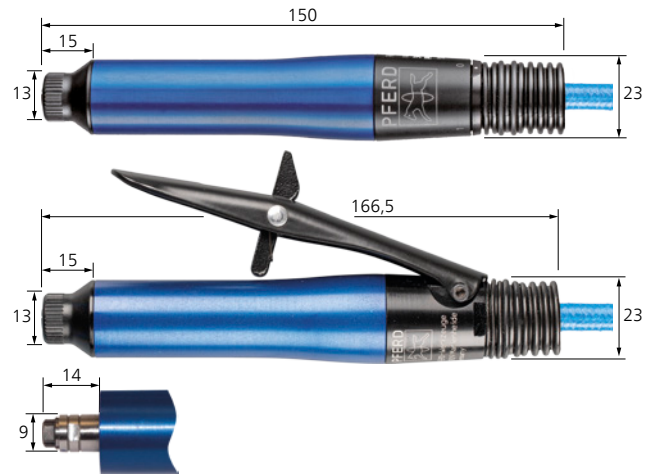
Included in delivery:

0.75 m exhaust hose and 2 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STGI), 3 mm collet, 2 keys.

PGAS 2/600 E-DV PGAS 2/600 E-HV

60,000 RPM / 100 watts

60,000 RPM / 100 watts



PFERDVALUE:



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption at idling speed [m ³ /min]	Air consumption under load [m ³ /min]	Collet group	Inner dia. of air supply hose [mm]	Net weight [kg]
PGAS 2/600 E-DV	NI 221402	rear	ring	0.30	0.18	15	5	0.120
PGAS 2/600 E-HV	NI 221419	rear	lever	0.30	0.18	15	5	0.160

Collets



Group	For shank dia.		
	3 mm	3/32 inch	1/8 inch
	EAN 4007220		
15	851814	851838	851821

Dimensions of the collets can be found in our Tool Manual 23, catalogue section 9, page 116.

Keys



Description	EAN 4007220
DM SW 6/8 mm	851791

Connecting set



Description	EAN 4007220
AS 1	351109

Further information on connecting sets can be found in our Tool Manual 23, catalogue section 9, page 67.

In-line fine filter



Description	EAN 4007220
SF 24 STG-IG 1/4	953259

Further information on in-line fine filters can be found in our Tool Manual 23, catalogue section 9, page 67.

Suitable PFERD tools

Catalogue section 2	Catalogue section 3*	Catalogue section 4*	Catalogue section 5
TC burs Cut 3 PLUS, 4, 5, ALU, INOX, MICRO Dia. up to 3 mm Shank dia. 3 mm	Mounted points Shank dia. 3 mm: Dia. up to 5 mm Dia. 5 to 6 mm mm Width ≤ 13 mm Dia 6 to 10 mm Width ≤ 10 mm	Poliflex fine grinding points Shank dia. 3 mm Bonds: GHR Dia. up to 4 mm LR, TX Dia. up to 6 mm	Diamond grinding points Dia. up to 4.5 mm Shank dia. 3 mm CBN grinding points Dia. up to 5.5 mm Shank dia. 3 mm

*Catalogue sections 3/4: This data applies to an unsupported shank length of 10 mm and the max. stated mounted point dimensions.

Note: Please observe the recommended cutting speeds and the max. permitted rotational speeds in the Tool Manual 23, catalogue sections 2–8.



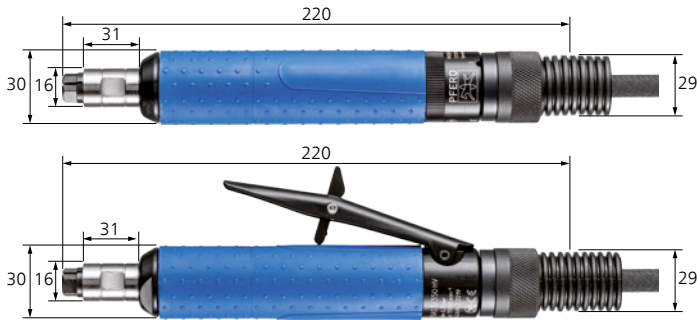
New in the PFERD product range

Air grinders – Straight grinders

PGAS 3/350 DV PGAS 3/350 HV

35,000 RPM / 290 watts

35,000 RPM / 290 watts



Special features:

- Very easy to handle and guide.
 - Good power transmission in the axial direction.
 - High performance with compact design.
- PGAS 3/350 HV**
- Dead man's switch using safety lever valve.

