
PFERD

TRUST BLUE

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Quality since

1799

PFERD

ABC

Application

The application determines which power tool and consumables are required. The following factors should be taken into account:

- The desired work result, e.g. high stock removal, high surface quality
- The operating conditions, e.g. the power supply, stationary or manual application
- The workpiece, and its dimensions, geometry and accessibility
- The duration of use, e.g. individual or mass production
- Requirements and ergonomic advantages required to meet labour protection laws

The **optimum** solution

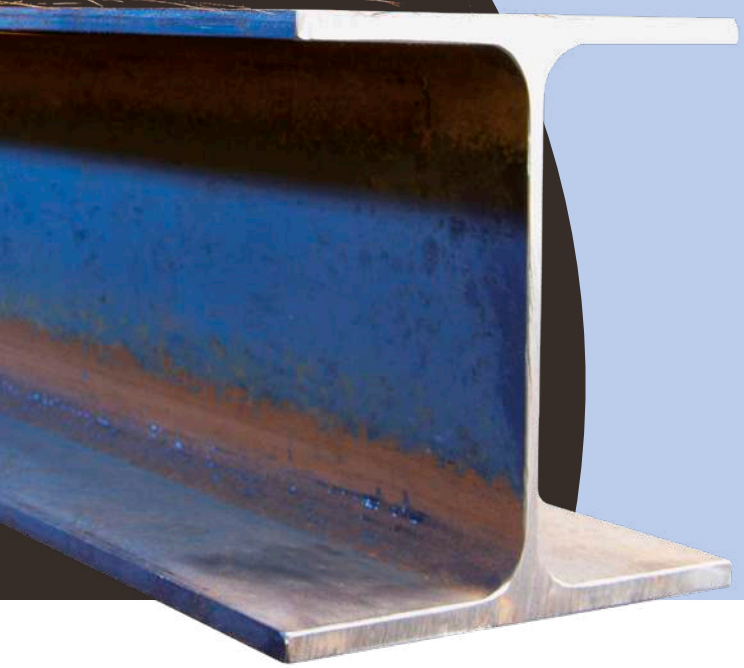
With close to 6,000 products for work on surfaces and material cutting, PFERD offers the ideal solution for every application. Selection of the correct product is determined by the application, the workpiece material, and the appropriate power tool.

The "**Quick product selection guides**" located within each respective catalogue section will help you select the optimum solution.

Power tool

The power tool used has a significant influence on the cost-effectiveness of the machining process. Selecting the ideal drive, i.e. air grinder, electric grinder and flexible shaft drive, takes into account:

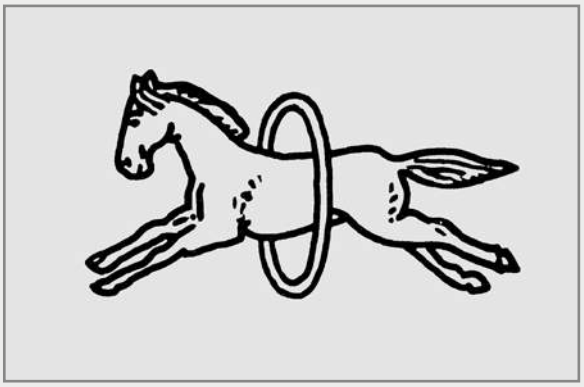
Further information on PFERD power tools can be found in catalogue section 9.



Material

PFERD products are especially designed to meet the challenges of unique material properties and result in the highest possible levels of cost-effectiveness.

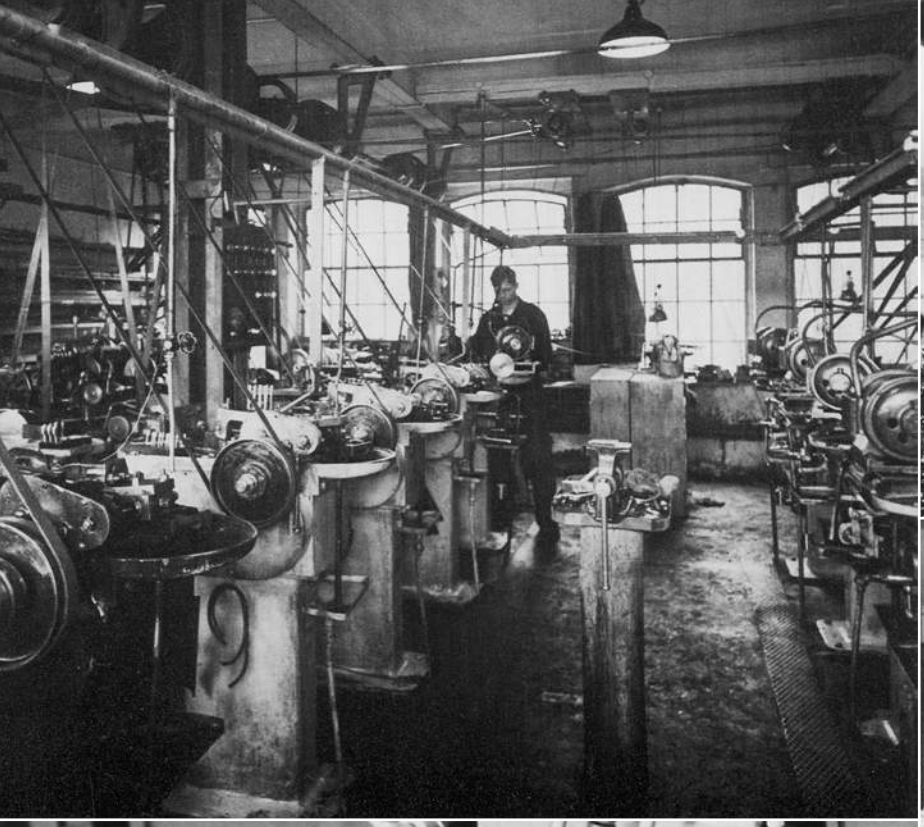
An overview of the material groups, information about material properties, as well as recommendations for use, can be found in the index on page 1.

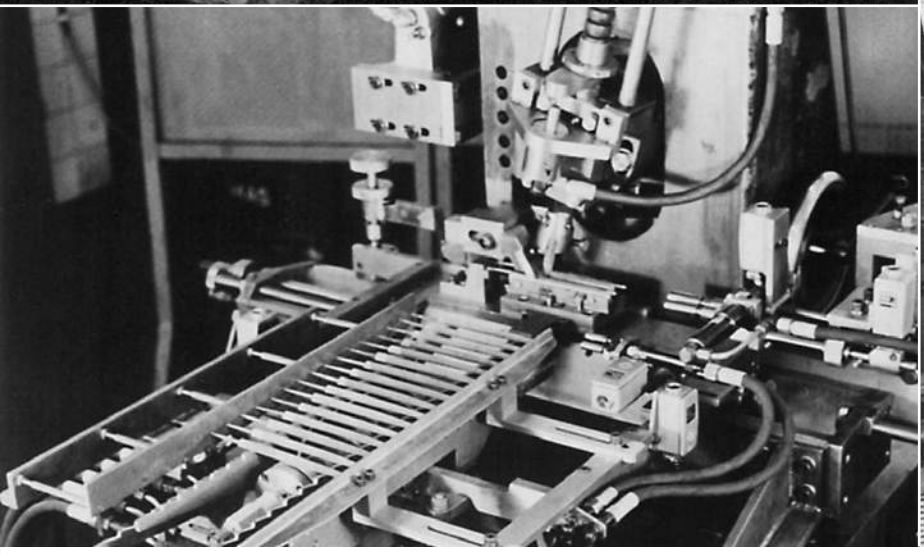


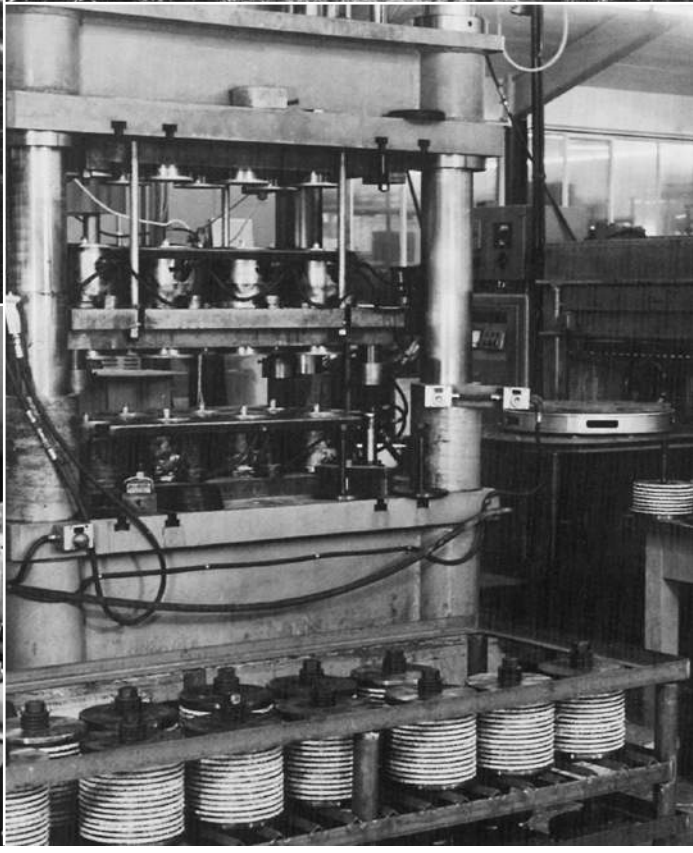
PFERD history

PFERD (the German word for "horse") is the leader in the development, production, and distribution, of solutions for work on surfaces and material cutting. In keeping with a tradition that dates back more than 200 years, PFERD operates as a family-owned company with an international and long-term focus.

PFERD expanded its global footprint into the North American market four decades ago with its U.S. subsidiary, PFERD INC., followed by PFERD CANADA INC., established in 2009. The MILWAUKEE BRUSH Manufacturing Company, and its notable brands of ADVANCE and MILWAUKEE wire brushes and 100-year history in the U.S. market, was acquired by PFERD in 1997. Since joining the global family of PFERD companies, we continue to invest in state-of-the-art manufacturing facilities at our Milwaukee, Wisconsin location and are proud to offer U.S.-made power and maintenance brushes.







Productivity with **PFERD**

Each and every day, PFERD products are used to solve application problems in a wide range of industries. Our innovative solutions add value at the user and operational level – with a focus on increasing overall manufacturing and process efficiency.

Our R&D and Marketing teams continue to develop and bring unique products to market that increase productivity and reduce overall cost. Select from a broad range of products in our standard offering or work with us to develop custom made-to-order solutions for your specific application challenges.


PFERD

Formula for **success**

Workers all over the world TRUST BLUE and choose PFERD. The combination of individual support and innovative high-performance products, together with the worker's experience on site, consistently guarantee the optimal result for every task.

Advisory services, such as on the improvement of ergonomics at work, are increasingly gaining importance. Our field applications team will evaluate your application and its parameters to build the foundation for a safe, productive, and ergonomic working process.

The **PFERD formula**

Innovative, high-performance **products**
+ Individual, targeted **support**
+ Correct selection of **power tool**
+ Worker's **experience**

= Optimum **productivity**

Ergonomic and efficient – **PFERD**VALUE®

PFERDVALUE® is our commitment to systematically focus on working ergonomics and economic efficiency by delivering optimum worker health and safety while attaining the best possible level of efficiency.

Speak to your PFERD representative and discover the added value with PFERD.

Vibration
reduction

Noise
reduction

PFERDERGONOMICS®

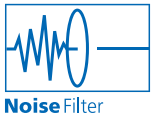
Emissions
reduction

Comfort
enhancement

PFERDERGONOMICS®

Vibration Filter

Users of hand-held tools are exposed to mechanical oscillation. The consequences of these oscillations may lead to decreased performance and adverse health effects. PFERD products and power tools with the "**Vibration**Filter" icon cause substantially fewer vibrations than comparable products.

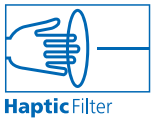


Noise Filter

Noise at the workplace can become an issue. Depending on the job and personal perceptions, noise at work may be bothersome, disruptive and may even pose a danger to health. The "**Noise**Filter" icon identifies PFERD products and power tools that have been optimized in terms of their noise emissions, and which pose a reduced risk of damage to users' hearing.

Emission Filter

Not only does the pollutant content impair air quality due to the dust, the size of the particles may also create issues: the smaller they are, the greater the health hazard. PFERD products which create less dust and air pollution than other products during use are marked with the "**Emission**Filter" icon.



Haptic Filter

When using any product, it is important that the work is carried out with the lowest levels of force and effort, with a high amount of control, and with as much comfort as possible. PFERD products and power tools with the "**Haptic**Filter" allow for labour-saving, comfortable work with minimal effort.

PFERDEFFICIENCY®

Energy Saving

Consumption of electricity or compressed air during day-to-day use represents a significant economic investment. PFERD products and power tools that require less energy, for example through a significantly higher performance on smaller power tool, are marked with the "**Energy**Saving" icon.

Waste Saving

The various forms of waste generated in operations leads to cost and effort. PFERD products that produce less waste, for example by achieving the same or better stock removal or cutting performance with less product mass or by an above-average service life, are marked with the "**Waste**Saving" icon.

Time Saving

Time is money. The "**Time**Saving" icon denotes PFERD products and power tools that achieve the desired results substantially quicker, for example through higher aggressiveness or performance. The icon also indicates products that save on unproductive idle periods, such as tool change or set-up times. Innovative product solutions that make the job easier and enable users to work longer with less effort are also marked with the "**Time**Saving" icon.

Resource Saving

PFERD products set themselves apart over their entire life cycle. In addition, the performance of the operator is crucial to productivity in the ongoing process and must therefore be maintained as much as possible. Products that are particularly cost-effective in operation and at the same time preserve users' health and performance also carry the "**Resource**Saving" icon.

PFERD for retail

High quality point-of-purchase displays bring the premium PFERD brand experience to your store-front. Customizable to your specific needs, our sales representatives will work with you to design the optimal **PFERD**TOOL-CENTER to highlight and promote PFERD products to your on-site visitors.

Choose from our “Big”, “Mini” or “Counter” TOOL-CENTERs or our space saving “Turnable”, a compact rotating TOOL-CENTER. A variety of display components are available based on your space requirements. With features such as attractive POP packaging, lockable cabinets, shelves and storage bins, you’ll find the right display to help you promote your unique PFERD portfolio.


PFERD
Chain saw files
60

PFERD expertise

A variety of sales and support resources are available to assist you with your everyday metalworking needs.

Our dedicated sales and technical applications teams will work with you to identify the right solution for your specific application. They are equipped to demonstrate cost-saving solutions and opportunities for increased productivity within your operations.

Additional resources such as our **PFERD**ACADEMY with state-of-the-art training facilities, provide highly specialized and practical hands-on training for our distribution partners. Our **PFERD**TOOL-MOBILE van, equipped for product training and demonstration, is also available to provide you with onsite support.

Product and application videos, an online live chat feature, as well as product details and technical hints can be found on our website, social media channels and digital communities.

Take advantage of PFERD's technical expertise and know-how to help you get the job done right the first time.

PFERD Quality

PFERD products are synonymous with quality. We develop, manufacture and test our products to the strictest quality requirements. We are committed to continuously monitoring and improving our quality and safety standards so as to guarantee superior customer satisfaction.

PFERD is a founding member of the Organisation for the Safety of Abrasives (oSa) and a long standing member of the American Brush Manufacturer's Association (ABMA).

PFERD's quality management is certified according to ISO 9001.

American Brush Manufacturers Association

ASTM INTERNATIONAL

ISO 9001 Certified

ANSI
American National Standards Institute

FEPA
FEDERATION·OF·EUROPEAN
PRODUCERS·OF·ABRASIVES

PFERD worldwide

a global footprint with a local presence

PFERD's global headquarters are located in Marienheide, Germany approximately 30 miles outside of Cologne. With global sales and distribution offices spanning over 25 countries around the world and eight production facilities in key markets, PFERD brings local expertise and support to customers right in their own backyard.

North American headquarters are located in Milwaukee, WI with US manufacturing and distribution facilities.

PFERD's approximately 2,000 employees around the globe are dedicated to providing superior service and supporting our customers with all their metalworking needs.

PFERD production facilities

Marienheide, Germany

Hermeskeil, Germany

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Quality tools from a single source

Catalogue section 1

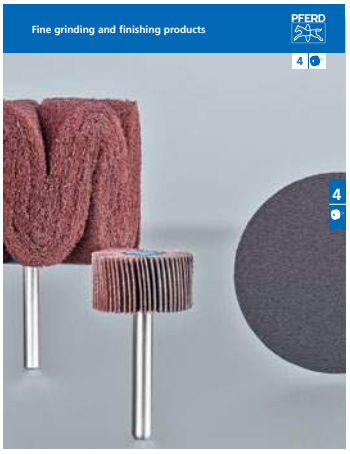
Files

Catalogue section 2

Carbide burs and bi-metal hole saws

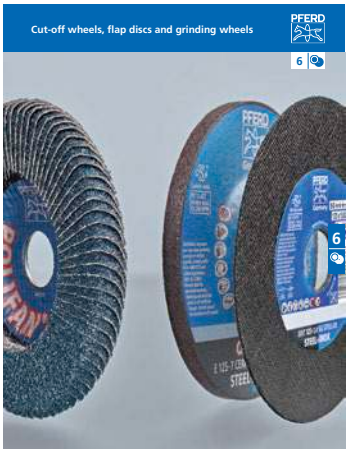
Catalogue section 3

Mounted points, cones and plugs, bench grinding wheels



Catalogue section 4

Fine grinding and finishing tools

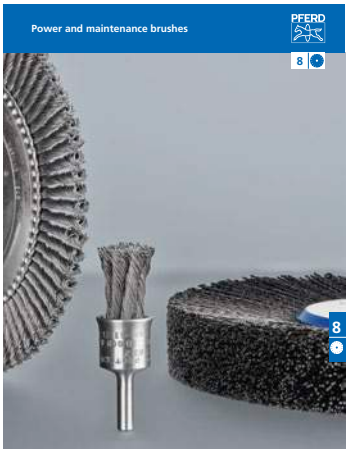


Catalogue section 6

Cut-off wheels, flap discs and grinding wheels

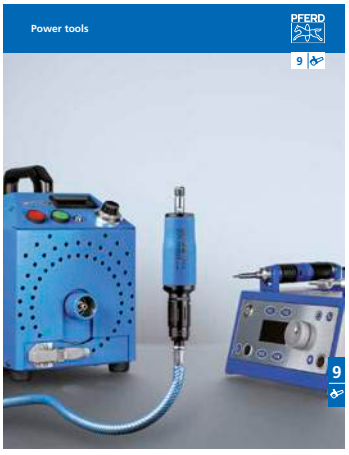
Catalogue section 7

Cut-off wheels for stationary applications



Catalogue section 8

Power and maintenance brushes



Catalogue section 9

Power tools

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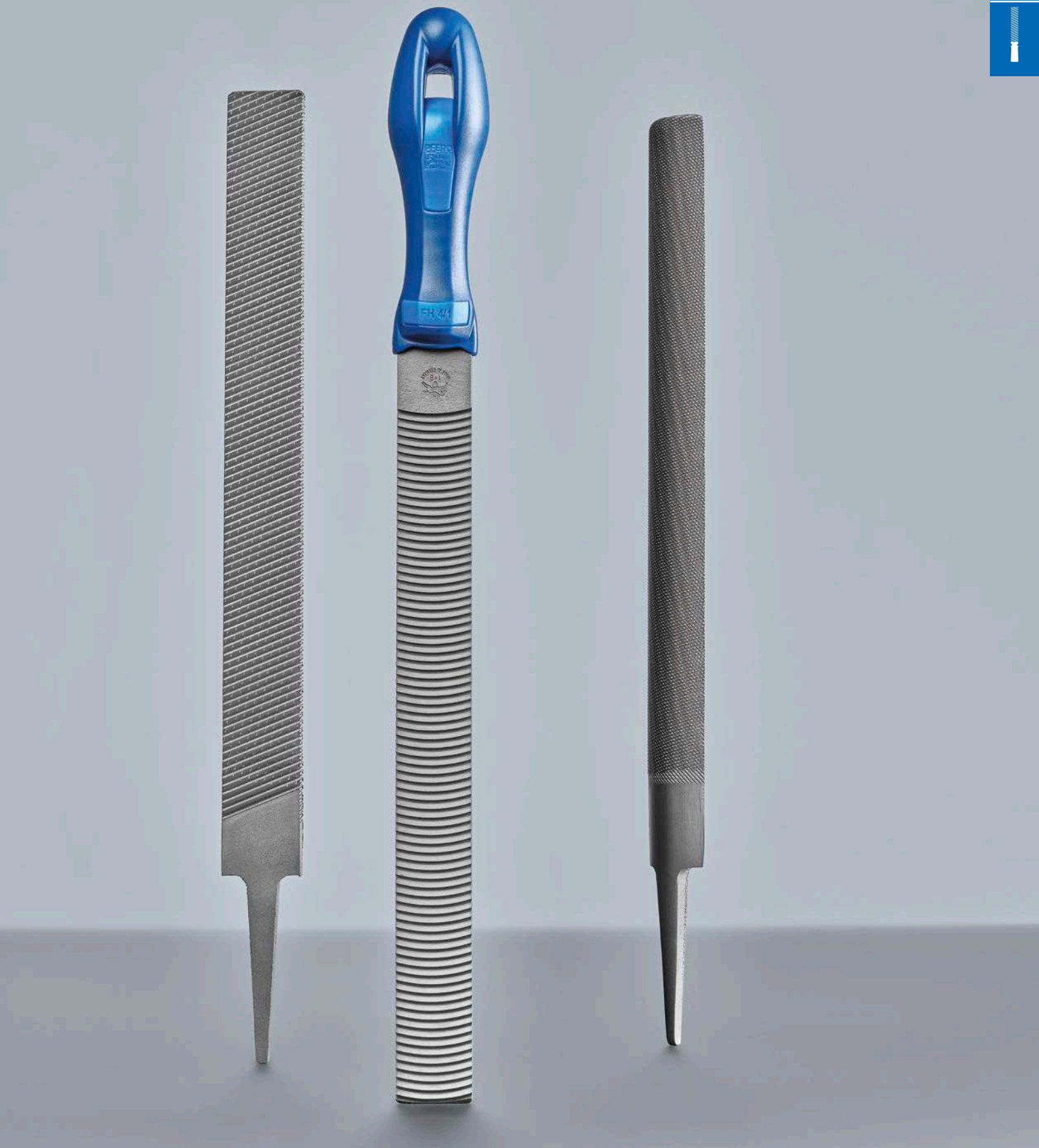
Files

PFERD

1

1



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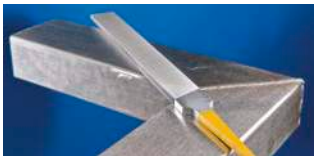
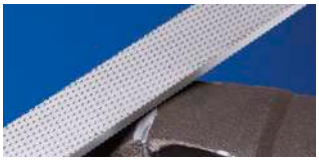
Files





Hand deburrer

Diamond products

Diamond products

Diamond files

File handles and accessories

File handles and accessories

Technical support

PFERD offers individual targeted support to solve unique application problems. Our experienced sales representatives and technical applications specialists are available to assist you.

Contact your local sales representative or visit us at pferd.com to learn more.

PFERD quality

With the benefit of over 200 years of experience, PFERD files are developed, manufactured and tested in accordance with the strictest quality requirements. Research and development, our in-house and plant construction, and the continuous testing to quality and safety standards in our internal laboratories all guarantee high PFERD quality.

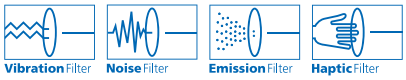
PFERD quality management is certified according to ISO 9001.

PFERDVALUE® – Your added value with PFERD

Results from the PFERD test laboratories as well as from the product tests by independent testing institutes prove: PFERD products offer measurable added value.

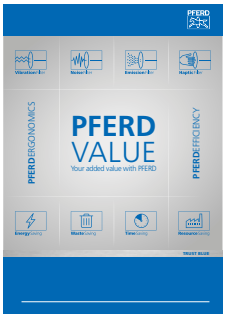
Discover **PFERD**ERGONOMICS® and **PFERD**EFFICIENCY®:

As part of **PFERD**ERGONOMICS®, PFERD offers ergonomically optimized products and power tools that contribute to greater safety and working comfort, and thus to health protection.



As part of **PFERD**EFFICIENCY®, PFERD offers innovative, high-performance product solutions and power tools with outstanding added value.

For more information on this topic, please refer to our brochure "**PFERD**VALUE® – Your added value with PFERD".



Packaging

PFERD files in standard industrial packaging are traditionally rolled in paper, which protects them against corrosion. Depending on file length, they are packed in packaging units of 5 or 10 pieces (except chain saw files and precision files).

These files are delivered without a handle. They are recommended for experienced users who have their own handles or would like to purchase them separately.

Advantages:
- Robust, corrosion- and damage-resistant packaging.
- Easier selection of the optimum file due to the colour coding system for fast cut selection.
- Packaging labels with all the important information at a glance.

Point-of-sale packaging

PFERD also offers many files and file sets in aesthetically-pleasing point-of-sale packaging, ideal for display on a **PFERD**TOOL-CENTER.

Advantages:
- Attractive design with easy identification of product features and part number.
- Included ergonomic-grip file handles.
- Optimal protection against corrosion and damage.

PFERDTOOL-CENTER

The **PFERD**TOOL-CENTER is a premium display system that can be custom-designed to meet your specific product and presentation requirements. For more information from a PFERD expert, contact us today at pferd.com.

PFERDPRAXIS **brochures**

Our **PFERD**PRAXIS brochures contain a wealth of useful information on material properties as well as tips and tricks for using PFERD products on specific materials or for specific applications.
You can find information on the maintenance and care of a saw chain and repair of other forestry tools in the "PFERD tools for forestry" **PFERD**PRAXIS FOCUS brochure.

Please visit our website for more information on our products: pferd.com

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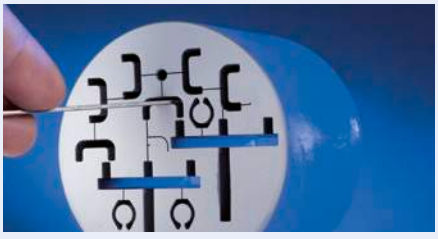
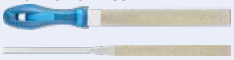
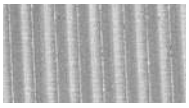
Hard material work 	■ Hardened steels ■ Tungsten carbide ■ Ceramic ■ Glass ■ Ferrite ■ Nickel- and titanium-based alloys	■ Precision filing	Diamond files 	49
		■ Machining concave and convex surfaces	Diamond flexible files 	48
			Diamond semi-flexible files 	48
	■ Fibre-reinforced plastics (GRP/ CRP)	■ Deburring ■ Chamfering ■ Breaking of edges	Diamond machinists files, grit size D251 	50

Files
PFERD file cuts

American pattern files

Cut 0/ ALU



- Cross cut.
- Suitable for coarse stock removal and for roughing.

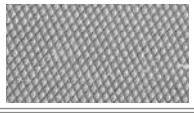
Cut 1/ Bastard

- Cross cut.
- Suitable for coarse stock removal and for roughing.

Cut 2/ Second

- Cross cut.
- Suitable for universal roughing and finishing.

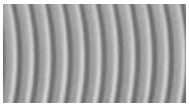
Cut 3/ Smooth



- Cross cut.
- Suitable for fine processing and finishing.

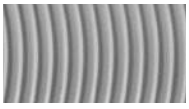
Car body files

Cut 00



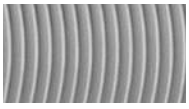
- Radial cut.
- Suitable for very coarse stock removal and for roughing.
- Creates score-free surfaces.

Cut 0



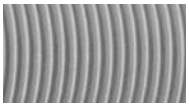
- Radial cut.
- Suitable for coarse stock removal and for roughing.
- Creates score-free surfaces.

Cut 1



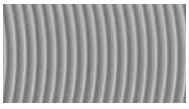
- Radial cut.
- Suitable for coarse stock removal and for roughing.
- Creates score-free surfaces.

Cut 2



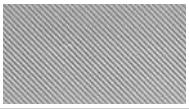
- Radial cut.
- Suitable for universal roughing and finishing.
- Creates score-free surfaces.

Cut 3



- Radial cut.
- Suitable for fine stock removal and finishing.
- Creates score-free surfaces.

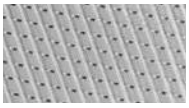
Cut 5



- Special cross cut.
- Suitable for finest finishing work.
- Creates score-free surfaces.

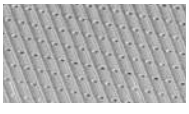
Milled tooth files

Cut 1



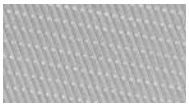
- Straight cut.
- Suitable for coarse stock removal on soft metals.
- Because of its milled tooth shape with large flutes, the teeth do not clog up.

Cut 2



- Straight cut.
- Suitable for universal roughing and finishing on soft metals.
- Because of its milled tooth shape with large flutes, the teeth do not clog up.

Cut 3



- Straight cut.
- Suitable for fine stock removal on soft metals.
- Because of its milled tooth shape with large flutes, the teeth do not clog up.

Sharpening files

Classic

- Classic spiral cut.
- For users who prefer an aggressive filing action.

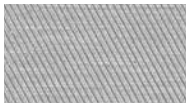
Premium

- Innovative spiral cut.
- For users who prefer a softer filing action.

Cut 1/ Bastard

- Single cut.
- Universally suited to sharpening.

Cut 2/ Second



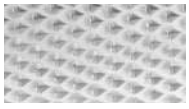
- Single cut.
- Universally suited to sharpening.

Cut 3/ Smooth

- Single cut.
- Universally suited to sharpening.

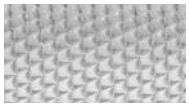
Rasps

Cut 1/ Bastard



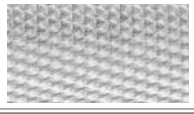
- Rasp cut.
- Suitable for coarse stock removal and for roughing.

Cut 2/ Second



- Rasp cut.
- Suitable for universal roughing and finishing.

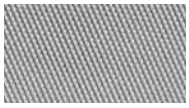
Cut 3/ Smooth



- Rasp cut.
- Suitable for fine processing and finishing.

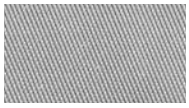
Precision files

Cut 00



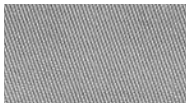
- Cross cut.
- Suitable for very coarse precision work.

Cut 0



- Cross cut.
- Suitable for coarse precision work.

Cut 1



- Cross cut.
- Suitable for medium precision work.

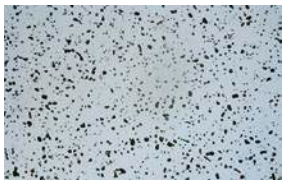
Cut 2

- Cross cut.
- Suitable for medium to fine precision work.

Cut 4

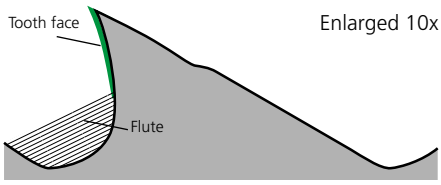
- Cross cut.
- Suitable for very fine precision work.

Several criteria determine PFERD quality



Uniform hardness through flawless steel microstructure
The profiling in the rolling mill, the forging of shape and tang, the annealing prior to cutting and the heat treatment each cause a change in the steel microstructure. The high carbon content of the steel microstructure determines the hardness and cutting performance of the file and must therefore be maintained.

Exact shape and uniform cut from tang to tip
The file blanks acquire their exact shape through forging and grinding. This enables accurate work. Equally spaced cuts and a uniform depth of cut ensure good filing performance and good surface finishes. The type and angle of the cut depend on the purpose for which the file is intended.



Perfectly milled tooth geometries for every application
Tooth shapes suited to various applications ensure the best stock removal rate. There is no universally appropriate tooth shape for every application. PFERD has developed the tooth shapes and tooth geometries for each of the various applications. The figure shows a car body file tooth with its typical rounded tooth face and large flute.

Number of teeth per Inch

Length (without tang) [Inch]	Machinists files Teeth number ± 8 %			Sharpening files Teeth number ± 5 %						
								Mill files		
	Bastard Cut 1	Second Cut 2	Smooth Cut 3	Regular	Slim	Extra slim	Double extra slim	Bastard Cut 1	Second Cut 2	Smooth Cut 3
4	43	56	71	51	58	66	-	-	-	-
5	-	-	-	48	56	61	64	-	-	-
6	33	46	56	43	51	56	61	51	61	71
7	-	-	-	41	48	53	58	-	-	-
8	25	36	46	38	43	51	56	46	51	56
10	23	30	41	36	41	43	-	41	46	51
12	20	28	36	-	-	-	-	36	41	46
14	18	25	33	-	-	-	-	31	36	41

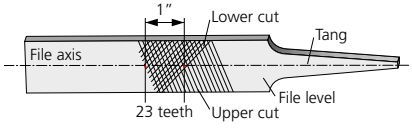
Colour code for the file cut

Cuts are colour-coded to allow for rapid file selection.

Cut 1	Cut 2	Cut 3
green = coarse (Bastard)	yellow = medium (Second)	red = fine (Smooth)
10 Hand Planas paralelas 1112 Inches 10" bastard basto 1	10 Hand Planas paralelas 1112 Inches 10" Second cut medio 2	10 Hand Planas paralelas 1112 Inches 10" Smooth fino 3

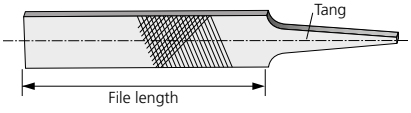
Determining the number of teeth:

The number of teeth for a file is the number of scores (cuts) per inch of file length, counted along the file axis. For cross cut files, the number of cuts is determined by the upper cut.



Example:
At a length of 10" bastard cut file has 23 teeth per inch. A 4" long file of the same cut has 43 teeth per inch of file length. The higher number of teeth found on shorter files is intended to provide the same ease of use (in terms of force input, guidability and stock removal) on surfaces and edges as a longer file.

Dimensions:



The cross-sectional dimensions indicated in the tables are measured across the cut and may vary depending on cut type. For tapered files the cut is measured at the highest and widest position. PFERD files are manufactured in compliance with DIN and ISO standards.

Products made to order

If you cannot find the solution for your particular application in our extensive catalogue range, we can produce files and rasps to meet your requirements in premium PFERD quality specifically for your application upon request.

Contact your local sales representatives who will be happy to assist you.

American pattern files
Aluminum files

Aluminum flat

This file has fast cutting teeth specially designed for use on aluminum alloys, soft steel and various non-ferrous metals. Single cut, uniform in thickness, special tooth construction eliminates loading.

Advantages:
- Special tooth geometry prevents the file from loading.
- Good surface finish.
- Labour-saving work.

Workpiece materials:
aluminum, soft non-ferrous metal, plastics

Applications:
deburring, surface work

Length [Inches]	Cross-section [Inches]	Cut and EDP number Cut 0	Compatible handle EDP	
10	31/32 x 1/4	17103	11146	10
12	1-5/32 x 9/32	17104	11148	5

Aluminum half round

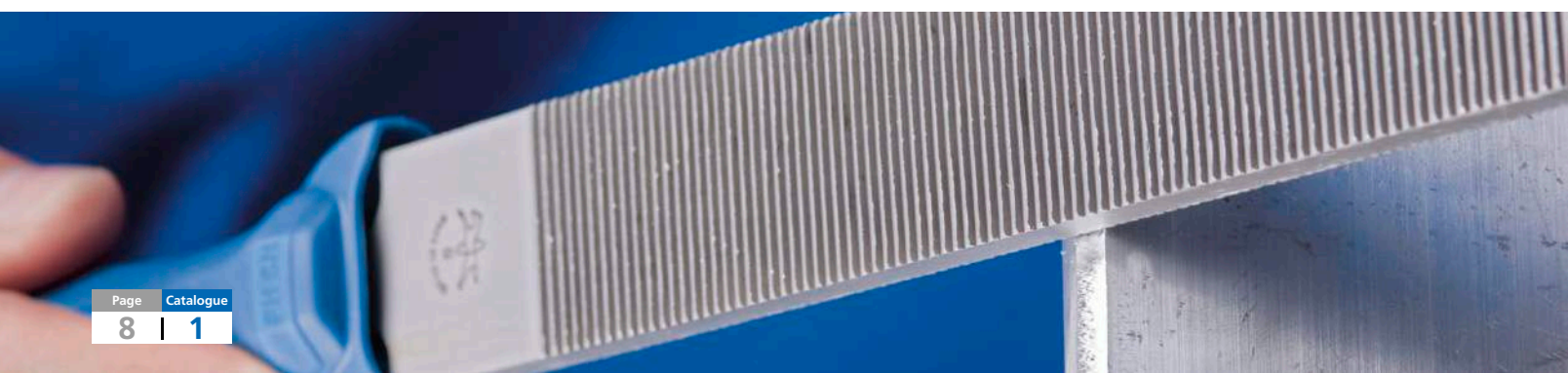
Like the flat aluminum, this file is made for use on aluminum and soft metals. The half round shape permits filing on concave surfaces and rounding out holes. The flat side is single cut and the half round side is spiral cut.

Advantages:
- Special tooth geometry prevents the file from loading.
- Good surface finish.
- Labour-saving work.

Workpiece materials:
aluminum, soft non-ferrous metal, plastics

Applications:
deburring, surface work

Length [Inches]	Cross-section [Inches]	Cut and EDP number Cut 0	Compatible handle EDP	
10	15/16 x 9/32	17107	11146	10
12	1-1/8 x 11/32	17108	11148	5



PFERD produces machinists files with the highest quality standards. They achieve a long service life and high stock removal rates. Three application-oriented cuts are available.

Advantages:

- Consistently high stock removal rate from the tip to the tang.
- Long service life.
- Application-oriented design.
- Half-round and round versions with outstanding filing performance due to PFERD spiral cut.

Recommendations for use:

- Choose bastard cut (cut 1) for roughing or coarse stock removal.
- Choose second cut (cut 2) for universal use.
- Choose smooth cut (cut 3) for fine processing and finishing.

Workpiece materials:

- Aluminum
- Bronze
- Copper
- Brass
- Zinc
- Grey cast iron
- Steels up to 370 HV (38 HRC)
- Cast steel

Applications:

- Deburring
- Surface work
- Work on edges (chamfering, rounding)

Ordering notes:

- PFERD files for the workshop are available in industrial packaging without handle or in POP packaging with ergonomic file handle. EDPs ending in "**P**" include handle.

Matching accessories:

- You can find matching ergonomic file handles and other PFERD handles on page 51.

PFERDVALUE®:

PFERDERGONOMICS® recommends the ergonomic file handle for comfortable work.

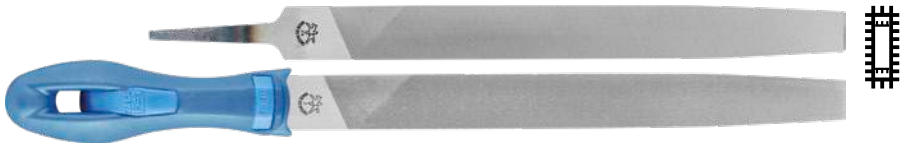
HapticFilter

Flat

Tapered in width at the point and slightly tapered in thickness at the point. Flat files are double cut on both sides and are single cut on the edges. Used extensively by machinists on ferrous and non-ferrous metals for rapid stock removal.

PFERDVALUE®:

HapticFilter



Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	Included handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)			
Without handle							
4	13/32 x 3/32	11001	11002	11003	11143	-	10
6	5/8 x 5/32	11004	11005	11006	11144	-	10
8	25/32 x 7/32	11007	11008	11009	11146	-	10
10	31/32 x 1/4	11010	11011	11012	11146	-	10
12	1-5/32 x 9/32	11013	11014	11015	11148	-	5
14	1-11/32 x 5/16	11016	-	-	11148	-	5
With handle							
8	25/32 x 7/32	11007**P**	11008**P**	11009**P**	-	11146	5
10	31/32 x 1/4	11010**P**	11011**P**	11012**P**	-	11146	5
12	1-5/32 x 9/32	11013**P**	11014**P**	11015**P**	-	11148	5

American pattern files
Machinists files

Flat PLUS

Universal file for fast metal removal and for producing a smooth finish on steel, non-ferrous metals, wood and plastics. PLUS files are noted for outstanding stock removal due to spade-shaped teeth, requiring minimum effort in use. Broad chip breakers prevent loading problems when filing soft materials.

Advantages:
- Easy and energy-saving working due to spade-like filing teeth.
- No loading when processing soft materials due to a wide chip breaker.
- Can be used universally for all hobby and DIY purposes.

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number PLUS Cut	Compatible handle EDP	
With handle				
8	25/32 x 7/32	11134**P**	11146	5
10	31/32 x 1/4	11135**P**	11148	5
12	1-5/32 x 9/32	11136**P**	11148	5

Half round (tapered)

These files are used for filing out concave surfaces and crevices, and for rounding out holes. The spiral cut enables them to remove metal rapidly and leaves a smooth finish.

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	Included handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)			
Without handle							
4	13/32 x 3/32	11150	11151	11152	11143	-	10
6	19/32 x 5/32	11020	11021	11022	11144	-	10
8	3/4 x 7/32	11023	11024	11025	11146	-	10
10	15/16 x 9/32	11026	11027	11028	11146	-	10
12	1-1/8 x 11/32	11029	11030	11031	11148	-	5
14	1-9/32 x 13/32	11032	-	-	11148	-	5
With handle							
8	3/4 x 7/32	11023**P**	11024**P**	11025**P**	-	11146	5
10	15/16 x 9/32	11026**P**	11027**P**	11028**P**	-	11146	5
12	1-1/8 x 11/32	11029**P**	-	-	-	11148	5

Half round pipeline

Designed for filing pipeline welds and root passes, and for scale removal from pipeline.

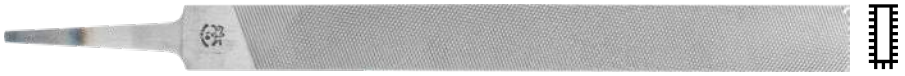
PFERDVALUE®:

Length [Inches]	Cross-section [Inches]	Cut and EDP number Bastard (cut 1)	Compatible handle EDP	Included handle EDP	
Without handle					
14	1-3/8 x 11/32	11155	11148	-	5
With handle					
14	1-3/8 x 11/32	11155**H**	-	11148	5

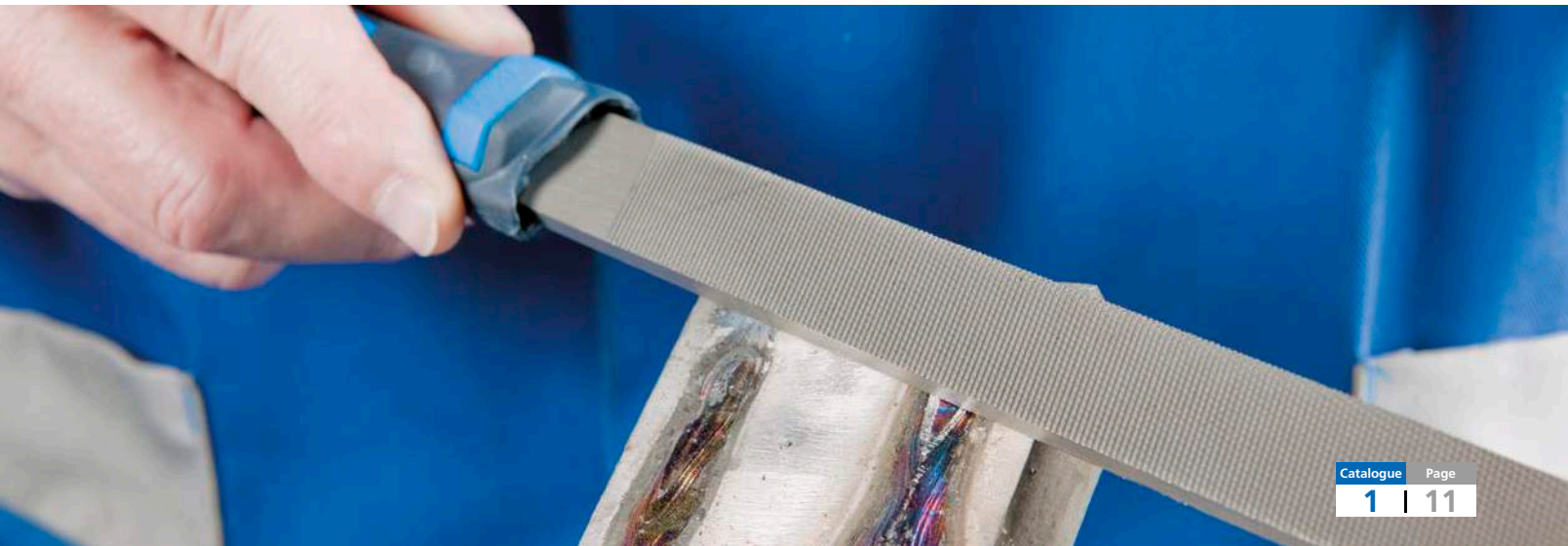
Hand

Hand files have the same cross-sectional dimensions as the Flat File but is blunt in shape (no taper). Double cut, it has one safe (uncut) edge which permits filing one surface without damaging an adjoining one.

PFERDVALUE®:



Length [Inches]	Cross-section [Inches]	Cut and EDP number Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)	Compatible handle EDP	
Without handle						
6	5/8 x 5/32	11036	11037	11038	11144	10
8	25/32 x 7/32	11039	11040	11041	11146	10
10	31/32 x 1/4	11042	11043	-	11146	10
12	1-5/32 x 9/32	11045	-	-	11148	5



Knife

Shaped like a knife blade, this file is commonly used on slots and keyways and for acute angle work in die making. Sides are double cut and the thin edge is cut but the back is safe (uncut).

Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)		
Without handle						
8	27/32 x 3/16	11055	11056	11057	11145	10

Long angle lathe

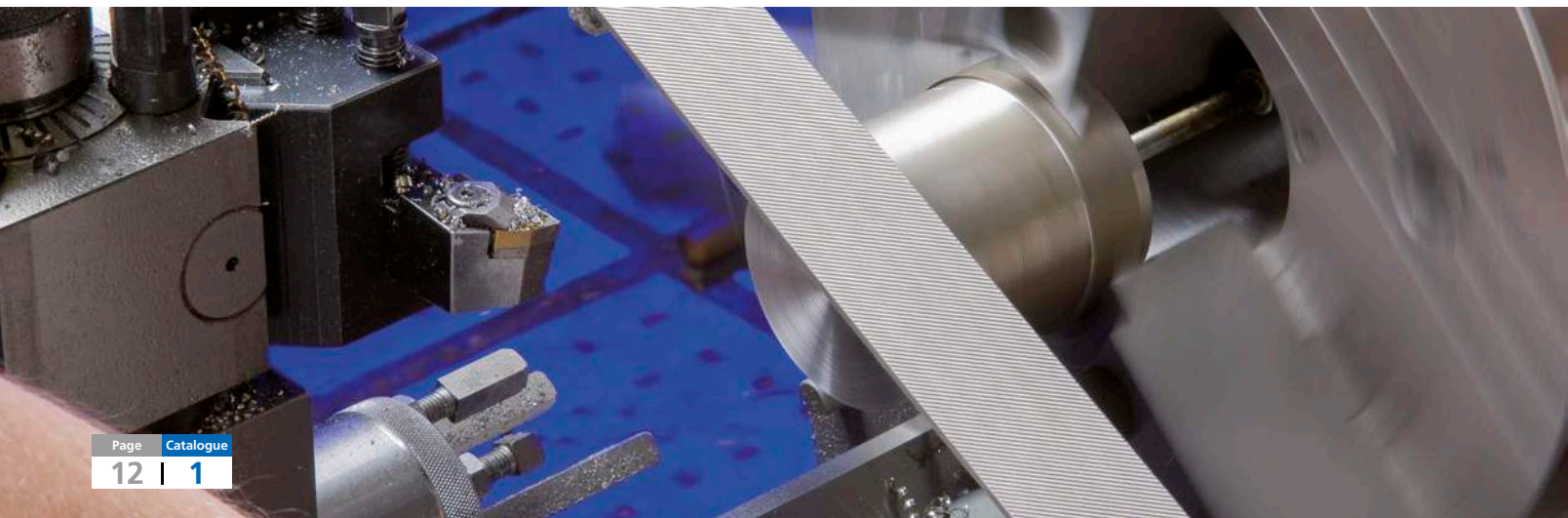
Designed for smooth finish lathe work on either hard or soft metals, this file has the teeth cut on a long angle. Both edges safe (uncut) to permit working next to a shoulder without damage to it. Also used for finish filing of aluminum.

Advantages:
- Direction of the cut on the front and back side causes the file to move away from the chuck during lathe work, improving safety.

Workpiece materials:
aluminum, hard non-ferrous metal, plastics, steel, cast steel

Applications:
deburring, work on edges

Length [Inches]	Cross-section [Inches]	Cut and EDP number	Compatible handle EDP	
		Bastard (cut 1)		
Without handle				
10	31/32 x 1/4	17005	11146	10
12	1-5/32 x 9/32	17006	11148	5



Round

This popular machinists file is designed for enlarging circular holes or rounded grooves that are too small for a half round file. It tapers toward the point making it adaptable for use on various size holes.

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	Included handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)			
Without handle							
4	5/32	11061	11062	11063	11143	-	10
6	7/32	11064	11065	11066	11144	-	10
8	5/16	11067	11068	11069	11145	-	10
10	3/8	11070	11071	11072	11145	-	10
12	1/2	11073	11074	11075	11147	-	5
14	5/8	11076	-	-	11147	-	5
With handle							
8	5/16	11067**P**	11068**P**	11069**P**	-	11145	5
10	3/8	11070**P**	11071**P**	11072**P**	-	11145	5
12	1/2	11073**P**	-	-	-	11147	5

Square

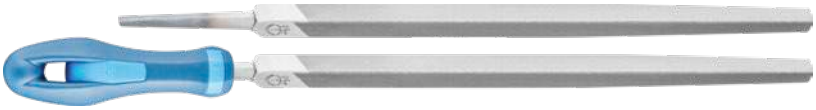
Handy for use on slots, keyways, rectangular as well as square holes and for surface work. Double cut, it tapers toward the point.

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	Included handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)			
Without handle							
4	5/32	11081	11082	11083	11143	-	10
6	7/32	11084	11085	11086	11144	-	10
8	5/16	11087	11088	11089	11145	-	10
10	3/8	11090	11091	11092	11145	-	10
12	1/2	11093	11094	-	11147	-	5
With handle							
8	5/16	11087**P**	11088**P**	-	-	11145	5
10	3/8	11090**P**	11091**P**	-	-	11145	5

American pattern files
Machinists files



Three square

Three square files are triangular in cross-section, like tapers, but are double cut and have fairly sharp corners that are slightly set and cut. These files are for general use by machinists for filing internal angles more acute than the right angle.

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	Included handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)			
Without handle							
6	15/32	11097	11098	11099	11144	-	10
8	19/32	11100	11101	11102	11145	-	10
10	11/16	11103	11104	11105	11147	-	10
With handle							
8	19/32	11100P	11101P	11102P	-	11145	5
10	11/16	11103P	11104P	-	-	11147	5

Tungsten point

Tungsten point files are very thin, making them particularly suitable for use on electrical contact points and in narrow grooves and slots. Once tips become worn, they can be broken off. The punch handle eliminates the need for an additional handle.

Advantages:
- The punched file handle eliminates the need for an additional handle.
- Very small cross section for use in keyways.
- Handy design.

Workpiece materials:
soft non-ferrous metal, steel, cast steel

Applications:
deburring, surface work

Length [Inches]	Cross-section [Inches]	Cut and EDP number	
		Second (cut 2)	
Without handle			
4	5/16 x 1/32	17008	10

Veneer knife

Specially designed for sharpening veneer knives. Thin, rectangular shape with two round, safe edges.

Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	Compatible handle EDP	
Without handle				
8	25/32 x 1/8	17044	11146	10

Machinists file sets in plastic pouch

This set comes in a rugged, weather-resistant PVC roll-up pouch for optimum protection. An indispensable item for the tool box of every mobile tradesman or fitter.

Advantages:
- Suitable for a wide range of applications.
- Available on request with matching plastic pouch to save space when stored.

PFERDVALUE®:

HapticFilter

Length [Inches]	Content (each file with appropriate ergonomic handle)	EDP number	
8	8" hand bastard, square bastard, half round bastard, round bastard, half round wood rasp second cut	16077	1
	8" hand bastard, three square bastard, square bastard, tapered half round bastard, round bastard	16078	1
	8" hand second cut, three square second cut, square second cut, tapered half round second cut, round second cut	16079	1
10	10" hand bastard, three square bastard, square bastard, tapered half round bastard, round bastard	16080	1
	10" hand second cut, three square second cut, square second cut, tapered half round second cut, round second cut	16081	1

DIY file set

These files are specifically designed to meet the needs of DIY users. Its professional quality makes this product very versatile. Due to their high precision and cutting performance, these files meet the highest standards of quality and longevity.

Contents:
The set consists of one file each:
- File rasp (EDP 16053)
- Half-round file (EDP 11155)
- Hobby file (EDP 16053)

PFERDVALUE®:

HapticFilter

Length [Inches]	Content (each file with appropriate ergonomic handle)	EDP number	
8	8" DIY file set, 3 pcs	16070	1

Hobby file

Rectangular file, tanged, with different cuts on three sides and ergonomic file handle. Cross cut 1 on front side for roughing, single cut 2 on back side for sharpening and one cut edge.

Advantages:
- For roughing and sharpening using the same file.
- Suitable for versatile use.

Workpiece materials:
steel, cast steel

Applications:
deburring, surface work, work on edges, sharpening, fine finishing

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number Cross 1/single 2	Included handle EDP	
With handle				
8	1 x 5/32	16053P	11146	5

File rasp

Rectangular file, tanged, with different cuts on three sides and ergonomic file handle. Cross cut 1 on front side for roughing, rasp cut 1 on back side for rasping and one cut edge.

Advantages:
- For roughing and sharpening using the same file.
- Recommended for versatile use.

Workpiece materials:
soft non-ferrous metal, wood, plastics, steel

Applications:
deburring, cutting out holes, surface work, work on edges

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number Cross 1/rasp 1	Included handle EDP	
With handle				
8	25/32 x 13/64	16056P	11146	5

Farmer's own rotary mower

Rectangular file, tanged, single cut 2 on two sides, with rounded, uncut narrow edges and ergonomic file handle. Often referred to as a lawnmower file.

Advantages:
- Long service life.
- High surface quality with optimum cutting performance.

Workpiece materials:
steel, cast steel

Applications:
deburring, sharpening

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number Single 2	Included handle EDP	
With handle				
8	15/32 x 1/8	17125P	11146	5

Fitter's file

Rectangular file with different milled cuts, tanged and with ergonomic file handle. Straight cut with chip breaker on front side, radial cut on back side, uncut edges.

Advantages:
- Extremely robust design.
- Ideal for versatile use.

Workpiece materials:
aluminum, soft non-ferrous metal, wood, plastics, steel, cast steel

Applications:
deburring, work on edges, surface work, roughing

PFERDVALUE®:

HapticFilter

Length [Inches]	Cross-section [Inches]	Cut and EDP number Radial 1/straight 2	Included handle EDP	
With handle				
10	15/32 x 1/8	16058	11146	5

American pattern files
Key files

Key files are small files for light, delicate filing tasks, especially in tool- and die-making. Also commonly used on locks and keys, they are well-suited for electricians, mechanics and anyone engaged in precision work.

Advantages:

- Ideal for a wide range of delicate and light filing tasks.

Workpiece materials:

- Aluminum
- Copper
- Brass
- Zinc
- Grey cast iron
- Steels up to 370 HV (38 HRC)
- Cast steel

Applications:

- Deburring
- Surface work
- Work on edges (chamfering, rounding)
- Sharpening
- Finishing

Ordering notes:

- PFERD key files are available in industrial packaging without handle or in POP packaging with wooden handle.

Accessories:

PFERD offers a practical quick-mounting handle for key files. File tangs are reliably clamped by simply twisting the two halves of the handle. For ordering data and more information about PFERD file handles, see page 52.

Key file set 265 A

Contains an application-oriented selection of key files. Ideal for fine and delicate filing.

Contents:
Six key files (one file each):
- hand
- flat
- three square
- square
- half-round
- round
- quick-mounting handle

Advantages:
- Suitable for a wide range of delicate and light filing tasks.

Ordering notes:
- Supplied with quick-mounting handle no. 210 in a plastic pouch to protect against dirt and damage.

Length [Inches]	Cut and EDP number Second (cut 2)	
4	17009	1

Key file set 265 B

Contains an application-oriented selection of key files. Ideal for fine and delicate filing.

Contents:
Six key files (one file each):
- hand
- flat
- three square
- square
- half-round
- round

Advantages:
- Ideal for a wide range of delicate and light filing tasks.

Ordering notes:
- Supplied with mounted wooden handles in a plastic pouch to protect against dirt and damage.

Length [Inches]	Cut and EDP number Second (cut 2)	
4	17012	1

Key file set 265 K

Contains an application-oriented selection of key files. Ideal for fine and delicate filing.

Contents:
Six key files (one file each):
- hand
- flat
- three square
- square
- half-round
- round

Advantages:
- Ideal for a wide range of delicate and light filing tasks.

Ordering notes:
- Supplied with mounted wooden handles in a metal box to protect against dirt and damage.

Length [Inches]	Cut and EDP number Second (cut 2)	
4	17010	1

Sharpening files
Chain saw files

Chain saw files, round

Round file for manual sharpening of saw chains with precise spiral cut for outstanding sharpness and particularly long service life. For fast, score-free sharpening of saw teeth. In comparison to machine sharpening, these files remove stock sparingly without the thermal strain caused by friction on the metal.

Advantages:
- **Classic line:** Optimum combination of service life and stock removal rate, aggressive filing for quick sharpening.
- **Premium line:** Perfect sharpness due to innovative spiral cut, for ensuring a fine tooth surface for maximum cutting performance and a gentler feel to the tool while filing.

Workpiece materials:
steels up to 370 HV (38 HRC)

Applications:
sharpening

Ordering notes:
- Packaging units of 6 and 60 pieces in a cardboard box.

Length [Inches]	Diameter [Inches]	Chain pitch [Inches]	Line and EDP number		Compatible handle EDP	
			Classic line	Premium line		
8	5/32	1/4	17047	17074	17046	6
	11/64	3/8 LP*	17057	17075	17046	6
	3/16	.325	17038	17076	17046	6
	13/64	3/8	17048	17077	17045, 17046	6
	7/32	3/8, .404	17039	17078	17045, 17046	6
	1/4	1/2	17040	-	17045, 17046	6
	5/16	3/4	17061	-	17045, 17046	6

Always observe the current guidelines and recommendations of the equipment and saw chain manufacturers. * LP = Low Profile

Packing system for PFERD chain saw files

Pack of 6
6 chain saw files

Display box
60 chain saw files
= 10 packs of 6

You can find matching ergonomic file handles for PFERD chain saw files on page 51.

Skin packed, 3-pack sleeve

PFERD chain saw files are available in convenient 3-piece plastic sleeves. The package helps keep file edges protected during storage and transit to ensure top file performance during use.

Advantages:
- The opening on the front of the packaging makes it easier to remove the files and return them when not in use.
- **Classic line:** Optimum combination of service life and stock removal rate, aggressive filing for quick sharpening.

Ordering notes:
- One packaging unit contains four plastic packs, each containing three files.

Length [Inches]	Diameter [Inches]	Chain pitch [Inches]	Line and EDP number Classic line	
POP packaging				
8	1/8	1/4 LP*	17129	12
	5/32	1/4; 3/8 LP*	17136	12
	3/16	.325	17137	12
	13/64	3/8	17133	12
	7/32	3/8; .404	17138	12

Always observe the current guidelines and recommendations of the equipment and saw chain manufacturers. * LP = Low Profile

Chisel bit files

Chisel bit files

For servicing and sharpening saw chains with a square gullet.

Advantages:
- Good stock removal rate.
- Long service life.
- The flat type fulfills two functions: it can be used to sharpen the blade and also to reduce the depth gauge.

Workpiece materials:
steels up to 370 HV (38 HRC)

Applications:
sharpening, edge grinding

Length [Inches]	Cross-section [Inches]	Chain pitch [Inches]	Shape	Cut and EDP number Single cut 2	Compatible handle EDP	
Without handle						
7	11/64	.325	Three square	17081	11146	12
	7/64 x 1/2	.325	Flat	17082	11146	12

Sharpening files
Handles

Wooden handles for chain saw files

The wooden handle for chain saw files has an angular contact surface which maintains a 35° filing angle for accurate, even sharpening of all saw teeth.

Advantages:
- Optimized filing angle ensures precise, even filing.

Type	Suitable for chain saw file diameter [Inches]	EDP number	
Wood	13/64, 7/32, 1/4, 5/16	17045	100

EDP 17046

EDP 17090
EDP 17091

Plastic handles for chain saw files

Classic PFERD blue plastic file handle features air chambers to reduce hand moisture. Enlarged, ergonomic handle reduces fatigue and improves safety.

PFERDVALUE®:

HapticFilter

Type	Recommended for chain saw file diameter [Inches]	EDP number	
Plastic handle for chain saw files			
Plastic	13/64, 7/32, 1/4, 5/16	17046	10
Filing angle guides			
25° - 30° guide	13/64, 7/32, 1/4, 5/16	17090	10
30° - 35° guide	13/64, 7/32, 1/4, 5/16	17091	10

You can find information on the maintenance and care of a saw chain and repair of other forestry tools in the "PFERD products for forestry" FIELD GUIDE brochure (EDP 819186).

In our pocket guide "Sharpening saw chains" (EDP 819199), we have concisely summarized all the important information that you need for sharpening your saw chains.

Chain saw sharpeners from PFERD are exceptionally well suited to the manual sharpening of saw chains. Manual sharpening is more economic and much more gentle than machine-based sharpening, and can prolong the service life of the saw chain.

Advantages:

- Flexible use on-site due to compact device design.
- Easy to use and defined sharpening angle.
- Long operating life due to easily replaceable files.
- Precise and uniform sharpening result, even for inexperienced users.

Workpiece materials:

- Steels up to 370 HV (38 HRC)

Applications:

- Sharpening

CHAIN SHARP CS-X chain saw sharpeners

The CHAIN SHARP CS-X chain saw sharpener stands out due to its excellent file position, ergonomic shape and easier operation. The device provides a sharpening angle of 30°. The defined depth gauge distance can be found in the table.

EDP 17299

EDP 17300
EDP 17301
EDP 17303
EDP 17304

Contents:
The chain saw sharpener consists of:
- One sharpener
- One depth gauge file
- Two Classic line chain saw files

Advantages:
- Turn the device over to change from the right to the left tooth – no conversion work required.
- Optimized shape for precise guidance and optimal sharpening results.
- Improved design makes it easy to replace the files.
- Simultaneously sharpens the saw teeth and adjusts the depth gauge.

Ordering notes:
- PFERD offers five types of the CHAIN SHARP CS-X chain saw sharpener adapted to different chain pitches.
- The sharpener is supplied with detailed operating instructions in a transparent, reusable plastic pouch which protects against damage and dirt.

PFERDVALUE®:

Chain saw file dia. [Inches]	Chain pitch [Inches]	Depth gauge distance [Inches]	EDP number	Replacement depth gauge file EDP	Replacement round file EDP		
					Classic line	Premium line	
POP packaging							
1/8	1/4 LP*	0.018	17299	17310	17129	-	1
5/32	3/8 LP*	0.025	17300	17310	17047	17064	1
3/16	.325	0.025	17301	17310	17038	17066	1
13/64	3/8	0.025	17303	17310	17048	17067	1
7/32	.404	0.030	17304	17310	17039	17068	1

* LP = Low Profile

CHAIN SHARP CS-MT chain saw sharpeners

The compact CHAIN SHARP CS-MT (MultiTool) sharpening solution combines a chain saw file and a depth gauge file in one ergonomic tool. The defined height of the chain saw file makes sharpening saw teeth easier and prevents the connecting links of the chain from being damaged. The side-mounted depth gauge file allows you to set the depth limit as desired. The gauge provided gives depth spacings of .025" for harder wood or .030" for softer wood.

Contents:
The chain saw sharpener consists of:
- One sharpener
- One Classic line chain saw file
- One depth limit file
- One ergonomic file handle
- One depth gauge

Advantages:
- Compact sharpener.
- Depth gauge can be individually adjusted.
- Recommended for all common chain saw files.
- Long service life with PFERD files.

Ordering notes:
- Available in four designs for the most common chain pitches.
- The sharpener is supplied with detailed operating instructions in a belt pouch which protects against damage and dirt.

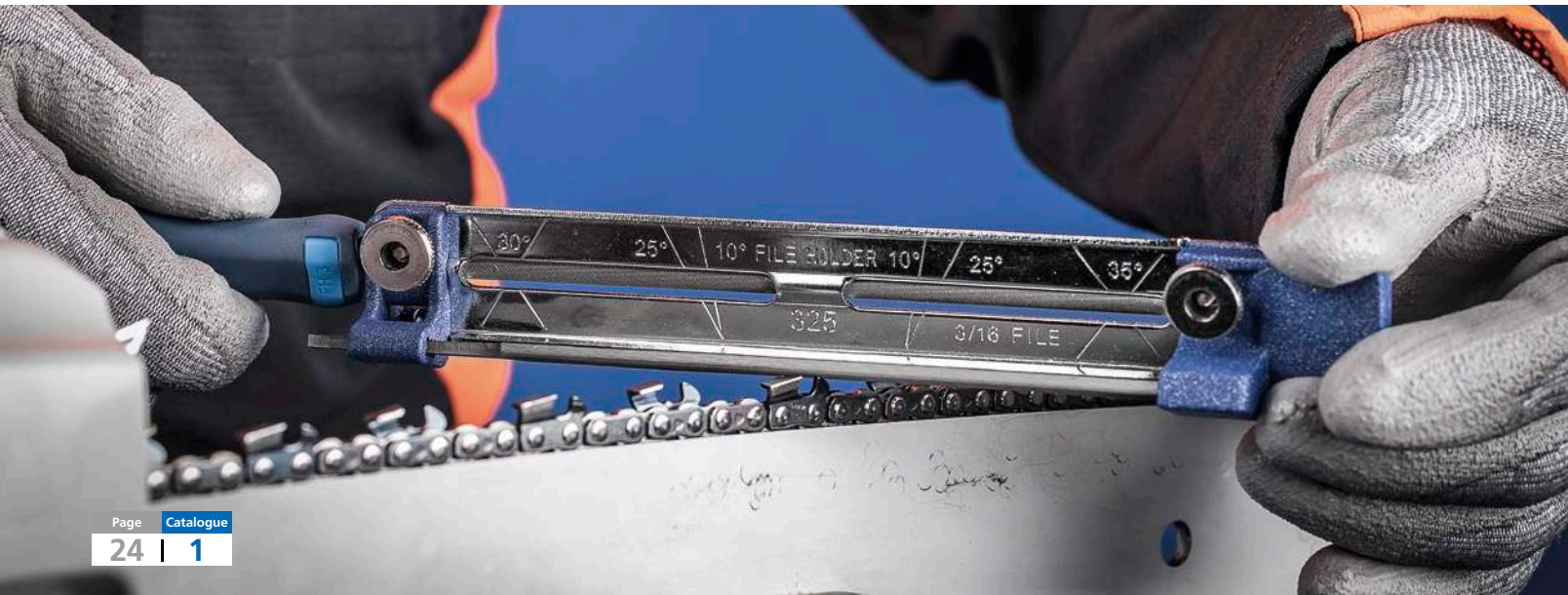
PFERDVALUE®:

HapticFilter

TimeSaving

Chain saw file dia. [Inches]	Chain pitch [Inches]	Depth gauge distance [Inches]	EDP number	Replacement depth gauge file EDP	
POP packaging					
5/32	3/8 LP*	0.025	17250	17043	1
3/16	.325	0.025	17251	17043	1
13/64	3/8	0.025	17252	17043	1
7/32	.404	0.025	17253	17043	1

* LP = Low Profile



Replacement depth gauge file for CHAIN SHARP CS-X

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

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

For use with	Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	
All CHAIN SHARP CS-X sizes	8	23/64 x 15/64	17310	10

Flat chain saw files for depth gauges

Rectangular file, tanged with two round uncut edges and cut on two sides. 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.

Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	Compatible handle EDP	
Without handle				
6	5/8 x 3/32	17043	11143	10
8	25/32 x 1/8	17044	11146	10

Mill, tapered

Rectangular file, tapered with tang. Cut on four sides.

Applications:
sharpening, deburring, surface work

Length [Inches]	Cross-section [Inches]	Cut and EDP number			Compatible handle EDP	
		Bastard (cut 1)	Second (cut 2)	Smooth (cut 3)		
Without handle						
6	19/32 x 7/64	19001	-	19003	11144	10
8	25/32 x 9/64	19004	19005	19006	11146	10
10	31/32 x 11/64	19007	19008	19009	11146	10
12	1-5/32 x 7/32	19010	19011	19012	11148	10

Mill, one round edge

Rectangular file, tanged, one round and one straight edge.

Length [Inches]	Cross-section [Inches]	Cut and EDP number	Compatible handle EDP	
		Second (cut 2)		
Without handle				
8	25/32 x 9/64	19017	11146	10

Cant saw files

Cant saw file

Triangular file, tanged. Cut on three sides, non-equilateral triangular shape.

Length [Inches]	Cross-section [Inches]	Cut and EDP number	Compatible handle EDP	
		Second (cut 2)		
Without handle				
8	7/8 x 1/2	17014	11145	10

Triangular files, tapered to the tip with tang. Cut on three sides and three edges.

Advantages:

- Good stock removal rate.
- Long service life.
- Versatile application.

Workpiece materials:

- Steels up to 370 HV (38 HRC)
- Cast steel

Applications:

- Sharpening

Ordering notes:

- Available in regular, slim, extra slim, and double extra slim versions.

Slim taper

Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	Compatible handle EDP	
Without handle				
4	7/32	17022	11143	10
5	9/32	17023	11143	10
6	11/32	17024	11144	10
7	13/32	17025	11145	10
8	15/32	17026	11145	10

Extra slim taper

Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	Compatible handle EDP	
Without handle				
4	3/16	17027	11143	10
6	9/32	17029	11144	10

Double extra slim taper

Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	Compatible handle EDP	
Without handle				
5	3/16	17032	11143	10
8	5/16	17035	11144	10

Precision files
General information

PFERD precision files meet the most exacting standards of dimensional accuracy, cutting performance and longevity. Compared to machinists files, precision files are smaller, easier to handle, and possess a more precise geometry.

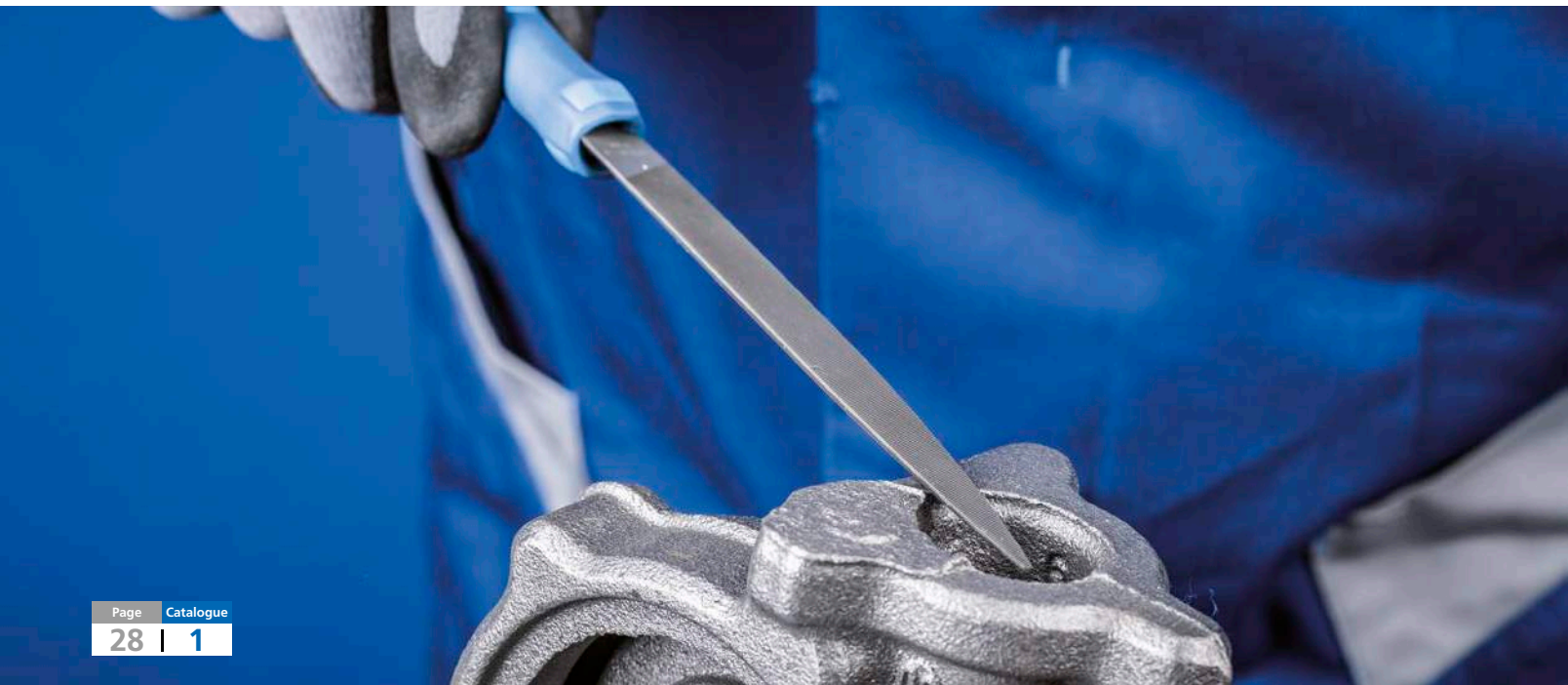
They are employed in jig, fixture and tool making, specifically in the fabrication of molds and dies (e.g., for punching, forming, forging and stamping in volume production environments).

In addition, precision files are needed in assembling and building complex devices and machines to the highest precision standards.

Table of cuts for precision files

Number of teeth per Inch

Cuts / Type of file	Swiss cut 00 [Teeth/Inch]	Swiss cut 0 [Teeth/Inch]	Swiss cut 1 [Teeth/Inch]	Swiss cut 2 [Teeth/Inch]	Swiss cut 4 [Teeth/Inch]
Tang files 4", 6" and 8"	41	51	64	79	117
Tang files 10"	30	41	51	64	97
CORINOX® files 6" and 8"	41	51	-	79	-
Needle files	-	64	-	97	142
CORINOX® needle files	-	64	-	97	-



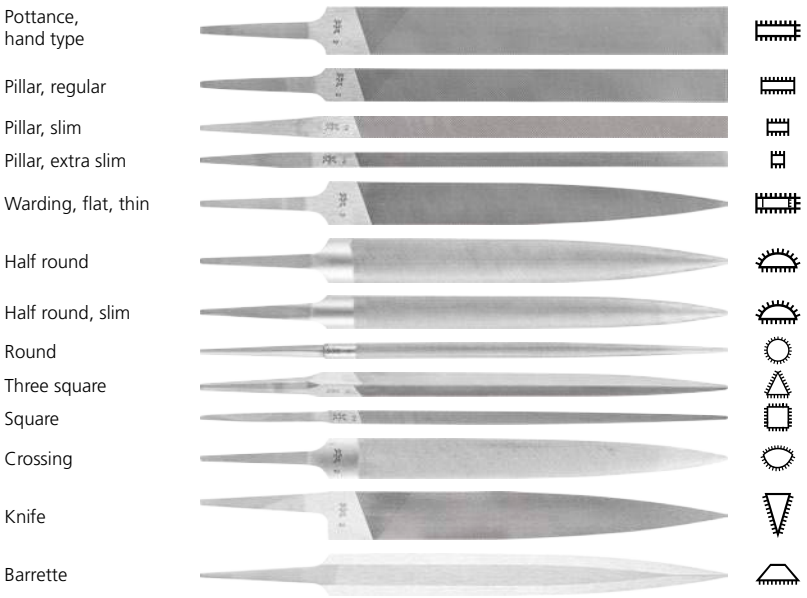
Swiss pattern machinists files, tanged

Small, handy files for use on delicate workpieces.

Advantages:
- Small, handy design.
- Recommended for work on small and delicate workpieces.

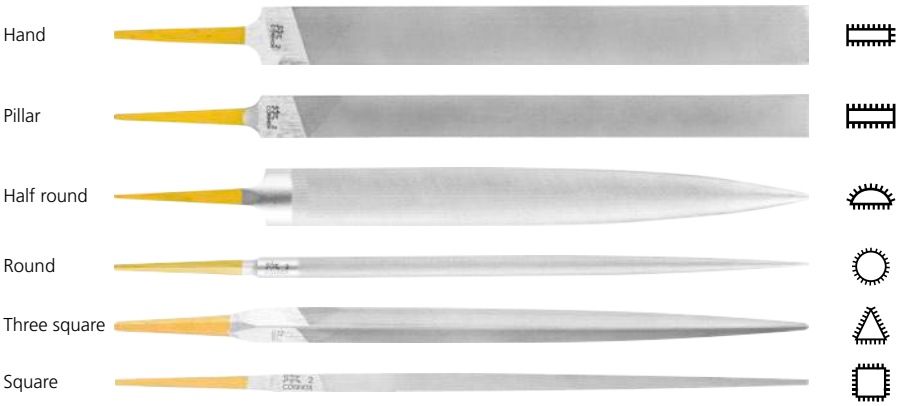
Workpiece materials:
steels up to 370 HV (38 HRC)

Applications:
deburring, surface work, work on edges (chamfering, rounding), fine finishing



Profile	Length [Inches]	Cross-section [Inches]	Swiss cut and EDP number				Compatible handle EDP	
			00	0	1	2		
Pottance, hand type	4	1/2 x 1/8	12609	12610	12611	12612	11143	12
	6	5/8 x 5/32	12615	12616	12617	12618	11144	12
	8	25/32 x 7/32	12622	12623	12624	12625	11146	12
Pillar, regular	6	1/2 x 5/32	12689	12690	-	12692	11144	12
	8	9/16 x 3/16	12696	12697	-	12699	11146	12
	10	5/8 x 7/32	12702	12703	-	12705	11146	12
Pillar, slim	6	5/16 x 1/8	12724	12725	-	12727	11143	12
	8	3/8 x 3/16	12730	12731	-	12733	11144	12
	10	1/2 x 3/16	12735	12736	-	12737	11144	12
Pillar, extra slim	6	1/4 x 1/8	12747	12748	-	12750	11143	12
	8	5/16 x 1/8	12753	12754	-	12756	11143	12
Warding, flat, thin	6	5/8 x 3/32	-	12894	-	12895	11144	12
Half round	4	1/2 x 1/8	12567	12568	12569	12570	11143	12
	6	5/8 x 3/16	12574	12575	12576	12577	11144	12
	8	7/8 x 1/4	12581	12582	12583	12584	11146	12
	10	1 x 1/4	12587	12588	12589	-	11146	12
Half round, slim	6	1/2 x 1/8	12594	12595	12596	12597	11144	12
Round	4	3/16	-	12785	-	12787	11143	12
	6	1/4	-	12790	12791	12792	11144	12
	8	5/16	-	12797	12798	12799	11145	12
Three square	4	1/4	-	-	12868	12869	11143	12
	6	3/8	-	12873	12874	12875	11144	12
	8	9/16	-	12879	12880	12881	11145	12
Square	6	1/4	-	12848	12849	12850	11144	12
	8	5/16	-	12854	12855	12856	11145	12
Crossing	6	5/8 x 3/16	-	-	-	12542	11144	12
Knife	6	11/16 x 3/16	-	12654	-	12656	11144	12
	8	7/8 x 3/16	-	12659	-	12661	11146	12
Barrette	6	5/8 x 3/16	-	12508	-	12510	11144	12
	8	7/8 x 3/16	-	12512	-	12513	11146	12

Precision files
Swiss pattern CORINOX® machinists files



CORINOX® machinists files

CORINOX® machinists files are designed for use on stainless steels and exotic alloys. With a surface hardness of 1,200 HV (Vickers Scale), 70 HRC (Rockwell Scale), these files offer excellent wear resistance and long service life.

Their specially coated surface leaves no corrosive residue on the workpiece and effectively resists loading.

Advantages:
- Extremely wear-resistant and sturdy due to high surface hardness.
- Resistant to loading.
- Chips can be easily removed by gently knocking the file against a hard surface.

Workpiece materials:
stainless steel (INOX), high-temperature-resistant materials, hard non-ferrous metal, fibre-reinforced duroplastics (GRP, CRP)

Applications:
deburring, surface work, work on edges (chamfering, rounding), fine finishing

Profile	Length [Inches]	Cross-section [Inches]	Swiss cut and EDP number			Compatible handle EDP	
			00	0	2		
Hand	6	5/8 x 5/32	15100	15101	-	11144	12
	8	25/32 x 7/32	15103	15104	15105	11146	12
	10	31/32 x 1/4	15133	15134	15135	11146	12
Pillar	6	1/2 x 5/32	15106	15107	-	11144	12
	8	9/16 x 7/32	15109	15110	15111	11146	12
Half round	6	9/32 x 5/32	-	15113	-	11144	12
	8	3/4 x 7/32	-	15116	15117	11146	12
Round	8	5/16	-	15122	15123	11145	12
Three square	8	5/8	-	15128	15129	11145	12
Square	6	7/32	-	15131	15132	11144	12

CORINOX® needle files

CORINOX® needle files are designed for ultra-fine, intricate stock removal on stainless steels and exotic alloys. With a surface hardness of 1,200 HV (Vickers Scale), 70 HRC (Rockwell Scale), these files offer excellent wear resistance and long service life.

Their specially coated surface leaves no corrosive residue on the workpiece and effectively resists loading.

Advantages:
- Extremely wear-resistant and sturdy due to high surface hardness.
- Resistant to loading.
- Chips can be easily removed by gently knocking the file against a hard surface.
- Can be used with or without needle file holders due to textured forged tangs.

Workpiece materials:
stainless steel (INOX), high-temperature-resistant materials, hard non-ferrous metal, fibre-reinforced duroplastics (GRP, CRP)

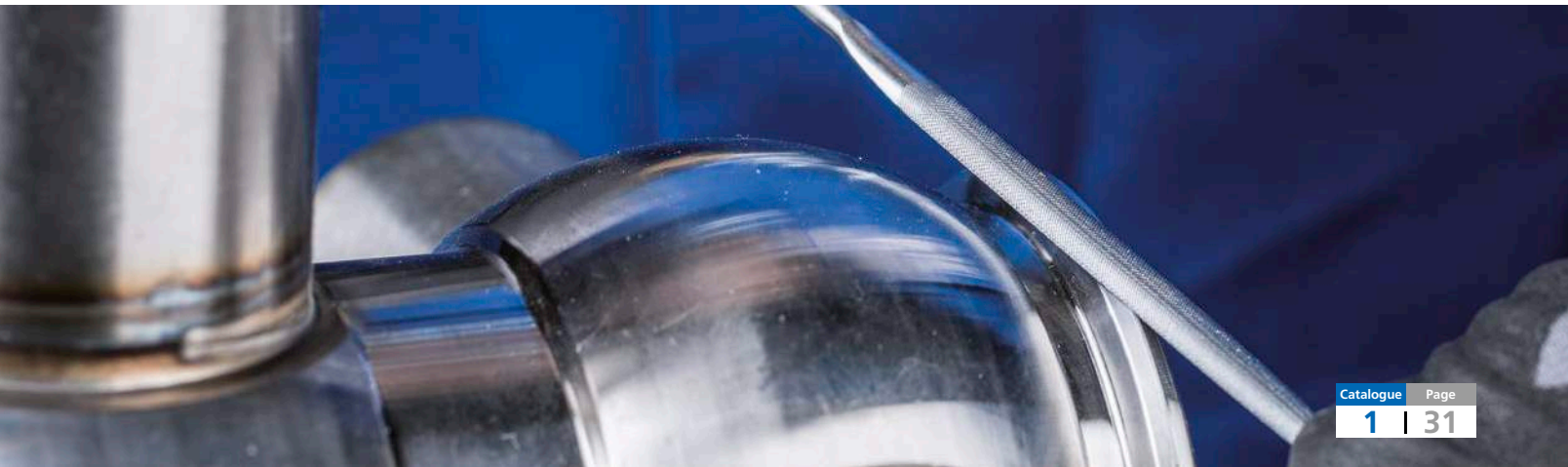
Applications:
deburring, surface work, work on edges (chamfering, rounding), fine finishing

Accessories:
Needle file holder plastic
EDP 16075 (see page 52)

Needle file holder wood
EDP 16076 (see page 52)

Quick-mounting handle
EDP 16174 (see page 52)

Profile	Length [Inches]	Shank dia. [Inches]	Swiss cut and EDP number		
			0	2	
Flat	7	5/32	15201	15203	12
Hand	7	5/32	15211	15213	12
Three square	7	5/32	15221	15223	12
Square	7	5/32	15231	15233	12
Round	7	5/32	15241	15243	12
Half round	7	5/32	15251	15253	12



Precision files
Swiss pattern needle files

Needle files

PFERD needle files are highly recommended for work on the smallest surfaces, breakthroughs, geometries, profiles and radii.

Advantages:
- Can be used with or without a needle file handle due to the textured forged tang.

Workpiece materials:
steels up to 370 HV (38 HRC)

Applications:
deburring, fine finishing

Ordering notes:
- Needle file cuts 00, 1, and 3, which are not listed in the table, are available by special order. Please call for more information.

Accessories:

Needle file holder plastic
EDP 16075 (see page 52)

Needle file holder wood
EDP 16076 (see page 52)

Quick-mounting handle
EDP 16174 (see page 52)

Profile	Length [Inches]	Cross-section [Inches]	Shank dia. [Inches]	Swiss cut and EDP number			
				0	2	4	
Flat	5-1/2	13/64 x 3/64	7/64	12011	12050	-	12
	6-1/4	7/32 x 3/64	1/8	12012	12051	-	12
Hand	5-1/2	13/64 x 3/64	7/64	12029	12068	-	12
	6-1/4	7/32 x 3/64	1/8	12030	12069	-	12
Crossing	5-1/2	3/16 x 5/64	7/64	-	12065	-	12
	6-1/4	13/64 x 5/64	1/8	12027	12066	-	12
Three square	5-1/2	11/64	7/64	12008	12047	-	12
	6-1/4	9/64	1/8	12009	12048	-	12
Square	5-1/2	3/32	7/64	12005	12044	-	12
	6-1/4	3/32	1/8	12006	12045	-	12
Round	5-1/2	7/64	7/64	12002	12041	12078	12
	6-1/4	1/8	1/8	12003	12042	12079	12
Knife	5-1/2	7/32 x 1/16	7/64	-	12053	-	12
	6-1/4	15/64 x 5/64	1/8	12015	12054	12091	12
Half round	5-1/2	13/64 x 1/16	7/64	12017	12056	-	12
	6-1/4	7/32 x 5/64	1/8	12018	12057	-	12

Needle file sets

Contains an application-oriented selection of needle files.

Contents:
12 needle files (one file each):
- flat
- hand
- crossing
- three square
- square
- round
- knife
- half-round
- barrette
- flat with round edges
- hand with round edges
- crossing oval

Accessories:
Needle file holder plastic
EDP 16075 (see page 52)

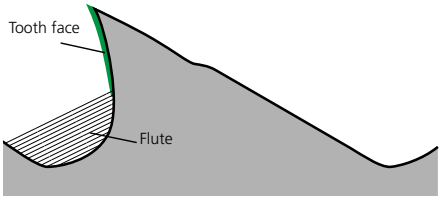
Needle file holder wood
EDP 16076 (see page 52)

Quick-mounting handle
EDP 16174 (see page 52)

Length [Inches]	Swiss cut and EDP number		Contents [pcs.]	
	0	2		
6-1/4	12039	12150	12	1

Milled tooth files
Car body files

Cross section of a file tooth
Enlarged 10x



Cross section of a car body file
Illustration of convex shape

PFERD car body files – for more than just automotive body work!

They are ideal for any surface work on sheet metal, non-ferrous metals and plastics requiring a particularly smooth and scratch-free finish. The surfaces can be painted immediately after filing. No subsequent polishing is necessary, as the file leaves no scratches. The positive rake angle, the convex shape and the unsurpassed sharpness of the teeth provide outstanding filing performance and an optimum surface quality for professional users of PFERD milled car body files.

Ideal tooth shape

The teeth of the car body files are milled from solid material, using a highly specialized cutting process. Each individual tooth is designed to ensure that the chip rolls up before the rounded tooth face and is found in the large flute. A special finishing treatment produces razor-sharp tooth edges that give these files an outstanding stock removal rate. The car body files are available in five radial cut versions and one cross-cut.

Convex shape prevents scratches

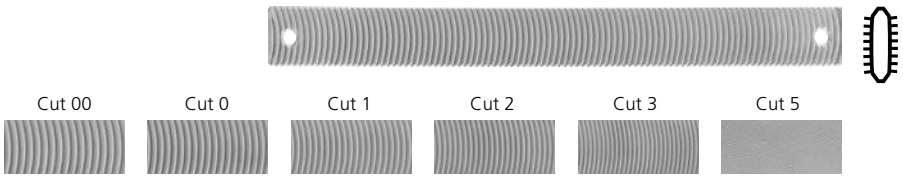
The convex shape means that the cutting area is not flat, but higher in the middle than around the file edges. The height difference is about 1/64". This special cross-section shape prevents the edges of the file from coming into contact with the workpiece during processing, thus preventing scratches.

Workpiece materials:

- Aluminum
- Steels up to 370 HV (38 HRC)

Applications:

- Leveling
- Surface work



Car body files

Car body file blades can be tensioned as desired in the car body file holder and adapted to match the surface contour of the workpiece.

Advantages:

- The bending radius of the file can be steplessly adjusted via the tensioning system.
- Convex shape of the file prevents unwanted scratches.
- Can be used in a focused manner.
- Razor-sharp tooth edges.

Length [Inches]	Cross-section [Inches]	Cut	Type	Number of teeth per Inch	EDP number	
12	1-5/32 x 7/32	1	coarse	9	14001	1
		2	medium	10	14002	1
		3	fine	12	14003	1
14	1-11/32 x 15/64	00	special coarse	7	14004	1
	1-11/32 x 7/32	0	extra coarse	8	14005	1
		1	coarse	9	14006	1
		2	medium	10	14007	1
		3	fine	12	14008	1
		5	*extra fine	20	14000	1

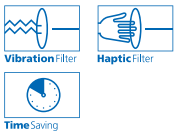
* Extra fine cut available in chisel cut file.

Adjustable holders for car body files

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

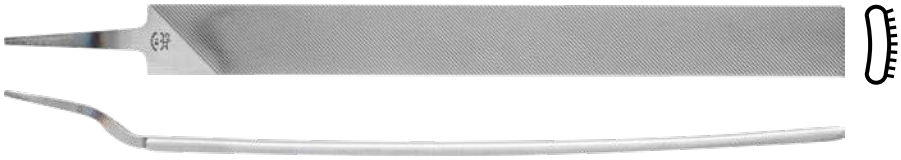
Advantages:
- The bending radius of the file can be steplessly adjusted via the tensioning system.
- Particularly lightweight plastic design without plasticizer.
- Can be used in a focused manner or over a wide area as the car body file can be used curved as well as straight.
- Enables work with low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

PFERDVALUE®:



Compatible for file length [Inches]	EDP number	
12	14012	1
14	14013	1

Car body files, tanged type



File curved in longitudinal and transverse direction (convex), tanged. Cut on one side.

Advantages:
- Convex shape of the file prevents unwanted scratches.
- Can be used in a focused manner.

Applications:
deburring, work on edges (chamfering, rounding)

Length [Inches]	Cross-section [Inches]	Number of teeth per inch	Cut	EDP number	Compatible handle EDP	
14	1-3/8 x 5/16	15	Bastard (cut 1)	14009	11148	5
	1-3/8 x 5/16	18	Smooth (cut 3)	14010	11148	5

Milled tooth files
Paint peeler

Paint peeler

The small design of the paint peeler enables work in hard-to-reach areas. It is used for finishing the smallest painted surfaces with the corresponding plastic holder. This plastic holder allows for very fine adjustment of the file using two adjusting screws.

Advantages:
- Convex shape of the file prevents unwanted scratches.
- Precision-cut, razor-sharp teeth provide a very high-quality, scratch-free surface finish.
- Surfaces can be painted or processed immediately.
- File blade can be used on both sides.

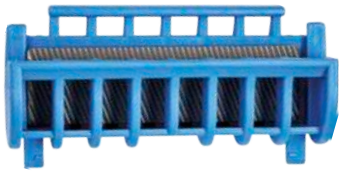
Industry:
car, car body and trailer construction, furniture manufacture

Workpiece materials:
aluminum, steels up to 370 HV (38 HRC)

Length [Inches]	Cross section [Inches]	Cut and EDP number Smooth (cut 3)	
Paint peeler			
2	1-1/2 x 3/16	14014	1
Replacement file for paint peelers			
2	1-1/2 x 3/16	14015	10

Edge sharpener

EDP 13025



EDP 13026

Edge sharpener

Rectangular file in a special plastic holder, straight cut on two sides. Ideal for easy and fast repair and for deburring on the bars of chain saws. Regular maintenance extends the service life of the bar and saw chain. Increases cutting precision and safety.

Advantages:
- The special holder enables easy tool control and exact, right-angled positioning of the chamfer file on the workpiece.
- Also excellent for sharpening ski edges.