Included in delivery:

1 m exhaust hose and 2.5 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STGI), 6 mm collet, 2 keys.

PFERDVALUE:



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption at idling speed [m ³ /min]	Air consumption under load [m ³ /min]	Collet group	Inner dia. of air supply hose [mm]	Net weight [kg]
PGAS 3/350 DV	NI 221440	rear	ring	0.70	0.45	6	8	0.360
PGAS 3/350 HV	NI 221457	rear	lever	0.70	0.45	6	8	0.400

Collets



Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
	EAN 4007220					
6	212875	212851	212936	234969	212882	212868

Dimensions of the collets can be found in our Tool Manual 23, catalogue section 9, page 116.

Keys



Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

Connecting set



Description	EAN 4007220
AS 2	351116

Further information on connecting sets can be found in our Tool Manual 23, catalogue section 9, page 67.

In-line fine filter



Description	EAN 4007220
SF 24 STG-IG 1/4	953259

Further information on in-line fine filters can be found in our Tool Manual 23, catalogue section 9, page 67.

Suitable PFERD tools

Catalogue section 2	Catalogue section 3*	Catalogue section 4*	Catalogue section 5	Catalogue section 6
TC burrs Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, MICRO, FVK, FVKs, PLAST, ALLROUND Dia. 4 to 6 mm HSS rotary cutters Special cuts Dia. up to 2.3 mm	Mounted points Shank dia. 3 mm: Dia. up to 20 mm Dia. 20 to 25 mm Width ≤ 6 mm Shank dia. 6 mm: Dia. up to 13 mm Dia. 13 to 16 mm Width ≤ 40 mm Dia. 16 to 25 mm Width ≤ 25 mm	Poliflex fine grinding points Shank dia. 3 + 6 mm Bonds: GR, PUR Dia. up to 8 mm GHR, LR, TX Dia. up to 16 mm LHR Dia. up to 20 mm Abrasive spiral bands and rubber drum holders Dia. up to 15 mm	Diamond grinding points Dia. 4.5 to 10.0 mm Shank dia. 3 + 6 mm CBN grinding points Dia. 8.0 to 14.0 mm Shank dia. 3 + 6 mm	Cut-off wheels EHT Dia. up to 40 mm matching arbor BO SPG 6/6 0-10 Snagging wheels ER Dia. up to 40 mm matching arbor BO SPG 6/6 0-10

If no shank diameter is given, the shank dia. of 6 mm applies.

*Catalogue sections 3/4: This data applies to an unsupported shank length of 10 mm and the max. stated mounted point dimensions.

Note: Please observe the recommended cutting speeds and the max. permitted rotational speeds in the Tool Manual 23, catalogue sections 2–8.



Special features:

- Only suitable for 150 mm NITOCUT cut-off wheels.
- Very powerful turbine motor.
- Constant power delivery due to the centrifugal governor.
- Spindle lock pin for tool change with one key.

Included in delivery:

1/2" female connecting thread, 2 keys, 1 clamping nut, 1 clamping flange, guard, anti-vibration handle.

PWT 26/150 HV NITOCUT

12,000 RPM / 2,600 watts



PFERDVALUE:



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption at idling speed [m ³ /min]	Air consumption under load [m ³ /min]	Spindle thread	Inner dia. of air supply hose [mm]	Tool mounting [mm]	Net weight [kg]
PWT 26/150 HV NITOCUT	N! 224038	bottom	lever	0.90	2.25	M14	16	25.4	2.200

Keys

Description	EAN 4007220
STL SW 35 x 5 mm	193853
SKS SW 5 mm	204467

In-line fine filter

Description	EAN 4007220
SF 35 IG 1/2-IG 1/2	072103

See Tool Manual 23, catalogue section 9, page 67.

Revolving nozzle



See Tool Manual 23, catalogue section 9, page 66.

Conversion set NITOCUT

Description	EAN 4007220
SH NITOCUT SET	N! 224007

Conversion set for PWT 26/120 HV incl. NITOCUT protective cover and NITOCUT clamping flange.

Suitable PFERD tools

Catalogue section 6

Cut-off wheels

CERAMIC SGP NITOCUT STEELOX (see page 113)



New in the PFERD product range
PFERD tools with **XLOCK** – Just one Click



X-LOCK from Bosch is the world's first quick-changing system for angle grinders: position the tool in the X-LOCK holder, click it into place – and you're done. It's never been so easy to change accessories on angle grinders. X-LOCK creates a new standard, makes professionals' work easier and increases the productivity. Bosch Power Tools relies on strong partners like PFERD. PFERD has developed the principle for connecting the X-LOCK punched part with bonded abrasives, flap wheels and brushes and created the conditions to enable them to be produced industrially.



With the Bosch X-LOCK system for angle grinders, you can change tools quickly and comfortably. Instead of a round centre hole, the X-LOCK system features an X-shaped contour, which allows the tool to be fixed on the angle grinder in a form-fitting manner. This guarantees that different tools can be mounted securely and comfortably in the shortest possible time. The unique system meets the highest quality and safety standards and even withstands tough and challenging operating conditions.

Advantages:

- Quick and comfortable tool changes.
- Tools are fixed securely since they audibly click into place.
- Tools with X-LOCK can also be used on conventional angle grinders with an M14 and 5/8"-11 thread (exception: cup brushes).

Recommendations for use:

- Place the tool on the X-LOCK quick-change system of your angle grinder and secure it by lightly pressing it down. The tool will audibly click into place.

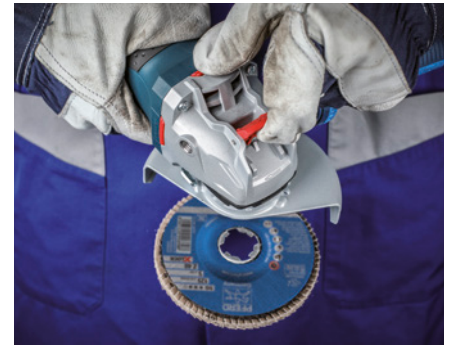
How it works:



Place the tool on the X-LOCK holder in a form-fitting manner.



Lightly press the tool down until it audibly clicks into place.



Release the tool by using the lever.



New in the PFERD product range

POLIVLIES flap discs with X-LOCK

PFERD supplies POLIVLIES flap discs in various grit sizes, diameters and types. These are particularly suited to work on large surfaces made from stainless steel (INOX).

Advantages:

- High profitability thanks to high abrasive performance and long tool life.
- Creates a consistently high surface quality throughout the entire tool life as new, sharp abrasive material is constantly freed up.
- Optimum adaptation to contours thanks to high flexibility.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Materials that can be worked:

- Can be used on nearly all materials.

Matching tool drives:

- Angle grinders
- Cordless angle grinders

Ordering notes:

- When ordering, please state the EAN or the full description. Please complete the description with the desired grit size.

Ordering example:

EAN 4007220**119846**
PVL 115-X-LOCK A **180 M**

Ordering example explanation:

PVL = POLIVLIES flap discs
115 = Outer diameter D [mm]
X-LOCK = Quick-change system
A = Abrasive
180 M = Grit size

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.



Flap discs PVL

For universal coarse to fine grinding applications in industry and professional trades.

Abrasive:

Aluminium oxide A

Available POLIVLIES grit sizes:

100 G = coarse (yellow-brown)

180 M = medium (red-brown)

240 F = fine (blue)

Ordering notes:


- Please complete the description with the desired grit size.

PFERDVALUE:



Recommendations for use:

- For the best results, use at a recommended cutting speed of 30–35 m/s.

D [mm]	T [mm]	H [mm]	Grit size			Opt. RPM	Max. RPM		Description
			100 G	180 M	240 F				
EAN 4007220									
115	18	X-LOCK (22.23)	N! 119839	N! 119846	N! 119853	5,000–5,800	13,300	5	PVL 115-X-LOCK A ...
125	18	X-LOCK (22.23)	N! 119860	N! 119907	N! 119914	4,600–5,300	12,200	5	PVL 125-X-LOCK A ...