Workpiece materials:
aluminum, grey cast iron, steels up to 370 HV (38 HRC)

Applications:
work on edges, chamfering, deburring

Length [Inches]	Cross-section [Inches]	Cut and EDP number Second (cut 2)	Replacement file EDP	
Edge sharpener				
4-1/2	1-1/4 x 1/4	13025	13026	1
Replacement file for edge sharpener				
4-1/2	1-1/4 x 1/4	13026	-	10

Milled tooth files from PFERD are highly recommended for coarse stock removal on soft materials such as lead babbitts. The highly abrasive milled tooth geometry with large flutes prevents loading.

Advantages:

- Very aggressive.
- No loading due to the large flutes.

Recommendations for use:

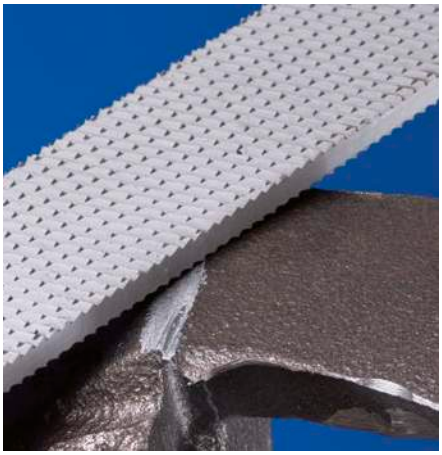
- Choose cut 1 with 8 teeth per inch for coarse stock removal.
- Choose cut 2 with 11 teeth per inch for medium stock removal.

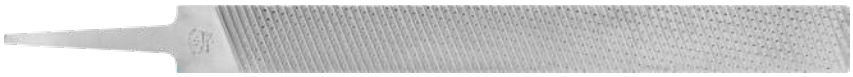
Workpiece materials:

- Aluminum
- Grey cast iron
- Steels up to 370 HV (38 HRC)
- Cast steel
- Copper
- Brass

Applications:

- Leveling
- Deburring
- Surface work
- Work on edges (chamfering, rounding)





Babbitt, flat

Rectangular file with cuts on three sides. Version with tang. Straight cut with chip breaker on the flat sides, straight cut on the high edge. Suitable for filing rectangular geometries.

Length [Inches]	Cross-section [Inches]	Cut and EDP number		Compatible handle EDP	
		Bastard (cut 1)	Second (cut 2)		
10	1-1/32 x 9/32	13001	-	11146	5
12	1-7/32 x 5/16	13003	13004	11148	5
14	1-3/8 x 11/32	13006	-	11146	5

Babbitt, half round, hollow

Half-round file, hollow and tapered. Version with tang. With chip breaker on the half-round side, straight cut on one side. Ideal for work on radii and for filing of half-round shapes.

Length [Inches]	Cross-section [Inches]	Cut and EDP number	Compatible handle EDP	
		Bastard (cut 1)		
10	7/8 x 9/32	13009	11146	5
12	1-1/16 x 11/32	13011	11148	5

Rasps
Wood rasps

PFERD quality rasps which are ideal for coarse stock removal of wood.

Advantages:

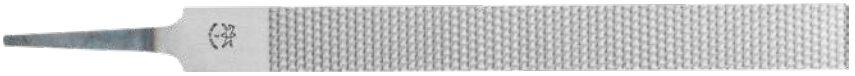
- High stock removal rate.
- Good chip removal.

Workpiece materials:

- Wood

Applications:

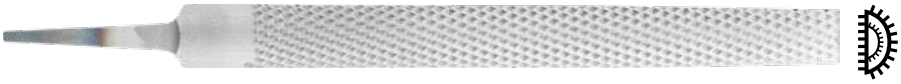
- Deburring
- Surface work
- Chamfering
- Work on edges (chamfering, rounding)



Wood rasps, hand

Rectangular file with cut on three sides, flat sides with rasp cut, one edge with file cut, one edge uncut. Version with tang.

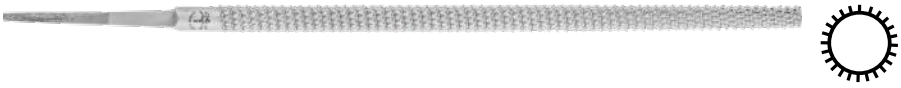
Length [Inches]	Cross-section [Inches]	Cut and EDP number		Compatible handle EDP	
		Bastard (cut 1)	Second (cut 2)		
Without handle					
8	25/32 x 13/64	-	15003	11146	10
10	1 x 1/4	15004	15005	11146	10



Wood rasps, half round

Half-round file, tapered with rasp cut on two sides. Version with tang.

Length [Inches]	Cross-section [Inches]	Cut and EDP number		Compatible handle EDP	
		Bastard (cut 1)	Second (cut 2)		
Without handle					
8	25/32 x 15/64	15008	15009	11146	10
10	31/32 x 9/32	15011	15012	11146	10
12	1-5/32 x 11/32	15014	-	11148	5



Wood rasps, round

Round file, tapered with circumferential rasp cut. Version with tang. Suitable for work on radii and for filing profiles with inner radii.

Length [Inches]	Cross-section [Inches]	Cut and EDP number	Compatible handle EDP	
		Second (cut 2)		
Without handle				
8	5/16	15016	11145	10
10	3/8	15017	11145	10

Hoof plane

Rectangular file, tanged and cut on four sides. One side fine, one side rough. Ideal for straightening the hoof surface, for finishing the hoof wall, for filing the toes and for work on the hoof nails after undercutting.

Advantages:
- Long service life.
- Very good surface quality.
- Saves on labour and reduces the strain on the back.
- Comfortable filing for humans, and easy on the animal.

Workpiece materials:
wood, horn

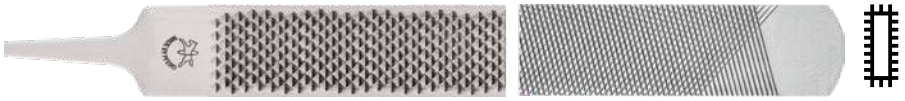
Recommendations for use:
- The PFERD hoof plane file can be used with commercial file handles in the corresponding sizes.

PFERDVALUE®:

Waste Saving Time Saving

Length [Inches]	Cross-section [Inches]	Cut and EDP number Milled	Compatible handle EDP	
14	1-3/4 x 1/4	15040	11147	5

Horse rasp, tanged type



Rectangular file, tanged and cut on four sides, one flat side with a rasp cut, one flat side with a cross cut, two edges with a file cut.

Advantages:
- Very robust.

Length [Inches]	Cross-section [Inches]	Cut and EDP number Rasp/filing cut 1	Compatible handle EDP	
14	1-3/4 x 3/16	15039	11147	5

Needle rasp set

Contains an application-oriented selection of needle rasps for work in hard-to-reach areas.

Contents:
Six needle rasps (one file each):
- flat
- hand
- three square
- square
- round
- half-round

Advantages:
- Can be used with or without a file handle due to the textured forged shanks.

Workpiece materials:
wood, soft stones, plastics, horn

Applications:
deburring, surface work, work on edges, chamfering, rounding

Ordering notes:
- Supplied in a clear, durable plastic pouch to protect against dirt and damage.

Length [Inches]	Contents [pcs.]	Cut and EDP number Second (cut 2)	
5-1/2	6	15065	1

Hand deburrer

Hand deburrer for efficient deburring, chamfering and reworking of different materials and contours. Hard-to-reach areas, bores, inner and outer diameters, thread and grooves can be worked on effortlessly by hand.

Available products:
- Three **deburring blades** for work on steel, aluminum, non-ferrous metals, cast iron, plastics and other soft materials.
- One **mini blade** for general work on the smallest geometries made of various materials.
- Two rotatable **deburring countersinks** for general work on bores made of various materials.

Advantages:
- Three different, easily changeable tungsten carbide deburrers (blades, mini-blades and countersinks).
- Easy to control and use with the special holder.
- Outstanding adjustment to the workpiece contours.
- The pivot-mounted adapter system makes handling and changing the deburrer very easy.
- Ergonomic file handle protects hands against sharp edges and prevents the tool from rolling away.

PFERDVALUE®:

HapticFilter

Shank dia [Inches]	Max. width [Inches]	Use for	EDP number	
Holder for hand deburrer				
-	-	all types	19500	1
Deburring blades				
1/8	1/8	steel, aluminum	19510	10
	1/8	plastics, other soft materials	19512	10
	1/8	non-ferrous metals, cast iron	19514	10
Mini-blade				
1/8	1/16	general use	19520	1
Deburring countersink				
1/8	3/8	general use	19530	1
	5/8	general use	19532	1

Used in many industries

The use of efficient products for work on surfaces and cutting materials is an important factor for ensuring profitability in many processes and industries.

For many materials and applications, products with super-hard abrasives like diamond or CBN (cubic boron nitride) abrasives provide a cost-effective alternative to conventional products.

With their high hardness, they have a particularly long service life and are an established problem-solver in many industries:

- Automotive industry and suppliers
- Energy industry
- Foundries (grey and nodular cast iron)
- Ceramic industry
- Plastics processing (GRP/CRP)
- Machine and plant construction
- Medical equipment
- Tool and mold construction
- Tool industry

PFERD quality

PFERD diamond products are developed, manufactured and tested in accordance with the strictest quality requirements. Research and development, our in-house and plant construction, and the continuous testing to quality and safety standards in our internal laboratories all guarantee high PFERD quality.

PFERD quality management is certified according to ISO 9001.

Associations

PFERD is an active member of the Federation of European Producers of Abrasives (FEPA) and the Organization for the Safety of Abrasives (oSa). The national and international activities of those associations include the areas of safety, standardization, classification and quality assurance.

Additional diamond tools in the PFERD product range

COMBIDISC® diamond abrasive discs:
COMBIDISC® is a comprehensive range of quick-change discs for work on surfaces. COMBIDISC® diamond abrasive discs are ideal for work on wear-resistant coatings and hard facings made from tungsten carbide, chromium carbide, titanium carbide, etc.

Further information and ordering data can be found in catalogue section 4.

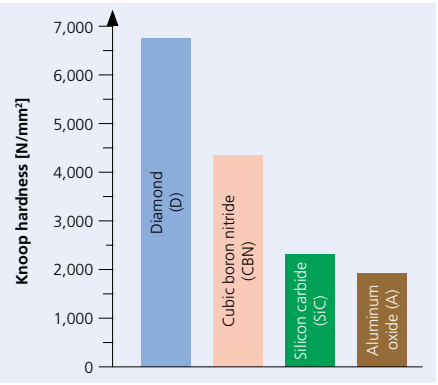
Super-hard abrasives

Diamond and CBN form the group of super-hard abrasives.

Diamond is the hardest naturally occurring solid. It consists of pure carbon in a crystalline structure. For grinding products, the diamonds used are generally synthetic, produced at very high temperatures under high pressure. The properties of the abrasive can be optimized for the subsequent application of the product.

CBN (cubic boron nitride) is the second-hardest solid known. It consists of boron and nitrogen in a crystalline structure.

For work on certain materials, diamond and CBN products are an economic alternative to tools with conventional abrasives such as aluminum oxide and silicon carbide. Diamond and CBN grain is much harder and its cutting edges are very resistant to blunting. Diamond and CBN tools therefore enjoy a very long service life.



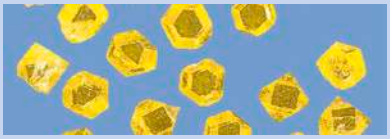
Materials

Diamond and CBN abrasives are used when materials cannot be machined with conventional abrasives such as aluminum oxide or silicon carbide. They also provide a more economical solution for many applications.

Due to high chemical wear, rotating diamond tools are not suitable for work on steel. CBN tools are used for these applications. The two abrasives complement each other ideally. In the adjacent overview, you will find various materials associated with the abrasives.

Using the colour coding system, the abrasive can be identified immediately.

Diamond = blue



- Duroplastics, in particular with glass or carbon fibre reinforcement (GRP and CRP)
- Ferrite (magnetic material)
- Glass
- Graphite and synthetic carbon
- Grey and nodular cast iron
- Tungsten carbide
- Nickel- or titanium-based superalloys
- Technical ceramics
- Wear-resistant coatings (powder metal alloys and hardfacing alloys)

CBN = red

- Case-hardened steels
- Roller-bearing and ball-bearing steels
- Tool steels
- Other hardened steel materials with a hardness from approx. 580 HV (54 HRC)

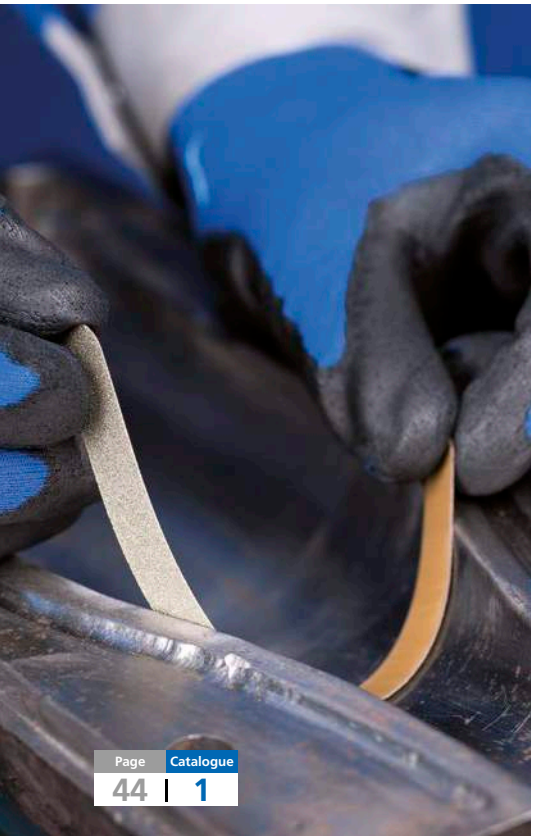
For information on diamond products made to order see page 46.

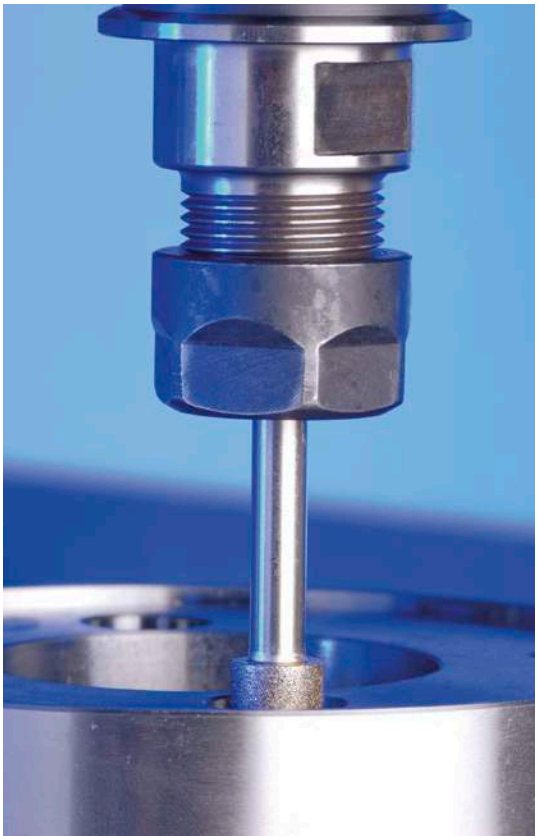
Grit sizes

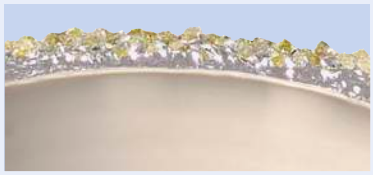
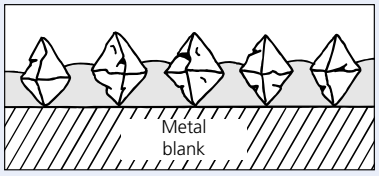
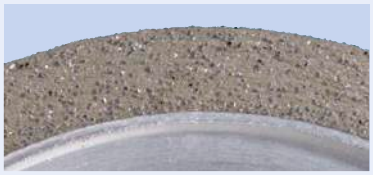
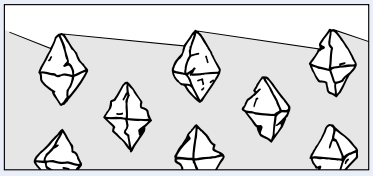
The grit size data for diamond and CBN products relates to the average grit diameter in [µm]. Thus, the higher the number specified in the grit designation, the coarser the grit size. A coarse grit size increases stock removal and the surface roughness of the workpiece.

Selecting the optimum grit size depends on the intended application, the material to be machined, the power tool drive employed and a wide range of other factors. As a general rule, the harder the material to be worked and the finer the desired surface roughness, the finer the selected grit size should be.

Grit sizes	Grit designations [µm] ISO 6106 (FEPA Standard)		Equivalent US mesh number/inch US Mesh Size
	Diamond	CBN	
Micro-grit	D 25 / D 30	-	-
Very fine Smaller Grit size Larger Very coarse	D 46	B 46	325/400
	D 54	B 54	270/325
	D 64	B 64	230/270
	D 76	B 76	200/230
	D 91	B 91	170/200
	D 107	B 107	140/170
	D 126	B 126	120/140
	D 151	B 151	100/120
	D 181	B 181	80/100
	D 213	B 213	70/80
	D 251	-	60/70
	-	B 252	60/80
	D 301	B 301	50/60
	D 357	B 357	45/50
	D 427	B 427	40/50
	D 502	-	35/45
	D 602	-	30/40
	D 711	-	25/30
	D 852	-	20/30
	D 1001	-	16/20





	Electroplated bond	Resinoid and metal bond
Bond type	  	  
Product construction	The main characteristic of electroplated products is the monolayer coating with diamond or CBN grit. The coating is provided by the fixation of abrasive grit onto a metal blank via an electrochemically deposited nickel layer. The nickel layer thickness is around half of the grit diameter used.	The abrasive coating of resinoid-bonded diamond and CBN products consists of abrasive grit, bond and fillers. The bond is tightly pressed, i.e. it has no pores. The metal bond is closely related to the resinoid bond. It is characterized by a higher grit retention strength and dimensional stability when compared to the resinoid bond.
Advantages	■ Shorter work time due to the coating type ■ Reduction in unproductive idle times because dressing and profiling are not required ■ Reduction in tool costs due to the monolayer coating and the possibility of recoating ■ Individual product profiles ■ Constant product geometry due to the monolayer coating	Resinoid bond: ■ The characteristics of the resinoid bond can be optimally adjusted to the application ■ Easy to dress Metal bond: ■ High dimensional stability and wear resistance
Applications	Electroplated tools are problem solvers for work on various materials, such as particularly hard or abrasive materials. Among other things, the characteristics of the electrochemically coated products can be adapted to the application through the selection of the grit sizes. Electroplated diamond and CBN products are used for both wet and dry grinding.	Resinoid-bonded diamond and CBN grinding discs are often used for grinding, i.e. sharpening tungsten carbide or HSS tools, as well as in other production grinding processes. Metal-bonded products are used for grinding glass and industrial ceramics. Resinoid and metal-bonded diamond and CBN products are used for both wet and dry grinding, according to the product specification.
	Pages 48-51	**on request**

Diamond products
Products made to order

PFERD specializes in consultancy for and the production of customer-specific electroplated diamond and CBN products.

Almost all tool blank geometries can be coated with various grit sizes. The electroplated bond also enables economic production of small lot sizes. Because of the diverse possibilities, our production can respond to individual customer requirements with a high degree of flexibility.

Our technical advisers will be happy to visit you on-site to develop individual product solutions for your applications.

Get the best possible advice for super-hard solutions!

1. We analyze your application.

Contact us at pferd.com and arrange an appointment with our experienced sales representatives and technical specialists.

If you already have precise ideas about the desired product, you can provide us with a technical drawing or a dimensioned sketch and information on the desired abrasives and grit sizes.

Our employees will analyse your application with you on-site and develop the most economic individual tool solution for you, after which you will receive a formal quotation. Three production variants are possible:

2. We develop the solution.

Complete production
From design and construction, through manufacture of the tool blank (steel, stainless steel or brass) and its coating with diamond or CBN grit, to the balancing of the finished product, PFERD offers you all the production steps from a single source. This guarantees you the highest level of quality, flexibility and on-time delivery.

Coating
Steel, stainless steel or brass blanks provided by the customer can also be coated with diamond or CBN grit. Close cooperation at an early stage is recommended.

Recoating
PFERD offers recoating of blunt tools with steel or stainless steel blanks as an economic alternative to replacement production.
Tools with brass blanks cannot be recoated.

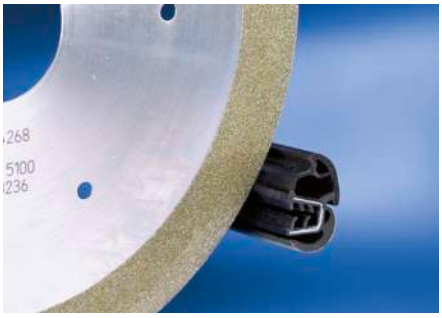
3. Your product is ready for use!

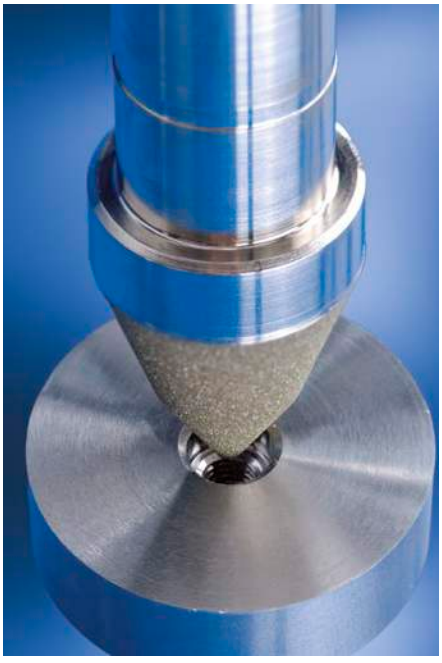
Our flexible production and global logistics network ensure that you receive your new product on time and within your budget.

If desired, your personal sales representative and a technical adviser will set up all the process parameters together with you.

See the quality, performance and economic value of PFERD products for yourself!


PFERD
D 602





Diamond files
General information

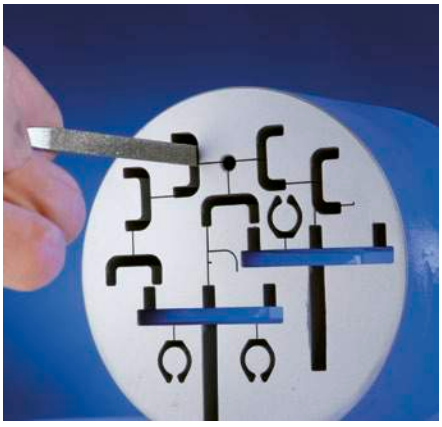
Diamond files are ideal for tasks where conventional files fail due to the hardness of the workpiece material. They also provide a more economical solution for many applications.

Recommendations for use:

- Apply only slight pressure to the file, especially in workpiece edge areas.
- Loaded diamond files can be cleaned in kerosene or anti-static plastic cleaner with a file brush. Alternatively, ultrasonic cleaning is also possible. Often it will suffice to knock the file against a hard object.
- Avoid contact with grease when using these files!

Note:

Diamond files are also used for processing hardened steel. The working temperatures are so low that no chemical wear occurs. This allows the higher hardness of the diamond grain to be exploited for a longer service life.



Diamond flexible files

Flexible diamond files

Flexible diamond files adapt perfectly to workpiece surfaces. Due to their flexibility, they can be used in convex and concave contours with small radii.

Recommendations for use:

- Only use files up to a bending radius of 5/8".

Length [Inches]	Cross-section [Inches]	Coating type	Grit size and EDP number			
			D 76 fine 200/230	D 126 medium 120/140	D 181 coarse 80/100	
6-1/2	1/64 x 9/16	single-sided	04090	04091	04092	5

Diamond semi-flexible files

These semi-flexible diamond files are exceptionally well suited to work on larger surfaces. Convex and concave contours can be worked on with relatively little effort.

Length [Inches]	Cross-section [Inches]	Coating type	Grit size and EDP number		
			D 64 fine 230/270	D 126 coarse 120/140	
6-5/8	1-3/16 x 1/32	complete	04100	04102	1
14	1-3/8 x 3/64	complete	04103	04101	1

Diamond needle files

Diamond needle files are designed for general use in tool making.
Diamond needle files in extra slim design are ideal for work on deep-set and narrow contours.

Accessories:
Needle file holder plastic
EDP 16075 (see page 52)

Needle file holder wood
EDP 16076 (see page 52)

Quick-mounting handle
EDP 16174 (see page 52)

Profile	Overall length [Inches]	Coating length [Inches]	Cross-section [Inches]	Shank dia. [Inches]	Grit size and EDP number			
					D 91 fine 170/200	D 126 medium 120/140	D 181 coarse 80/100	
Hand	5-1/2	2-3/4	7/32 x 1/16	1/8	04027	04014	04001	1
Hand with rounded edges	5-1/2	2-3/4	7/32 x 1/16	1/8	04028	04015	-	1
Flat	5-1/2	2-3/4	7/32 x 1/16	1/8	04029	04016	04003	1
Three square	5-1/2	2-3/4	9/64	1/8	04030	04017	04004	1
Square	5-1/2	2-3/4	7/64	1/8	04031	04018	04005	1
Half-round	5-1/2	2-3/4	7/32 x 1/16	1/8	04032	04019	04006	1
Round	5-1/2	2-3/4	1/8	1/8	04033	04020	04007	1
Knife	5-1/2	2-3/4	13/64 x 1/16	1/8	04034	04021	04008	1
Feather edge	5-1/2	2-3/4	13/64 x 7/64	1/8	04035	04022	-	1
Crossing oval	5-1/2	2-3/4	13/64 x 3/32	1/8	04036	04023	-	1
Barrette	5-1/2	2-3/4	13/64 x 5/64	1/8	04037	04024	-	1

Diamond needle file sets

Diamond needle file sets are supplied in a sturdy, practical plastic box which protects the files from damage. This is ideal for keeping in the tool box or workbench.

Contents :
1 piece each:
- hand
- three square
- square
- half-round
- round

Accessories:
Quick-mounting handle
EDP 16174 (see page 52)

Needle file holder plastic
EDP 16075 (see page 52)

Needle file holder wood
EDP 16076 (see page 52)

Overall length [Inches]	Coating length [Inches]	Shank dia. [Inches]	Grit size and EDP number			
			D 91 fine 170/200	D 126 medium 120/140	D 181 coarse 80/100	
5-1/2	2-3/4	1/8	04038	04025	04012	1

Diamond files
Diamond riffler files

Diamond riffler file set

The diamond riffler file set is supplied in a sturdy, practical plastic box which protects the files from damage. This is ideal for keeping in the tool box or workbench.

Contents:
1 piece each:
- crossing oval
- hand
- square
- three square
- round

Overall length [Inches]	Coating length [Inches]	Grit size and EDP number	
		D 126 medium 120/140	
6	1	04080	1

Diamond machinists files

Diamond machinists files

Ideal for use on hardened steels and hard metal components such as cutting, punching, press/extrusion and profiling dies, as well as for filing workpieces made of glass, ceramics, and fibre-reinforced plastics.

PFERDVALUE®:

HapticFilter

Profile	Overall length [Inches]	Coating length [Inches]	Cross-section [Inches]	Grit size and EDP number		Included handle EDP	
				D 151 coarse 100/120	D 251 very coarse 60/70		
With handle							
Hand	8	7-1/8	7/8 x 7/32	04060	04065	11146	1
Three square	8	7-1/8	9/16	04061	-	11146	1
Square	8	7-1/8	5/16	04062	-	11145	1
Half-round pointed	8	7-1/8	7/8 x 1/4	04063	04068	11146	1
Round	8	7-1/8	5/16	04064	-	11145	1

Ergonomic file handles

Ergonomic file handles for comfortable and safe work.

Advantages:
- Protects hands against sharp edges and corners.
- Ergonomic shape with optimized haptics.
- Files do not roll away.
- Soft plastic on the outside with a hard, stable inner part.
- Without plasticizer.

PFERDVALUE®:

HapticFilter

Suitable for file length [Inches]	Overall length [Inches]	EDP number	Suitable for	
4, 6	4-1/4	11143	key files	10
		11144	all tangs	10
8, 10	4-1/2	11145	profiles three square, square, round, special profiles	10
		11146	profiles hand, flat, half-round	10
12, 14	4-1/2	11148	profiles three square, square, round, special profiles	10
		11147	profiles hand, flat, half-round	10

Plastic file handles

Plastic file handles for good guidance and power transmission.

Advantages:
- Wide collar guarantees fatigue-free work and increases safety.
- Good force transmission and control of the file.
- Air chambers help absorb hand moisture.
- File handle made from sturdy plastic.
- Contains no plasticizers.

Ordering notes:
- Available in four different types to accommodate most tanged files.

Compatible for file length [Inches]	Overall length [Inches]	EDP number	Suitable for	
4, 6	3-1/2	11130	key files	10
		11131	all tangs	10
8, 10	4-1/4	11132	all tangs	10
12, 14	5-25/32	11133	all tangs	10

Plastic file handle, quick-mounting type

Quick-mounting handle for needle files, diamond needle files and smaller machinists and precision files.

Advantages:
- Reliably clamps the file tangs into the handle by simply twisting the two halves of the handle.

Compatible for file length [Inches]	Suitable for tang diameter [Inches]	Overall length [Inches]	EDP number	Description	
5-1/2, 6-1/4, 7, 8	7/64, 1/8, 5/32	3-1/2	16174	Quick mounting plastic handle	10

EDP 16075

EDP 16076

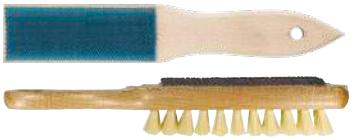
Needle file holder

Quick-mounting handles for needle files with 1/8 - 11/64" tang diameter.

Advantages:
- Handy and lightweight.
- Available in two materials.

Compatible for file length [Inches]	Overall length [Inches]	EDP number	Description	
5-1/2, 6-1/4, 7	4	16075	Needle file holder plastic	10
	3-5/8	16076	Needle file holder wood	10

File cards



File card and brush

The file brush is for easy cleaning of clogged files. Comes with a robust handle made from wood and wear-resistant steel wire.

Advantages:
- Easy cleaning.
- Long service life.

Applications:
cleaning

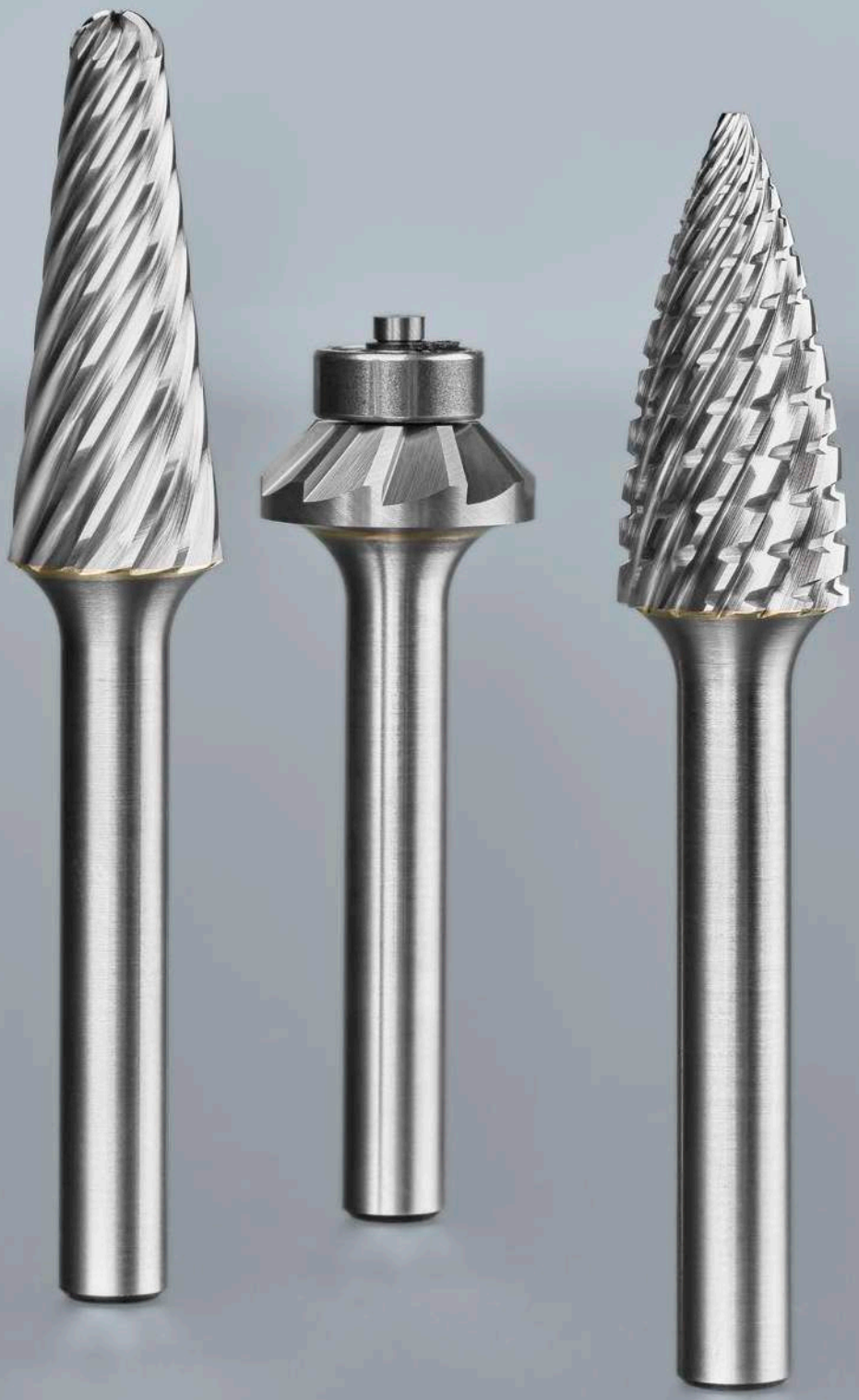
Length [Inches]	EDP number	Description	
9-1/8	17146	File card	5
9-1/8	17147	File card and brush	5

Carbide burs and bi-metal hole saws

PFERD

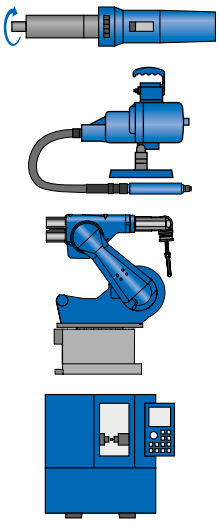
2

2



Carbide burs and bi-metal hole saws
Table of contents

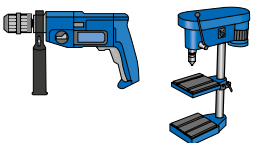
Milling



Carbide burs

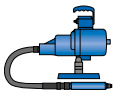
Bur sets, extended shank burs, and HICOAT® coated burs can be found on the pages for the respective bur cuts.

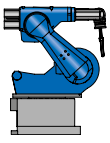
Cutting out holes

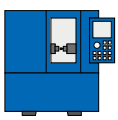


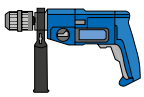
Bi-metal hole saws

 Straight grinder

 Flexible shaft

 Robot

 CNC machines

 Power drill

 Drill press

Visit pferd.com for more information.

PFERD carbide burs and bi-metal hole saws are developed, manufactured and tested in accordance with the strictest quality requirements. Research and development, our in-house and plant construction, and the continuous testing to quality and safety standards in our internal laboratories all guarantee high PFERD quality.

PFERD quality management is certified according to ISO 9001.

Technical customer support

PFERD offers individual targeted support to solve unique application problems. Our experienced sales representatives and technical applications specialists are available to assist you.

Contact your local sales representative or visit us at pferd.com to learn more.

Packaging

PFERD carbide burs and bi-metal hole saws are packaged to provides optimum protection. All burs are supplied individually packed in a sturdy plastic box. Bi-metal hole saws are supplied in a practical card box. Packaging can also be easily displayed on **PFERD**TOOL-CENTER units. The packaging labels feature easy identification of product features and part number.

PFERDTOOL-CENTER

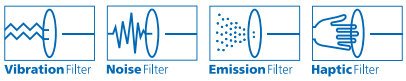
The **PFERD**TOOL-CENTER is a premium display system that can be custom-designed to meet your specific product and presentation requirements, including lockable cases specially designed for displaying carbide burs. For more information from a PFERD expert, contact us today at pferd.com.

PFERDVALUE® – Your added value with PFERD

Results from the PFERD test laboratories as well as from the product tests by independent testing institutes prove: PFERD products offer measurable added value.

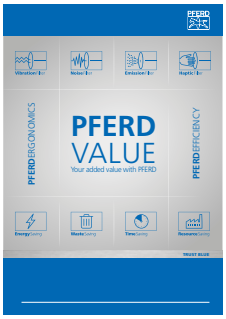
Discover **PFERD**ERGONOMICS® and **PFERD**EFFICIENCY®:

As part of **PFERD**ERGONOMICS®, PFERD offers ergonomically optimized products and power tools that contribute to greater safety and working comfort, and thus to health protection.



As part of **PFERD**EFFICIENCY®, PFERD offers innovative, high-performance solutions with outstanding added value.

For more information please refer to our brochure "**PFERD**VALUE® – Your added value with PFERD".



Carbide burs and bi-metal hole saws
Quick product selection guide

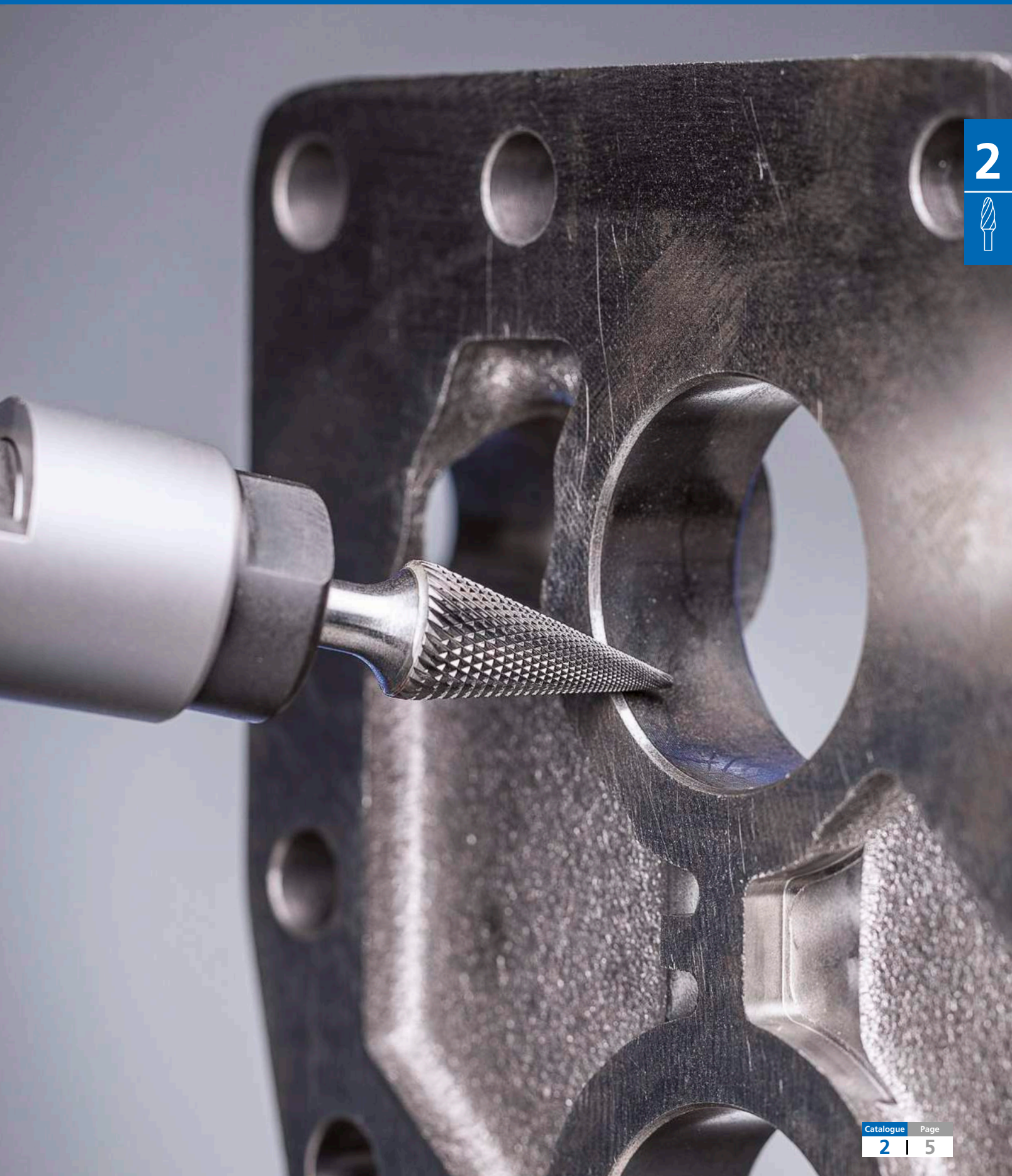
Application	Material group			Application	High-performance line	P.	Performance line	P.	Universal line	P.
Deburring, chamfering, milling out for the preparation of build-up welding, machining weld seams, machining contours, cleaning cast material	Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	STEEL cut	38	OMNI cut	29	Double cut	14
				Fine stock removal	MICRO cut	65	-	-	Single cut	
		Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel	Coarse stock removal	STEEL cut	38	OMNI cut	29	Double cut	
				Fine stock removal	MICRO cut	65	-	-	Single cut	
	Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	INOX cut	43	OMNI cut	29	Diamond cut	14
				Fine stock removal	MICRO cut	65	-	-	-	
	Non-ferrous metals	Soft non-ferrous metals	Aluminum alloys	Coarse stock removal	ALU cut	48	-	-	Single cut	14
				Fine stock removal						
			Brass, copper, zinc	Coarse stock removal	ALU cut	48	OMNI cut	29	Single cut	
				Fine stock removal			-	-		
		Hard non-ferrous metals	Bronze, titanium/ titanium alloys, hard aluminum alloys (high Si content)	Coarse stock removal	ALU cut	48	OMNI cut	29	Diamond cut	
					INOX cut	43				
				Fine stock removal	MICRO cut	65	-	-	Single cut	
		High-temperature-resistant materials	Nickel-based and cobalt-based alloys (engine and turbine construction)	Coarse stock removal	On request	-	-	-	Diamond cut	
				Fine stock removal	MICRO cut	65	-	-	Single cut	
	Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	Coarse stock removal	CAST cut	55	OMNI cut	29	Double cut	14
				Fine stock removal	MICRO cut	65	-	-	Single cut	
Trimming, contour milling, cutting out holes	Plastics, other materials	Thermoplastics, fibre-reinforced plastics (GRP/CRP) with a fibre content > 40 %		Coarse stock removal	ALU cut	48	-	-	-	-

Special applications

Application	High-performance/performance line	Page	Universal line	Page
Work on edges	Carbide burs for work on edges	69	-	-
Applications resulting in broken teeth	Carbide burs – TOUGH cut	59	-	-
Cutting out round holes	-	-	Bi-metal hole saws	73

PFERD

Carbide burs



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Extended shank burs

Tungsten carbide extended shank burs are particularly well suited to working in hard-to-reach areas. PFERD offers long-shank versions for the respective product groups.

Long-shank versions are available with the Double, OMNI, STEEL and TOUGH cuts. All extended shanks can be individually shortened, and additional versions can be custom-made on request.

Please observe the safety regulations for extended shanl burs on page 11.

HICOAT® coatings

PFERD offers carbide burs with HICOAT® coatings to tackle particularly demanding applications. The anti-wear coatings enable effective chip removal due to the improved anti-adhesion characteristics and increase in the product's service life. Two different coatings are available. The HICOAT® coating HC-FEP is specifically designed for iron and steel materials. The HICOAT® coating HC-NFE is mainly used for long-chipping and lubricating aluminum alloys and non-ferrous metals.

Automated applications

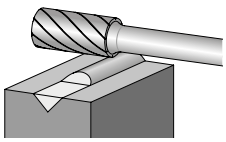
PFERD milling tools can be used on automated machines such as robots and CNC machines. The optimum bur for your application depends on the process requirements.

Our sales representatives and technical applications specialists will be happy to assist you in selecting the most suitable bur.

PFERDPRAXIS **brochures**

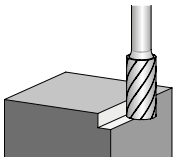
Our **PFERD**PRAXIS brochures contain a wealth of useful information on material properties as well as tips and tricks for using PFERD products on specific materials or for specific applications.

Cylindrical shape



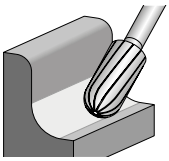
Shape A

Cylindrical shape with end cut



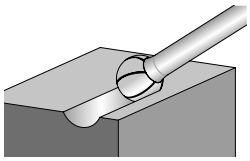
Shape B

Cylindrical shape with radius end



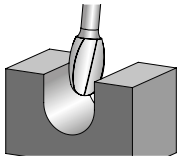
Shape C

Ball shape



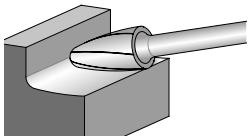
Shape D

Oval shape



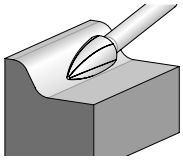
Shape E

Tree shape with radius end



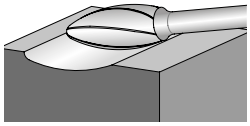
Shape F

Pointed tree shape



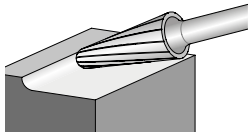
Shape G

Flame shape



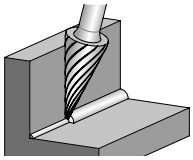
Shape H

Cone shape with radius end



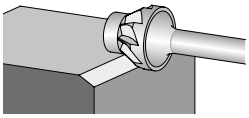
Shape L

Cone pointed shape



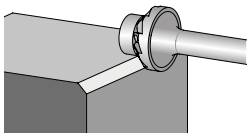
Shape M

EDGE 30°



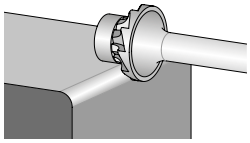
Shape EDGE 30°

EDGE 45°



Shape EDGE 45°

EDGE R-1/8”



Shape EDGE R-1/8”

Carbide burs
PFERD cuts and their application

PFERD cuts for universal applications

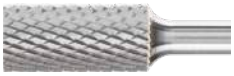
Single cut

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

Double cut

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

Diamond 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 finish.

PFERD cuts for performance applications

OMNI cut

- High stock removal rate on key materials such as steel, cast steel, stainless steel (INOX), non-ferrous metals and cast iron.
- Similar to the double cut but with a significantly higher stock removal rate.

PFERD cuts for high-performance applications

STEEL cut

- Extremely high stock removal rate on steel and cast steel.
- Smooth milling.
- Reduced vibration and less noise.