PSF STEELOX ★★☆☆

Cut-off wheel for steel and stainless steel (INOX) with high cutting performance and long tool life.

Advantages:

- Universally suitable for steel and stainless steel (INOX).
- Fast work progress thanks to high cutting performance.
- High economic efficiency due to long tool life.
- Thin cut-off wheels are ideal for cordless angle grinders.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Applications:

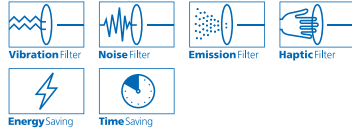
cutting of sheet metal, profiles and solid material, cutting out holes

Abrasive:

Aluminium oxide A

PFERDVALUE:




Thin cut-off wheels:



Materials that can be worked:

steel, stainless steel (INOX)



D [mm]	T/U [mm]	EAN 4007220	H [mm]	Max. RPM		Description
Flat type EHT (shape 41) 						
115	1.0	N! 113400	X-LOCK (22.23)	13,300	25	EHT 115-1,0 PSF STEELOX/X-LOCK
	1.6	N! 113417	X-LOCK (22.23)	13,300	25	EHT 115-1,6 PSF STEELOX/X-LOCK
125	1.0	N! 113431	X-LOCK (22.23)	12,200	25	EHT 125-1,0 PSF STEELOX/X-LOCK
	1.6	N! 113455	X-LOCK (22.23)	12,200	25	EHT 125-1,6 PSF STEELOX/X-LOCK
Depressed-centre type EH (shape 42) 						
115	2.4	N! 113424	X-LOCK (22.23)	13,300	25	EH 115-2,4 PSF STEELOX/X-LOCK
125	2.4	N! 113448	X-LOCK (22.23)	12,200	25	EH 125-2,4 PSF STEELOX/X-LOCK

Cut-off wheels with X-LOCK – Performance Line SG ★★☆☆

SG STEELOX ★★☆☆

Cut-off wheel for steel and stainless steel (INOX) with high cutting performance and very long tool life.

Advantages:

- Universally suitable for steel and stainless steel (INOX).
- Fast work progress thanks to high cutting performance.
- Maximum economic efficiency due to very long tool life.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Applications:

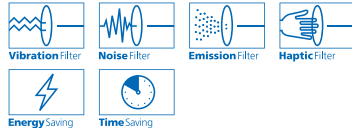
cutting of sheet metal, profiles and solid material, cutting out holes

Abrasive:

High-performance aluminium oxide A

PFERDVALUE:




Thin cut-off wheels:



Materials that can be worked:

steel, stainless steel (INOX)



D [mm]	T/U [mm]	EAN 4007220	H [mm]	Max. RPM		Description
Flat type EHT (shape 41) 						
115	1.0	N! 113486	X-LOCK (22.23)	13,300	25	EHT 115-1,0 SG STEELOX/X-LOCK
	1.6	N! 113509	X-LOCK (22.23)	13,300	25	EHT 115-1,6 SG STEELOX/X-LOCK
125	1.0	N! 113585	X-LOCK (22.23)	12,200	25	EHT 125-1,0 SG STEELOX/X-LOCK
	1.6	N! 113592	X-LOCK (22.23)	12,200	25	EHT 125-1,6 SG STEELOX/X-LOCK
Depressed-centre type EH (shape 42) 						
115	2.4	N! 113479	X-LOCK (22.23)	13,300	25	EH 115-2,4 SG STEELOX/X-LOCK
125	2.4	N! 113493	X-LOCK (22.23)	12,200	25	EH 125-2,4 SG STEELOX/X-LOCK

New in the PFERD product range

POLIFAN flap discs with X-LOCK – Universal Line PSF ★★☆☆☆



Z PSF STEELOX ★★☆☆☆

POLIFAN flap disc with aggressive stock removal rate and long tool life.

Advantages:

- Fast work progress and high economic efficiency thanks to the aggressive stock removal rate.
- Long tool life.
- Also suitable for low-power angle grinders.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Materials that can be worked:

steel, stainless steel (INOX)

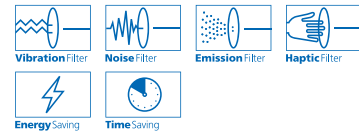
Applications:


surface grinding, weld dressing, chamfering, deburring

Abrasive:

Zirconia alumina Z

PFERDVALUE:



D [mm]	Grit size			H [mm]	Max. RPM		Description
	40	60	80				
EAN 4007220							

Conical type PFC



115	N! 113608	N! 113615	N! 113622	X-LOCK (22.23)	13,300	10	PFC 115 Z ... PSF STEELOX/X-LOCK
125	N! 113639	N! 113646	N! 113653	X-LOCK (22.23)	12,200	10	PFC 125 Z ... PSF STEELOX/X-LOCK

POLIFAN flap discs with X-LOCK – Performance Line SG ★★☆☆☆



Z SG POWER STEELOX ★★☆☆☆

The POLIFAN Z SG POWER flap disc stands out due to its aggressive stock removal rate and excellent tool life while achieving the highest level of efficiency. It is the best conventional flap disc for steel.

Advantages:

- Fast work progress and maximum economic efficiency thanks to the aggressive stock removal rate.
- Maximum aggressiveness over the entire tool life.
- Fewer tool changes due to the excellent tool life.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Materials that can be worked:

steel, stainless steel (INOX)

Applications:

weld dressing, chamfering, deburring

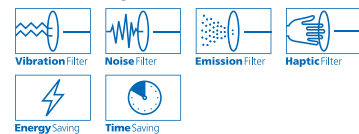
Abrasive:


Zirconia alumina Z

Recommendations for use:

- Also suitable for surface grinding on steel.

PFERDVALUE:



D [mm]	Grit size			H [mm]	Max. RPM		Description
	40	60	80				
EAN 4007220							

Conical type PFC



115	N! 113677	N! 113684	N! 113691	X-LOCK (22.23)	13,300	10	PFC 115 Z ... SG POWER STEELOX/X-LOCK
125	N! 113707	N! 113714	N! 113721	X-LOCK (22.23)	12,200	10	PFC 125 Z ... SG POWER STEELOX/X-LOCK

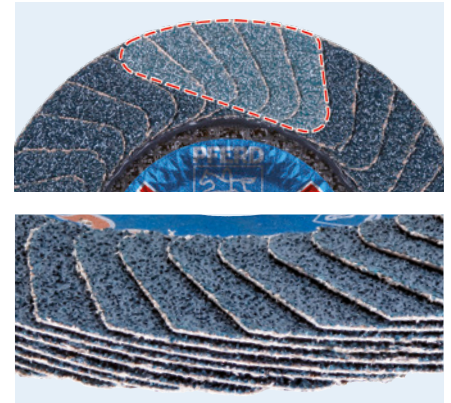


POLIFAN-STRONG STEEL

The innovative POLIFAN-STRONG flap disc is a unique tool with a particularly high performance level. Due to its patented design, it offers significantly higher efficiency compared to conventional flap discs.

Advantages:

- Fast grinding through constant grinding aggressiveness down to the last abrasive grit.
- Ultimate economic efficiency thanks to maximum stock removal per time unit and less wear on discs.
- Extremely long tool life.
- With X-LOCK quick-change system for comfortable and quick tool changes.



Long, compactly arranged flaps

Z SGP STRONG STEEL ★★★★★

Materials that can be worked:
steel

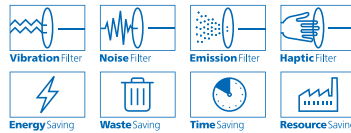
Applications:
weld dressing, chamfering, deburring


Abrasive:
Zirconia alumina Z

Recommendations for use:

- Grit size 36 is ideal for a high stock removal rate, e.g. during work on weld seams.
- Grit size 50 is ideal for work on edges, e.g. chamfering or for producing a fine finish.