INOX cut

- Extremely high stock removal rate on all austenitic, rust and acid-resistant steels, stainless steel (INOX) and soft titanium alloys.
- Significantly reduced vibration and less noise.

ALU cut

- High stock removal rate on aluminum and aluminum alloys, non-ferrous metals and plastics.
- Smooth milling.

CAST cut

- Extremely high stock removal rate on cast iron.
- Smooth milling.
- Reduced vibration and less noise.

EDGE cut

- Creates exact edge shapes – with either 30° or 45° chamfering or a defined radius of 1/8".
- Safe and comfortable to guide.

TOUGH cut

- High stock removal rate on cast iron, steel up to 580 HV (54 HRC).
- Extremely resistant to impacts.
- Suitable for use with high surface contact angles > 1/3 and under impact loads.

MICRO cut

- Good stock removal on almost all materials up to 940 HV (68 HRC).
- High surface quality.
- Reduced vibration and less noise.

HICOAT® coatings

- PFERD carbide burs are also available with HICOAT® coatings.
- Improved anti-adhesion characteristics.
- Effective chip discharge.
- Lower thermal loads.
- Increased service life.
- Also suitable for use at higher peripheral speeds when compared with uncoated burs.

If you cannot find the solution for your particular application in our extensive catalogue range, we can produce carbide burs to meet your requirements in premium PFERD quality specifically for your application upon request.

Contact your local sales representatives who will be happy to assist you.

As a tool manufacturer with over 200 years of experience, PFERD can call on comprehensive expertise in the manufacture of metalworking 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 product. 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.

1. We analyze your application.

We will discuss and analyze your application on-site and develop the most economic solution for your specific application.

Contact us for details and to set up an appointment.

2. We develop the solution.

This is based on your needs, application requirements and other criteria. From inspection of raw materials, to the inspection of the final product itself – PFERD always works to the highest quality standards.

The quality of PFERD products is certified according to ISO 9001.

3. Your product is ready for use!

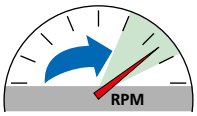
Our flexible production and global logistics network ensure your custom product is delivered on-time and within your budget.

See the quality, performance and economic value of PFERD products for yourself!

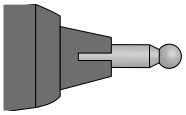
Carbide burs
Recommendations for use and instances of misuse

Recommendations for use:

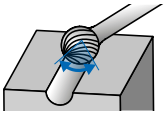
An optimum rotational speed and power output for the power tool (air-powered or electric grinders, flexible shaft drive) is required for cost-effective use of carbide burs.



- If possible, mount burs on high-powered drives with elastically mounted spindles to avoid vibration.
- For cost-effective use of burs with a shank diameter > 1/4", a power tool output of 300–500 watts is required when used at a higher rotational speed and peripheral speed.
- Use the highest rotational speed possible within the recommended rotational speed and peripheral 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 extended shank burs).

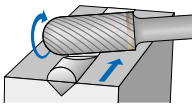


- Use only rigid clamping systems and power tools as impacts on the burs and bur chatter lead to premature wear.



1/3 of the total surface

- The bur surface in contact with the workpiece must not exceed 1/3 of the total bur 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 cut.



In direction of rotation
= fine finish

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

Safety notes:

= Wear eye protection!

= Wear hearing protection!

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

= Observe the recommended rotational speed, especially when using extended shank burs!

= Read the Safety Data Sheets (SDS) before using any materials!

Avoiding misuse

Figure	Consequences of misuse	Solution
	The bur becomes clogged during use.	Use the correct cut for the material being machined. Use tools with a HICOAT® coating or use grinding oil.
	Pronounced discolouration 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 head detaches from the 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 bur surface.
	Bur head shows severe chipping or splintering.	Avoid impact loads when using the bur.

Figure	Consequences of misuse	Solution
	The shank breaks.	Only use rigid power tools and undamaged clamping systems, and replace them if necessary.
incorrect  correct 	The clamping length is incorrect.	Do not chose a bur clamping depth that is too short. **In general,** the minimum clamping depth is 2/3 of the shank length (does not apply to extended shank burs).
	The shank bends on Extended shank burs.	Observe the recommended rotational speeds and safety notes for extended shank burs.
	Signs of wear such as rough running and strong vibrations occur, as well as increased flying sparks.	Do not use burs beyond the end of their service life. Use a new bur instead.

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

Extended shank burs are ideal for cost-effectively machining small, hard-to-reach areas on components. Long-shank versions are available with the Double, OMNI, STEEL and TOUGH cut burs.

Extended shank burs can be shortened if required.
SL = shank length (long steel shank)

Safety notes:

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

= Observe the prescribed rotational speed!

Safety note – maximum rotational speed [RPM] for extended shank burs

When working with extended shank burs, it is critical that the bur is in contact with the workpiece (or inserted in the bore or slot to be machined) before the power tool is turned on. As a rule, the bur 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 bur and the workpiece is not guaranteed, the ❸ maximum idling speeds stated in the table must not be exceeded.

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

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

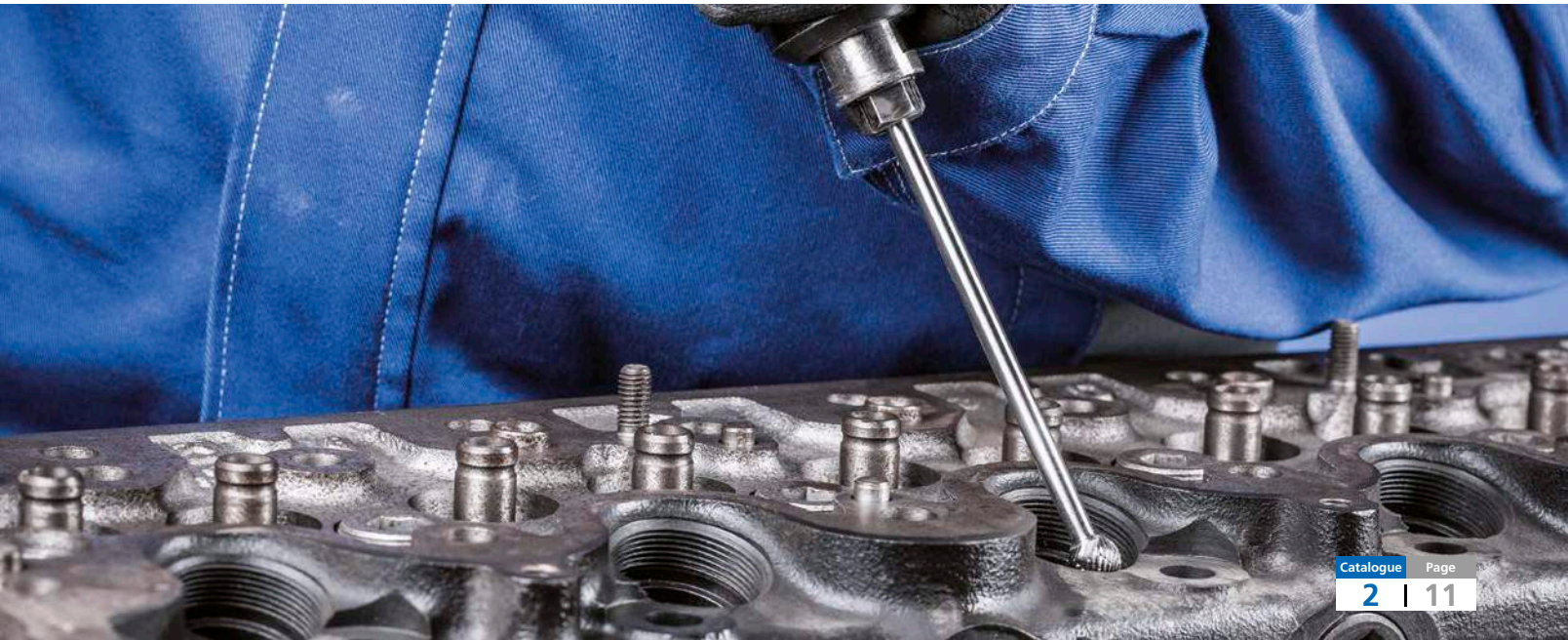
❶ Select the required bur diameter.
❷ For the maximum application speed [RPM] with contact with the workpiece, please refer to the right-hand side of the table.

Example
Carbide bur, L6, double cut,
bur diameter: 1/2".
Coarse stock removal on steels
up to 370 HV.
Recommended reduced speed with workpiece contact: 7,000 RPM

❶ Bur dia. [Inches]	❸ Maximum rotational free speed [RPM] (No contact to the workpiece)	❷ Recommended reduced rotational application speed [RPM] (With contact to the workpiece)
	Shank length [Inches]	
	L6 (6")	L6 (6")
1/4	8,000	15,000
5/16	6,000	11,000
3/8	4,000	9,000
1/2	3,000	7,000

Extensions for spindles

In some applications, spindle extensions are an economic alternative to customized extended shank burs. For more information please see page 12.



Burs (shank dia. 1/8, 1/4 and 3/8 inch) can be extended with spindle extensions. They allow access to hard-to-reach areas. The drive spindle extension is mounted in the collet of the power tool (air-powered or electric), or in the handpiece of the flexible shaft drive. In some applications, spindle extensions are an economical alternative to customized extended shank burs.

Safety notes:

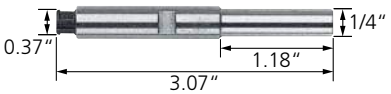
- For safety reasons, it is not possible to use spindle extensions in combination with extended-shank burs.
- For additional safety notes, please refer to catalogue section 9.

= Read the safety notes!

More detailed information and ordering information for spindle extensions can be found in catalogue section 9.

SPV 50-1/8 S1/4
for shank diameter of 1/8"

EDP 95820



SPV 75-1/4 SPG 6
for shank diameter of SPG 6

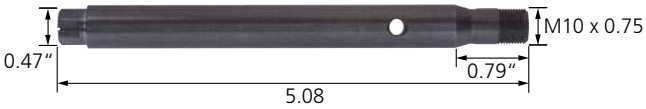
EDP 95821

SPV 75-1/4 S3/8
for shank diameter of 3/8

EDP 95822

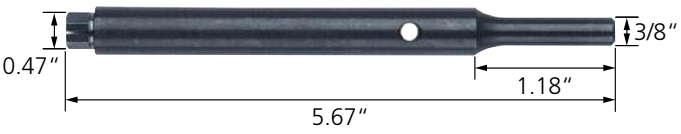
SPV 100-1/4 SPG 6
for shank diameter of SPG 6

EDP 95823



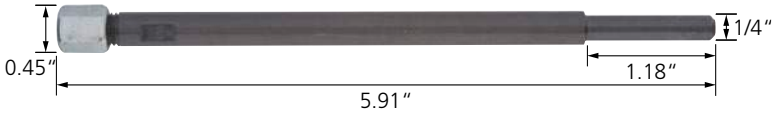
SPV 100-1/4 S3/8
for shank diameter of 3/8"

EDP 95824



SPV 150-1/8 S1/4
for shank diameter of 1/4"

EDP 95825



SPV 150-1/4 S3/8
for shank diameter of 3/8"

EDP 95826

PFERD

Carbide burs, universal line

2

Carbide burs, universal line
For fine and coarse stock removal

Universal line burs 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 service life.
- Reduced wear on the power tool due to impact-free work without chatter marks, due to the high concentricity.
- High surface quality.

Workpiece materials:

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

Applications:

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

Recommendations for use:

- If possible, use the burs on powerful tools with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burs, work with higher rotational/peripheral speeds.
  Power recommendation for power tools:
  - Shank diameter of 1/8": 75 to 300 watts
  - Shank diameter of 1/4": from 300 watts
- Please observe the rotational speed recommendations.

Compatible with:

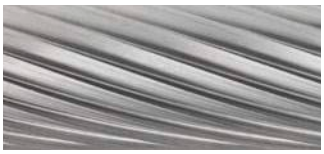
- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines

PFERDVALUE®:

PFERDEFFICIENCY® recommends burs 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

Single cut



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

Diamond 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.

Double cut

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

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 peripheral speeds when compared with uncoated burs.

Recommended rotational speed range [RPM]

To determine the recommended peripheral speed range [SFPM], 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 peripheral speed range.

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

❺ Select the required bur diameter.
❻ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

❶ Material group			❷ Application	❸ Cut	❹ Peripheral speed
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	Double cut	2,000 - 3,000 SFPM
				HICOAT® HC-FEP	1,500 - 2,500 SFPM
			Fine stock removal	Single cut	1,500 - 2,000 SFPM
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel	Coarse stock removal	Single cut	850 - 1,150 SFPM
				Double cut	
				Diamond cut	
				HICOAT® HC-FEP	850 - 1,500 SFPM
			Fine stock removal	Single cut	1,150 - 1,500 SFPM
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	Single cut	1,150 - 1,500 SFPM
				Double cut	850 - 1,150 SFPM
				Diamond cut	
			Fine stock removal	Single cut	1,150 - 1,500 SFPM
Non-ferrous metals	Soft non-ferrous metals	Aluminum alloys, brass, copper, zinc	Coarse stock removal	Single cut	2,000 - 3,000 SFPM
			Fine stock removal	Single cut	1,150 - 1,500 SFPM
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminum alloys (high Si content)	Coarse stock removal	Single cut	850 - 1,150 SFPM
				Diamond cut	
			Fine stock removal	Single cut	1,150 - 1,500 SFPM
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys (engine and turbine construction)	Coarse stock removal	Double cut	850 - 1,500 SFPM
				Diamond cut	
			Fine stock removal	Single cut	1,150 - 2,000 SFPM
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	Coarse stock removal	Double cut	1,500 - 2,000 SFPM
			Fine stock removal	Single cut	

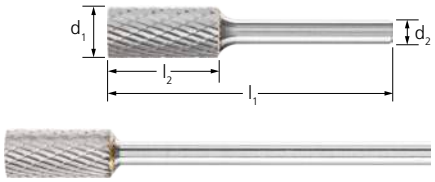
Example:
Carbide bur,
double cut,
bur diameter 1/2"
Coarse stock removal on steels
up to 370 HV.
Peripheral speed: 2,000–3,000 SFPM
Rotational speed range:
16,000–24,000 RPM

Safety note:

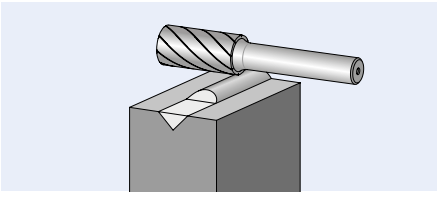
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

❺ Bur dia. [Inches]	❻ Peripheral speed [SFPM]					
	850	1,150	1,500	2,000	2,500	3,000
	Rotational speed [RPM]					
3/32	35,000	56,000	72,000	95,000	119,000	120,000
1/8	27,000	37,000	48,000	64,000	80,000	95,000
3/16	16,000	22,000	29,000	38,000	48,000	57.000
1/4	13,000	19,000	24,000	32,000	40,000	48,000
5/16	10,000	14,000	18,000	24,000	30,000	36,000
3/8	8,000	11,000	14,000	19,000	24,000	29,000
7/16	7,500	10,000	13,000	17,500	22,000	26,500
1/2	7,000	9,000	12,000	16,000	20,000	24,000
5/8	5,000	7,000	9,000	12,000	15,000	18,000
3/4	4,000	6,000	7,000	10,000	13,000	14,000
1	3,000	4,000	6,000	8,000	10,000	11,000

Carbide burs, universal line
For fine and coarse stock removal



Cylindrical bur with plain end (uncut) – Shape A



Safety notes:

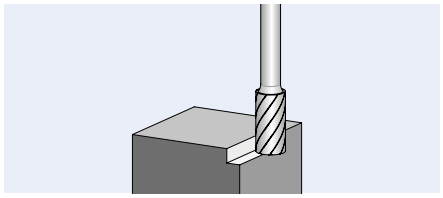
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

PFERDVALUE®:
With HICOAT® coating:

Waste Saving Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number				
				Single	Double	Double HC-FEP	Diamond	
Shank dia. 1/8" [d_2]								
3/32	1/2	SA-42	1-1/2	-	23112	-	-	1
1/8	1/2	SA-43	1-1/2	23121	23122	-	-	1
1/4	1/2	SA-51	1-11/16	23131	23132	-	-	1
Shank dia. 1/4" [d_2]								
1/8	1/2	SA-11	1-15/16	24001	24002	-	-	1
3/16	5/8	SA-14	1-15/16	-	24022	-	-	1
1/4	5/8	SA-1	1-15/16	24031	24032	27040	24033	1
5/16	3/4	SA-2	2-1/2	24051	24052	-	24053	1
3/8	3/4	SA-3	2-1/2	24061	24062	27042	24063	1
7/16	1	SA-4	2-3/4	24091	24092	-	-	1
1/2	1	SA-5	2-3/4	24101	24102	27052	24103	1
5/8	1	SA-6	2-3/4	-	24112	-	-	1
3/4	1/2	SA-15	2-1/4	-	24132	-	-	1
	3/4	SA-16	2-1/2	-	24142	-	-	1
	1	SA-7	2-3/4	-	24122	-	-	1
1	1	SA-9	2-3/4	-	24162	-	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)								
1/4	5/8	SA-1L6	6-9/16	-	25802	-	-	1
3/8	3/4	SA-3L6	6-5/8	-	25812	-	-	1
1/2	1	SA-5L6	6-7/8	-	25822	-	-	1

Cylindrical bur with end cut – Shape B

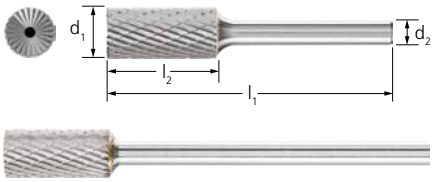


Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

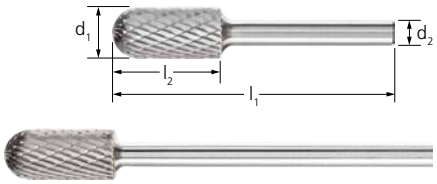
PFERDVALUE®**:**
With HICOAT® coating:

Waste Saving Time Saving

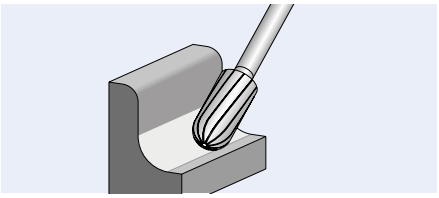


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number				
				Single	Double	Double HC-FEP	Diamond	
Shank dia. 1/8" [d_2]								
1/4	1/2	SB-51	1-11/16	23171	-	-	-	1
Shank dia. 1/4" [d_2]								
3/16	5/8	SB-14	1-15/16	-	24202	-	-	1
1/4	5/8	SB-1	1-15/16	24211	24212	-	24213	1
5/16	3/4	SB-2	2-1/2	-	24232	-	24233	1
3/8	3/4	SB-3	2-1/2	24241	24242	27082	-	1
7/16	1	SB-4	2-3/4	24271	24272	-	24273	1
1/2	1	SB-5	2-3/4	24281	24282	-	24283	1
5/8	1	SB-6	2-3/4	-	24292	-	-	1
3/4	1/2	SB-15	2-1/4	-	24312	-	-	1
	3/4	SB-16	2-1/2	-	24322	-	-	1
	1	SB-7	2-3/4	-	24302	-	-	1
1	1	SB-9	2-3/4	-	24342	-	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)								
3/8	3/4	SB-3L6	6-5/8	-	25842	-	-	1
1/2	1	SB-5L6	6-7/8	-	25852	-	-	1

Carbide burs, universal line
For fine and coarse stock removal



Cylindrical bur with radius end – Shape C



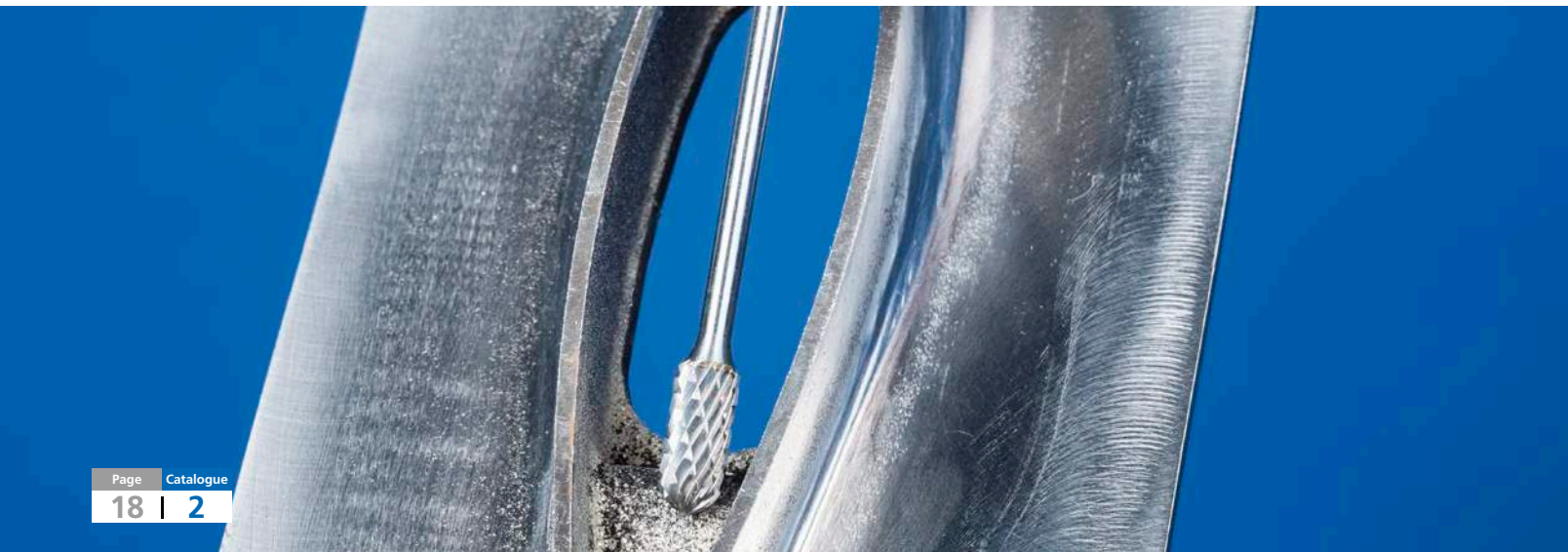
Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

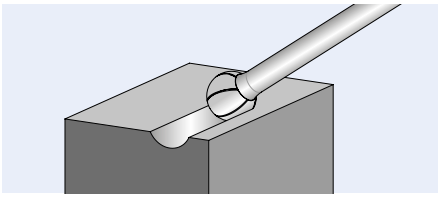
PFERDVALUE®:
With HICOAT® coating:

Waste Saving | Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number				
				Single	Double	Double HC-FEP	Diamond	
Shank dia. 1/8" [d_2]								
3/32	1/2	SC-41	1-1/3	-	23182	-	-	1
1/8	1/2	SC-42	1-1/2	23191	23192	-	-	1
1/4	1/2	SC-51	1-11/16	23201	23202	-	-	1
Shank dia. 1/4" [d_2]								
1/8	1/2	SC-11	1-15/16	-	24352	-	-	1
	5/8	SC-12	1-15/16	-	24362	-	-	1
3/16	5/8	SC-14	1-15/16	-	24382	-	-	1
1/4	5/8	SC-1	1-15/16	24391	24392	-	24393	1
5/16	3/4	SC-2	2-1/2	-	24412	-	-	1
3/8	3/4	SC-3	2-1/2	24421	24422	27167	24423	1
7/16	1	SC-4	2-3/4	-	24452	-	-	1
1/2	1	SC-5	2-3/4	24461	24462	27177	24463	1
5/8	1	SC-6	2-3/4	-	24472	-	24473	1
3/4	1	SC-7	2-3/4	-	24482	-	24483	1
1	1	SC-9	2-3/4	-	24512	-	24513	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)								
1/4	5/8	SC-1L6	6-9/16	-	25862	-	-	1
3/8	3/4	SC-3L6	6-5/8	-	25872	-	-	1
1/2	1	SC-5L6	6-7/8	-	25882	-	-	1



Ball bur – Shape D

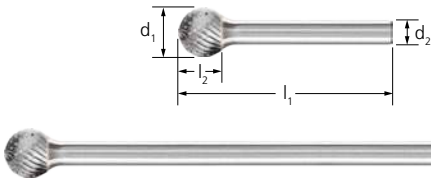


Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

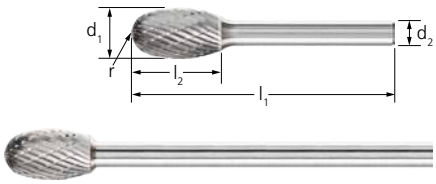
PFERDVALUE®**:**
With HICOAT® coating:

Waste Saving Time Saving

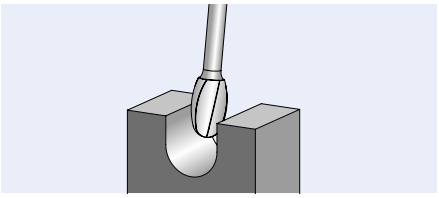


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number				
				Single	Double	Double HC-FEP	Diamond	
Shank dia. 1/8" [d_2]								
3/32	3/32	SD-41	1-1/2	23231	23232	-	-	1
1/8	3/32	SD-42	1-1/2	23241	23242	-	-	1
3/16	1/8	SD-53	1-38	23261	23262	-	-	1
1/4	3/16	SD-51	1-3/8	23251	23252	-	-	1
Shank dia. 1/4" [d_2]								
1/8	3/32	SD-11	1-15/16	-	24522	-	-	1
3/16	1/8	SD-14	1-15/16	24531	24532	-	-	1
1/4	3/16	SD-1	1-15/16	24541	24542	-	24543	1
5/16	1/4	SD-2	2-1/16	24551	24552	-	-	1
3/8	5/16	SD-3	2-1/16	24561	24562	27217	24563	1
7/16	3/8	SD-4	2-1/8	-	24572	-	-	1
1/2	7/16	SD-5	2-3/16	24581	24582	27227	-	1
5/8	9/16	SD-6	2-5/16	-	24592	-	24593	1
3/4	11/16	SD-7	2-13/16	-	24602	-	-	1
1	15/16	SD-9	2-1/16	24611	24612	-	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)								
1/4	3/16	SD-1L6	6-1/8	-	25922	-	-	1
3/8	5/16	SD-3L6	6-1/4	-	25932	-	-	1
1/2	7/16	SD-5L6	6-5/16	-	25942	-	-	1

Carbide burs, universal line
For fine and coarse stock removal



Oval bur – Shape E

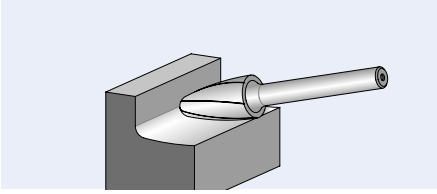


Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number			
					Single	Double	Diamond	
Shank dia. 1/8" [d_2]								
1/8	7/32	SE-41	1-1/2	.047	-	23272	-	1
1/4	3/8	SE-51	1-9/16	.110	23281	23282	-	1
Shank dia. 1/4" [d_2]								
1/4	3/8	SE-1	1-15/16	.110	24631	24632	24633	1
3/8	5/8	SE-3	2-3/8	.157	24641	24642	24643	1
1/2	7/8	SE-5	2-5/8	.196	24651	24652	24653	1
5/8	1	SE-6	2-3/4	.256	-	24662	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)								
1/4	3/8	SE-1L6	6-3/8	.110	-	25982	-	1
3/8	5/8	SE-3L6	6-1/2	.157	-	25992	-	1
1/2	7/8	SE-5L6	6-3/4	.196	-	26002	-	1

Tree bur with radius end – Shape F

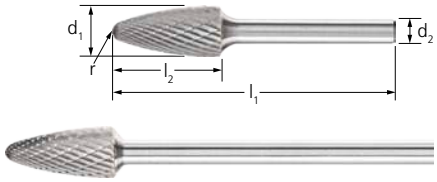


Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

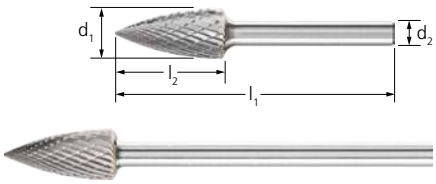
PFERDVALUE®**:**
With HICOAT® coating:

Waste Saving Time Saving

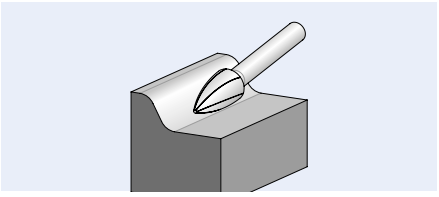


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number				
					Single	Double	Double HC-FEP	Diamond	
Shank dia. 1/8" [d_2]									
1/8	1/4	SF-41	1-1/2	.029	23301	23302	-	-	1
	1/2	SF-42	1-1/2	.029	23311	23312	-	-	1
1/4	1/2	SF-51	1-11/16	.059	23321	23322	-	-	1
Shank dia. 1/4" [d_2]									
1/4	5/8	SF-1	1-15/16	.059	24691	24692	-	24693	1
3/8	3/4	SF-3	2-1/2	.098	24701	24702	27282	24703	1
7/16	1	SF-4	2-3/4	.012	-	24712	-	-	1
1/2	3/4	SF-13	2-1/2	.098	-	24732	-	24733	1
1/2	1	SF-5	2-3/4	.018	24721	24722	27292	24723	1
5/8	1	SF-6	2-3/4	.141	-	24742	-	-	1
3/4	1	SF-7	2-3/4	.196	-	24752	-	24753	1
	1-1/4	SF-14	3	.196	-	24762	-	24763	1
	1-1/2	SF-15	3-1/4	.196	-	24772	-	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)									
1/4	5/8	SF-1L6	6-9/16	.059	-	26042	-	-	1
3/8	3/4	SF-3L6	6-3/4	.098	-	26052	-	-	1
1/2	1	SF-5L6	6-7/8	.098	-	26062	-	-	1

Carbide burs, universal line
For fine and coarse stock removal



Tree bur with pointed end – Shape G

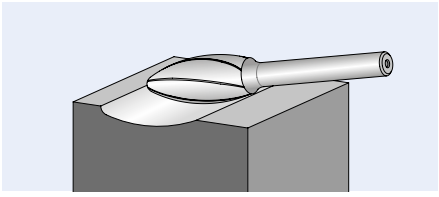


Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

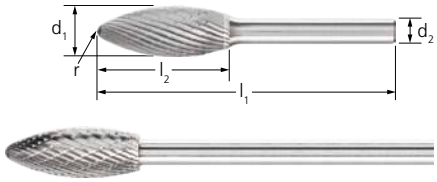
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number			
				Single	Double	Diamond	
Shank dia. 1/8" [d_2]							
1/8	1/4	SG-41	1-1/2	23341	23342	-	1
	3/8	SG-43	1-1/2	23361	23362	-	1
3/16	1/2	SG-53	1-11/16	-	23392	-	1
1/4	1/2	SG-51	1-11/16	23381	23382	-	1
Shank dia. 1/4" [d_2]							
1/4	5/8	SG-1	1-15/16	24781	24782	24783	1
5/16	3/4	SG-2	2-1/2	-	24792	24793	1
3/8	3/4	SG-3	2-1/2	24801	24802	24803	1
1/2	3/4	SG-13	2-1/2	-	24822	24823	1
	1	SG-5	2-3/4	24811	24812	24813	1
5/8	1	SG-6	2-3/4	-	24832	24833	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)							
1/4	5/8	SG-1L6	6-9/16	-	26102	-	1
3/8	3/4	SG-3L6	6-3/4	-	26112	-	1
1/2	1	SG-5L6	6-7/8	-	26122	-	1

Flame bur – Shape H



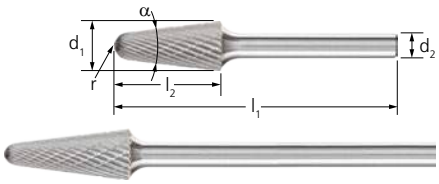
Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

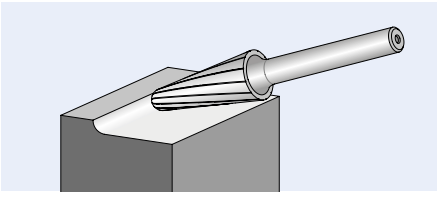


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number			
					Single	Double	Diamond	
Shank dia. 1/8" [d_2]								
1/8	1/4	SH-41	1-1/2	.031	23401	23402	-	1
Shank dia. 1/4" [d_2]								
1/4	5/8	SH-1	1-15/16	.039	-	24862	24863	1
5/16	3/4	SH-2	2-1/2	.059	24871	24872	-	1
1/2	1-1/4	SH-5	3	.082	24881	24882	24883	1
5/8	1-7/16	SH-6	3-3/16	.102	-	24892	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)								
5/16	3/4	SH-2L6	6-5/8	.059	-	26162	-	1
1/2	1-1/4	SH-5L6	7-1/4	.082	-	26172	-	1

Carbide burs, universal line
For fine and coarse stock removal



14° Taper bur with radius end – Shape L



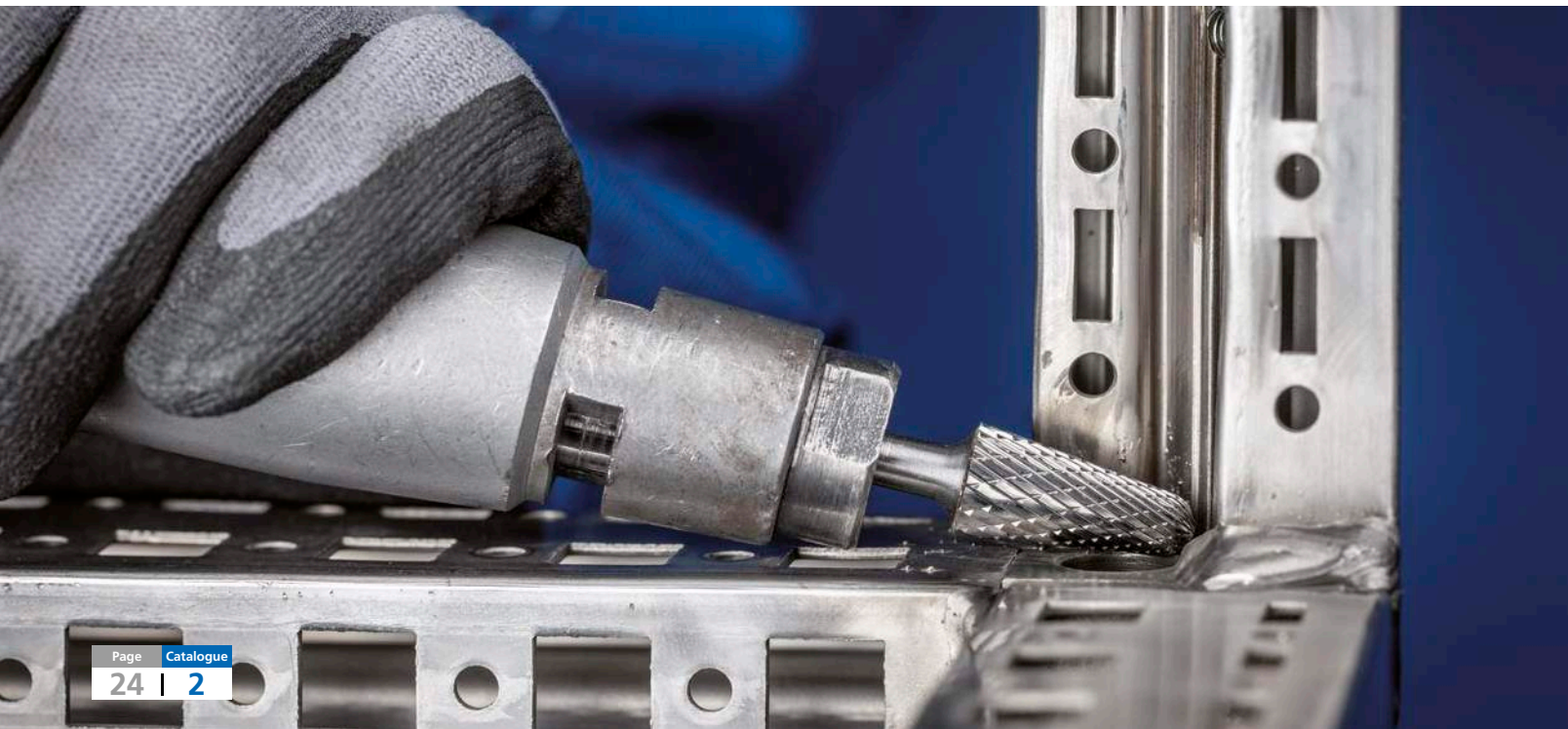
Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

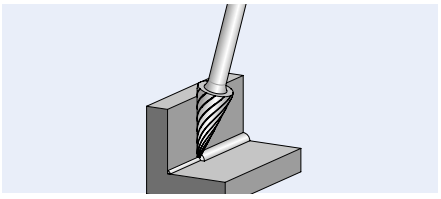
PFERDVALUE®**:**
With HICOAT® coating:

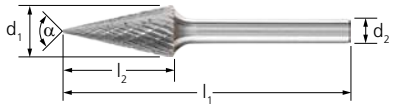
Waste Saving Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	r [Inches]	Cut type and EDP number				
						Single	Double	Double HC-FEP	Diamond	
Shank dia. 1/8" [d_2]										
1/8	1/2	SL-42	14°	1-1/2	.035	23451	23452	-	-	1
Shank dia. 1/4" [d_2]										
1/4	5/8	SL-1	14°	1-15/16	.055	25131	25132	-	25133	1
5/16	1	SL-2	16°	2-13/16	.049	-	25142	-	25143	1
3/8	1-1/16	SL-3	14°	3	.114	-	25152	27457	25153	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	25161	25162	27462	25163	1
5/8	1-5/16	SL-6	14°	3-1/4	.189	-	25182	-	25183	1
3/4	1-1/2	SL-7	14°	3-7/16	.212	-	25192	-	-	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)										
1/4	5/8	SL-1L6	14°	6-9/16	.055	-	26212	-	-	1
3/8	1-1/16	SL-3L6	14°	7-1/8	.114	-	26222	-	-	1
1/2	1-1/8	SL-4L6	14°	7-3/16	.130	-	26232	-	-	1



Cone bur with pointed end – Shape M





d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	Cut type and EDP number			
					Single	Double	Diamond	
Shank dia. 1/8" [d_2]								
1/8	3/8	SM-41	14°	1-1/2	-	23472	-	1
	1/2	SM-42	12°	1-1/2	23481	23482	-	1
	5/8	SM-43	9°	1-1/2	-	23492	-	1
1/4	1/2	SM-51	22°	1-13/16	23501	23502	-	1
Shank dia. 1/4" [d_2]								
1/4	1/2	SM-1	22°	1-15/16	25201	25202	-	1
	3/4	SM-2	14°	1-15/16	-	25212	25213	1
	1	SM-3	10°	1-15/16	-	25222	25223	1
3/8	3/4	SM-4	28°	2-1/2	25231	25232	-	1
1/2	1	SM-5	28°	2-3/4	-	25242	-	1
5/8	1-1/8	SM-6	31°	2-15/16	-	25252	25253	1

Carbide burs, universal line
For fine and coarse stock removal

12 piece carbide bur sets – Single cut, double cut

Contains twelve carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.

EDP 26525
12 piece single cut carbide bur set
1/8" shank (plastic case)
Contains 12 pcs. burs with 1/8" shank diameter and single cut.

EDP 26526
12 piece double cut carbide bur set
1/8" shank (plastic case)
Contains 12 pcs. burs with 1/8" shank diameter and double cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		Cut type and set EDP number		
				Single	Individual bur EDP's in set	Double	Individual bur EDP's in set	
Cylindrical (plain end)	1/8	1/2	SA-43	26525	23121	26526	23122	1
Cylindrical (radius end)	3/32	1/2	SC-51		23201		23202	1
	1/8	1/2	SC-42		23191		23192	1
Ball	1/8	3/32	SD-42		23241		23242	1
	3/16	1/8	SD-53		23261		23262	1
Oval	1/4	3/8	SE-51		23281		23282	1
Tree (radius end)	1/8	1/4	SF-41		23301		23302	1
	1/8	1/2	SF-42		23311		23312	1
Tree (pointed end)	1/8	3/8	SG-43		23361		23362	1
Flame shape	1/8	1/4	SH-41		23401		23402	1
14° Taper	1/8	1/2	SL-42		23451		23452	1
Cone	1/8	1/2	SM-42		23481		23482	1

8 piece carbide bur sets – Single cut, double cut

Contains eight carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.
Two additional unused slots are available for other burs.

EDP 26546
8 piece single cut carbide bur set
1/4" shank (plastic case)
Contains 8 pcs. burs with 1/4" shank diameter and single cut.

EDP 26547
8 piece double cut carbide bur set
1/4" shank (plastic case)
Contains 8 pcs. burs with 1/4" shank diameter and double cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		Cut type and set EDP number		
				Single	Individual bur EDP's in set	Double	Individual bur EDP's in set	
Cylindrical (plain end)	3/8	3/4	SA-3	26546	24061	26547	24062	1
	1/2	1	SA-5		24101		24102	1
Cylindrical (radius end)	3/8	3/4	SC-3		24421		24422	1
	1/2	1	SC-5		24461		24462	1
Ball	3/8	5/16	SD-3		24561		24562	1
Tree (radius end)	3/8	3/4	SF-3		24701		24702	1
	1/2	1	SF-5		24721		24722	1
Tree (pointed end)	3/8	3/4	SG-3		24801		24802	1

5 piece carbide bur set – diamond cut

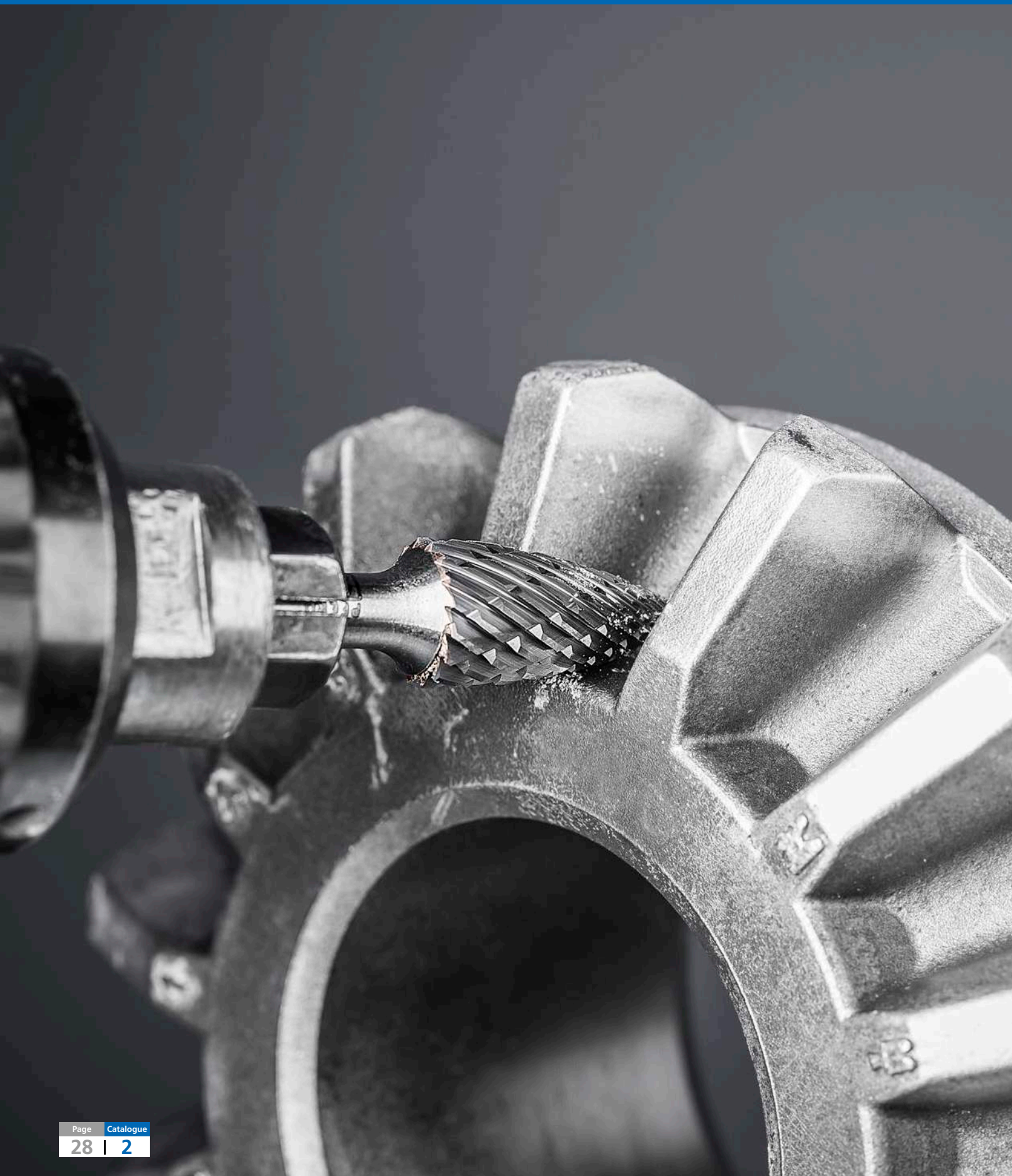
Contains five carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.
Five additional unused slots are available for other burs.

EDP 26552
5 piece carbide bur set 1/4" shank
diamond cut (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter and diamond cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				Diamond	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	26552	24103	1
Cylindrical (radius end)	1/2	1	SC-5		24463	1
Oval	1/2	7/8	SE-5		24653	1
Tree (radius end)	1/2	1	SF-5		24723	1
14° Taper	1/2	1-1/8	SL-4		25163	1

Carbide burs, performance line



Carbide burs, performance line
OMNI cut for versatile use

With the innovative OMNI cut, PFERD has developed unique burs for versatile use on key materials such as steel and cast steel, stainless steel (INOX), non-ferrous metals and cast iron. The OMNI cut offers all the benefits of the tried-and-tested double 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.

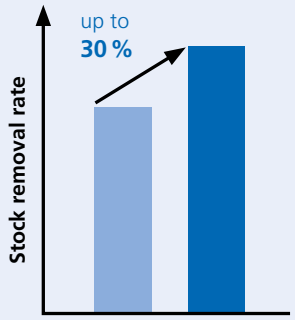
Advantages:

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

Workpiece materials:

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

Performance values for applications on steel



- Conventional double cut burs
- Carbide burs, OMNI cut

Applications:

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

Recommendations for use:

- It is recommended to use the burs on powerful power tools with elastically mounted spindles to avoid vibration.
- For the most cost-effective use of burs, work with higher rotational/peripheral speeds. Power recommendation for power tools: from 300 watts.
- Please observe the rotational speed recommendations.