PFERDVALUE:



D [mm]	Grit size		H [mm]	Max. RPM		Description
	36	50				
	EAN 4007220					

Conical type PFC

115	N! 113738	N! 113745	X-LOCK (22.23)	13,300	10	PFC 115 Z ... SGP STRONG STEEL/X-LOCK
125	N! 113752	N! 113769	X-LOCK (22.23)	12,200	10	PFC 125 Z ... SGP STRONG STEEL/X-LOCK

New in the PFERD product range

POLIFAN flap discs with X-LOCK – Special Line SGP ★★★★★

POLIFAN-CURVE

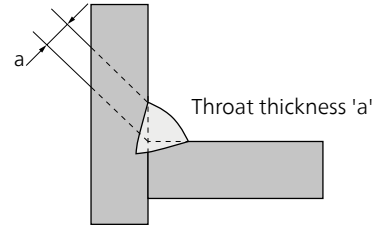
The patented POLIFAN-CURVE flap disc has been specially developed for work on fillet welds. It is the only flap disc in the world that has flaps on both the grinding side and on the rear side, as well as on the radius.

Advantages:

- High stock removal rate ensures fast work progress and therefore significant wage cost savings.
- Outstanding tool life when working on fillet welds.
- Precise and optimum grinding of the fillet weld geometry.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Recommendations for use:

- Type M:
For fillet weld radii over 5 mm or throat thickness up to 6 mm with 90° joint, width at the radius: 11 mm.
- Type L:
For fillet weld radii over 8 mm or throat thickness over 6 mm with 90° joint, width at the radius: 14 mm.



Z SGP CURVE STEELOX ★★★★★

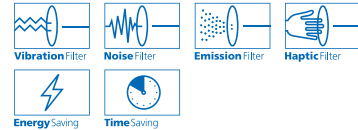
High-performance flap disc for maximum stock removal on steel and stainless steel (INOX).

Materials that can be worked:
steel, stainless steel (INOX)

Applications:
work on fillet welds, weld dressing, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE:



D [mm]	Fillet weld radius [mm]	Grit size	Width	H [mm]	Max. RPM		Description
		40					
		EAN 4007220					

Radial type PFR



115	> 5	N! 113776	M (11 mm)	X-LOCK (22.23)	13,300	10	PFR 115-M Z 40 SGP CURVE STEELOX/X-LOCK
	> 8	N! 113783	L (14 mm)	X-LOCK (22.23)	13,300	10	PFR 115-L Z 40 SGP CURVE STEELOX/X-LOCK
125	> 5	N! 113790	M (11 mm)	X-LOCK (22.23)	12,200	10	PFR 125-M Z 40 SGP CURVE STEELOX/X-LOCK
	> 8	N! 113806	L (14 mm)	X-LOCK (22.23)	12,200	10	PFR 125-L Z 40 SGP CURVE STEELOX/X-LOCK



PSF STEEL ★★☆☆

Grinding wheel for steel with high grinding performance and long tool life.

Advantages:

- Fast work progress and high economic efficiency thanks to the high grinding performance.
- Long tool life.
- Also suitable for low-power angle grinders. Soft grinding characteristics, achieves particularly high stock removal rates even at low contact pressure.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Materials that can be worked:

steel, cast iron

Applications:



surface grinding, weld dressing, work on fillet welds, grouting, chamfering, deburring

Abrasive:

Aluminium oxide A

PFERDVALUE:



D [mm]	U [mm]	EAN 4007220	H [mm]	Max. RPM		Description
Depressed-centre type E (shape 27) 						
115	7.2	NI 113516	X-LOCK (22.23)	13,300	10	E 115-7 PSF STEEL/X-LOCK
125	7.2	NI 113523	X-LOCK (22.23)	12,200	10	E 125-7 PSF STEEL/X-LOCK

Grinding wheels with X-LOCK – Performance Line SG ★★☆☆

SG STEEL ★★☆☆

Grinding wheel for steel with high grinding performance and very long tool life.

Advantages:

- Fast work progress and maximum economic efficiency thanks to the high grinding performance.
- Fewer tool changes due to the very long tool life.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Abrasive:

Special aluminium oxide A

Recommendations for use:

- Width of 4.1 mm is ideal for work on root seams.