Compatible with:

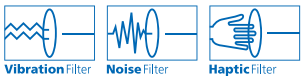
- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines

Safety note:

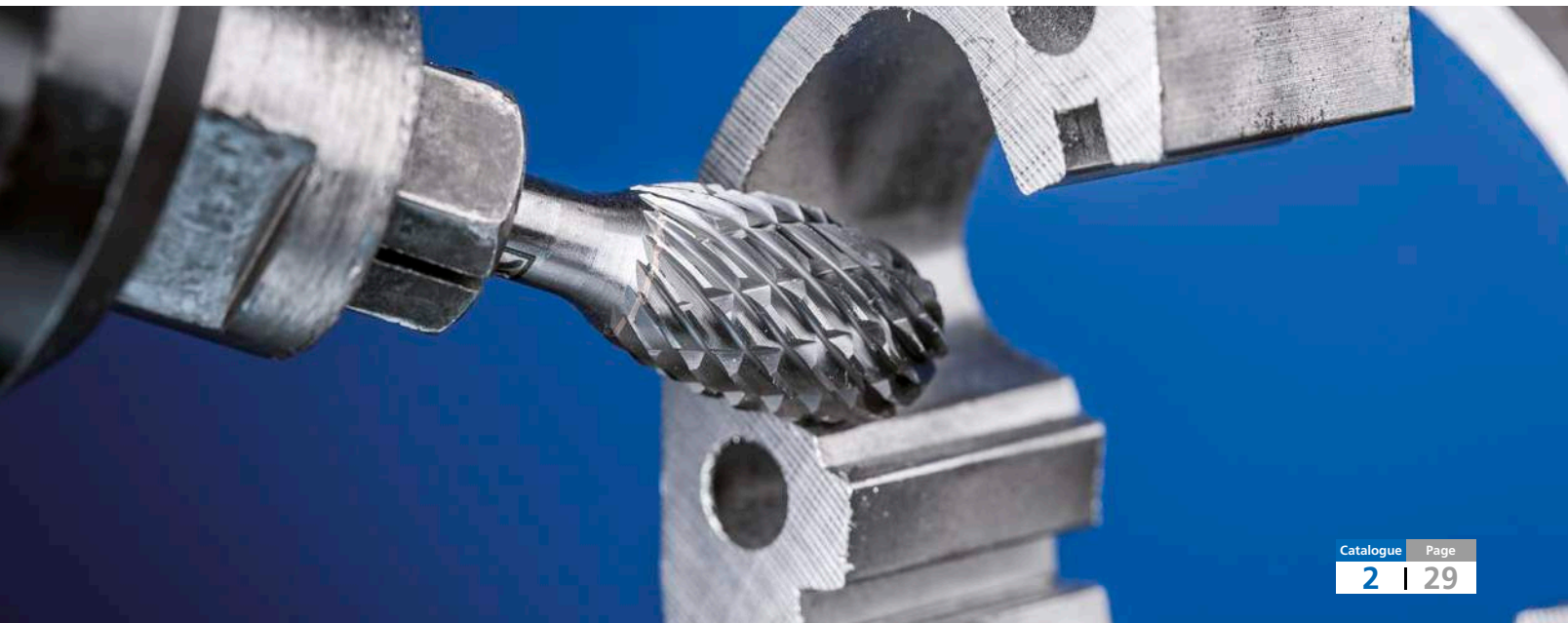
- The very high stock removal rate can cause discolouration on the shank. This does not constitute a safety risk.

PFERDVALUE®:

PFERDERGONOMICS® recommends burs with OMNI cut as an innovative bur solution for comfortable working with significantly reduced vibration and less noise.



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



Carbide burs, performance line
OMNI cut for versatile use

Recommended rotational speed range [RPM]

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

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

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

❸ Select the required bur diameter.
❹ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

Safety note:

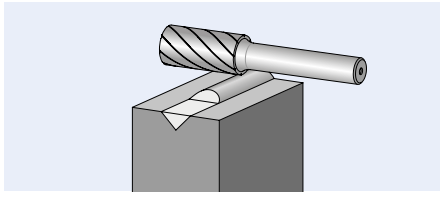
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

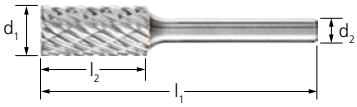
❶ Material group			Application	Cut	❷ Peripheral speed
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	OMNI	1,500 - 2,500 SFPM
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel	Coarse stock removal	OMNI	850 - 1,500 SFPM
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	OMNI	1,500 - 2,000 SFPM
Non-ferrous metals	Soft non-ferrous metals	Brass, copper, zinc	Coarse stock removal	OMNI	1,500 - 2,500 SFPM
	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminum alloys (high Si content)	Coarse stock removal	OMNI	1,500 - 2,000 SFPM
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	Coarse stock removal	OMNI	1,500 - 3,000 SFPM

Example:
Carbide bur,
OMNI cut,
bur diameter 1/2".
Coarse stock removal on steels up to 370 HV.
Peripheral speed: 1,500–2,500 SFPM
Rotational speed range:
12,00–20,000 RPM

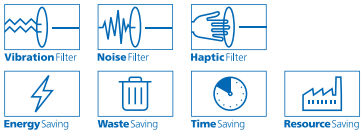
❸ Bur dia. [Inches]	❹ Peripheral speed [SFPM]				
	850	1,500	2,000	2,500	3,000
	Rotational speeds [RPM]				
1/4	13,000	24,000	32,000	40,000	48,000
3/8	8,000	14,000	19,000	24,000	29,000
7/16	8,000	13,000	17,500	22,000	29,000
1/2	7,000	12,000	16,000	20,000	26,500
5/8	5,000	9,000	12,000	15,000	18,000

Cylindrical bur with plain end (uncut) – Shape A



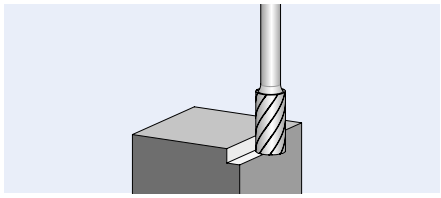


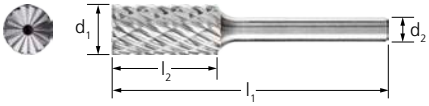
PFERDVALUE®:



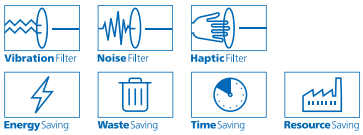
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]					
1/4	5/8	SA-1	1-15/16	28026	1
3/8	3/4	SA-3	2-1/2	28018	1
1/2	1	SA-5	2-3/4	28005	1

Cylindrical bur with end cut – Shape B



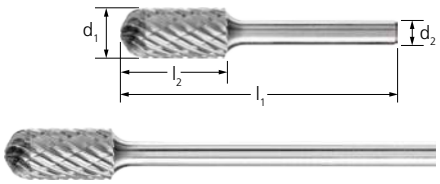


PFERDVALUE®:

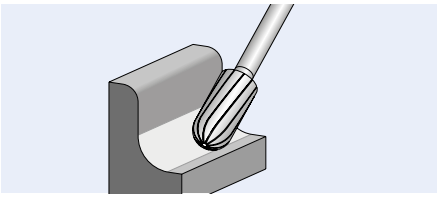


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]					
1/4	5/8	SB-1	1-15/16	28029	1
3/8	3/4	SB-3	2-1/2	28019	1
1/2	1	SB-5	2-3/4	28010	1
5/8	1	SB-6	2-3/4	28032	1

Carbide burs, performance line
OMNI cut for versatile use



Cylindrical bur with radius end – Shape C



Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

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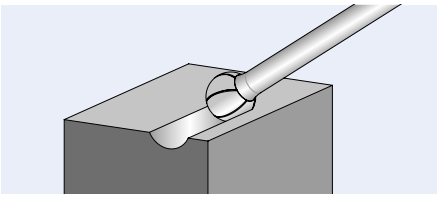
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]					
1/4	5/8	SC-1	1-15/16	28024	1
3/8	3/4	SC-3	2-1/2	28006	1
1/2	1	SC-5	2-3/4	28001	1
5/8	1	SC-6	2-3/4	28030	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	3/4	SC-3L6	6-5/8	28020	1
1/2	1	SC-5L6	6-7/8	28017	1

Ball bur – Shape D



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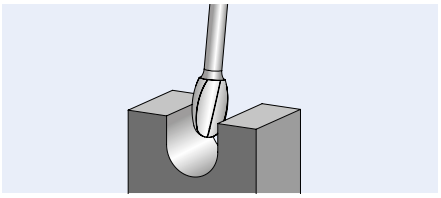
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]					
1/4	3/16	SD-1	1-15/16	28034	1
3/8	5/16	SD-3	2-1/16	28021	1
1/2	7/16	SD-5	2-3/16	28028	1

Oval bur – Shape E



Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

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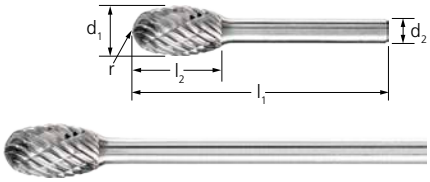
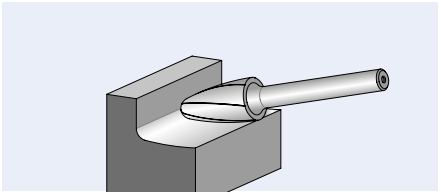


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]						
3/8	5/8	SE-3	2-3/8	.157	28035	1
1/2	7/8	SE-5	2-5/8	.196	28025	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)						
1/2	7/8	SE-5L6	6-3/4	.196	28022	1

Tree bur with radius end – Shape F



Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

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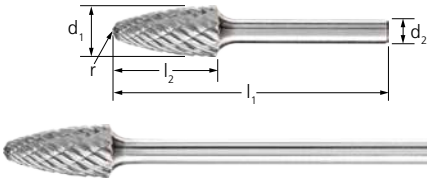
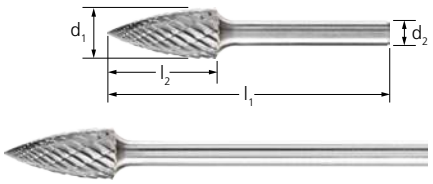
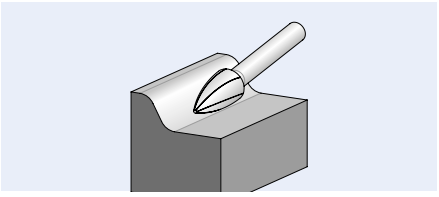


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]						
1/4	5/8	SF-1	1-15/16	.059	28012	1
3/8	3/4	SF-3	2-1/2	.098	28007	1
7/16	1	SF-4	2-3/4	.012	28002	1
1/2	1	SF-5	2-3/4	.098	28000	1
5/8	1	SF-6	2-3/4	.141	28033	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)						
3/8	3/4	SF-3L6	6-3/4	.098	28027	1
1/2	1	SF-5L6	6-7/8	.098	28008	1

Carbide burs, performance line
OMNI cut for versatile use



Tree bur with pointed end – Shape G



Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

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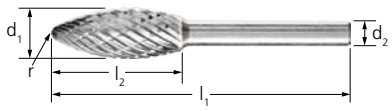
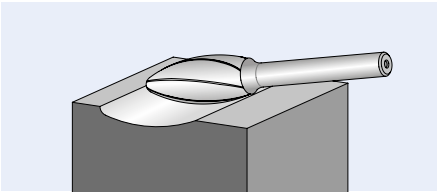
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]					
3/8	3/4	SG-3	2-1/2	28015	1
1/2	1	SG-5	2-3/4	28009	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	3/4	SG-3L6	6-3/4	28031	1
1/2	1	SG-5L6	6-7/8	28023	1



Flame bur – Shape H



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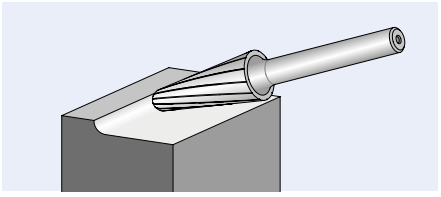
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]						
1/2	1-1/4	SH-5	3	.082	28004	1

14° Taper bur with radius end – Shape L



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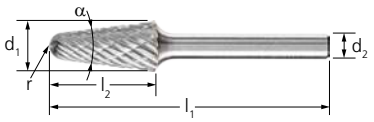
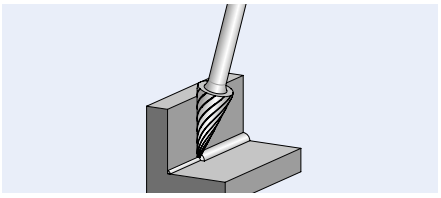


d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	r [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]							
3/8	1-1/16	SL-3	16°	3	.114	28003	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	28014	1
5/8	1-5/16	SL-6	14°	3-1/4	.189	28013	1

Cone bur with pointed end – Shape M



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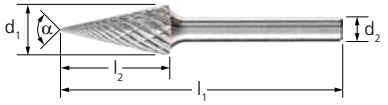
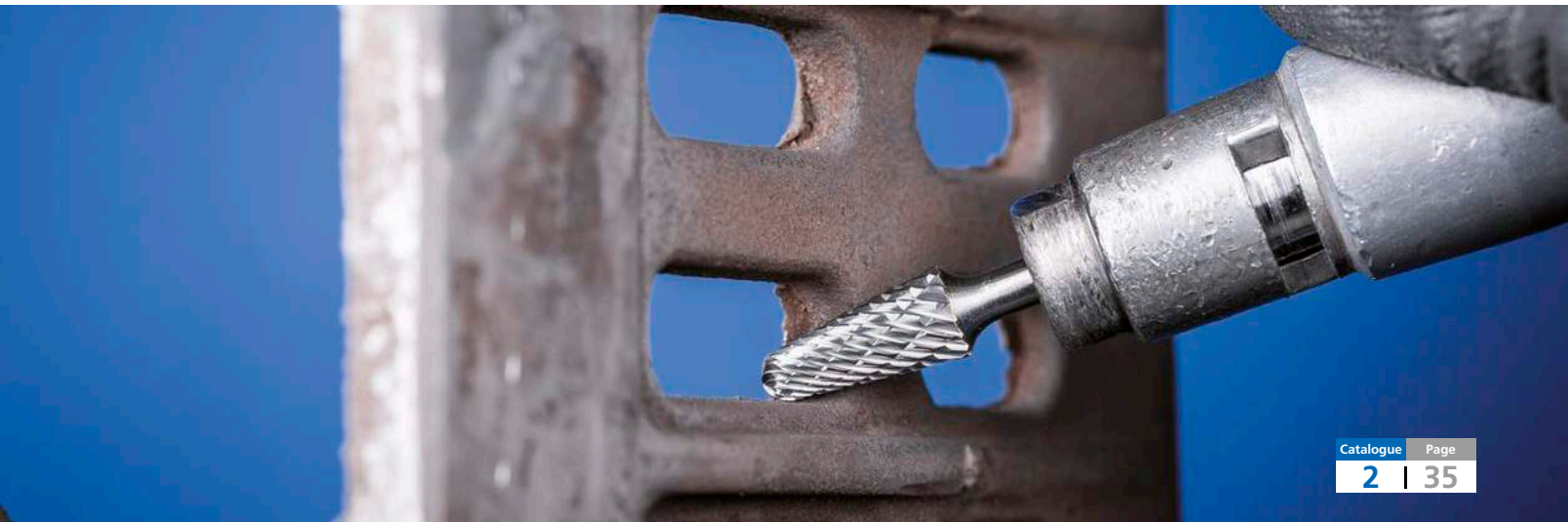


d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	Cut type and EDP number OMNI	
Shank dia. 1/4" [d_2]						
1/4	1	SM-3	10°	1-15/16	28036	1
1/2	1	SM-5	28°	2-3/4	28016	1



8 piece carbide bur sets – OMNI cut

Contains eight carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.
Two additional unused slots are available for other burs.

EDP 28011
8 piece OMNI cut carbide bur set
1/4" shank (plastic case)
Contains 8 pcs. burs with 1/4" shank diameter
and OMNI cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				OMNI	Individual bur EDP's in set	
Cylindrical (plain end)	3/8	3/4	SA-3	28011	28018	1
	1/2	1	SA-5		28005	1
Cylindrical (radius end)	3/8	3/4	SC-3		28006	1
	1/2	1	SC-5		28001	1
Ball	3/8	5/16	SD-3		28021	1
Tree (radius end)	3/8	3/4	SF-3		28007	1
	1/2	1	SF-5		28000	1
Tree (pointed end)	3/8	3/4	SG-3		28015	1

5 piece carbide bur sets – OMNI cut

Contains five carbide burs in the shapes and dimensions most commonly used in the workshop.

The sturdy plastic box protects the burs from dirt and damage.
Five additional unused slots are available for other burs.

EDP 28037
5 piece OMNI cut carbide bur set
1/4" shank (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter
and OMNI cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				OMNI	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	28037	28005	1
Cylindrical (radius end)	1/2	1	SC-5		28001	1
Oval	1/2	7/8	SE-5		28025	1
Tree (radius end)	1/2	1	SF-5		28000	1
14° Taper	1/2	1-1/8	SL-4		28014	1

PFERD

Carbide burs, high performance line

2

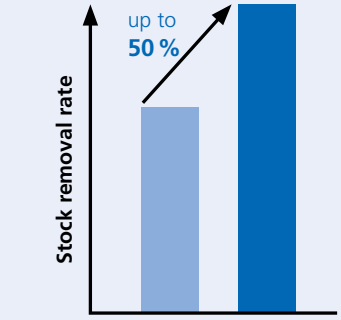
Carbide burs, high performance line
STEEL cut for steel and cast steel

With the innovative STEEL cut, PFERD has developed unique burs for working with steel and cast steel. They are characterized by significantly increased aggressiveness and good guidance, ensuring safe and precise work.
The extremely high stock removal rate makes burs with the STEEL cut impressive, with significant time savings and a high economic value.

Advantages:

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

Performance values for applications on steel and cast steel



- Conventional burs with cross cut
- Carbide burs, STEEL cut

Applications:

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

Workpiece materials:

- Steel
- Cast steel

Recommendations for use:

- It is recommended to use the burs on powerful power tools with elastically mounted spindles to avoid vibration.
- For the most cost-effective use of burs, work with higher rotational/peripheral speeds. Power recommendation for power tools: from 300 watts.
- Please observe the rotational speed recommendations.

Compatible with:

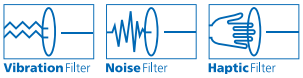
- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines

Safety note:

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

PFERDVALUE®:

PFERDERGONOMICS® recommends burs with STEEL cut as an innovative product solution for comfortable working with significantly reduced vibration and less noise.



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

More PFERD products and information on working with steel can be found in our PRAXIS brochure "PFERD products for use on steel".

Recommended rotational speed range [RPM]

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

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

Safety note:

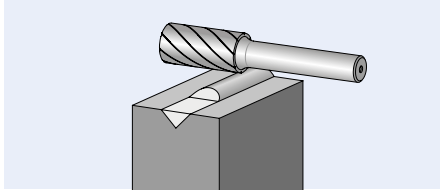
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

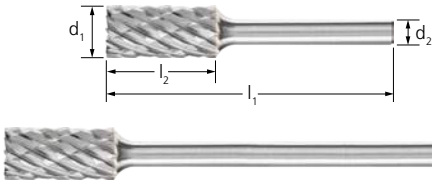
Material group			Application	Cut	❶ Peripheral speed
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal	STEEL	1,500 - 2,500 SFPM
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel			

Example:
Carbide bur,
STEEL cut,
bur diameter of 1/2" .
Peripheral speed: 1,500–2,500 SFPM
Rotational speed range:
12,000–20,000 RPM

❷ Bur dia. [Inches]	❸ Peripheral speed [SFPM]	
	1,500	2,500
	Rotational speed [RPM]	
1/4	24,000	40,000
3/8	14,000	24,000
1/2	12,000	20,000
5/8	9,000	15,000

Cylindrical bur with plain end (uncut) – Shape A





Safety notes:

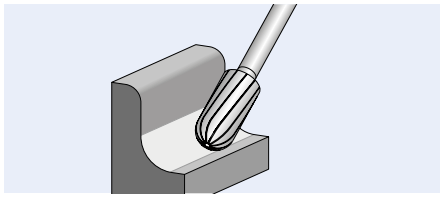
The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

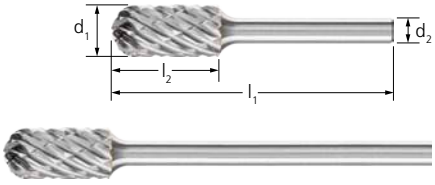
PFERDVALUE®:

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

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number STEEL	
Shank dia. 1/4" [d_2]					
1/4	5/8	SA-1	1-15/16	24038	1
3/8	3/4	SA-3	2-1/2	24068	1
1/2	1	SA-5	2-3/4	24108	1
5/8	1	SA-6	2-3/4	24118	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	3/4	SA-3L6	6-5/8	25640	1
1/2	1	SA-5L6	6-7/8	25642	1

Cylindrical bur with radius end – Shape C





Safety notes:

The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

PFERDVALUE®:

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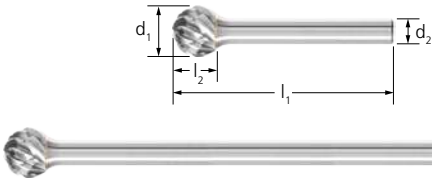
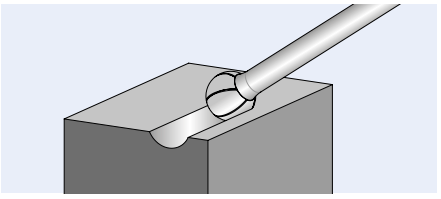
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number STEEL	
Shank dia. 1/4" [d_2]					
1/4	5/8	SC-1	1-15/16	24398	1
3/8	3/4	SC-3	2-1/2	24428	1
1/2	1	SC-5	2-3/4	24468	1
5/8	1	SC-6	2-3/4	24478	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	3/4	SC-3L6	6-5/8	25641	1
1/2	1	SC-5L6	6-7/8	25643	1

Carbide burs, high performance line
STEEL cut for steel and cast steel



Ball bur – Shape D



Safety notes:

The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

PFERDVALUE®:

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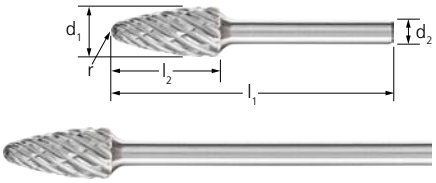
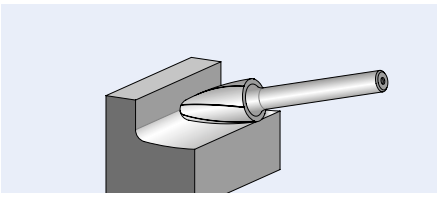
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number STEEL	
Shank dia. 1/4" [d_2]					
1/4	3/16	SD-1	1-15/16	24546	1
3/8	5/16	SD-3	2-1/16	24568	1
1/2	7/16	SD-5	2-3/16	24588	1
5/8	9/16	SD-6	2-5/16	24599	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	5/16	SD-3L6	6-1/4	25650	1
1/2	7/16	SD-5L6	6-5/16	25651	1



Tree bur with radius end – Shape F



Safety notes:

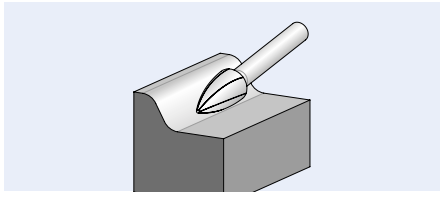
The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

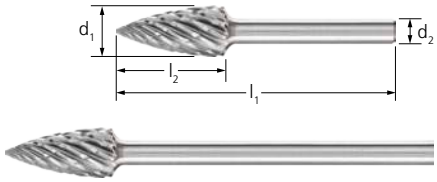
PFERDVALUE®:

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

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number STEEL	
Shank dia. 1/4" [d_2]						
1/4	5/8	SF-1	1-15/16	.059	24698	1
3/8	3/4	SF-3	2-1/2	.098	24708	1
1/2	1	SF-5	2-3/4	.098	24728	1
5/8	1	SF-6	2-3/4	.141	24748	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)						
3/8	3/4	SF-3L6	6-3/4	.098	25645	1
1/2	1	SF-5L6	6-7/8	.098	25647	1

Tree bur with pointed end – Shape G





Safety notes:

The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

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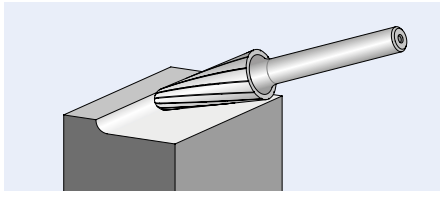
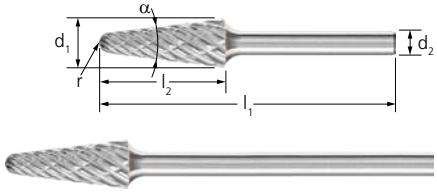
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number STEEL	
Shank dia. 1/4" [d_2]					
1/4	5/8	SG-1	1-15/16	24788	1
3/8	3/4	SG-3	2-1/2	24808	1
1/2	1	SG-5	2-3/4	24818	1
5/8	1	SG-6	2-3/4	24838	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	3/4	SG-3L6	6-3/4	25644	1
1/2	1	SG-5L6	6-7/8	25646	1

14° Taper bur with radius end – Shape L





Safety notes:

The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

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d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	r [Inches]	Cut type and EDP number STEEL	
Shank dia. 1/4" [d_2]							
1/4	5/8	SL-1	14°	1-15/16	.055	25138	1
3/8	1-1/16	SL-3	14°	3	.114	25158	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	25168	1
5/8	1-5/16	SL-6	14°	3-1/4	.189	25188	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)							
3/8	1-1/16	SL-3L6	14°	7-1/8	.114	25648	1
1/2	1-1/8	SL-4L6	14°	7-3/16	.130	25649	1

Carbide burs, high performance line
STEEL cut for steel and cast steel

5 piece carbide bur sets – STEEL cut

Contains five carbide burs for processing steel and cast steel in the most common shapes and dimensions.

The sturdy plastic box protects the burs from dirt and damage.
Five additional slots are available for other burs.

EDP 26553
5 piece STEEL cut carbide bur set
1/4" shank (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter and STEEL cut.

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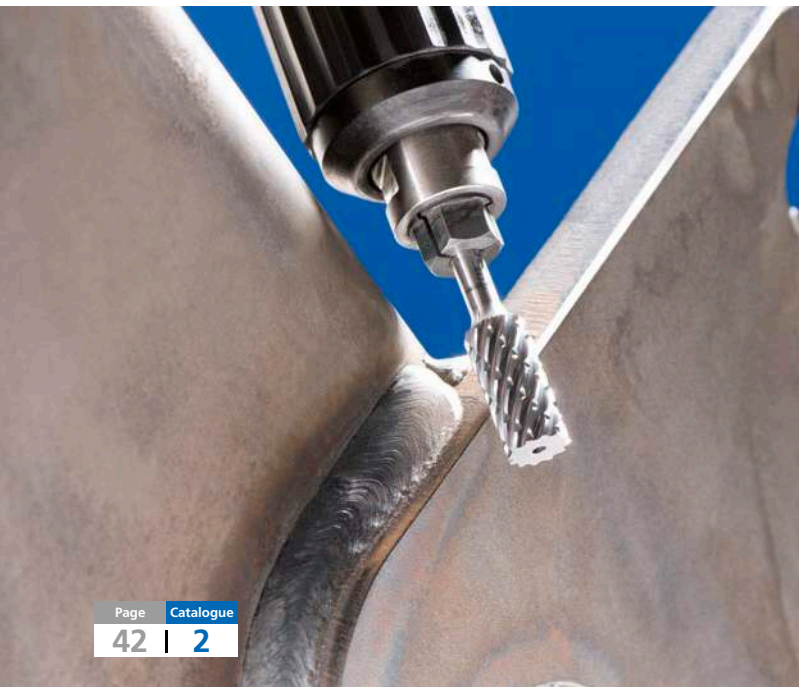
Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				STEEL	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	26553	24108	1
Cylindrical (radius end)	1/2	1	SC-5		24468	1
Tree (radius end)	1/2	1	SF-5		24728	1
Tree (pointed end)	1/2	1	SG-5		24818	1
14° Taper (radius end)	1/2	1-1/8	SL-4		25168	1



With the INOX cut, PFERD has developed innovative burs 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.

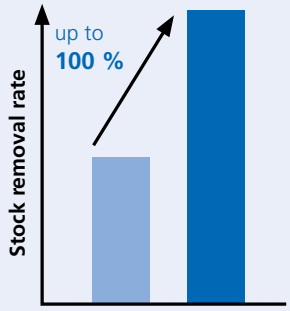
Advantages:

- Outstanding stock removal rate and service 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.

Workpiece materials:

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

Performance values for applications on stainless steel (INOX)



- Conventional double cut burs
- Carbide burs, INOX cut

Applications:

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

Recommendations for use:

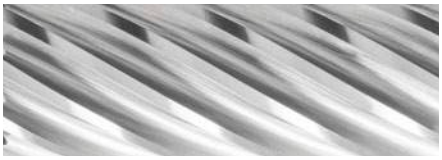
- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burs, work with higher rotational/peripheral speeds.
  Power recommendation for power tools:
  - Shank diameter of 1/8": 75 to 300 watts
  - Shank diameter of 1/4": from 300 watts
- Please observe the rotational speed recommendations.

Compatible with:

- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines

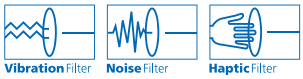
Safety note:

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



PFERDVALUE®:

PFERDERGONOMICS® recommends burs with INOX cut as an innovative bur solution for comfortable working with significantly reduced vibration and less noise.



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

More PFERD products and information on working with stainless steel (INOX) can be found in our PRAXIS brochure "PFERD tools for use on 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 Refer to the table for the peripheral speed.
❸ Select the required bur diameter.
❹ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

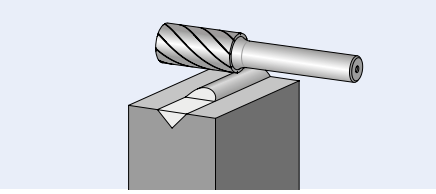
❶ Material group			Application	Cut	❷ Peripheral speed
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Coarse stock removal	INOX	1,500 - 2,000 SFPM
Non-ferrous metals	Non-ferrous metals	Titanium/titanium alloys	Coarse stock removal	INOX	850 - 1,500 SFPM

Example:
Carbide bur,
INOX cut,
bur diameter of 1/2".
Coarse stock removal on stainless steel (INOX).
Peripheral speed: 1,500–2,000 SFPM
Rotational speed range:
12,000–16,000 RPM

❸ Bur dia. [Inches]	❹ Peripheral speeds [SFPM]		
	850	1,500	2,000
	Rotational speeds [RPM]		
1/8	27,000	48,000	64,000
1/4	13,000	24,000	32,000
3/8	8,000	14,000	19,000
1/2	7,000	12,000	16,000

Carbide burs, high performance line
INOX cut for stainless steel (INOX)

Cylindrical bur with plain end (uncut) – Shape A



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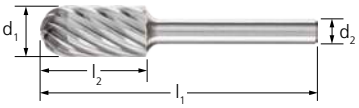
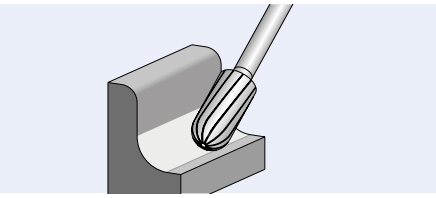
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number INOX	
Shank dia. 1/8" [d_2]					
1/8	1/2	SA-43	1-1/2	23127	1
1/4	1/2	SA-51	1-11/16	23137	1
Shank dia. 1/4" [d_2]					
1/4	5/8	SA-1	1-15/16	24037	1
3/8	3/4	SA-3	2-1/2	24067	1
1/2	1	SA-5	2-3/4	24107	1



Cylindrical bur with radius end – Shape C



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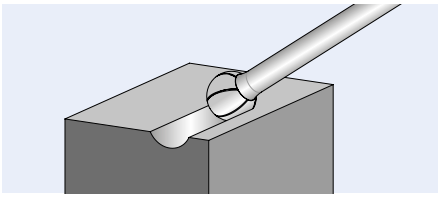
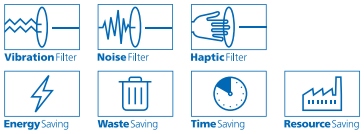
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number INOX	
Shank dia. 1/8" [d_2]					
1/8	1/2	SC-42	1-1/2	23197	1
1/4	1/2	SC-51	1-11/16	23207	1
Shank dia. 1/4" [d_2]					
1/4	5/8	SC-1	1-15/16	24397	1
3/8	3/4	SC-3	2-1/2	24427	1
1/2	1	SC-5	2-3/4	24467	1

Ball bur – Shape D

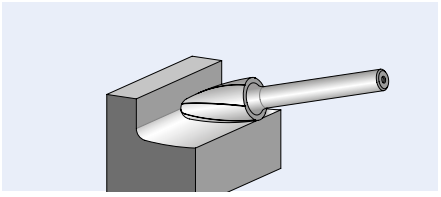


PFERDVALUE®:

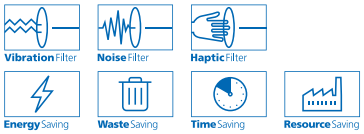


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number INOX	
Shank dia. 1/8" [d_2]					
1/8	3/32	SD-42	1-1/2	23247	1
1/4	3/16	SD-51	1-3/8	23257	1
Shank dia. 1/4" [d_2]					
1/4	3/16	SD-1	1-15/16	24527	1
3/8	5/16	SD-3	2-1/16	24567	1
1/2	7/16	SD-5	2-3/16	24587	1

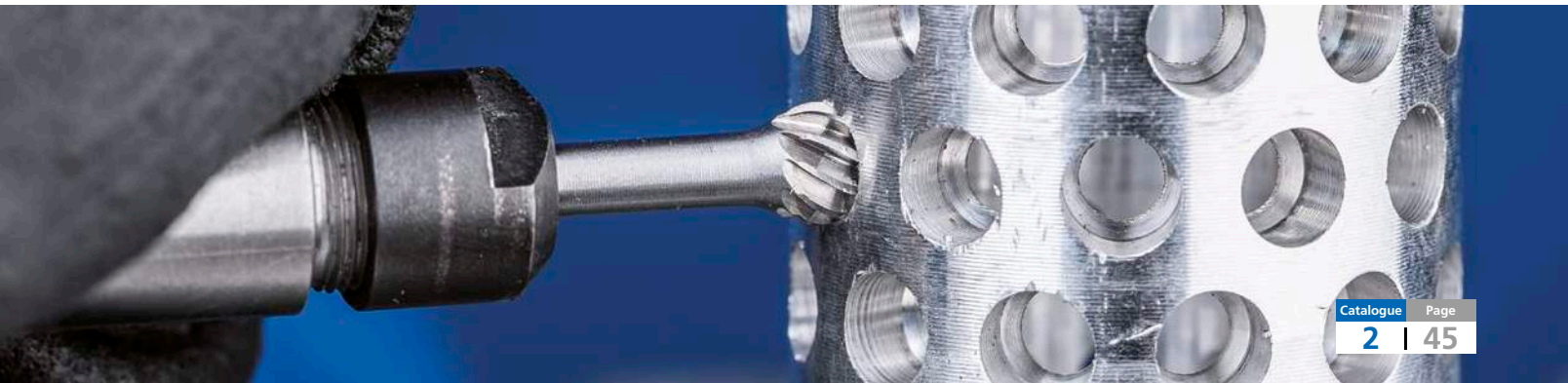
Tree bur with radius end – Shape F



PFERDVALUE®:

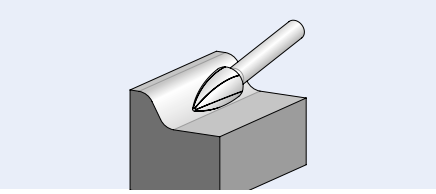


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number INOX	
Shank dia. 1/8" [d_2]						
1/8	1/2	SF-42	1-1/2	.029	23317	1
1/4	1/2	SF-51	1-11/16	.059	23327	1
Shank dia. 1/4" [d_2]						
1/4	5/8	SF-1	1-15/16	.059	24697	1
3/8	3/4	SF-3	2-1/2	.098	24707	1
1/2	1	SF-5	2-3/4	.098	24727	1



Carbide burs, high performance line
INOX cut for stainless steel (INOX)

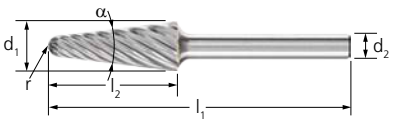
Tree bur with pointed end – Shape G



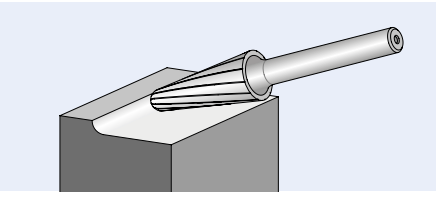
PFERDVALUE®:

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

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number INOX	
Shank dia. 1/8" [d_2]					
1/8	1/4	SG-41	1-1/2	23357	1
1/4	1/2	SG-51	1-11/16	23387	1
Shank dia. 1/4" [d_2]					
1/4	5/8	SG-1	1-15/16	24787	1
3/8	3/4	SG-3	2-1/2	24807	1
1/2	1	SG-5	2-3/4	24817	1



14° Taper bur with radius end – Shape L



PFERDVALUE®:

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

d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	r [Inches]	Cut type and EDP number INOX	
Shank dia. 1/8" [d_2]							
1/8	1/2	SL-42	14°	1-1/2	.035	23457	1
Shank dia. 1/4" [d_2]							
1/4	5/8	SL-1	14°	1-15/16	.055	25137	1
3/8	1-1/16	SL-3	14°	3	.114	25157	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	25167	1

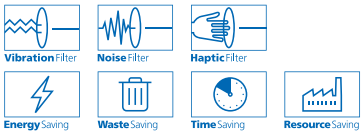
5 piece carbide bur sets – INOX cut

Contains five carbide burs for processing stainless steel (INOX) in the most common shapes and dimensions.

The sturdy plastic box protects the burs from dirt and damage.
Five additional slots are available for other burs.

EDP 26554
5 piece INOX cut carbide bur set 1/4" shank (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter and INOX cut.

PFERDVALUE®:



2

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number		
				INOX	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	26554	24107	1
Cylindrical (radius end)	1/2	1	SC-5		24467	1
Tree (radius end)	1/2	1	SF-5		24727	1
Tree (pointed end)	1/2	1	SG-5		24817	1
14° Taper (radius end)	1/2	1-1/8	SL-4		25167	1

Carbide burs, high performance line

ALU cut for aluminum/non-ferrous metals

When it comes to machining aluminum 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.

Applications:

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

Compatible with:

- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines

Recommendations for use:

- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burs, work with higher rotational/peripheral speeds.
  Power recommendation for power tools:
  - Shank diameter of 1/8": 75 to 300 watts
  - Shank diameter of 1/4": from 500 watts
- Please observe the rotational speed recommendations.

More PFERD tools and a wealth of useful information on working with aluminum can be found in our PRAXIS brochure "PFERD tools for use on aluminum".

ALU cut

The ALU cut is especially designed for stock removal on aluminum. This cut is characterized by its high stock removal rate.

Advantages:

- Extremely high stock removal rate.
- Large chips.
- Reduced material adhesion.
- Long service life and smooth running.
- Can be used with peripheral speeds of up to 3,600 SFPM.

ALU cut with HICOAT® coating HC-NFE

The use of burs with the PFERD HICOAT® coating HC-NFE prevents chips adhering during work on soft aluminum alloys. This increases the service 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.

Workpiece materials:

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

PFERDVALUE®:

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

Recommended rotational speed range [RPM]

To determine the recommended peripheral speed range [SFPM], 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 peripheral speed range.

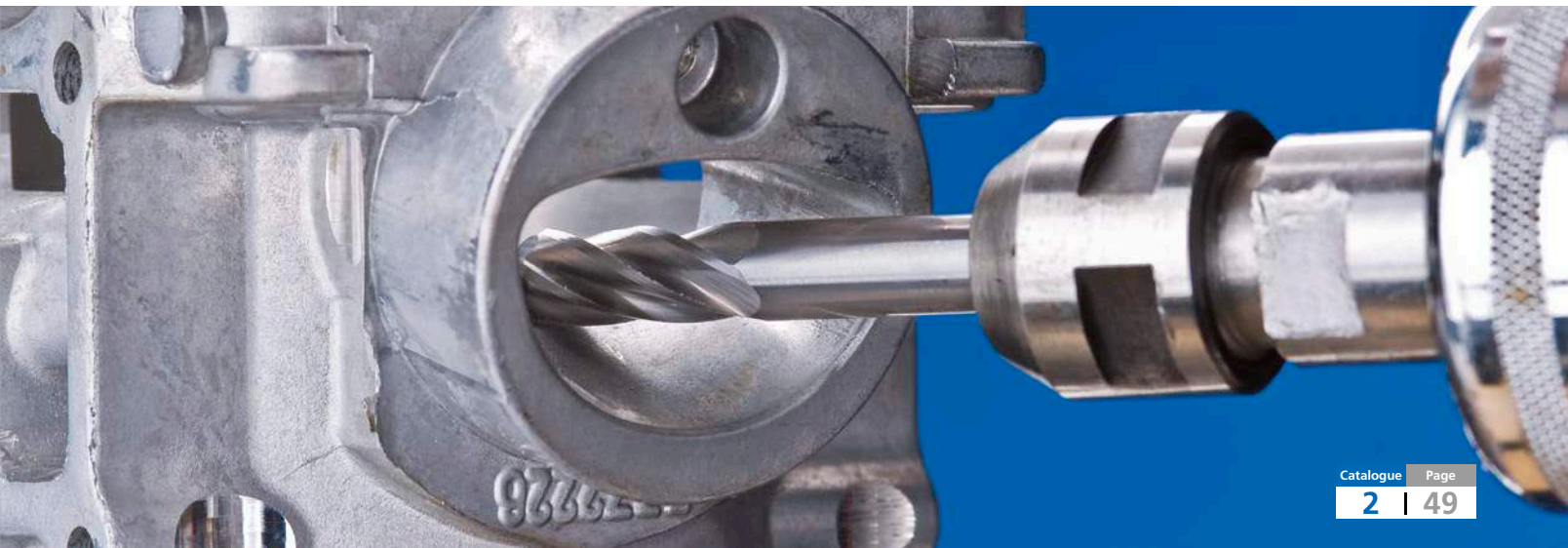
To determine the recommended rotational speed range [RPM], please proceed as follows:

❺ Select the required bur diameter.
❻ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

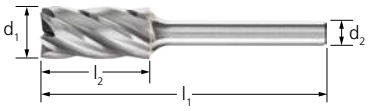
❶ Material group			❷ Application	❸ Cut	❹ Peripheral speed
Non-ferrous metals	Soft non-ferrous metals	Aluminum alloys	Coarse stock removal	ALU HICOAT® HC-NFE	2,000 - 3,600 SFPM
			Fine stock removal	ALU HICOAT® HC-NFE	3,000 - 3,600 SFPM
		Brass, copper, zinc	Coarse stock removal	ALU HICOAT® HC-NFE	2,000 - 3,600 SFPM
			Fine stock removal	ALU HICOAT® HC-NFE	3,000 - 3,600 SFPM
	Hard non-ferrous metals	Hard aluminum alloys (high Si content)	Coarse stock removal	ALU HICOAT® HC-NFE	2,000 - 3,600 SFPM
			Fine stock removal	ALU HICOAT® HC-NFE	3,000 - 3,600 SFPM
		Bronze	Coarse stock removal	ALU HICOAT® HC-NFE	2,000 - 3,000 SFPM
			Fine stock removal	ALU HICOAT® HC-NFE	2,000 - 3,600 SFPM
Plastics, other materials	Thermoplastics, fibre-reinforced plastics (GRP/CRP)		Coarse stock removal	ALU HICOAT® HC-NFE	2,000 - 3,600 SFPM
			Fine stock removal	ALU HICOAT® HC-NFE	

Example:
Carbide bur,
ALU cut,
bur diameter of 1/2".
Coarse stock removal on hard non-ferrous metals, e.g. bronze.
Peripheral speed: 2,000–3,000 SFPM
Rotational speed range:
16,000–24,000 RPM

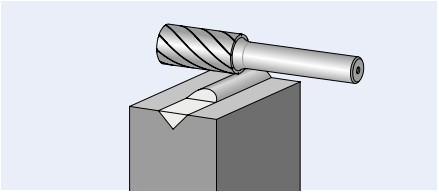
❺ Bur dia. [Inches]	❻ Peripheral speed [SFPM]		
	2,000	3,000	3,600
	Rotational speed [RPM]		
1/8	64,000	95,000	117,000
1/4	32,000	48,000	59,000
5/16	24,000	36,000	44,000
3/8	19,000	29,000	35,000
1/2	16,000	24,000	30,000
5/8	12,000	18,000	22,000



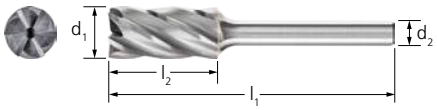
Carbide burs, high performance line
ALU cut for aluminum/non-ferrous metals



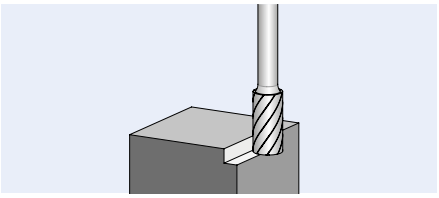
Cylindrical bur with plain end (uncut) – Shape A



d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number ALU	
Shank dia. 1/4" [d_2]					
1/4	5/8	SA-1	1-15/16	24035	1
3/8	3/4	SA-3	2-1/2	24065	1
1/2	1	SA-5	2-3/4	24105	1
5/8	1	SA-6	2-3/4	24115	1



Cylindrical bur with end cut – Shape B

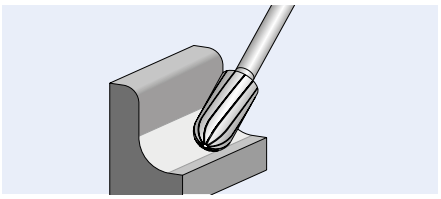


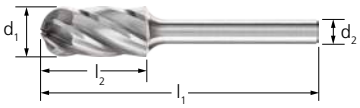
PFERDVALUE®:
With HICOAT® coating:

Waste Saving Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number ALU	ALU HC-NFE	
Shank dia. 1/8" [d_2]						
1/8	9/16	SB-43	1-1/2	23165	-	1
1/4	1/2	SB-51	1-11/16	23175	-	1
Shank dia. 1/4" [d_2]						
1/4	5/8	SB-1	1-15/16	24215	-	1
3/8	3/4	SB-3	2-1/2	24245	24250	1
1/2	1	SB-5	2-3/4	24285	27105	1
5/8	1	SB-6	2-3/4	24295	-	1

Cylindrical bur with radius end – Shape C



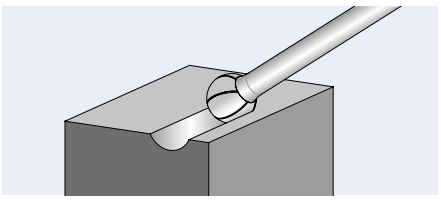


PFERDVALUE®:
With HICOAT® coating:

Waste Saving Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number ALU	ALU HC-NFE	
Shank dia. 1/8" [d_2]						
1/8	1/2	SC-42	1-1/2	23195	-	1
1/4	1/2	SC-51	1-11/16	23205	-	1
Shank dia. 1/4" [d_2]						
1/4	5/8	SC-1	1-15/16	24395	-	1
3/8	3/4	SC-3	2-1/2	24425	24433	1
1/2	1	SC-5	2-3/4	24465	27165	1
5/8	1	SC-6	2-3/4	24475	-	1

Ball bur – Shape D

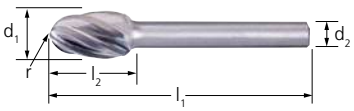


PFERDVALUE®:
With HICOAT® coating:

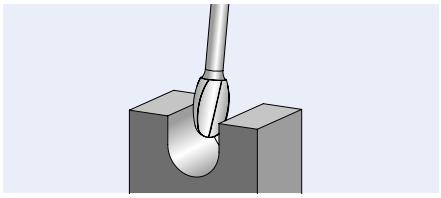
Waste Saving Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number ALU	ALU HC-NFE	
Shank dia. 1/8" [d_2]						
1/8	3/32	SD-42	1-1/2	23245	-	1
1/4	3/16	SD-51	1-3/8	23255	-	1
Shank dia. 1/4" [d_2]						
1/4	3/16	SD-1	1-15/16	24545	-	1
3/8	5/16	SD-3	2-1/16	24565	24570	1
1/2	7/16	SD-5	2-3/16	24585	27235	1
5/8	9/16	SD-6	2-5/16	24595	-	1

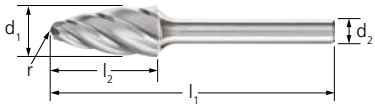
Carbide burs, high performance line
ALU cut for aluminum/non-ferrous metals



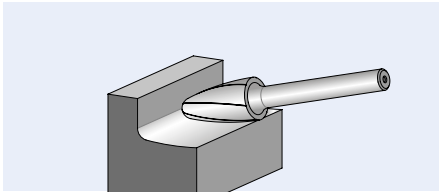
Oval bur – Shape E



d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number ALU	
Shank dia. 1/4" [d_2]						
1/4	3/8	SE-1	1-15/16	.110	25652	1
3/8	5/8	SE-3	2-3/8	.157	24645	1
1/2	7/8	SE-5	2-5/8	.196	24655	1
5/8	1	SE-6	2-3/4	.256	24665	1



Tree bur with radius end – Shape F

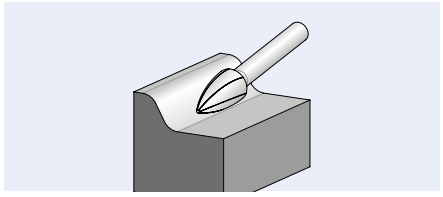


PFERDVALUE®:
With HICOAT® coating:

Waste Saving Time Saving

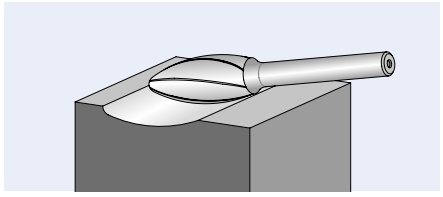
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number ALU	ALU HC-NFE	
Shank dia. 1/8" [d_2]							
1/8	1/2	SF-42	1-1/2	.029	23315	-	1
1/4	1/2	SF-51	1-11/16	.059	23325	-	1
Shank dia. 1/4" [d_2]							
1/4	5/8	SF-1	1-15/16	.059	24695	-	1
3/8	3/4	SF-3	2-1/2	.098	24705	24710	1
1/2	1	SF-5	2-3/4	.098	24725	27280	1
5/8	1	SF-6	2-3/4	.141	24745	-	1

Tree bur with pointed end – Shape G



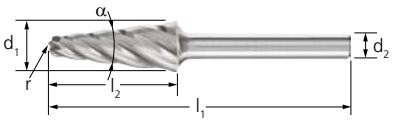
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number ALU	
Shank dia. 1/4" [d_2]					
1/4	5/8	SG-1	1-15/16	25653	1
3/8	3/4	SG-3	2-1/2	25654	1
1/2	1	SG-5	2-3/4	25655	1
5/8	1	SG-6	2-3/4	25656	1

Flame bur – Shape H

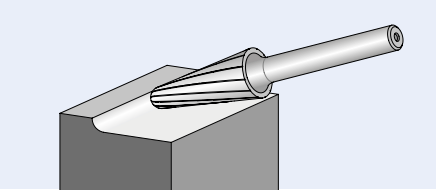


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number ALU	
Shank dia. 1/4" [d_2]						
1/4	5/8	SH-1	1-15/16	.039	25657	1
5/16	3/4	SH-2	2-1/2	.059	25658	1
1/2	1-1/4	SH-5	3	.082	25659	1

Carbide burs, high performance line
ALU cut for aluminum/non-ferrous metals



14° Taper bur with radius end – Shape L



PFERDVALUE®:
With HICOAT® coating:

Waste Saving Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	α [Inches]	l_1 [Inches]	r [Inches]	Cut type and EDP number ALU	ALU HC-NFE	
Shank dia. 1/4" [d_2]								
3/8	1-1/16	SL-3	14°	3	.114	25155	25160	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	25165	27450	1
5/8	1-5/16	SL-6	14°	3-1/4	.189	25185	-	1

5-piece carbide bur set – ALU cut

Contains five carbide burs for processing aluminum in the most common shapes and dimensions.