PFERDVALUE:



Materials that can be worked:
steel

Applications:

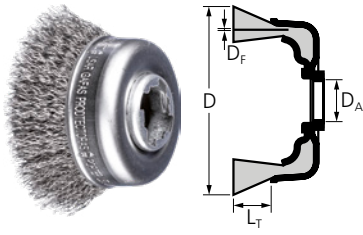
surface grinding, weld dressing, work on fillet welds, grouting, chamfering, deburring

D [mm]	U [mm]	EAN 4007220	H [mm]	Max. RPM		Description
Depressed-centre type E (shape 27) 						
115	4.1	NI 113530	X-LOCK (22.23)	13,300	10	E 115-4,1 SG STEEL/X-LOCK
	7.2	NI 113554	X-LOCK (22.23)	13,300	10	E 115-7 SG STEEL/X-LOCK
125	4.1	NI 113547	X-LOCK (22.23)	12,200	10	E 125-4,1 SG STEEL/X-LOCK
	7.2	NI 113561	X-LOCK (22.23)	12,200	10	E 125-7 SG STEEL/X-LOCK



New in the PFERD product range

Cup brushes with X-LOCK, crimped



TBU

Excellent for medium-duty brushing such as deburring, cleaning and derusting on large surfaces.

Advantages:


- Highly flexible, enabling optimal adjustment to the workpiece contour.
- Creates fine surfaces.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Recommendations for use:

- For optimum results, use on speed-adjustable angle grinders.

PFERDVALUE:



D [mm]	L _T [mm]	D _A	D _f [mm]	Packaging	Rec. RPM	Max. RPM	Description
				 EAN 4007220			

Steel wire (ST)

60	20	X-LOCK	0.30	N! 119150	6,300–9,400	12,500	POS TBU 60/X-LOCK ST 0,30
75	25	X-LOCK	0.30	N! 119327	6,300–9,400	12,500	POS TBU 75/X-LOCK ST 0,30

Stainless steel wire (INOX)

All INOX brushes are degreased.

60	20	X-LOCK	0.30	N! 119198	5,000–8,100	12,500	POS TBU 60/X-LOCK INOX 0,30
75	25	X-LOCK	0.30	N! 119440	5,000–8,100	12,500	POS TBU 75/X-LOCK INOX 0,30



TBG

Aggressive brush. Excellent for heavy-duty brushing such as deburring, cleaning and derusting on large surfaces.

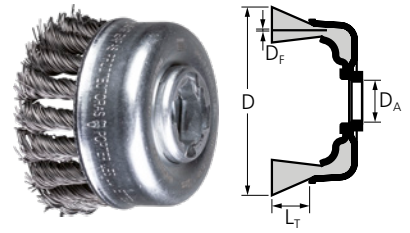
Advantages:

- Aggressive brushing effect due to the very stiff wire knots.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Recommendations for use:

- For optimum results, use on powerful angle grinders.

PFERDVALUE:



D [mm]	L _T [mm]	D _A	D _F [mm]	Knots [pcs.]	Packaging	Rec. RPM	Max. RPM	Description
					1			
					EAN 4007220			

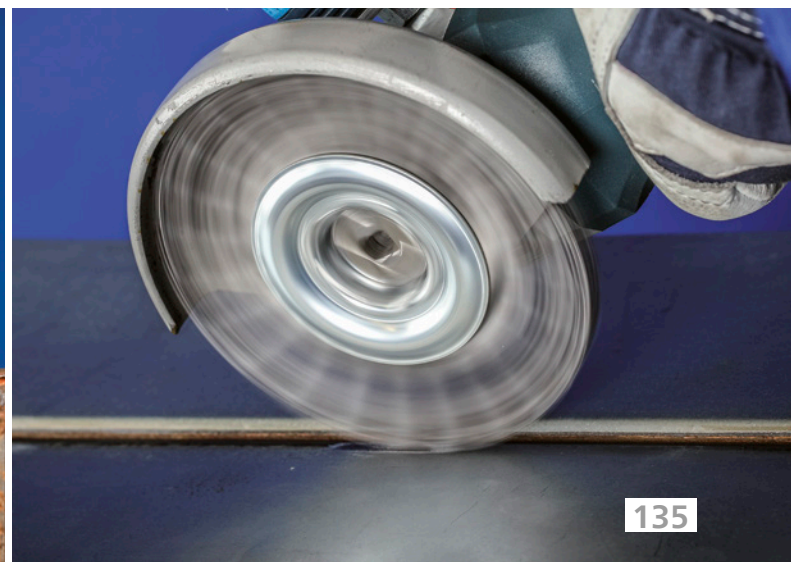
Steel wire (ST)