The sturdy plastic box protects the burs from dirt and damage.
Five additional slots are available for other burs.

EDP 26550
5 piece ALU cut carbide bur set 1/4" shank (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter and ALU cut.

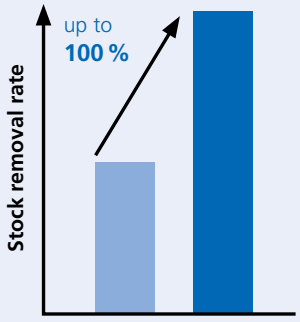
Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number ALU	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	26550	24105	1
Cylindrical (radius end)	1/2	1	SC-5		24465	1
Oval	1/2	7/8	SE-5		24655	1
Tree	1/2	1	SF-5		24725	1
14° Taper	1/2	1-1/8	SL-4		25165	1

With the CAST cut, PFERD has developed innovative burs especially for work on cast iron. They are characterized by an extremely high stock removal rate on cast iron and impress through smooth milling with significantly reduced vibration and less noise.

Advantages:

- Up to 100% higher stock removal rate when used on cast iron due to the innovative tooth geometry, when compared with conventional double cut burs.
- Significantly increased aggressiveness, large chips and very good chip removal.
- Comfortable working with reduced vibration and less noise.

Performance values for applications on cast iron



- Conventional double cut burs
- Carbide burs, CAST cut

Workpiece materials:

- Grey cast iron
- Nodular cast iron
- Annealed cast iron

Applications:

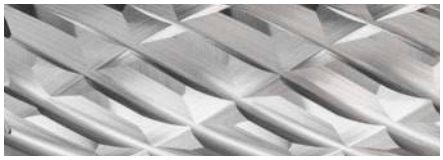
- Milling out
- Leveling
- Deburring
- Cutting out holes
- Surface work
- Work on weld seams

Recommendations for use:

- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burs, work with higher rotational/peripheral speeds. Power recommendation for power tools: from 300 watts.
- Please observe the rotational speed recommendations.

Compatible with:

- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines



Safety note:

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

PFERDVALUE®:

PFERDERGONOMICS® recommends burs with CAST cut as an innovative bur solution for comfortable working with significantly reduced vibration and less noise.

Vibration Filter | Noise Filter | Haptic Filter

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

Energy Saving | Waste Saving | Time Saving | Resource Saving

Recommended rotational speed range [RPM]

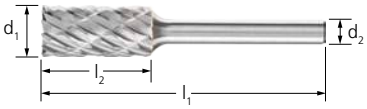
To determine the recommended rotational speed range [RPM], please proceed as follows:

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

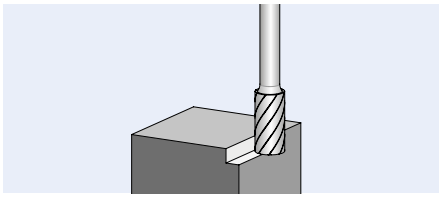
Material group			Application	Cut	❶ Peripheral speed
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	Coarse stock removal	CAST	1,500 - 2,500 SFPM

Example
Carbide bur, CAST cut,
bur diameter: 1/2".
Coarse stock removal on cast iron.
Peripheral speed: 1,500–2,500 SFPM
Rotational speed: 12,000–20,000 RPM

❷ Bur dia. [Inches]	❸ Peripheral speeds [SFPM]	
	1,500	2,500
	Rotational speeds [RPM]	
3/8	14,000	24,000
1/2	12,000	20,000



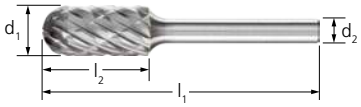
Cylindrical bur with plain end (uncut) – Shape A



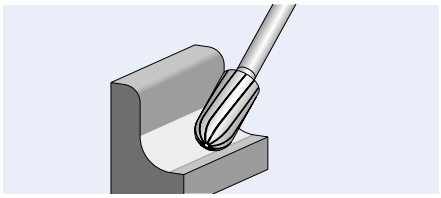
PFERDVALUE®:

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

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number CAST	
Shank dia. 1/4" [d_2]					
3/8	3/4	SA-3	2-1/2	24069	1
1/2	1	SA-5	2-3/4	24109	1



Cylindrical bur with radius end – Shape C

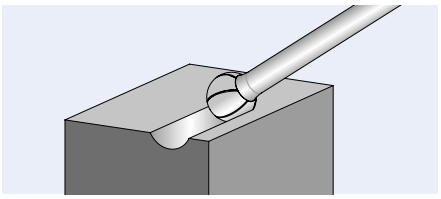


PFERDVALUE®:

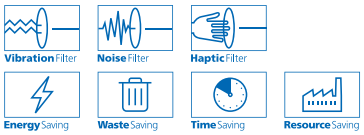
Vibration Filter · Noise Filter · Haptic Filter · Energy Saving · Waste Saving · Time Saving · Resource Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number CAST	
Shank dia. 1/4" [d_2]					
3/8	3/4	SC-3	2-1/2	24429	1
1/2	1	SC-5	2-3/4	24469	1

Ball bur – Shape D

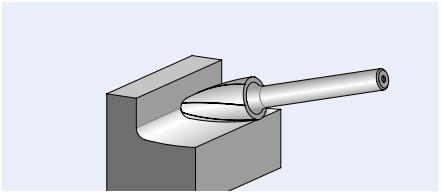


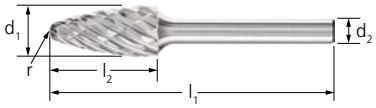
PFERDVALUE®:



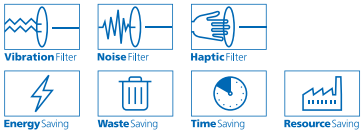
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number CAST	
Shank dia. 1/4" [d_2]					
3/8	5/16	SD-3	2-1/16	24569	1
1/2	7/16	SD-5	2-3/16	24589	1

Tree bur with radius end – Shape F

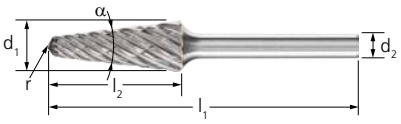




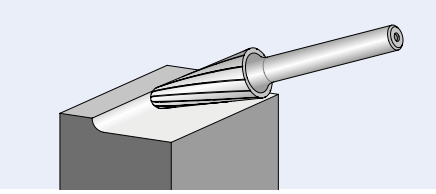
PFERDVALUE®:



d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number CAST	
Shank dia. 1/4" [d_2]						
3/8	3/4	SF-3	2-1/2	.098	24709	1
1/2	1	SF-5	2-3/4	.098	24729	1



14° Taper bur with radius end – Shape L



PFERDVALUE®:

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

d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	r [Inches]	Cut type and EDP number CAST	
Shank dia. 1/4" [d_2]							
3/8	1-1/16	SL-3	14°	3	.114	25159	1
1/2	1-1/8	SL-4	14°	3-1/16	.130	25169	1

5-piece carbide bur set – CAST cut

Contains five carbide burs for processing cast iron in the most common shapes and dimensions.

The sturdy plastic box protects the burs from dirt and damage.
Five additional slots are available for other burs.

EDP 26555
5 piece carbide bur set 1/4" shank CAST cut (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter and CAST cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number CAST	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	26555	24109	1
Cylindrical (radius end)	1/2	1	SC-5		24469	1
Ball	1/2	7/16	SD-5		24589	1
Tree (radius end)	1/2	1	SF-5		24729	1
14° Taper (radius end)	1/2	1-1/8	SL-4		25169	1

The TOUGH cut has been specially designed for tough operating conditions in shipyards, foundries and steel construction. They are also ideal for use in all manufacturing sectors where, due to the difficult production environment, tooth breakages or other damage to conventional burs is a frequent occurrence.

Advantages:

- Innovative, special cuts providing exceptional impact resistance.
- Minimized tooth chipping/breakage, splintering and bur failures due to very robust, high-performance cuts.
- Can also be used at low rotational speeds.
- Due to their extreme impact resistance, they can be used as long-shank variants.

Applications:

- High-impact applications when using shank extensions
- Applications with a high angle of surface contact
- Milling of narrow contours
- Applications where high rotational speeds are not available

Workpiece materials:

- Cast iron
- Steel
- Cast steel
- The TOUGH cut can be used on materials up to 580 HV (54 HRC). For harder materials, it is recommended to perform trials beforehand.

Recommendations for use:

- For the cost-effective use of burs, work with higher rotational/peripheral speeds.
  Power recommendation for power tools:
  - Shank diameter of 1/8": 75 to 300 watts
  - Shank diameter of 1/4": from 300 watts
- Please observe the rotational speed recommendations.

TOUGH cut

Carbide burs with the TOUGH cut are particularly aggressive and are characterized by high stock removal.

Compatible with:

- Flexible shaft drive
- Straight grinder

Safety note:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

Recommended rotational speed range [RPM]

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

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

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

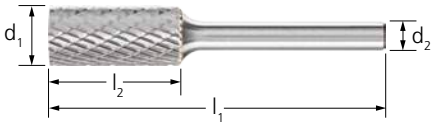
❹ Select the required bur diameter.
❺ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

❶ Material group			Application	❷ Cut	❸ Peripheral speed
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Coarse stock removal with impact load	TOUGH	850 - 2,000 SFPM
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel		TOUGH	850 - 1,150 SFPM
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	Coarse stock removal with impact load	TOUGH	850 - 2,000 SFPM

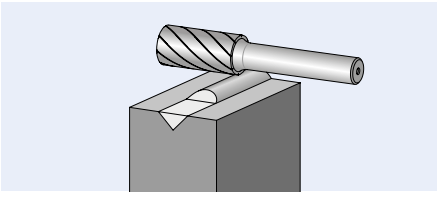
Example:
Carbide bur,
TOUGH cut,
bur diameter of 1/2".
Coarse stock removal with impact load on steels up to 370 HV.
Peripheral speed: 850–2,000 SFPM
Rotational speed range: 7,000–16,000 RPM

❹ Bur dia. [Inches]	❺ Peripheral speeds [SFPM]		
	850	1,150	2,000
	Rotational speeds [RPM]		
3/8	8,000	11,000	19,000
1/2	7,000	9,000	16,000
5/8	5,000	7,000	12,000

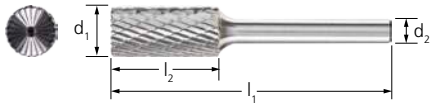
Carbide burs, high performance line
TOUGH cut for tough applications



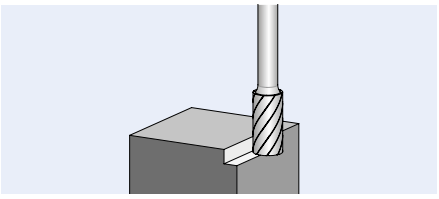
Cylindrical bur with plain end (uncut) – Shape A



d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]					
3/8	3/4	SA-3	2-1/2	22152	1
1/2	1	SA-5	2-3/4	22156	1

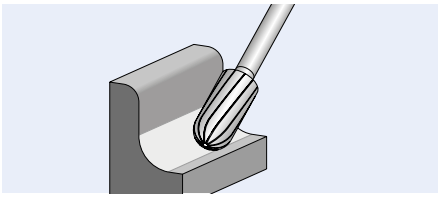


Cylindrical bur with end cut – Shape B



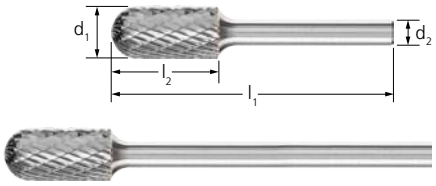
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]					
3/8	3/4	SB-3	2-1/2	22182	1
1/2	1	SB-5	2-3/4	22186	1

Cylindrical bur with radius end – Shape C



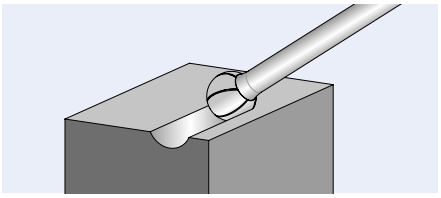
Safety notes:

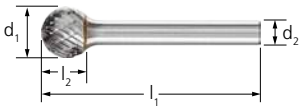
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.



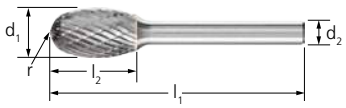
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]					
3/8	3/4	SC-3	2-1/2	22212	1
1/2	1	SC-5	2-3/4	22216	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
3/8	3/4	SC-3L6	6-5/8	22734	1

Ball bur – Shape D

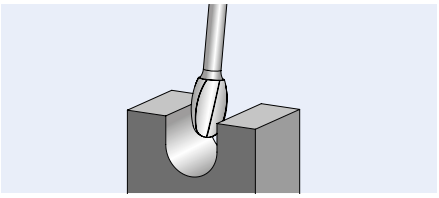




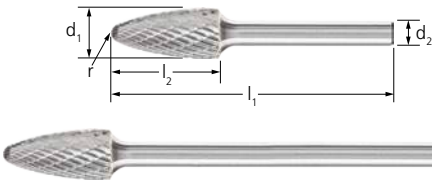
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]					
1/2	7/16	SD-5	2-3/16	22244	1
5/8	9/16	SD-6	2-5/16	22246	1



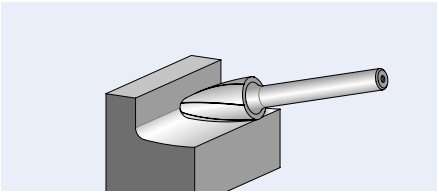
Oval bur – Shape E



d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]						
3/8	5/8	SE-3	2-3/8	.157	22260	1



Tree bur with radius end – Shape F

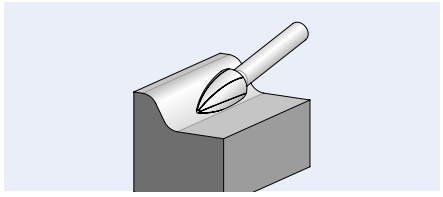


Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

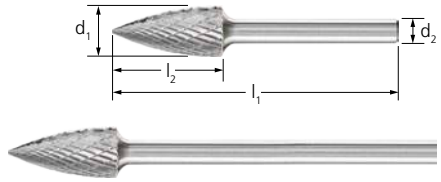
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]						
1/2	1	SF-5	2-3/4	.098	22276	1
5/8	1	SF-6	2-3/4	.141	22278	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)						
1/2	1	SF-5L6	6-7/8	.098	22754	1

Tree bur with pointed end – Shape G



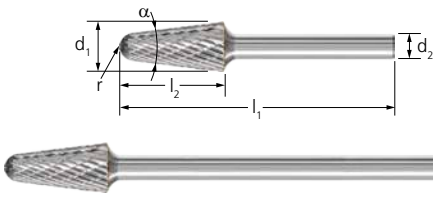
Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

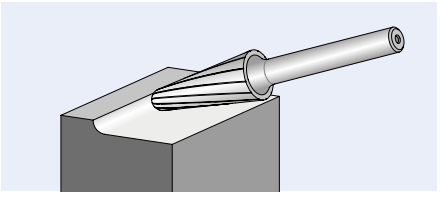


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]					
3/8	3/4	SG-3	2-1/2	22294	1
1/2	1	SG-5	2-3/4	22296	1
5/8	1	SG-6	2-3/4	22298	
Extended shank – dia. 1/4" [d_2], SL 6" (L6)					
1/2	1	SG-5L6	6-7/8	22760	1

Carbide burs, high performance line
TOUGH cut for tough applications



14° Taper bur with radius end – Shape L



Safety notes:

Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

d_1 [Inches]	l_2 [Inches]	SCTI no.	α	l_1 [Inches]	r [Inches]	Cut type and EDP number TOUGH	
Shank dia. 1/4" [d_2]							
1/2	1-1/8	SL-4	14°	3-1/16	.130	22346	1
Extended shank – dia. 1/4" [d_2], SL 6" (L6)							
1/2	1-1/8	SL-4L6	14°	7-3/16	.130	22774	1

5-piece carbide bur set – TOUGH cut

Contains five carbide burs for tough applications in the most common shapes and dimensions.

The sturdy plastic box protects the burs from dirt and damage.
Five additional unused slots are available for other burs.

EDP 26551
5 piece carbide bur set 1/4" shank TOUGH cut (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter and TOUGH cut.

Set contents shape	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	Cut type and set EDP number TOUGH	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5	26551	22156	1
Cylindrical (radius end)	1/2	1	SC-5		22216	1
Ball	1/2	7/16	SD-5		22244	1
Tree (radius end)	1/2	1	SF-5		22276	1
Tree (pointed)	1/2	1	SG-5		22296	1

Carbide burs with MICRO cut are specifically designed for finishing and are used in areas in which abrasive mounted 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 service life, and are well suited to manual and machine applications. Almost all materials up to a hardness of 940 HV (68 HRC) can be machined.

Advantages:

- High surface quality.
- Unlike with abrasive mounted points, there is no change in geometry due to wear and tear.
- Work on almost all materials up to 940 HV (68 HRC).

Applications:

- Finishing
- Very fine cleaning work
- Corrections in die and mold construction
- Sharpening cutting tools

Workpiece materials:

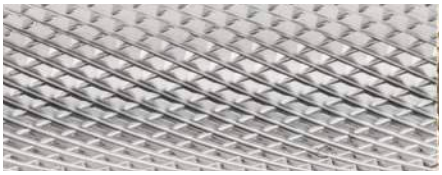
- Steel and cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

Recommendations for use:

- If possible, use the tools on powerful drives with elastically mounted spindles to avoid vibration.
- For the cost-effective use of burs, work with higher rotational/peripheral speeds.
  Power recommendation for power tools:
  - Shank diameter of 1/8": 75 to 300 watts
  - Shank diameter of 1/4": from 300 watts
- Please observe the rotational speed recommendations.

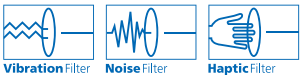
Compatible with:

- Flexible shaft drive
- Straight grinder
- Robot applications
- CNC machines



PFERDVALUE®:

PFERDERGONOMICS® recommends burs with MICRO cut as an innovative bur solution for comfortable working with significantly reduced vibration and less noise.



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

Recommended rotational speed range [RPM]

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

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

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

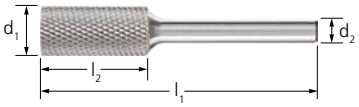
❸ Select the required bur diameter.
❹ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

❶ Material group			Application	Cut	❷ Peripheral speed
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Fine stock removal	MICRO	2,000 - 2,500 SFPM
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel			1,500 - 2,000 SFPM
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	Fine stock removal	MICRO	1,500 - 2,000 SFPM
Non-ferrous metals	Hard non-ferrous metals	Bronze, titanium/titanium alloys, hard aluminum alloys (high Si content)	Fine stock removal	MICRO	1,500 - 2,000 SFPM
	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, with nodular graphite cast iron, white annealed cast iron, black cast iron	Fine stock removal	MICRO	2,000 - 2,500 SFPM

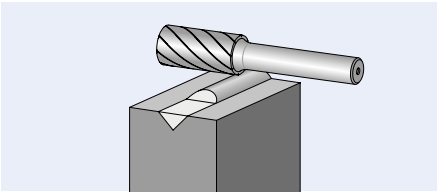
Example
Micro bur, MICRO cut,
bur diameter: 3/8".
Fine stock removal on steel and cast steel up to 370 HV (38 HRC), e.g. construction steels, carbon steels etc.
Peripheral speed: 2,000–2,500 SFPM
Rotational speed: 19,000–24,000 RPM

❺ Bur dia. [Inches]	❹ Peripheral speed [SFPM]		
	1,500	2,000	2,500
	Rotational speed [RPM]		
3/32	72,000	95,000	120,000
1/8	48,000	64,000	80,000
1/4	24,000	32,000	40,000
3/8	14,000	19,000	24,000

Carbide burs, high performance line
MICRO cut for finishing work



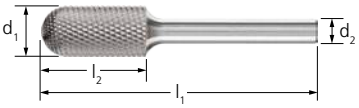
Cylindrical bur with plain end (uncut) – Shape A



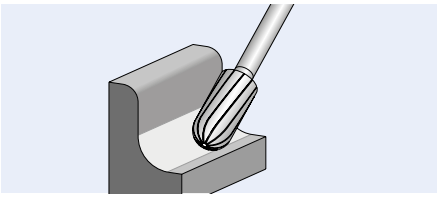
PFERDVALUE®:

Vibration Filter · Noise Filter · Haptic Filter · Time Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number MICRO	
Shank dia. 1/8" [d_2]					
1/8	1/2	SA-43	1-1/2	27500	1
Shank dia. 1/4" [d_2]					
1/4	5/8	SA-1	1-15/16	27512	1
3/8	3/4	SA-3	2-1/2	27516	1



Cylindrical bur with radius end – Shape C



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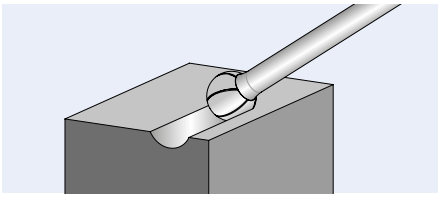
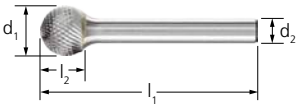
d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number MICRO	
Shank dia. 1/8" [d_2]					
1/8	1/2	SC-42	1-1/2	27540	1
Shank dia. 1/4" [d_2]					
1/4	5/8	SC-1	1-15/16	27541	1
3/8	3/4	SC-3	2-1/2	27542	1

Ball bur – Shape D



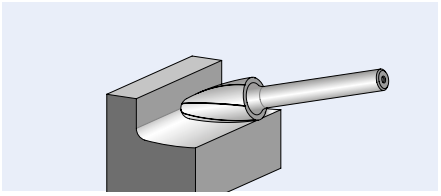
PFERDVALUE®:

Vibration Filter | Noise Filter | Haptic Filter | Time Saving



d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number MICRO	
Shank dia. 1/8" [d_2]					
3/32	3/32	SD-41	1-1/2	27519	1
1/8	3/32	SD-42	1-1/2	27520	1
Shank dia. 1/4" [d_2]					
1/4	3/16	SD-1	1-15/16	27521	1
3/8	5/16	SD-3	2-1/16	27522	1

Tree bur with radius end – Shape F



PFERDVALUE®:

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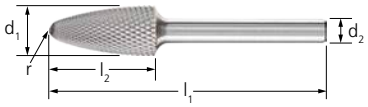
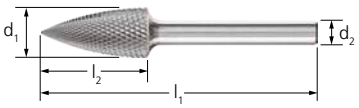
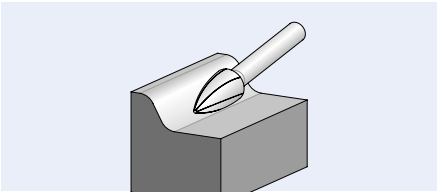


d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	r [Inches]	Cut type and EDP number MICRO	
Shank dia. 1/8" [d_2]						
1/8	1/2	SF-42	1-1/2	.029	27524	1
Shank dia. 1/4" [d_2]						
1/4	5/8	SF-1	1-15/16	.059	27528	1
3/8	3/4	SF-3	2-1/2	.141	27532	1

Carbide burs, high performance line
MICRO cut for finishing work



Tree bur with pointed end – Shape G



PFERDVALUE®:

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d_1 [Inches]	l_2 [Inches]	SCTI no.	l_1 [Inches]	Cut type and EDP number MICRO	
Shank dia. 1/8" [d_2]					
1/8	1/4	SG-41	1-1/2	27546	1
Shank dia. 1/4" [d_2]					
1/4	5/8	SG-1	1-15/16	27547	1
3/8	3/4	SG-3	2-1/2	27548	1

Carbide burs for work on edges are mainly used in steel and aluminum construction, and have been specifically designed for chamfering, deburring, and rounding of edges. PFERD offers burs for both flexible as well as for defined work on edges, including EDGE ALU designed with ALU cut for use on aluminum.

Workpiece materials:

- Steel and cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron
- Plastics, other materials

Compatible with:

- Flexible shaft drive
- Straight grinder
- Robot
- CNC machines

Defined work on edges with the EDGE cut

Carbide burs with the EDGE cut have been specially developed for defined work on edges. The special design allows the bur to run directly along the edges without damaging the workpiece. Exact edge shapes can be created in a single step – with either defined chamfers of 30° or 45°, or to a defined radius of 1/8". Among other things, rounding edges is a precautionary measure for anti-corrosion protection according to ISO 12944-3, ISO 8501-3, SOLAS XII/6.3 (Ref. T4/3.01 MSC.1/Circ.1198).

Advantages:

- Special design for precise guidance.
- Safe and comfortable to guide.
- Create exact edge shapes in a single step.

Applications:

- Defined work on edges
- Defined deburring
- Breaking and rounding edges in steel and aluminum construction
- Rounding edges in preparation for the application of anti-corrosion coatings in shipbuilding, on crane systems and other steel constructions which are exposed to corrosion loading
- Defined chamfering for weld seam preparation for V-shaped seams (60°, ISO 9692-1)
- Defined chamfering for edge breaking (45°)

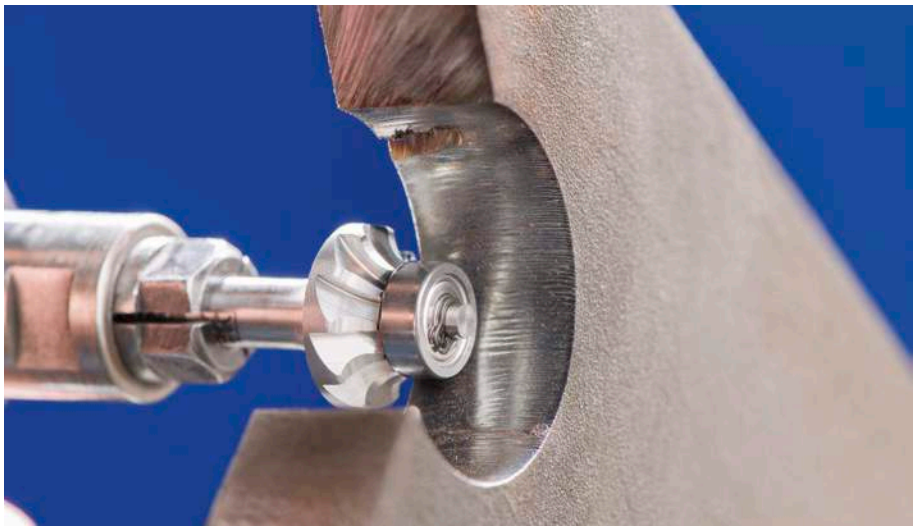
Recommendations for use:

- Use the burs counterrotationally. In order to produce a fine surface, pass the bur over the edges in the rotational direction.
- If possible, use EDGE cut burs with the PFERD pneumatic straight grinder PG 3/210 (EDP 90036) with matching guide sleeve EFH PG 3/210 (EDP 95294) (see the info box on the right).

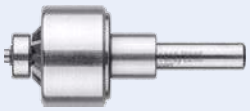
PFERDVALUE®:

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

Energy Saving Time Saving



EDGE Cutting System (ECS)



The EDGE Cutting System consists of burs with the EDGE cut and a special guide sleeve that can be mounted into a conventional power tool collet to ensure optimal guidance during light deburring work (see pages 71–72).

Advantages:

- Improved guidance.
- Can be used with any conventional straight grinder.
- Bur is interchangeable.

Compressed-air straight grinder PG 3/210 DH and accessories

The combination of this compressed-air straight grinder, the specially designed guide sleeve for this power tool and burs with the EDGE cut, guarantees optimal guidance for creating exact edge shapes.

Advantages:

- Improved guidance due to additional contact surface.
- Exhaust is discharged towards the front, so that the thermal load on the workpiece and the bur is reduced (this is a key advantage when working with materials which do not conduct heat well, such as stainless steel (INOX)).
- Avoids the build-up of chip deposits when working on aluminum materials.
- Chips are removed in a targeted way by the power tool's exhaust air.

Ordering data:

Compressed-air straight grinder

PG 3/210
EDP 90036

Guide sleeve

EFH PG 3/210
EDP 95294

Guide plate

EFP PG 3/210
EDP 95295

Recommended rotational speed range [RPM]

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

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

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

❹ Select the required bur diameter.
❺ The peripheral speed range and the bur diameter determine the recommended rotational speed range.

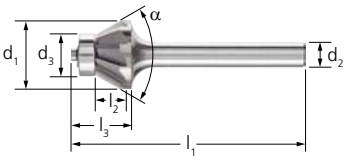
❶ Material group			Application	❷ Cut	❸ Peripheral speed
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels	Work on edges	EDGE	2,000 - 3,000 SFPM
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel			2,000 - 2,500 SFPM
Non-ferrous metals	Soft non-ferrous metals	Soft aluminum alloys	Work on edges	EDGE ALU	3,000 - 3,600 SFPM
		Brass, copper, zinc		EDGE	2,000 - 3,000 SFPM
	Hard non-ferrous metals	Bronze, hard aluminum alloys (high Si content)	Work on edges	EDGE ALU	3,000 - 3,600 SFPM
		Titanium/titanium alloys		EDGE	850 - 1,500 SFPM
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys (engine and turbine construction)	Work on edges	EDGE	850 - 1,500 SFPM
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	Work on edges	EDGE	2,000 - 3,000 SFPM
Plastics, other materials	Fibre-reinforced plastics (GRP/CRP), thermoplastics		Work on edges	EDGE ALU	2,500 - 3,600 SFPM

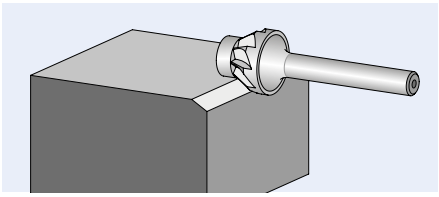
Example:
Carbide bur,
EDGE cut,
bur diameter of 5/8".
Steel and cast steel up to 370 HV (38 HRC),
e.g. construction steels, carbon steels etc.
Peripheral speed: 2,000 - 3,000 SFPM
Rotational speed range:
12,000 - 18,000 RPM

❹ Bur dia. [Inches]	❺ Peripheral speeds [SFPM]					
	850	1,500	2,000	2,500	3,000	3,600
	Rotational speeds [RPM]					
5/8	5,000	9,000	12,000	15,000	18,000	22,000

Cone counterbore EDGE 30°

Cone counterbore bur for the production of precisely defined chamfers. Suitable for counterboring and chamfering of defined 30° chamfer angles.





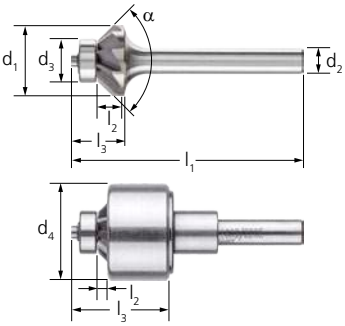
PFERDVALUE®:

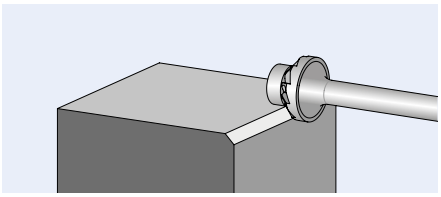
Time Saving | Energy Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_3 [Inches]	α [Inches]	l_1 [Inches]	d_3 [Inches]	Cut type and EDP number		
							EDGE	EDGE ALU	
Shank dia. 1/4" [d_2]									
5/8	3/16	SJ-6	9/16	60°	2-1/4	3/8	25045	25175	1

Cone counterbore EDGE 45°

Cone counterbore bur for the production of precisely defined chamfers. Suitable for counterboring and chamfering of defined 45° chamfer angles. The chamfers created using the EDGE Cutting System (ECS) are .047" (+/- .007") wide.





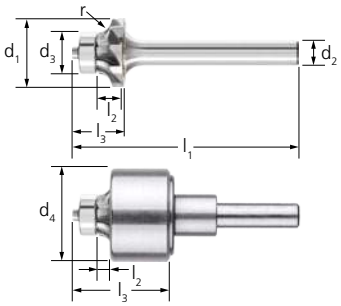
Ordering notes:

- The EDGE Cutting System (ECS) bur can be reordered and replaced if required. Matching burs: EDP 25105 (EDGE) and EDP 25176 (EDGE ALU)

PFERDVALUE®:

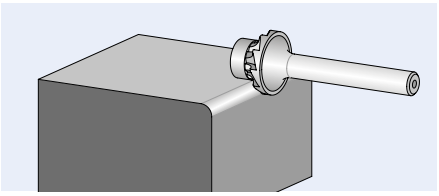
Time Saving | Energy Saving

d_1 [Inches]	l_2 [Inches]	SCTI no.	l_3 [Inches]	α [Inches]	l_1 [Inches]	d_3 [Inches]	d_4 [Inches]	Cut type and EDP number		
								EDGE	EDGE ALU	
Shank dia. 1/4" [d_2]										
5/8	1/8	SK-6	1/2	90°	2	3/8	-	25105	25176	1
EDGE Cutting System (ECS) – Shank dia. 1/4" [d_2]										
5/8	.040	SK-6	5/16	90°	2	3/8	1	25106	25177	1



Concave radius bur EDGE R-1/8"

Concave radius burs for the production of precise radii. Cannot be re-sharpened. Suitable for the production and processing of 1/8" outer radii.



Ordering notes:
- The EDGE Cutting System (ECS) bur can be reordered and replaced if required. Matching bur: EDP 25150

PFERDVALUE®:

TimeSaving EnergySaving

d_1 [Inches]	l_2 [Inches]	l_3 [Inches]	l_1 [Inches]	d_3 [Inches]	d_4 [Inches]	r [Inches]	Cut type and EDP number EDGE	
Shank dia. 1/4" [d_2]								
5/8	1/8	1/2	2	3/8	-	1/8	25150	1
EDGE Cutting System (ECS) – Shank dia. 1/4" [d_2]								
5/8	1/8	1/2	2	3/8	1	1/8	25149	1

Evaluation bur sets

5-piece carbide bur set – Multi-material

Contains five carbide burs in different cuts in the most common shapes and dimensions, uniquely designed for various materials including steel, stainless steel, aluminum and cast iron.

The sturdy plastic box protects the burs from dirt and damage.
Five additional unused slots are available for other burs.

EDP 26557
5 piece carbide bur set 1/4" shank (plastic case)
Contains 5 pcs. burs with 1/4" shank diameter.

Set contents shape	Cut	Bur dia. d_1 [Inches]	Bur length l_2 [Inches]	SCTI no.	EDP number	Individual bur EDP's in set	
Tree (radius end)	STEEL	1/2	2-3/4	SF-5	26557	24728	1
Tree (radius end)	INOX	1/2	2-3/4	SF-5		24727	1
Tree (radius end)	ALU	1/2	2-3/4	SF-5		24725	1
Tree (radius end)	CAST	1/2	2-3/4	SF-5		24729	1
Tree (radius end)	OMNI	1/2	2-3/4	SF-5		28000	1

Bi-metal hole saws

Bi-metal hole saws
General information

Hole saws are made from tough, shatter-proof, sturdy HSS bi-metal. The saw teeth are made from high-quality M42 material.

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 bi-metal pilot drill.
- Hole saw arbor is supplied with an ejection spring for improved ejection of the sawn cut material.

Workpiece materials:

- Steel
- Stainless steel (INOX)
- Aluminum
- 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 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 aluminum, use kerosene instead of cutting oil.
- Bi-metal 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.

Compatible with:

- Power drill
- Drill press

Safety notes:

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

= Wear eye protection!

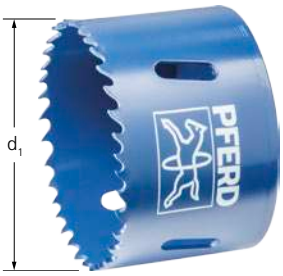
= Follow the safety instructions!

Bi-metal hole saws

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

Thread:
LS 14–LS 30 = 1/2–20
LS 32–LS 152 = 5/8-18

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 78.



d_1 [Inches]	Max. cutting depth [Inches]	EDP number	Suitable arbors	Recommended rotational speed [RPM]				
				Steel	Stainless steel (INOX)	Non-ferrous metals	Plastics	
9/16	1-5/16	29100	EDP 29033, EDP 29034	620	310	800	1,000	1
5/8	1-5/16	29101	EDP 29033, EDP 29034	550	275	730	880	1
11/16	1-7/16	29102	EDP 29033, EDP 29034	520	260	680	820	1
3/4	1-7/16	29103	EDP 29033, EDP 29034	460	230	600	740	1
13/16	1-7/16	29104	EDP 29033, EDP 29034	410	205	540	670	1
7/8	1-7/16	29105	EDP 29033, EDP 29034	390	195	520	640	1
15/16	1-7/16	29106	EDP 29033, EDP 29034	360	180	470	580	1
1	1-7/16	29107	EDP 29033, EDP 29034	350	175	470	560	1
1-1/16	1-7/16	29108	EDP 29033, EDP 29034	325	160	435	520	1
1-1/8	1-7/16	29109	EDP 29033, EDP 29034	300	150	400	480	1
1-3/16	1-7/16	29110	EDP 29033, EDP 29034	285	145	380	470	1
1-1/4	1-7/16	29111	EDP 29036	275	140	360	440	1
1-5/16	1-7/16	29112	EDP 29036	260	135	345	420	1
1-3/8	1-7/16	29113	EDP 29036	250	125	330	400	1
1-7/16	1-7/16	29114	EDP 29036	235	115	310	370	1
1-1/2	1-7/16	29115	EDP 29036	230	115	300	370	1
1-9/16	1-7/16	29116	EDP 29036	215	110	280	350	1
1-5/8	1-7/16	29117	EDP 29036	210	105	280	340	1
1-11/16	1-1/4	29118	EDP 29036	200	100	260	330	1
1-3/4	1-1/4	29119	EDP 29036	195	95	260	320	1
1-13/16	1-1/4	29120	EDP 29036	185	90	250	300	1
1-7/8	1-1/4	29121	EDP 29036	180	90	240	290	1
2	1-1/4	29122	EDP 29036	170	85	230	270	1
2-1/16	1-1/4	29123	EDP 29036	165	80	220	270	1
2-1/8	1-1/4	29124	EDP 29036	160	80	210	260	1
2-1/4	1-1/4	29125	EDP 29036	150	75	200	250	1
2-5/16	1-1/4	29126	EDP 29036	145	70	190	240	1
2-3/8	1-1/4	29127	EDP 29036	140	70	190	230	1
2-1/2	1-1/4	29128	EDP 29036	135	65	180	220	1
2-9/16	1-1/4	29129	EDP 29036	135	60	180	220	1
2-5/8	1-1/4	29130	EDP 29036	130	65	170	210	1
2-3/4	1-1/4	29131	EDP 29036	125	60	160	200	1
2-7/8	1-1/4	29132	EDP 29036	120	60	160	190	1
3	1-1/4	29133	EDP 29036	115	55	150	180	1
3-1/8	1-1/4	29134	EDP 29036	110	55	140	180	1
3-1/4	1-1/4	29135	EDP 29036	105	50	140	170	1

Continued on next page

d_1 [Inches]	Max. cutting depth [Inches]	EDP number	Suitable arbors	Recommended rotational speed [RPM]				
				Steel	Stainless steel (INOX)	Non-ferrous metals	Plastics	
3-3/8	1-1/4	29136	EDP 29036	100	50	130	160	1
3-1/2	1-1/4	29137	EDP 29036	95	45	130	160	1
3-5/8	1-1/4	29138	EDP 29036	95	45	120	150	1
3-3/4	1-1/4	29139	EDP 29036	90	45	120	150	1
3-7/8	1-1/4	29140	EDP 29036	90	45	120	140	1
4	1-1/4	29141	EDP 29036	85	40	110	140	1
4-1/8	1-1/4	29142	EDP 29036	80	40	110	130	1
4-3/8	1-1/4	29144	EDP 29036	75	35	100	130	1
4-1/2	1-1/4	29145	EDP 29036	75	35	100	120	1
4-3/4	1-1/4	29146	EDP 29036	70	35	90	120	1
5	1-1/4	29147	EDP 29036	65	30	80	110	1
5-1/2	1-1/4	29148	EDP 29036	60	30	75	100	1
6	1-1/4	29149	EDP 29036	55	25	70	90	1

Bi-metal hole saw sets

13-piece hole saw set

The set contains nine bi-metal hole saws in the most common diameters, including accessories, for engineers in the construction, container and pipeline industries. It is supplied in a clearly structured plastic box which protects against dirt and damage. The operating instructions are included.
It is possible to use the 1-3/8" and 1-1/2" diameter hole saws with the adapter and washer.

Industry/ target group:
Process equipment construction, tank and pressure vessel construction, pipeline construction

Number of pieces	Dimension [Inches]	Contents			EDP number		
		Description	Diameter [Inches]	Shank dia. [Inches]		Individual EDP's in set	
13	8-1/2 x 7 x 2-1/2	Bi-metal hole saw	3/4	-	29180	29103	1
		Bi-metal hole saw	7/8	-		29105	1
		Bi-metal hole saw	1-1/8	-		29109	1
		Bi-metal hole saw	1-3/8	-		29113	1
		Bi-metal hole saw	1-1/2	-		29115	1
		Bi-metal hole saw	1-3/4	-		29119	1
		Bi-metal hole saw	2	-		29122	1
		Bi-metal hole saw	2-1/4	-		29125	1
		Bi-metal hole saw	2-1/2	-		29128	1
		Hole saw arbor	-	1/4		29036	1
		Hole saw arbor	-	3/8		29034	1
		Bi-metal pilot drill	-	1/4		29039	1
		Thread adapter	-	-		29070	1

Quick-mounting system for hole saws, adapter sets

PFERD offers a clamping system for easily and quickly using bi-metal hole saws. The quick-mounting system and the two three-part adapter sets, which have been tailored to the hole saw diameter, enable PFERD bi-metal 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 bi-metal 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 EDP 29043 is available for hole saw diameter 9/16" - 1-3/16", and adapter set EDP 29044 for hole saw diameter 1-1/4" - 6". Both adapter sets contain three adapters with the same dimensions.