65	22	X-LOCK	0.35	18	N! 119457	6,300–12,500	12,500	POS TBG 65/X-LOCK ST 0,35
			0.50	18	N! 119532	6,300–12,500	12,500	POS TBG 65/X-LOCK ST 0,50
80	20	X-LOCK	0.50	20	N! 119686	5,000–10,000	11,500	POS TBG 80/X-LOCK ST 0,50

Stainless steel wire (INOX)

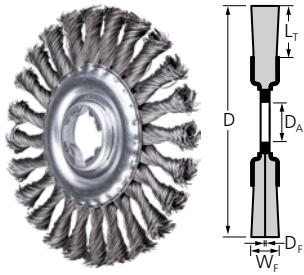
All INOX brushes are degreased.

65	22	X-LOCK	0.35	18	N! 119624	5,000–12,500	12,500	POS TBG 65/X-LOCK INOX 0,35
			0.50	18	N! 119631	5,000–12,500	12,500	POS TBG 65/X-LOCK INOX 0,50
80	20	X-LOCK	0.50	20	N! 119730	4,000–10,000	11,500	POS TBG 80/X-LOCK INOX 0,50



New in the PFERD product range

Wheel brushes with X-LOCK, knotted



RBG

Aggressive brush. Suitable for heavy-duty brushing in metalwork such as descaling, derusting, deburring, cleaning of weld seams and removal of adhesive residues.

Advantages:

- Aggressive brushing effect due to the very stiff wire knots.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Recommendations for use:

- For optimum results, use on powerful angle grinders.

PFERDVALUE:



D [mm]	W _F [mm]	L _T [mm]	D _A	D _F [mm]	Knots [pcs.]	Packaging	Rec. RPM	Max. RPM	Description
									
						EAN 4007220			

Steel wire (ST)

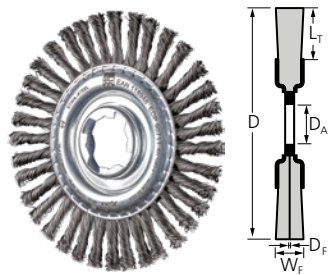
115	12	22	X-LOCK (22.23)	0.50	24	N! 118559	6,300–12,500	12,500	POS RBG 11512/X-LOCK ST 0,50
125	12	28	X-LOCK (22.23)	0.50	24	N! 118764	5,500–12,500	12,500	POS RBG 12512/X-LOCK ST 0,50

Stainless steel wire (INOX)

All INOX brushes are degreased.

115	12	22	X-LOCK (22.23)	0.50	24	N! 118757	5,000–12,500	12,500	POS RBG 11512/X-LOCK INOX 0,50
125	12	28	X-LOCK (22.23)	0.50	24	N! 118771	4,400–12,500	12,500	POS RBG 12512/X-LOCK INOX 0,50

Wheel brushes with X-LOCK, Pipeline



RBG PIPE, Pipeline

Aggressive and robust brush that is able to withstand high mechanical loads. Perfect for heavy-duty brushing in pipeline and container construction.

Advantages:

- Extra-slim design enables optimal access to hard-to-reach areas such as root weld seams.
- Aggressive brushing effect due to the very stiff wire knots.
- With X-LOCK quick-change system for comfortable and quick tool changes.

Recommendations for use:

- For optimum results, use on powerful angle grinders.

PFERDVALUE:



D [mm]	W _F [mm]	L _T [mm]	D _A	Knots [pcs.]	D _F [mm]	Packaging	Rec. RPM	Max. RPM	Description
									
						EAN 4007220			

Steel wire (ST)

115	6	21	X-LOCK (22.23)	36	0.50	N! 118948	6,300–12,500	12,500	POS RBG 11506/X-LOCK PIPE ST 0,50
125	6	18	X-LOCK (22.23)	48	0.50	N! 119136	6,300–12,500	12,500	POS RBG 12506/X-LOCK PIPE ST 0,50