EDP 29042

EDP 29043

EDP 29044

For hole saw threads	Suitable for hole saw diameters [Inches]	d_2 [Inches]	Shank type	Description	EDP number	
-	9/16 - 6	7-1/16	hexagonal	Quick-mounting system for hole saws	29042	1
1/2-20	9/16 - 1-3/16	-	-	3-piece quick-mounting adapter set	29043	1
5/8-18	1-1/4 - 6	-	-	3-piece quick-mounting adapter set	29044	1

Example combination

1-3/4" hole saw EDP 29119 + Adapters from adapter set EDP 29044 + Quick-mounting system EDP 29042 = Bi-metal hole saw 1-3/4" with adapter EDP 29044 and quick-mounting system EDP 29042

Bi-metal pilot drill

Bi-metal pilot drills for bi-metal hole saw arbors and quick-mounting systems for hole saws.

Ordering notes:
- Hole saw arbors EDP 29033 and EDP 29034 are supplied with the bi-metal pilot drill EDP 29040.
- Hole saw arbors 29036 are supplied with the bi-metal pilot drill EDP 29039.
- The bi-metal pilot drill EDP 29039 can be used for the quick-mounting system EDP 29042.

EDP 29040

EDP 29039

Shank dia. [Inches]	Shank dia. [mm]	Shank type	d_2 [Inches]	Suitable for hole saw diameters [Inches]	Suitable for arbors	EDP number	
1/4	6.35	Round	1/4	9/16 to 6	EDP 29033, EDP 29034	29040	1
	6.35	Round	1/4	9/16 to 6	EDP 29036	29039	1

Bi-metal hole saws
Accessories

EDP 29033

EDP 29034

EDP 29036

Hole saw arbors

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 power tool.
- Hole saw arbors EDP 29033 and EDP 29034 are supplied with the bi-metal pilot drill EDP 29040 and an ejection spring.
- Hole saw arbors EDP 29036 are supplied with the bi-metal pilot drill EDP 29039 and an ejection spring.

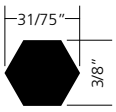
d_2 [Inches]	d_2 [mm]	Thread	Shank type	Suitable for hole saw diameters [Inches]	EDP number	
3/8	9.53	1/2"-20	hexagonal	9/16 to 1-3/16	29033	1
	9.53	5/8"-18	hexagonal	1-1/4 to 6	29034	1
1/4	6.35	1/2"-20	round	9/16 to 1-3/16	29036	1

Shank shapes

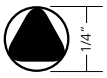
The adjacent tables provide information on the arbor shapes and dimensions for the hole saw arbors and pilot drills. The matching hole saws and hole saw arbors are indicated.

Shank dimensions [mm]

Hexagonal



Round



PFERD hole saw arbor EDP	Shank dia. [Inches]	Shank dia. [mm]	Shank shape	for PFERD hole saw dia. [Inches]
29033	3/8	9.53	⬢	9/16 to 1-3/16
29034	3/8	9.53	⬢	1-1/4 to 6
29036	1/4	6.35	◮	9/16 to 1-3/16

PFERD pilot drill EDP	Shank dia. [Inches]	Shank dia. [mm]	Shank shape	For PFERD hole saw arbors
29040	1/4	6.35	◮	EDP 29033, EDP 29034
29039	1/4	6.35	◮	EDP 29036

Ejection spring

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

Before using the hole saw, 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 adapter and washer (see diagram).

Bi-metal hole saw | Ejection spring | Washer | Adapter | Hole saw arbor

Arbor extension for hole saws

The bi-metal hole saw arbors EDP 29033 and EDP 29034 can be extended using this arbor extension.

Advantages:
- Suitable for work on hard-to-reach components.
- Particularly suitable for work on hollow walls.
- Deep holes can be accessed easily.
- Achieves the required distance between the power tool and the work area.
- Avoids damage to the workpiece and machine.
- Dust is not drawn into the power tool during sawing.

Hexagon socket d_1 [Inches]	Hexagon socket d_1 [mm]	l_1 [Inches]	l_1 [mm]	Shank type	Width across flats (AF) d_2 [Inches]	Width across flats (AF) d_2 [mm]	Suitable for arbors	EDP number	
3/8	9.53	12	300	hexagonal	7/16	11	EDP 29033, 29034	29071	1

Repair set for hole saw arbors

With the repair set for hole saw arbors, the most common parts can be replaced in case of loss or damage.

Contents:
- 2 ejection springs
- 2 hexagon socket head screws
- 1 hexagon socket wrench

EDP number	
29072	1

LSA adapter

1-1/4" to 1-1/2" diameter hole saws can be used with the adapter, a washer and the hole saw arbors EDP 29033 and EDP 29036.

Suitable for hole saw diameters [Inches]	Suitable for arbors	EDP number	
1-1/4 – 1-1/2	EDP 29033, EDP 29036	29070	1

Quality tools from a single source

Catalogue section 1

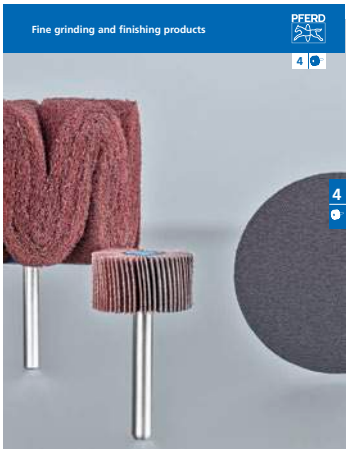
Files

Catalogue section 2

Carbide burs and bi-metal hole saws

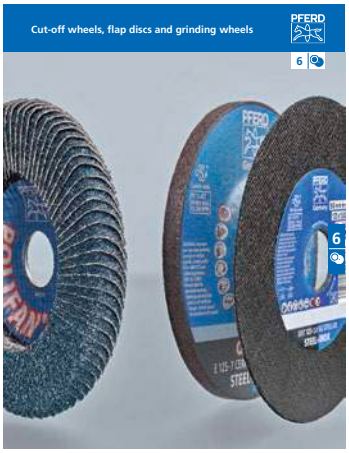
Catalogue section 3

Mounted points, cones and plugs, bench grinding wheels



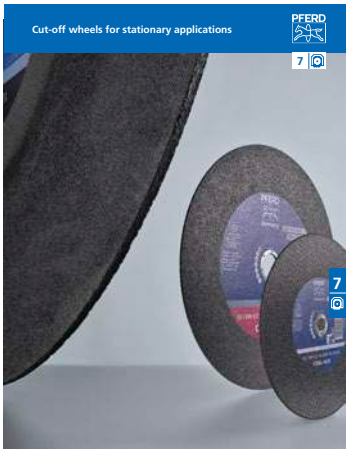
Catalogue section 4

Fine grinding and polishing tools



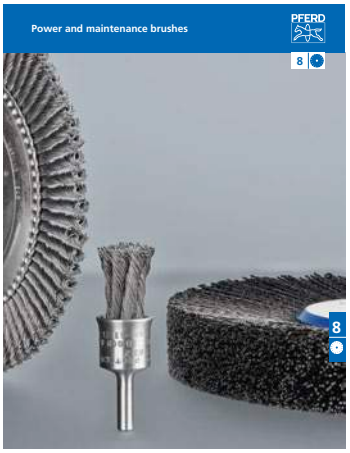
Catalogue section 6

Cut-off wheels, flap discs and grinding wheels



Catalogue section 7

Cut-off wheels for stationary applications



Catalogue section 8

Power and maintenance brushes

Catalogue section 9

Power tools

PFERD INC.
9201 W. Heather Ave.
Milwaukee, WI 53224
Phone: (262) 255-3200
Toll-Free: (800) 342-9015
Fax: (262) 255-2840
e-mail: sales@pferdusa.com

PFERD CANADA INC.
5570 McAdam Road
Mississauga, ONT L4Z 1P1
Phone: (905) 501-1555
Toll-Free: (866) 245-1555
Fax: (905) 501-1554
e-mail: sales@pferdcanada.ca

Mounted points, cones and plugs, bench grinding wheels

PFERD

3

Mounted points, cones and plugs, bench grinding wheels

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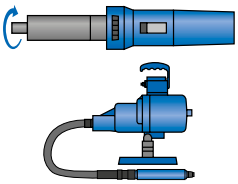
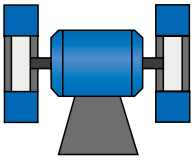
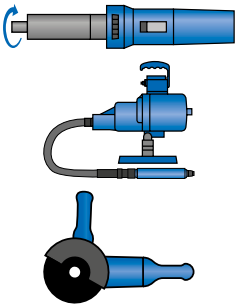
Mounted points



Bench grinding wheels



Cones and plugs



Mounted points, cones and plugs, bench grinding wheels

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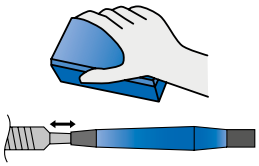
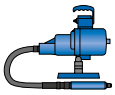
Grinding and polishing stones

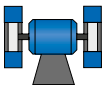


Hand dressers

3

 Straight grinder

 Flexible shaft

 Bench grinder

 Manual filing tool

 Manual application

Visit pferd.com for more information.

PFERDPRAXIS **brochures**

Our **PFERD**PRAXIS brochures contain a wealth of useful information on material properties as well as tips and tricks for using PFERD products on specific materials or for specific applications.

Technical support

PFERD offers individual targeted support to solve unique application problems. Our experienced sales representatives and technical applications specialists are available to assist you.

Contact your local sales representative or visit us at pferd.com to learn more.

PFERDTOOL-CENTER

The **PFERD**TOOL-CENTER is a premium display system that can be custom-designed to meet your specific product and presentation requirements. For more information from a PFERD expert, contact us today at pferd.com.

PFERD packaging

PFERD mounted points in standard industrial packaging are delivered in protective plastic pouches with transparent fronts for easy identification of the shape, color, and grain. These can also be easily displayed on **PFERD**TOOL-CENTER units due to the standard hang-holes. The packaging labels feature easy identification of product features and part number.

PFERD quality

Mounted points, bench grinding wheels, and dressing and finishing stones are developed, manufactured and tested in accordance with the strictest quality requirements.

Research and development, our in-house and plant construction, and the continuous testing to quality and safety standards in our internal laboratories all guarantee high PFERD quality.

PFERD quality management is certified according to ISO 9001.

Applications of mounted points

- Work on edges (chamfering, rounding)
- Deburring
- Grinding out
- Leveling
- Surface work
- Work on weld seams
- Finishing
- Grouting
- Roughing (RUBBER type)

Mounted point dia. [Inches]	Peripheral speeds [SFPM]							
	1,000	2,000	3,000	4,000	5,000	6,000	7,800	9,800
	Rotational speeds [RPM]							
1/8	30,100	60,200	90,200	120,300	150,400	180,500	240,600	300,800
3/16	20,100	40,100	60,200	80,200	100,300	120,300	160,400	200,500
1/4	15,000	30,100	45,100	60,200	75,200	90,200	120,300	150,400
5/16	12,000	24,100	36,100	48,100	60,200	72,200	96,200	120,300
3/8	10,000	20,100	30,100	40,100	50,100	60,200	80,200	100,300
7/16	8,600	17,200	25,800	34,400	43,000	51,600	68,700	85,900
1/2	7,500	15,000	22,600	30,100	37,600	45,100	60,200	75,200
5/8	6,000	12,000	18,000	24,100	30,100	36,100	48,100	60,200
11/16	5,500	10,900	16,400	21,900	27,300	32,800	43,700	54,700
3/4	5,000	10,000	15,000	20,100	25,100	30,100	40,100	50,100
7/8	4,300	8,600	12,900	17,200	21,500	25,800	34,400	43,000
1	3,800	7,500	11,300	15,000	18,800	22,600	30,100	37,600
1-1/8	3,300	6,700	10,000	13,400	16,700	20,100	26,700	33,400
1-1/4	3,000	6,000	9,000	12,000	15,000	18,000	24,100	30,100
1-3/8	2,700	5,500	8,200	10,900	13,700	16,400	21,900	27,300
1-1/2	2,500	5,000	7,500	10,000	12,500	15,000	20,100	25,100
1-5/8	2,300	4,600	6,900	9,300	11,600	13,900	18,500	23,100
2	1,900	3,800	5,600	7,500	9,400	11,300	15,000	18,800
2-3/4	1,400	2,700	4,100	5,500	6,800	8,200	10,900	13,700

Recommended rotational speed range

Refer to the table for the recommended rotational speed based on the diameter and peripheral speed of your tool.
The recommended cutting speeds can be found in the introductory descriptions of the various hardness grades in this catalogue.

Note:
The optimum rotational speeds can be found in the product tables. These have been limited to 150,000 RPM, as conventional power tools do not permit a higher rotational speed.

Example:
Mounted point diameter 1"
STEEL
Peripheral speed: 5,000–6,000 SFPM
Rotational speed: 18,800–22,600 RPM

Safety notes

All PFERD mounted points are approved for a maximum operating speed of 9,800 SFPM. The maximum permitted rotational speeds for the various shank lengths and shank diameters are defined in DIN 69170 based on EN 12413. These must be adhered to in order to avoid buckling of the shank during use. Regardless of the shank length, the clamping length (L_3) of the shank must be at least 1/2".

The maximum permitted rotational speed calculated according to ANSI B7.1 is determined by the following factors:
- Shape and dimensions of the mounted point
- Diameter of the steel shank S_d
- Unsupported shank length L_0

Each packaging unit of PFERD mounted points comes with rotational speed specifications for the unsupported shank length (L_0) of that mounted point. Proper concentric accuracy and correct clamping of the power tool must also be ensured.

Tables with the maximum permitted rotational speeds for the entire PFERD mounted point product range are available on request.

Important!
Observe applicable safety codes and accident prevention regulations when working with spindle extensions.


= Wear eye protection!


= Wear hearing protection!


= Wear dust respirators!


= Wear gloves!


= Read the instructions!

= Read the Safety Data Sheets (SDS) before using any materials!

Dust warning

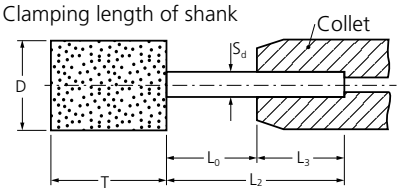
Use of the mounted points in this catalogue may create dust and other particles. To avoid any risk of adverse health effects, the operator must use appropriate protective measures, including a respirator, during and after operation. Refer to our Safety Data Sheet (SDS) for further information regarding the product to be used. Furthermore, additional health hazards may result from dust in the surrounding environment and from dust generated from the workpiece material.

PROTECTIVE MEASURES FOR THE OPERATOR MUST ADDRESS DUST AND OTHER PARTICULATES ARISING FROM ALL SOURCES. Always use our products in a well-ventilated workspace.

Important! Observe applicable safety codes and accident prevention regulations when working with spindle extensions.

Dimensional specifications

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_0 = Unsupported shank length
L_2 = Shank length
L_3 = Clamping length of shank



Mounted points
Quick product selection guide

PFERD offers a very extensive range of vitrified-bonded and resinoid-bonded mounted points. Designed to meet individual grinding application needs, these products come in a broad range of grain types, grit sizes, hardness grades and shapes. The mounted points are manufactured on automated, state-of-the-art production lines to high standards of dimensional accuracy and stability, consistent quality and close tolerances. To select the correct mounted point, the material, main fields of application and specific operating requirements have to be taken into consideration.
This overview shows which types (abrasives and bonds) are recommended for the various materials and the tasks at hand.

❶ Material group
The various material groups are colour-coded and form the starting point for choosing the most appropriate mounted point.

❷ Application
After the material, the application must be selected. This differentiation is necessary in order to find the optimum mounted point and correct bond type. The mounted point bond, hardness and grain mixture have a decisive impact on the abrasive performance, service life and aggressiveness of the products:

❶ Material group			Bond ▶ ❸ Mounted point type ▶ Abrasive ▶ Recom. peripheral speed ▶ ❷ Application ▼
Steel, cast steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, tempering steels	**General use** on edge and surface **Surface grinding** with high stock removal rate **Edge grinding** with high dimensional stability
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels	**General use** on edge and surface **Surface grinding** with high stock removal rate **Edge grinding** with high dimensional stability
	Cast steel	Non-alloyed cast steel, low-alloyed cast steel	**General use** on edge and surface **Surface grinding** with high stock removal rate **Edge grinding** with high dimensional stability
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	**Surface grinding** with high stock removal rate **Edge grinding** with high dimensional stability
Non-ferrous metals	Soft non-ferrous metals, non-ferrous metals	Aluminum alloys, brass, copper, zinc	**General use** on edge and surface
	Hard non-ferrous metals	Bronze, titanium, titanium alloys, hard aluminum alloys	
	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, with nodular graphite cast iron, white annealed cast iron, black cast iron	**Surface grinding** with high stock removal rate **Edge grinding and grinding out of metal contamination** with high dimensional stability
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, rubber, wood	**General use** on edge and surface
			❹ Catalogue page ▶

- **General use:** For general use on surfaces and edges, the emphasis is on the balance between abrasive performance and service life.
- **Surface grinding:** In surface grinding, the mounted points are subject to lower loads. The mounted point bond is comparatively soft and has been designed to give high stock removal rates.
- **Edge grinding:** In edge grinding, the mounted points must be dimensionally stable. The mounted point bond is comparatively hard and designed for a long service life.

❸ Mounted point type
After determining the application (see column ❷), the type is selected in the horizontal row. The "Highly recommended" types are indicated by a black dot (●). Further "Recommended" types are indicated by an open dot (❍).

❹ Reference to catalogue page
Further information about the hardness grades, mounted point shapes and dimensions, as well as grit sizes, can be found on the corresponding catalogue pages stated in the table.

Resinoid bond		Vitrified bond							
INOX	INOX EDGE	RUBBER	ALU	TOOL STEEL	TOUGH	CAST	STEEL	STEEL EDGE	CAST EDGE
ADW	AN	AH	CN	AW	AWCO	ARN	ADW	AR	CU
									
6,900–9,800 SFPM	6,900–9,800 SFPM	1,000–4,000 SFPM	4,000–7,800 SFPM	6,000–9,800 SFPM	6,000–9,800 SFPM	6,000–9,800 SFPM	6,000–9,800 SFPM	5,000–7,800 SFPM	6,000–9,800 SFPM
							●		
❍				❍			●	❍	
	❍						❍	●	
							●		
				●	●		❍		
					●			❍	
❍						❍	●	❍	
	❍						❍	●	
●	❍						❍		
❍	●							❍	
❍			●						
●			❍		●		❍		
❍				❍	●				
❍	❍					●		❍	❍
❍	❍					❍		❍	●
		●	❍						
22	23	29	25	21	17	26	11	13	27

● = highly recommended ❍ = recommended

W 222 6,3 ADW 30 M 5 V STEEL
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❶ Shapes according to ANSI B74.2

Series W **Cylindrical mounted points**
Series A/B other shapes

❷ Dimensions

Series W cylindrical mounted points and series A and B shaped mounted points are specified by a number.
For example the number of **W 222** is defined for the dimension **1" x 2"**

❸ Shanks

Only the shank diameter is given in the description. The shank length is determined as follows:
Shank diameter 1/8" (3,1 mm) = 1-1/4" shank length
Shank diameter **1/4" (6,3 mm) = 1-1/2"** shank length

❹ Abrasives

In general, two grain types are used, with internationally defined descriptions according to ISO 525:

A	= Aluminum oxide (Al_2O_3)	C	= Silicon carbide (SiC)

The following abbreviations are used in order to specify the grain mixtures more precisely, beyond ISO 525:

AD	= Aluminum oxide, dark red	AH	= Bubble grain aluminum oxide	**ADW**	**= Mixture AD + AW**
AW	= Aluminum oxide, white	CN	= Silicon carbide, green	ARN	= Mixture AR + AN
AR	= Aluminum oxide, pink	CU	= Silicon carbide, grey	ADR	= Mixture AD + AR
AN	= Aluminum oxide, regular	CO	= Ceramic oxide grain	AWCO	= Mixture AW + CO

❺ Grit sizes according to ISO 525 and ISO 8486

The grit sizes used in PFERD mounted points are determined by the shape and diameter of the mounted point.
In this example, **grit size 30** is used.

❻ Hardness grades according to ISO 525

Hardness grades are classified using letters in alphabetical order to specify the hardness from soft to hard.

This example concerns a mounted point with **hardness M**.

Hardness grade coding				Property
A	B	C	D	Extremely soft
E	F	G	–	Very soft
H	I	J	K	Soft
L	**M**	N	O	**Medium**
P	Q	R	S	Hard
T	U	V	W	Very hard
X	Y	Z	–	Extremely hard

❼ Structure according to ISO 525

The internationally valid scale for structural density ranges from 1 = dense to 14 = open (porous) structure.
In this example, the structural density is specified by the number **5**.

❽ Bond according to ISO 525

Bond types are indicated with the following internationally standardized letters:
V = Vitrified bond
B = Resinoid bond

❾ Material-specific description

The material-specific description indicates the material to be processed.
STEEL **= For universal use on steel and cast steel**
STEEL EDGE = For edge grinding on steel and cast steel

Mounted points with a shank diameter of 1/8" and 1/4" can be extended with drive spindle extensions. They allow access to hard-to-reach areas. The drive spindle extension is mounted in the collet of the power tool (air grinder or electric grinder), or in the handpiece of the flexible shaft. In some applications, spindle extensions are an economical alternative to customized mounted points with long shanks.

Safety notes:

- For safety reasons, it is not possible to use drive spindle extensions in combination with mounted points that have long shanks.
- For additional safety notes, please refer to catalogue section 9.

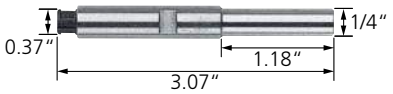
= Read the safety notes!

More detailed information and ordering data for drive spindle extensions can be found in catalogue section 9.

3

SPV 50-1/8 S1/4
for shank diameter of 1/8"

EDP 95820



SPV 75-1/4 SPG 6
for shank diameter of SPG 6

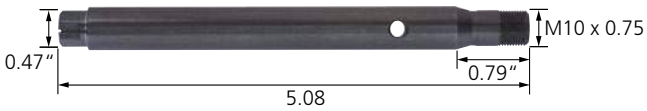
EDP 95821

SPV 75-1/4 S3/8
for shank diameter of 3/8

EDP 95822

SPV 100-1/4 SPG 6
for shank diameter of SPG 6

EDP 95823

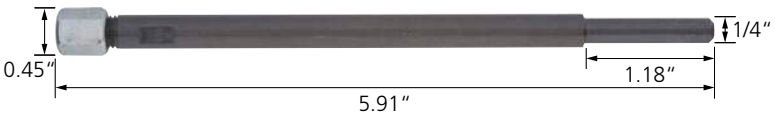


SPV 100-1/4 S3/8
for shank diameter of 3/8"

EDP 95824

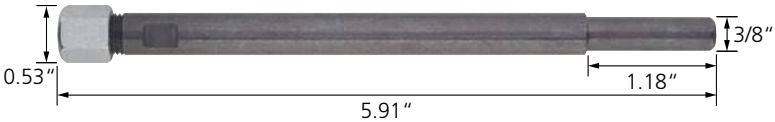
SPV 150-1/8 S1/4
for shank diameter of 1/4"

EDP 95825



SPV 150-1/4 S3/8
for shank diameter of 3/8"

EDP 95826



Mounted points
Products made to order

If you cannot find the solution for your particular application in our extensive catalogue range, we can produce mounted points to meet your requirements in premium PFERD quality specifically for your application upon request.

Contact your local sales representatives who will be happy to assist you.

Important information for your order

Diameter of mounted point	Minimum order quantity
Smaller than 1-1/4"	1,000
Larger than 1-1/4"	600

Special order mounted points lead time may take between 8 and 10 weeks.

1. We analyze your application.

We will discuss and analyze your application on-site and develop the most economic solution for your specific application.

Contact us for details and to set up an appointment.

2. We develop the solution.

This is based on your needs, application requirements and other criteria. From inspection of raw materials, to the inspection of the final product itself – PFERD always works to the highest quality standards.

The quality of PFERD products is certified according to ISO 9001.

3. Your product is ready for use!

Our flexible production and global logistics network ensure your custom product is delivered on-time and within your budget.

See the quality, performance and economic value of PFERD products for yourself!

Examples of made to order PFERD products

STEEL mounted points

The STEEL type is the most universal bond for machining steel and cast steel. It is extremely well suited to grinding high-speed steel (HSS) molded parts and weld dressing on steel constructions.

Advantages:

- Good grinding performance and stock removal rate in universal use on steel materials.
- High stock removal rate results in increased productivity.
- Recommended for work on both surfaces and edges.

Workpiece materials:

- Steel
- Cast steel

Type:

- Vitrified bond
- Mixture of dark-red and white aluminum oxide

Recommendations for use:

- STEEL mounted points perform best at a peripheral speed of 6,000–9,800 SFPM.

Compatible power tools:

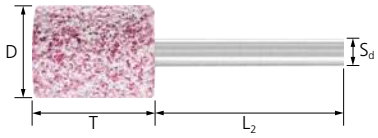
- Flexible shaft drive
- Straight grinder

Safety notes:

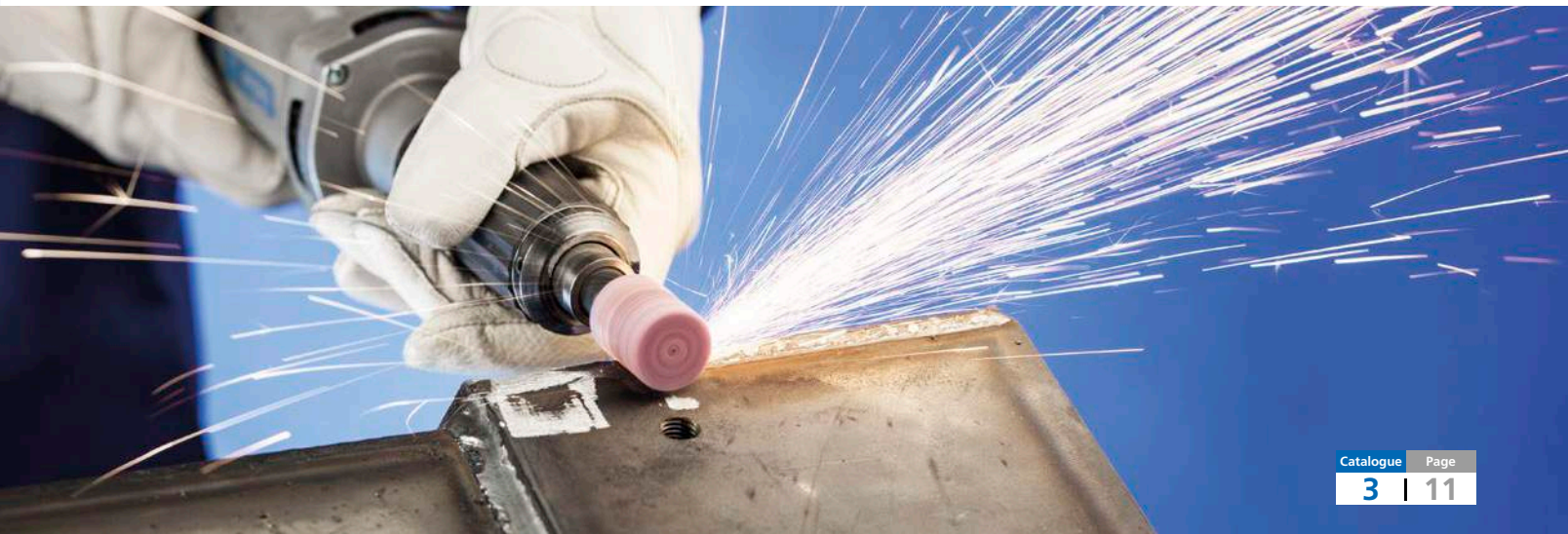
- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

STEEL, series W

The cylindrical shape W is ideal for grinding bores, radii and contours.



Shape	D [Inches]	T [Inches]	Grit size and EDP number		Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			30	46				
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
W 187	1/2	1	-	33694	40,500	40,500	30,000	10
W 189	1/2	2	-	33724	24,000	24,000	18,750	10
W 208	3/4	2	34006	-	18,750	18,750	15,370	10
W 220	1	1	34186	-	25,500	25,500	19,120	10
W 222	1	2	34216	-	15,900	15,900	12,370	10
W 236	1-1/2	1/2	34426	-	22,600	25,470	25,470	5
W 239	1-1/2	2	34471	-	12,750	12,750	9,900	5
W 242	2	1	-	34512	17,200	19,100	15,950	5



Mounted points
For universal use on steel and cast steel

STEEL, series A

Series A mounted points are generally used on larger components. Due to the special shapes of series A mounted points, it is possible to grind in a variety of contours.

The applications range from grinding out slits and grooves in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
A 1	3/4	2-1/2	31000	19,800	19,800	16,500	10
A 2	1	1-1/4	31010	34,400	38,200	32,620	10
A 3	1	2-3/4	31020	16,100	16,100	13,080	10
A 4	1-1/4	1-1/4	31030	26,900	30,560	24,750	5
A 5	3/4	1-1/8	31040	45,000	45,000	33,750	10
A 11	7/8	2	31060	19,860	19,860	15,100	10
A 12	11/16	1-1/4	31070	48,000	48,000	35,250	10
A 25	1	1	31150	34,400	35,620	27,370	10
A 31	1-3/8	1	31170	24,600	27,780	26,250	10
A 38	1	1	31240	34,400	34,500	26,250	10

STEEL EDGE mounted points

The STEEL EDGE type is ideal for edge grinding and deburring work on steel and cast steel components. Its applications also include grinding of chamfers in preparation for weld seams and grinding of contours.

Advantages:

- Long service life and low wear due to hard, dimensionally stable bond.
- Cost-effective due to high edge stability, even on low-speed power tools.
- Ideal for work on edges.

Workpiece materials:

- Steel
- Cast steel

Type:

- Vitrified bond
- Pink aluminum oxide

Recommendations for use:

- STEEL EDGE mounted points perform best at a peripheral speed of 5,000–7,800 SFPM.

Compatible power tools:

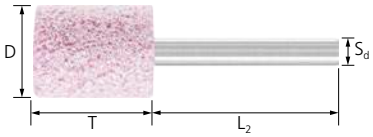
- Flexible shaft drive
- Straight grinder

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

STEEL EDGE, series W

The cylindrical shape W is ideal for grinding bores, radii and contours.



Shape	D [Inches]	T [Inches]	Grit size and EDP number					Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			30	46	60	80	100				
Shank diameter 1/8" x 1-1/4" [S_d x L_2]											
W 154	3/16	1/2	-	-	33203	-	-	70,500	70,500	45,600	10
W 163	1/4	1/2	-	-	33338	-	33344	60,000	60,000	38,020	10
W 170	5/16	1/2	-	-	-	33446	-	52,500	52,500	33,000	10
Shank diameter 1/4" x 1-1/2" [S_d x L_2]											
W 179	3/8	1-1/4	-	33575	-	-	-	45,750	45,750	33,750	10
W 187	1/2	1	-	33695	-	-	-	40,500	40,500	30,000	10
W 189	1/2	2	-	33725	-	-	-	24,000	24,000	18,750	10
W 205	3/4	1	33962	-	33968	-	-	34,500	34,500	28,870	10
W 207	3/4	1-1/2	33992	-	-	-	-	24,000	24,000	18,520	10
W 215	1	1/8	-	-	34118	-	-	26,700	38,200	38,200	10
W 220	1	1	34187	-	-	-	-	25,500	25,500	19,120	10
W 221	1	1-1/2	34202	-	-	-	-	19,120	19,120	14,620	10
W 222	1	2	34217	-	34223	-	-	15,900	15,900	12,370	10
W 237	1-1/2	1	34442	-	-	-	-	16,700	22,500	17,620	5
W 238	1-1/2	1-1/2	34457	-	34463	-	-	15,600	15,600	12,000	5
W 239	1-1/2	2	34472	-	-	-	-	12,750	12,750	9,900	5
W 242	2	1	34517	-	34523	-	-	13,400	19,100	15,950	5

Mounted points
For edge grinding on steel and cast steel

STEEL EDGE, series A

Series A mounted points are generally used on larger components. Due to the special shapes of series A mounted points, it is possible to grind in a variety of contours.
The applications range from grinding out slits and grooves in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number		Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			30	60				
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
A 1	3/4	2-1/2	31001	-	19,800	19,800	16,500	10
A 2	1	1-1/4	31011	-	26,000	38,200	32,620	10
A 3	1	2-3/4	31021	-	16,100	16,100	13,080	10
A 4	1-1/4	1-1/4	31031	-	21,000	30,560	24,750	5
A 5	3/4	1-1/8	31041	-	35,200	45,000	33,750	10
A 6	3/4	1-1/8	31051	-	35,200	39,000	29,700	10
A 11	7/8	2	31061	-	19,860	19,860	15,100	10
A 12	11/16	1-1/4	31071	-	40,000	48,000	35,250	10
A 15	1/4	1-1/16	-	31104	72,750	72,750	47,620	10
A 21	1	1	31111	-	26,000	34,500	26,250	10
A 24	1/4	3/4	-	31144	76,500	76,500	49,500	10
A 26	5/8	5/8	31161	-	41,800	61,120	46,500	10
A 36	1-5/8	3/8	-	31224	16,000	23,520	23,520	5
A 37	1-1/4	1/4	31234	-	21,000	30,560	30,560	5
A 38	1	1	31241	31244	26,700	34,500	26,250	10

STEEL EDGE, series B

Series B mounted points are generally used on smaller or more delicate components, such as in tool and die construction. Due to the special shapes of series B mounted points, it is possible to grind in a variety of contours.
The applications range from grinding out slits and grooves in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number				Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			46	60	80	100				
Shank diameter 1/8" x 1-1/4" [S_d x L_2]										
B 42	1/2	3/4	32310	-	-	-	33,750	33,750	23,250	10
B 43	1/4	5/16	-	-	-	32328	81,370	81,370	51,000	10
B 51	7/16	3/4	-	-	32375	-	45,370	45,370	28,500	10
B 52	3/8	3/4	32380	-	32385	-	45,370	45,370	28,500	10
B 53	5/16	5/8	-	32392	-	-	60,000	60,000	38,020	10
B 54	1/4	1/2	-	-	-	32408	60,000	60,000	38,020	10
B 97	1/8	3/8	-	-	-	32658	105,000	105,000	64,500	10
B 121	1/2	1/2	-	-	32785	-	45,370	45,370	28,500	10
B 122	3/8	3/8	-	-	32795	-	61,650	61,650	37,720	10
B 123	3/16	3/16	-	-	-	32808	104,250	104,250	61,820	10
B 124	1/8	1/8	-	-	-	32818	105,000	105,000	64,500	10
B 125	1/4	1/4	-	-	-	32827	81,370	81,370	51,000	10
B 131	1/2	1/2	-	-	32835	-	34,500	34,500	22,500	10
B 132	3/8	1/2	32840	-	-	-	45,370	45,370	28,500	10
B 135	1/4	1/2	-	-	-	32878	60,000	60,000	38,020	10

Mounted points
For edge grinding on steel and cast steel

23-piece STEEL EDGE mounted point set

STEEL EDGE mounted points with 1/4" shank diameter are noted for their outstanding versatility, dimensional stability and edge-holding properties.

The set contains 23 mounted points of various shapes and sizes.

Contents:

5 pcs each:
- A 1
- A 3
- A 11
- W 222

3 pcs each:
- W 242

Set	Shank diameter S_d [Inches]	Grit size	EDP number	
23 piece	1/4	30	39000	1

50-piece STEEL EDGE mounted point set

This set comprises 1/4" shank STEEL EDGE mounted points, universally recommended for many fine-grinding tasks. It includes the most common shapes and sizes.

Contains 50 mounted points in various shapes and dimensions.

Contents:

5 pcs each:
- A 1
- A 4
- A 12
- A 15
- A 21
- A 24
- A 37
- W 189
- W 215
- W 220

Set	Shank diameter S_d [Inches]	Grit size	EDP number	
50 piece	1/4	30-60	39005	1

TOUGH mounted points

The TOUGH type is specifically designed for use on titanium materials, nickel-based and cobalt-based alloys, hardened steel components and built-up weld deposits. Its applications include weld dressing on repair welds and reworking on turbine blades during aircraft maintenance and regrinding of repair welds in tool and die-making.

Advantages:

- Cool grinding due to the easily broken-down grain mixture.
- High stock removal rate results in increased productivity.
- The self-sharpening properties of the ceramic oxide grain provide consistent stock removal rates throughout the life of the product.

Workpiece materials:

- Hardened, heat-treated steels over 370 HV
- Titanium alloys
- Titanium
- High-temperature-resistant materials
- Nickel-based and cobalt-based alloys

Type:

- Vitrified bond
- Mixture of ceramic oxide grain and white aluminum oxide

Recommendations for use:

- TOUGH mounted points perform best at a peripheral speed of 6,000–9,800 SFPM.

Compatible power tools:

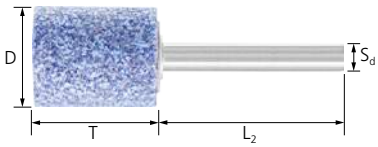
- Flexible shaft drive
- Straight grinder

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

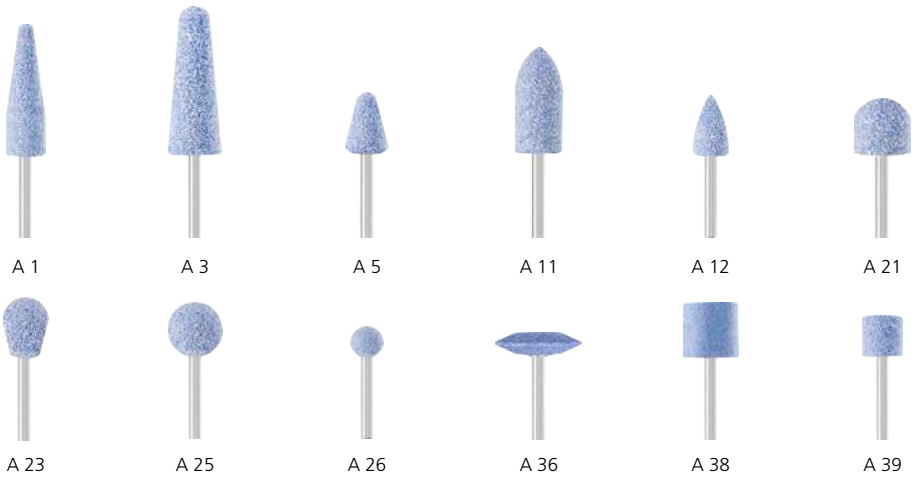
TOUGH, series W

The cylindrical shape is ideal for grinding bores, radii and contours.



Shape	D [Inches]	T [Inches]	Grit size and EDP number			Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			46	60	80				
Shank diameter 1/8" x 1-1/4" [S_d x L_2]									
W 154	3/16	1/2	-	30127	30128	70,500	70,500	45,600	10
W 163	1/4	1/2	-	30131	30132	60,000	60,000	38,020	10
W 164	1/4	3/4	-	30133	30134	45,900	45,900	30,000	10
W 170	5/16	1/2	-	30135	30136	52,500	52,500	33,000	10
W 185	1/2	1/2	-	30145	30146	34,500	34,500	22,500	10
W 215	1	1/8	-	30165	30168	34,400	38,200	24,900	10
Shank diameter 1/4" x 1-1/2" [S_d x L_2]									
W 179	3/8	1-1/4	30141	-	30142	45,750	45,750	33,750	10
W 189	1/2	2	30151	-	30153	24,000	24,000	18,750	10
W 218	1	1/2	30167	-	30166	35,000	38,200	32,770	10
W 220	1	1	30169	-	30170	25,500	25,500	19,120	10
W 222	1	2	30175	-	30176	15,900	15,900	12,370	10
W 236	1-1/2	1/2	30182	-	30183	22,000	25,470	25,470	10
W 239	1-1/2	2	30188	-	30189	12,750	12,750	9,900	10
W 242	2	1	30191	-	30192	17,200	19,100	15,950	10

Mounted points
For universal use on materials that are tough to machine



TOUGH, series A

Series A mounted points are generally used on larger components. Due to the special shapes of series A mounted points, it is possible to grind in a variety of contours.
The applications range from grinding out slits and grooves in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number		Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			46	80				
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
A 1	3/4	2-1/2	30000	30001	19,800	19,800	16,500	10
A 3	1	2-3/4	30003	30004	16,100	16,100	13,080	10
A 5	3/4	1-1/8	30006	30007	45,000	45,000	33,750	10
A 11	7/8	2	30010	30011	19,860	19,860	15,100	10
A 12	11/16	1-1/4	30012	30013	48,000	48,000	35,250	10
A 21	1	1	30017	30018	34,400	34,500	26,250	10
A 23	3/4	1	30020	30021	39,370	39,370	30,370	10
A 25	1	1	30022	30023	34,000	35,620	27,370	10
A 26	5/8	5/8	30024	30025	53,700	61,120	46,500	10
A 36	1-5/8	3/8	30031	30032	21,000	23,520	23,520	10
A 38	1	1	30033	30034	34,500	34,500	26,250	10
A 39	3/4	3/4	30035	30036	45,200	47,250	35,250	10

TOUGH, series B

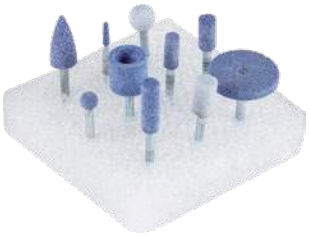
Series B mounted points are generally used on smaller or more delicate components, such as in tool and die construction. Due to the special shapes of series B mounted points, it is possible to grind in a variety of contours.
The applications range from grinding out slits and grooves in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number		Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			60	80				
Shank diameter 1/8" x 1-1/4" [S_d x L_2]								
B 42	1/2	3/4	30053	30054	33,750	33,750	23,250	10
B 52	3/8	3/4	30064	30065	45,370	45,370	28,500	10
B 97	1/8	3/8	30082	30083	105,000	105,000	64,500	10
B 122	3/8	3/8	30090	30091	61,650	61,650	37,720	10
B 125	1/4	1/4	30094	30095	81,370	81,370	51,000	10
B 131	1/2	1/2	30096	30097	34,500	34,500	22,500	10

Mounted points
For universal use on materials that are tough to machine



10 piece mounted point set TOUGH, fine

Contains 10 small mounted points with shank diameter 1/8" in the most common shapes and dimensions for fine work.

Contents:
1 piece each:

- B 52
- B 97
- B 122
- B 125
- B 131
- W 154
- W 163
- W 134
- W 170
- W 215

Set	Shank diameter S_d [Inches]	Grit size and EDP number 80	
10 piece	1/8	39002	1

10 piece mounted point set TOUGH, coarse

Contains 10 mounted points with shank diameter 1/4" in the most common shapes and dimensions for rough grinding.

Contents:
1 piece each:

- A 1
- A 3
- A 5
- A 11
- A 36
- A 38
- A 39
- W 189
- W 222
- W 242

Set	Shank diameter S_d [Inches]	Grit size and EDP number 46	
10 piece	1/4	39003	1

TOOL STEEL mounted points

The TOOL STEEL type is ideal for surface grinding of hardened steel.
Its applications include grinding of heat-treated steel components, titanium and titanium alloy workpieces as well as dressing of hard deposit-welded claddings.

Advantages:

- Easy to break down, sharp-edged aluminum oxide allows high stock removal rates on hardened steel.
- The open structure allows good heat dissipation and cool grinding.

Workpiece materials:

- Hardened, heat-treated steels over 370 HV
- Tool steel
- Titanium
- Titanium alloys

Type:

- Vitrified bond
- White aluminum oxide

Recommendations for use:

- TOOL STEEL mounted points perform best at a peripheral speed of 6,000–9,800 SFPM.

Compatible power tools:

- Flexible shaft drive
- Straight grinder

Ordering notes:

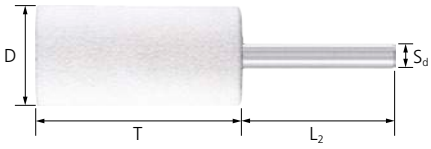
- Further dimensions on request, see page 10.

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

TOOL STEEL, series W

The cylindrical shape is ideal for grinding bores, radii and contours.



Shape	D [Inches]	T [Inches]	Grit size and EDP number 60	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
W 222	1	2	34212	15,900	15,900	12,370	10

Mounted points
For universal use on stainless steel (INOX)

INOX mounted points

INOX mounted points are ideal for surface work on stainless steel (INOX) and for universal use on non-ferrous metals and bronze. These products are used for rough grinding of stainless steel (INOX) castings and grinding of molded parts made of high temperature-resistant alloys.

Advantages:

- Due to cool grinding, ideal for use on temperature-sensitive materials.
- Increased operator comfort due to low-vibration grinding.

Workpiece materials:

- Stainless steel (INOX)
- Bronze
- Hard non-ferrous metals

Type:

- Resinoid bond
- Mixture of dark-red and white aluminum oxide

Recommendations for use:

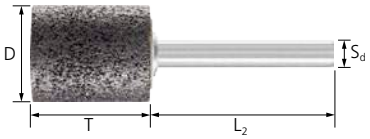
- INOX mounted points perform best at a peripheral speed of 6,900–9,800 SFPM.

Compatible power tools:

- Flexible shaft drive
- Straight grinder

Safety notes:

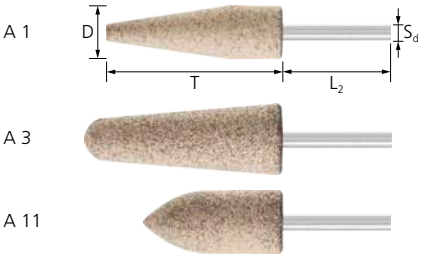
- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".



INOX, series W

The cylindrical shape is ideal for grinding bores, radii and contours.

Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
W 222	1	2	35382	15,900	15,900	12,370	10
W 236	1-1/2	1/2	35409	22,900	25,470	25,470	5



INOX, series A

Series A mounted points are generally used on larger, stainless steel components, such as in container construction. Due to the special shapes of series A mounted points, it is possible to grind in a variety of contours. The applications range from grinding in hard-to-reach areas to machining bores and small holes as well as smoothing.

Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
A 1	3/4	2-1/2	35100	19,800	19,800	16,500	10
A 3	1	2-3/4	35104	16,100	16,100	13,080	10
A 11	7/8	2	35112	19,860	19,860	15,100	10

INOX EDGE mounted points

INOX EDGE mounted points are for edge grinding on stainless steel (INOX). Applications include weld dressing on fillet welds on stainless steel components, removing burrs on molded parts made of high-temperature-resistant alloys, removing burrs on stainless steel castings, and grinding chamfers in preparation for welding stainless steel profiles

Advantages:

- Due to cool grinding, ideal for use on temperature-sensitive materials.
- Increased operator comfort due to low-vibration grinding.
- Cost-effective due to high edge stability even on low-speed power tools.
- High dimensional stability on edges.

Workpiece materials:

- Stainless steel (INOX)

Type:

- Resinoid bond
- Regular aluminum oxide

Recommendations for use:

- INOX EDGE mounted points perform best at a peripheral speed of 6,900–9,800 SFPM.

Compatible power tools:

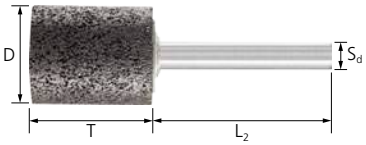
- Flexible shaft drive
- Straight grinder

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

INOX EDGE, series W

The cylindrical shape is ideal for grinding bores, radii and contours.



Shape	D [Inches]	T [Inches]	Grit size and EDP number		Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			30	46				
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
W 189	1/2	2	-	35337	24,000	24,000	18,750	10
W 220	1	1	35379	-	25,500	25,500	19,120	5
W 222	1	2	35383	-	15,900	15,900	12,370	10
W 236	1-1/2	1/2	35410	-	22,900	25,470	25,470	5

Mounted points
For edge grinding on stainless steel (INOX)

A 1 A 3 A 4 A 5 A 11 A 12 A 21 A 38

INOX EDGE, series A

Series A mounted points are generally used on larger, stainless steel components, such as in container construction. Due to the special shapes of series A mounted points, it is possible to grind in a variety of contours. The applications range from grinding in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number		Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
			30	46				
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
A 1	3/4	2-1/2	35101	-	19,800	19,800	16,500	10
A 3	1	2-3/4	-	35105	16,100	16,100	13,080	10
A 4	1-1/4	1-1/4	35107	-	28,600	30,560	24,750	5
A 5	3/4	1-1/8	35109	-	45,000	45,000	33,750	10
A 11	7/8	2	35113	-	19,860	19,860	15,100	10
A 12	11/16	1-1/4	35115	-	48,000	48,000	35,250	10
A 21	1	1	35123	-	34,500	34,500	26,250	10
A 38	1	1	-	35149	34,500	34,500	26,250	10

ALU mounted points

The ALU type is ideal for universal use on aluminum and non-ferrous metals.
It is used to remove burrs on cast aluminum parts and for chamfering on aluminum profiles for weld-seam preparation.

Advantages:

- The special impregnation means there is no clogging when working on soft, lubricating or tough materials.
- Good grinding performance and stock removal rate.

Workpiece materials:

- Aluminum
- Copper
- Brass
- Zinc

Type:

- Vitrified bond
- Green silicon carbide

Recommendations for use:

- ALU mounted points perform best at a peripheral speed of 4,000–7,800 SFPM.

Compatible power tools:

- Flexible shaft drive
- Straight grinder

Ordering notes:

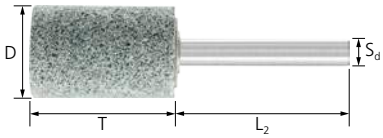
- Further dimensions on request, see page 10.

Safety notes:

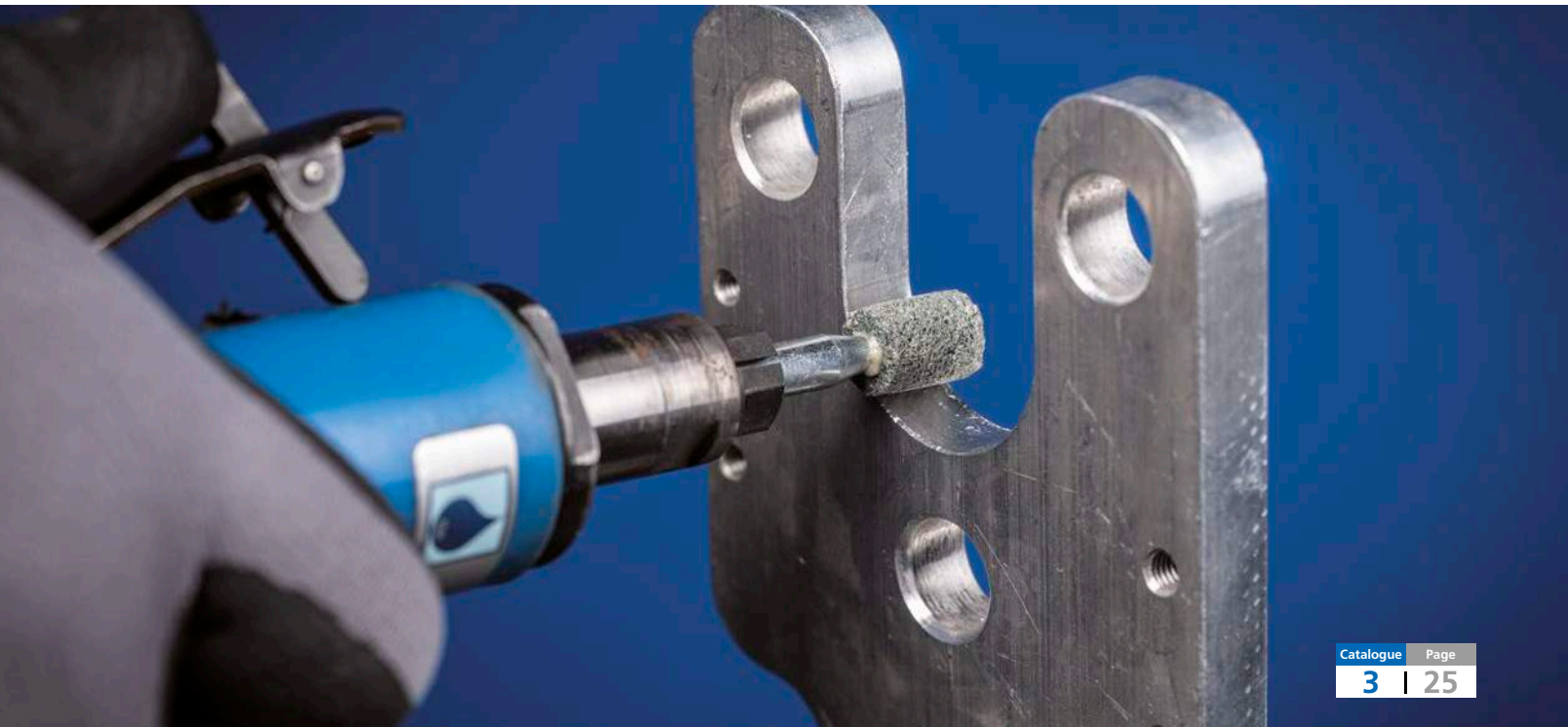
- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

ALU, series W

The cylindrical shape is ideal for grinding bores, radii and contours.
It can be made into any desired shape with the aid of a dressing stone.



Shape	D [Inches]	T [Inches]	Grit size and EDP number 80	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
W 222	1	2	34214	15,900	15,900	12,370	10



Mounted points
For universal use on grey and nodular cast

CAST mounted points

The CAST type is ideal for surface work on grey and nodular cast iron in combination with high peripheral speeds. Its applications include cleaning of workpieces and grinding out of shrinkage holes.

Advantages:

- Recommended for use on surfaces and edges.
- Good grinding performance and long service life.
- High stock removal rates due to coarse grit size.

Workpiece materials:

- Grey/nodular cast iron (GG/GJL, GGG/GJS)
- Annealed cast iron

Type:

- Vitrified bond
- Mixture of pink aluminum oxide and regular aluminum oxide

Recommendations for use:

- CAST mounted points perform best at a peripheral speed of 6,000–9,800 SFPM.

Compatible power tools:

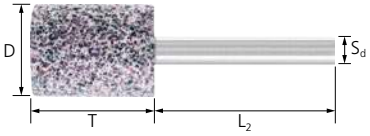
- Flexible shaft drive
- Straight grinder

Ordering notes:

- Further dimensions on request, see page 10.

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".



CAST, series W

The cylindrical shape is ideal for grinding bores, radii and contours.
It can be made into any desired shape with the aid of a dressing stone.

Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
W 222	1	2	34215	15,900	15,900	12,370	10

CAST EDGE mounted points

CAST EDGE mounted points are for edge grinding and grinding out sharp burrs, sand inclusions, and scale in grey and nodular cast iron in combination with high cutting speeds.

Advantages:

- Dimensionally stable due to the high bond content.
- Cost-effective due to high edge stability even on low-speed power tools.

Workpiece materials:

- Grey/nodular cast iron (GG/GJL, GGG/GJS)
- Annealed cast iron
- Casting scale with sand contamination and metal contamination

Type:

- Vitrified bond
- Grey silicon carbide

Recommendations for use:

- CAST EDGE mounted points perform best at a peripheral speed of 6,000–9,800 SFPM.

Compatible power tools:

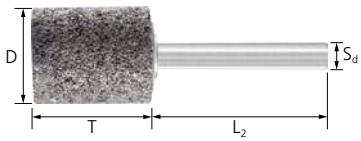
- Flexible shaft drive
- Straight grinder

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

CAST EDGE, series W

The cylindrical shape is ideal for grinding bores, radii and contours.



Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
W 189	1/2	2	33726	24,000	24,000	18,750	10
W 208	3/4	2	34008	18,750	18,750	15,370	10
W 222	1	2	34218	15,900	15,900	12,370	10

Mounted points
For edge grinding on grey and nodular cast

A 1

A 3

A 5

A 11

CAST EDGE, series A

Series A mounted points are generally used on larger components. Due to the special shapes of series A mounted points, it is possible to grind in a variety of contours.
The applications range from grinding out slits and grooves in hard-to-reach areas to machining bores and small holes as well as smoothing.

Dimensional specifications:

D = Mounted point outer diameter
T = Mounted point width
S_d = Shank diameter
L_2 = Shank length

Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
A 1	3/4	2-1/2	31002	19,800	19,800	16,500	10
A 3	1	2-3/4	31022	16,100	16,100	13,080	10
A 5	3/4	1-1/8	31042	45,000	45,000	33,750	10
A 11	7/8	2	31062	19,860	19,860	15,100	10

RUBBER mounted points

The RUBBER type is specifically designed for universal use on soft materials such as rubber, plastic and wood. The fields of application include removal of burrs on plastic injection-molded parts, trimming of rubber molded parts and molded parts made of polyurethane (PUR), grinding of wooden cores and wooden shapes in model construction workshops and roughing of various adhesive joints (e.g. for repairs on conveyor belts and tires).

Advantages:

- Open structure and large chip spaces due to bubble grain aluminum oxide.
- Machining of temperature-sensitive materials without addition of cooling lubricant due to large chip spaces.
- Excellent grinding performance.

Workpiece materials:

- Elastomers
- Thermoplastics
- Rubber
- Wood

Type:

- Vitrified bond
- Bubble grain aluminum oxide

Recommendations for use:

- RUBBER mounted points perform best at a peripheral speed of 1,000–4,000 SFPM.

Compatible power tools:

- Flexible shaft drive
- Straight grinder

Ordering notes:

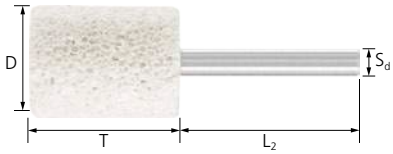
- Further dimensions on request, see page 10.

Safety notes:

- The maximum permitted rotational speed relates to the unsupported shank length of 1/2".

RUBBER, series W

The cylindrical shape is ideal for grinding radii and contours, and for deburring work.



Shape	D [Inches]	T [Inches]	Grit size and EDP number 30	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/4" x 1-1/2" [S_d x L_2]							
W 222	1	2	34213	15,900	15,900	12,370	10

Bench grinding wheels
General information

PFERD offers a very wide range of high-quality bench grinding wheels for working with a large variety of materials and for many different applications. Bench grinding wheels are available with different dimensions, grains and abrasives.

Advantages:

- Long service life.
- High dimensional stability.
- High abrasive performance.
- Integrated telescopic bushings for mounting on almost any bench grinder spindle.

Applications:

- Deburring
- Work on edges (chamfering, rounding)
- Sharpening

Recommendations for use:

- Dressing the wheel on a regular basis exposes sharp grain and maintains an even grinding area.
- Constantly adjust the workpiece support to the grinding wheel diameter (gap width max. 1/8").
- All bench wheels are packed with telescoping bushings to accommodate popular machine spindle sizes.
- If a bench grinding wheel starts to show signs of loading, use dressing tool on page 32.

Compatible power tools:

- Bench grinders
- Pedestal grinders

Safety notes:

- The maximum permitted peripheral speed is 6,900 SFPM. The maximum speed is calculated in accordance with ANSI B7.1.
- For safety reasons, the maximum permitted rotational speed indicated must never be exceeded.
- Before clamping, the grinding tool must be ring tested to make sure that it does not have any cracks (undamaged grinding tools give a clear tone).
- Perform the ring test before mounting. An undamaged wheel will give a clear tone.
- **CAUTION:** Smaller spindles frequently run at higher RPMs.


= Wear eye protection!


= Wear hearing protection!


= Wear dust respirators!


= Wear gloves!


= Follow the safety instructions!

= Read the Safety Data Sheets (SDS) before using any materials!


= Do not use if damaged!

Vitrified bond

UNIVERSAL type

UNIVERSAL type bench grinding wheels are ideal for universal use in the workshop.

Workpiece materials:
steel, cast steel, stainless steel (INOX), cast iron

Type:
Vitrified bond, regular aluminum oxide

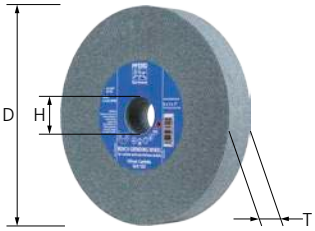
D [Inches]	T [Inches]	H [Inches]	Included bushings	Grit size and EDP number					Max. RPM	
				24	36	46	60	80		
Flat (type 1)										
6	1/2	1	3/4, 5/8, 1/2	-	-	-	61736	-	4,140	1
	3/4	1	3/4, 5/8, 1/2	61738	61739	61740	61741	61742	4,140	1
	1	1	3/4, 5/8, 1/2	61743	61744	61745	61746	61747	4,140	1
7	1	1	3/4, 5/8, 1/2	61753	61754	61755	61756	61757	3,600	1
8	1	1-1/4	1	61763	61764	61765	61766	61767	3,600	1
10	1	1-1/4	1	61768	61769	61770	61771	61772	2,400	1
	1-1/2	1-1/4	1	61773	61774	-	61776	-	2,400	1
12	2	1-1/2	1-1/4	61778	61779	61780	61781	-	2,070	1
14	2	1-1/2	1-1/4	61782	61783	-	61784	-	1,800	1

CARBIDE type

CARBIDE type bench grinding wheels are used on hard materials, such as for sharpening tungsten carbide tools.

Workpiece materials:
tungsten carbide, hardened, heat-treated steels over 370 HV (38 HRC), steel materials with a hardness over 580 HV (54 HRC), glass

Type:
Vitrified bond, green silicon carbide



D [Inches]	T [Inches]	H [Inches]	Included bushings	Grit size and EDP number			Max. RPM	
				60	80	120		
Flat (type 1)								
6	3/4	1	3/4, 5/8, 1/2	61785	61786	61787	4,140	1
	1	1	3/4, 5/8, 1/2	61788	61789	61790	4,140	1
7	1	1	3/4, 5/8, 1/2	61791	61792	61793	3,600	1
8	1	1-1/4	1	61794	61795	61796	3,600	1
10	1	1-1/4	1	61797	61798	61799	2,400	1

Accessories

Bench wheel bushings

PFERD bench grinder bushings provide a safe method of reducing the wheel arbor to accommodate various spindle sizes. The bushing should be flush on both sides of the wheel, and should not interfere with the flanges.

Recommendation for use:
CAUTION: Smaller spindles frequently run at higher RPMs.

Fits arbor hole H [Inches]	Fits thickness T [Inches]	Bushing I.D. [Inches]	EDP number	
Telescoping				
1	1/2	3/4, 5/8, 1/2	69018	1
	3/4	3/4, 5/8, 1/2	69019	1
	1	3/4, 5/8, 1/2	69011	1
1-1/2	1	1-1/4	69024	1
1-1/4	1	1	69025	1
Standard				
1-1/4	1/4	1	69012	1
		7/8	69014	1
		3/4	69015	1
		5/8	69016	1
		1/2	69017	1

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 service life.

Overall length [Inches]	Roll width [Inches]	Roll dia. [Inches]	EDP number	Max. wheel diameter [Inches]	Max. wheel thickness [Inches]	
17	1-1/2	1	39110	20	2-1/2	1

Replacement roller

The replaceable roller can be used until the teeth are completely worn.

Roll width [Inches]	Roll dia. [Inches]	EDP number	
1-1/2	1	39114	1

Replacement spindle

The greaseable spindle can be used to replace worn spindles.

Roll width [Inches]	Axis dia. [Inches]	EDP number	
1-1/2	1/2	39115	1

Grinding wheel dressing rod

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 [Inches]	Diameter [Inches]	EDP number	
10	1	39112	1

PFERD cones and plugs are made of regular aluminum oxide in a high-quality resinoid bond. Because of their hardness, these products are noted for their good stock removal rates and high durability.

Advantages:

- High stock removal rate.
- High edge-holding and dimensional stability.
- Cool grinding properties reduce the thermal load on the workpiece.

Application examples:

- Weld dressing on steel removing excess weld metals.
- Chamfering in preparation of welding operations.
- Grinding in hard-to-reach workpiece areas.
- Removing parting lines and imperfections at casting parts.
- Smoothing rough castings.

Recommendations for use:

- Cones and plugs perform best at the recommended peripheral speed of 6,900–9,800 SFPM.
- Recommended power tools include flexible shafts, electric or air-powered straight grinders and angle grinders.

Safety recommendations:

- The maximum speed is calculated in accordance with ANSI B7.1.
- Never exceed the maximum RPM listed on the label.

= Wear eye protection!

= Wear hearing protection!

= Wear dust respirators!

= Wear gloves!

= Follow the safety instructions!

= Read the Safety Data Sheets (SDS) before using any materials!

Cones and plugs

Cones and plugs are used for steel, cast steel and cast iron.


Type 16

Type 17

Type 18


Type 18R

D_1 [Inches]	D_2 [Inches]	T [Inches]	Grit size	Thread and EDP number		Recom. RPM	Max. RPM	
				3/8-24	5/8-11			
Curved (type 16)								
1-1/2	-	2-1/2	16	61816	-	24,000	24,100	10
		3	16	-	61820	24,000	24,100	10
1-3/4	-	3	16	-	61826	20,600	20,700	10
2	-	3	16	-	61829	18,100	18,100	10
2-3/4	-	3-1/2	16	-	61837	13,100	13,200	10
3	-	3	16	-	61838	12,000	12,500	10
Tapered (type 17)								
1-1/2	3/8	2-1/2	16	61850	61851	24,000	24,100	10
	1/2	3	16	61854	61855	24,000	24,100	10
2	1/2	3	16	-	61859	14,500	18,100	10
Straight (type 18)								
1	-	2	16	61883	-	36,100	36,200	10
1-1/2	-	2-1/2	16	61884	61885	24,000	24,100	10
		3	16	61888	61889	24,000	24,100	10
2	-	3	16	-	61893	18,100	18,100	10
Straight (type 18R)								
1-1/2	-	2-1/2	16	61927	61928	24,000	24,100	10
		3	16	61931	61932	24,000	24,100	10
2	-	3	16	-	61936	18,100	18,100	10
3	-	3	16	-	61937	12,000	12,500	10

Grinding and polishing stones
General information

PFERD grinding and polishing stones are versatile tools for finish machining on forms in tool and die-making. They are used for step-by-step fine grinding after machining or after electrical discharge machining (EDM) to grind in a brushed finish/polish in the demoulding direction or to prepare for high-gloss polishing with diamond pastes.

Advantages:

- Long service life.
- High dimensional stability.
- High abrasive performance.
- Controlled, even stock removal.
- Fine surface finish.

Applications:

- Surface work
- Polishing
- Rounding
- Finishing
- Step-by-step fine grinding

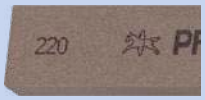
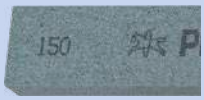
Recommendations for use:

- A quick-mounting handle is recommended in manual applications to make work more ergonomic.
- The use of grinding oils is recommended to achieve a better surface finish.
- Sort the grinding and polishing stones by type to avoid grain being carried over.

Compatible power tools:

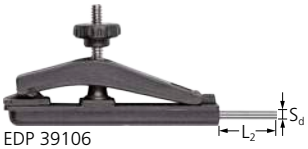
- Manual filing machine

Quick product selection guide

Material group ▼		Type ▶	UNIVERSAL 	CARBIDE 
Steel	Steels up to 370 HV (38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, tempering steels	●	❍
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels	❍	●
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels	●	
Tungsten carbide	–	–		●
Non-ferrous metals	Soft non-ferrous metals, non-ferrous metals	Aluminum alloys, brass, copper, zinc	●	
	Hard non-ferrous metals	Bronze, titanium, titanium alloys, hard aluminum alloys	●	

● = highly recommended ❍ = recommended

EDP 39104
EDP 39105



EDP 39106

Holders for grinding and polishing stones

EDP 39104:
Can accommodate two different cross sections.

EDP 39105:
Can accommodate four different cross sections.

EDP 39106:
The arbor for the manual filing machine features stepless adjustment to accommodate all grinding and polishing stones.

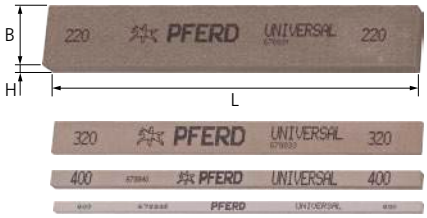
Matching cross sections	EDP number	
For manual applications		
1/4" x 1/4", 1/4" x 1/2"	39104	1
1/4" x 1/8", 1/2" x 1/16", 1/2" x 1/8"	39105	1
Manual filing machine shank diameter of 1/8" x 3/4" [S_d x L_2]		
all grinding and polishing stones	39106	1

UNIVERSAL type

The UNIVERSAL type grinding and polishing stones general purpose hand tools for step-by-step fine grinding in tool and die-making.

Workpiece materials:
Hardened, heat-treated steels over 370 HV (38 HRC), stainless steel (INOX), aluminum, other non-ferrous metals

Type:
Vitrified bond, regular aluminum oxide



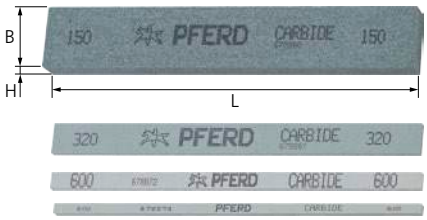
B [Inches]	H [Inches]	L [Inches]	Grit size and EDP number				
			220	320	400	600	
Square							
5/32	5/32	6	39050	39056	39062	39068	12
1/4	1/8	6	39051	39057	39063	39069	12
	1/4	6	39052	39058	39064	39070	12
1/2	1/8	6	39053	39059	39065	39071	12
	1/4	6	39054	39060	39066	39072	12
1	1/2	6	39055	39061	39067	39073	6

CARBIDE type

The CARBIDE type soft grinding and polishing stones enable high removal rates without loading on hard materials in tool and die-making.

Workpiece materials:
High-temperature-resistant materials, tungsten carbide, steel materials with a hardness over 580 HV (54 HRC)

Type:
Vitrified bond, green silicon carbide



B [Inches]	H [Inches]	L [Inches]	Grit size and EDP number					
			150	220	320	400	600	
Square								
5/32	5/32	6	39074	39080	39086	39092	39098	12
1/4	1/8	6	39075	39081	39087	39093	39099	12
	1/4	6	39076	39082	39088	39094	39100	12
1/2	1/8	6	39077	39083	39089	39095	39101	12
	1/4	6	39078	39084	39090	39096	39102	12
1	1/2	6	39079	39085	39091	39097	39103	6

Dressing stones

Dressing stone, small, fine, EDP 39012:
Small dressing stone with finer grain for profiling and dressing of smaller mounted points.

Dressing stone, medium, coarse, EDP 39010:
This medium-large dressing stone in coarser grit (grit 30) is ideal for coarse dressing work. Their anti-slip rubber backing provides a firm grip and protects the support surfaces.

Dressing stone, 2-sided, EDP 39011:
Dressing stone with two different grit sizes:
Upper side (coarse): Profiling and dressing of large mounted points with coarse bonds and grain
Underside (fine): Profiling and dressing of mounted points with fine bonds and grain

Dressing stone,large, coarse, EDP 39015:
This large dressing stone in coarser grit (grit 30) is ideal for profiling and dressing larger and coarser mounted points.

Description	L x B x H [Inches]	Grit	EDP number	
Small dressing stones – fine	2-3/4 x 7/8 x 1/2	46	39012	5
Medium dressing stones – coarse	4-3/4 x 2 x 1-1/4	30	39010	5
Medium dressing stones – 2-sided	4-3/4 x 2 x 1-1/4	30-60	39011	5
Large dressing stones – coarse	6 x 1 x 1	30	39015	5

Fine grinding and finishing products

PFERD

4

4

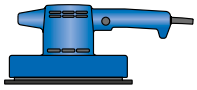
Fine grinding and finishing products
Table of contents

Fine grinding and polishing products

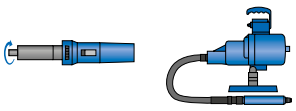

COMBICLICK® quick-mounting system


Fibre discs

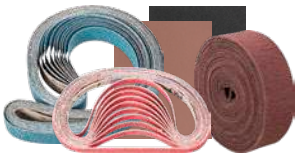
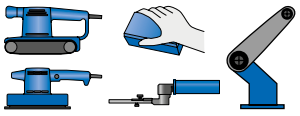

PSA discs

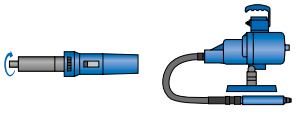
Velcro-backed abrasive discs

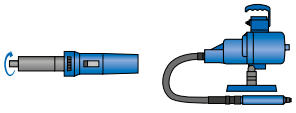
COMBIDISC® quick-change discs

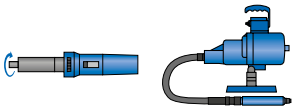
Abrasive belts, sheets, and rolls

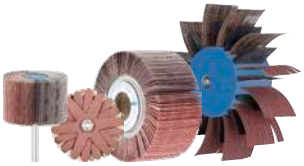
Abrasive spiral bands

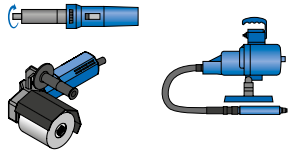



POLIROLL® cartridge rolls

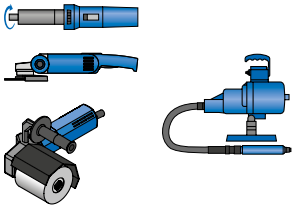


POLICAP® seamless abrasive caps

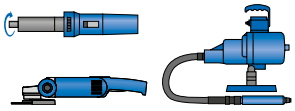




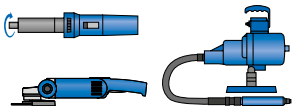
Flap wheels



Non-woven products



Poliflex® finishing products

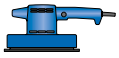


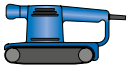
Polishing products

Grinding and polishing pastes

X-LOCK quick-change system


Angle grinder

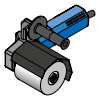

Eccentric orbital sander


Belt grinder


Belt grinder


Straight grinder


Stationary belt grinder


Linear finishing machines


Manual application


Flexible shaft drive

PFERD quality

Fine grinding and finishing products from PFERD are developed, manufactured and tested in accordance with the strictest quality requirements.

Research and development, our in-house and plant construction, and the continuous testing to quality and safety standards in our internal laboratories all guarantee high PFERD quality.

PFERD quality management is certified according to ISO 9001.

Safety notes

Use of the products in this catalogue may create dust and other particles. To avoid any risk of adverse health effects, the operator must use appropriate protective measures, including a respirator, during and after operation. Refer to our Safety Data Sheet (SDS) for further information on how the product should be used.

Furthermore, additional health hazards may result from dust in the surrounding environment and from dust generated from the workpiece material.

PROTECTIVE MEASURES FOR THE OPERATOR MUST ADDRESS DUST AND OTHER PARTICULATES ARISING FROM ALL SOURCES. Always use our products in a well-ventilated workspace.

Technical support

PFERD offers individual targeted support to solve unique application problems. Our experienced sales representatives and technical specialists are available to assist you.

Contact your local sales representative or visit us at pferd.com to learn more.

Products made to order

If you cannot find the solution for your particular application in our extensive catalogue range, we can produce fine grinding and polishing products to meet your requirements in premium PFERD quality specifically for your application upon request.

Contact your local sales representatives who will be happy to assist you.

PFERD packaging

PFERD supplies fine grinding and polishing products in robust industrial packaging, which protects the products against damage. You can find details on the packaging unit (PU) in the product tables. The packaging labels feature easy identification of product features and part number.

PFERDTOOL-CENTER

The **PFERD**TOOL-CENTER is a premium display system that can be custom-designed to meet your specific product and presentation requirements. For more information from a PFERD expert, contact us today at **pferd.com**.

PFERDPRAXIS brochures and theme brochures

Our **PFERD**PRAXIS brochures contain a wealth of useful information on material properties as well as tips and tricks for using PFERD products on specific materials or for specific applications.

PFERDVALUE® – Your added value with PFERD

Results from the PFERD test laboratories as well as from the product tests by independent testing institutes prove: PFERD products offer measurable added value.

Discover **PFERD**ERGONOMICS® and **PFERD**EFFICIENCY®:

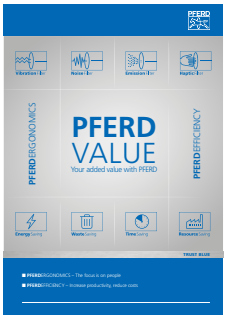
As part of **PFERD**ERGONOMICS®, PFERD offers ergonomically optimized products and power tools that contribute to greater safety and working comfort, and thus to health protection.

Vibration Filter | **Noise** Filter | **Emission** Filter | **Haptic** Filter

As part of **PFERD**EFFICIENCY®, PFERD offers innovative, high-performance product solutions and power tools with outstanding added value.

Energy Saving | **Waste** Saving | **Time** Saving | **Resource** Saving

For more information on this topic, please refer to our brochure "**PFERD**VALUE – Your added value with PFERD".



Please visit our website for more information on our products: pferd.com

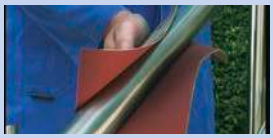
Fine grinding and finishing products
Quick product selection guide

PFERD

Work type / Work steps	Face-down grinding Products with backing pad	Page		Page	Belt grinding Products for belt grinders	Page
Changing geometrical profiles	COMBIDISC® ■ abrasive discs ■ diamond abrasive discs	29–33 33	COMBICLICK® fibre discs	13–14	Abrasive belts	42–47
	COMBIDISC® mini fibre discs	32	Fibre discs	20–21		
	COMBIDISC® Mini-POLIFAN®	28	PSA discs	23–24		
Step-by-step fine grinding Reducing roughness depths	COMBIDISC® ■ abrasive discs ■ non-woven discs	29–33 34–36	PSA discs	23–24	Abrasive belts	42–47
	Poliflex® finishing wheels	114	Velcro-backed abrasive discs	25		
	COMBICLICK® ■ fibre discs ■ non-woven discs	13–14 15–16	Fibre discs	20–21		
	POLINOX® unitized discs	88	POLINOX® fibre-backing discs	102		
Fine grinding Very fine grinding	COMBIDISC® ■ abrasive discs ■ non-woven discs	29–33 34–36	Fibre discs	20–21	Abrasive belts	42–47
	Poliflex® finishing wheels	114	PSA discs	23–24	Surface conditioning belts	45, 48
	POLINOX® unitized discs	88	COMBICLICK® ■ fibre discs ■ non-woven discs	13–14 15–16		
Cleaning	COMBIDISC® non-woven discs	34–36	POLIVLIES® hook and loop discs	104	Surface conditioning belts	45, 48
	COMBIDISC® POLICLEAN® PLUS discs	34	POLICLEAN® PLUS discs	107		
	COMBICLICK® non-woven discs	15–16	POLINOX® fibre-backing discs	102		
	POLIVLIES® flap discs	103				
Creating visual effects	COMBIDISC® non-woven discs	34–36	POLIVLIES® hook and loop discs	104	Surface conditioning belts	45, 48
	POLIVLIES® flap discs	103	COMBICLICK® non-woven discs	15–16		
	POLINOX® fibre-backing discs	102				
Polishing	COMBIDISC® felt discs	37	Felt flap discs	118	Felt polishing belt	45
	COMBICLICK® felt discs	17				

Peripheral grinding
Mounted/unmounted products

Manual grinding



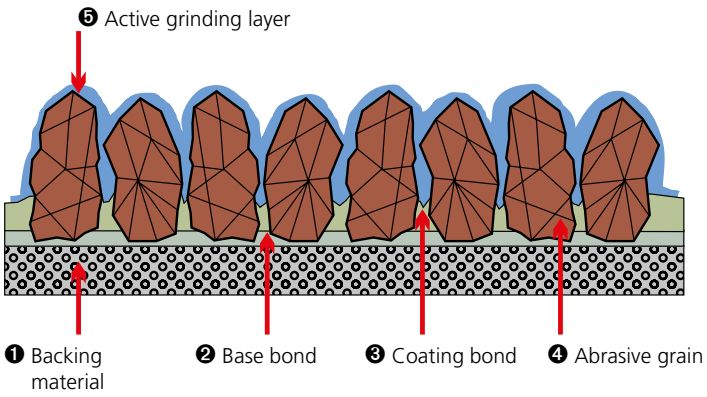
Structure of coated abrasives

PFERD supplies a wide range of products with coated abrasives for machining a variety of workpiece geometries and materials:

- COMBICLICK® quick-mounting system
- Fibre discs
- PSA discs
- Abrasive discs
- COMBIDISC® quick-change discs
- Abrasive belts, sheets and rolls
- Abrasive spiral bands
- POLIROLL® cartridge rolls
- POLICAP® abrasive caps
- Flap wheels

You can find additional PFERD products with coated abrasives in catalogue section 6.

Coated abrasives are used for both wet and dry grinding.



❶ Backing material

Bond and abrasive grain are applied to the base. The backing materials available for selection differ in their properties, such as tear strength, flexibility and wear. The respective grinding product is adapted to the requirements of the intended application by choosing the appropriate base material. The PFERD range is sub-divided into three groups:

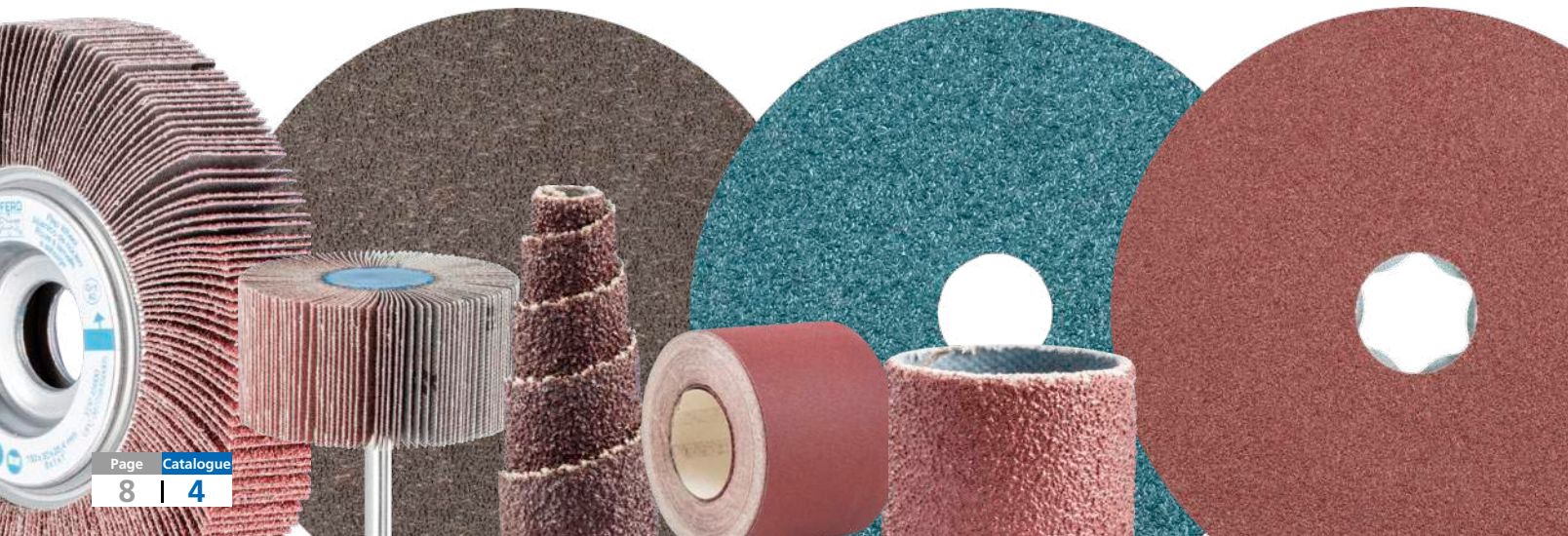
Paper:
The main areas of application for coated abrasives with a paper base are in the woodworking industry and in trade, e.g. among carpenters, painters and decorators. Coated abrasives with a paper base are rarely used for industrial metalwork.
Abrasives for manual grinding are predominantly made from paper with a surface weight of 70 to 100 g/m². Heavier paper types are used to make abrasives for machine applications involving wide and narrow belts alike.

Cloth:
Coated abrasives with a cloth base are predominantly used for metalwork.

Vulcanized fibre:
When adapted to the corresponding applications, vulcanized fibre in various thicknesses is predominantly used for making fibre grinding discs. Vulcanized fibre is a very sturdy, robust backing material, and also very wear-resistant.

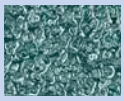
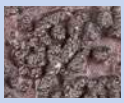
❷ + ❸ Bond

When manufacturing coated abrasives, different resin bonds are used to fix the abrasive grain to the backing material. First, the backing material is coated with the base bond (❷). After this, the abrasive grain is evenly scattered over the surface and aligned to achieve higher aggressiveness with the help of special procedures. The coating bond (❸) ensures that the abrasive grain is fixed in place and protects the grain against the forces and loads resulting from the grinding process.



❹ Abrasive grain

Choosing the right abrasive grain has a significant influence on surface quality and productivity. The most common materials for abrasive grain are:

Aluminum oxide A		Numerous types of aluminum oxide are used as abrasives. These may be present in molten or sintered form. The hardness and toughness can be influenced by special manufacturing procedures or additives. Standard types of aluminum oxide and a "sharp-edged" grain shape are predominantly used for coated abrasives.
Ceramic oxide CO		For sintered aluminum oxides, a differentiation is made between sintered bauxite aluminum oxides and sol-gel aluminum oxides. Sol-gel aluminum oxides are predominantly used for coated abrasives in the form of abrasive ceramic grain. This state-of-the-art abrasive is used for numerous applications due to its high toughness and good self-sharpening qualities.
Zirconia alumina Z		Zirconia alumina is a fused mixture of aluminum oxide and zirconium oxide. In comparison to aluminum oxides, zirconia alumina exhibits lower hardness but greater toughness. The high proportion of zirconium oxide results in an extremely powerful self-sharpening effect and contributes to outstanding stock removal rates with cool grinding and a long service life.
Silicon carbide SiC		Silicon carbide is synthetically manufactured abrasive grain which has very sharp edges, with low toughness and very high hardness. It is recommended for work on titanium, aluminum, bronze, stone and plastics. Ideally suited for use in the aeronautical industry, especially where SiC is the only approved abrasive, e.g. for use on engine components.
Diamond grain D		Diamond grain is the hardest abrasive. It consists of pure carbon in a crystalline structure. For grinding products, the diamonds used are generally synthetic, produced at very high temperatures and under high pressure. The properties of diamond grain can be adapted for use in grinding products through various synthesis conditions.
Compact grain CK		In the case of compact grain, individual grains are built up as granulate with a bond system. Each individual grain of granulate is one solid unit, in which numerous abrasive grains made from aluminum oxide or silicon carbide (SiC) are joined together. Used abrasive grains are torn out of this compound structure by the forces resulting from the grinding, and expose sharp abrasive points in doing so. This guarantees a long service life with a constant surface quality.

Grit sizes

The various grit sizes for coated abrasives are specified in ISO 6344 and have been adopted for FEPA standards:

Coarse	Medium	Fine	Superfine
P 12 – 16 – 20 – 24 – 36 – 40 – 50 – 60 – 80	P 100 – 120 – 150 – 180 – 220 – 240 – 280	P 320 – 360 – 400 – 500 – 600	P 800 – 1000 – 1200 – 1500

❺ Active grinding layer

The use of an active grinding layer considerably increases the stock removal rate and reduces the workpiece temperature.
This is especially advantageous for materials with poor heat-conducting properties, such as stainless steel (INOX).
PFERD products with an active grinding layer feature the additional "COOL" label in their item description.

Factors influencing surface roughness:

Abrasive:
- The larger the grit, the rougher the surface finish will be.
- Aluminum oxide, ceramic oxide and zirconia alumina grains all achieve similar levels of surface roughness.
- Workpieces which are ground with silicon carbide grain exhibit a slightly brighter or more reflective surface than other grains.

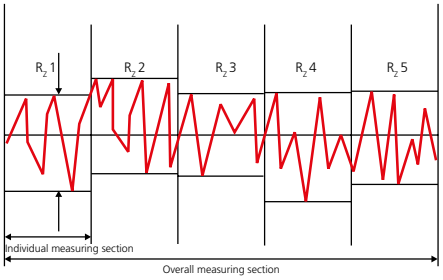
Workpiece materials:
- The softer the material to be ground, the coarser the finished surface will be when using the same grit sizes.
- Adding grease or lubricant will achieve a slightly finer surface finish.

Work parameters:
- The relationship between the peripheral speed and feed rate has the following impact:
  - Increasing the peripheral speed slightly improves the surface quality.
  - Reducing the speed of the feed rate makes the surface quality slightly finer.
- The contact pressure can have a significant influence on the surface roughness.

There is a differentiation between the following roughness depths:

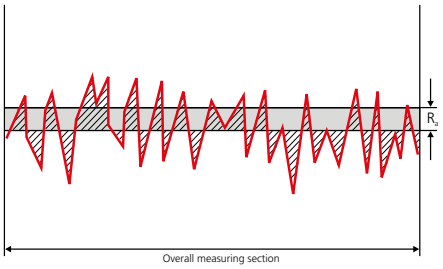
The **individual roughness depth R_{zi}** is the sum of the height of the largest profile peak and the depth of the largest profile trough within an individual measuring section.

The **roughness depth R_z** is the largest individual roughness depths (R_{zi}) of consecutive individual measuring sections.



The **roughness depth R_{max}** is the largest individual roughness depth within the overall measuring section.

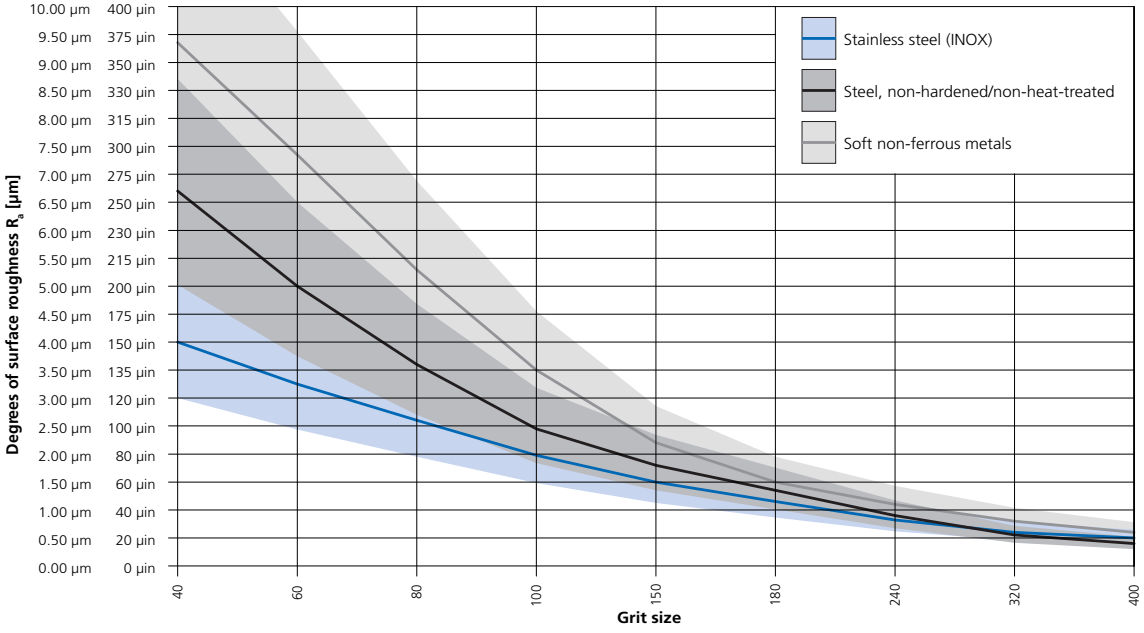
The **average roughness value R_a** is the arithmetic mean value of the sum of all profile values within the roughness profile.



Reference values for roughness depths in the case of different applications

Application	Roughness depth
Coarse stock removal: Grit sizes 24 to 150	R_a = 0.70 to 12 µm (25 to 470 µin)
Fine finishing: Grit sizes 180 to 400	R_a = 0.20 to 0.70 (8 to 25 µin)
Very fine finishing: Grit sizes 500 to 1200	R_a = 0.05 to 0.20 µm (2 to 8 µin)
Mirror finishing:	
Step 1:	R_a = 0.10 to 0.20 µm (4 to 8 µin)
Step 2:	R_a = 0.04 to 0.10 (2 to 4 µin)
Step 3:	R_a = < 0.01 µm (< 1 µin)
Pharmaceutical grade:	R_a = 0.20 to 0.70 µm (8 to 25 µin)
Sanitary food grade/ directional matte finish:	R_a = .10 to 0.70 µm (4 to 25 µin)

Surface roughness of different materials after machining with products using coated abrasives



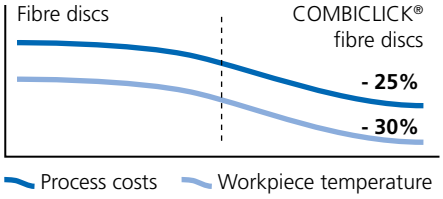
The patented quick-mounting and cooling system is recommended with fibre, non-woven and felt discs.

The COMBICLICK® system consists of a specially developed backing pad and a rugged mounting system at the back of the disc.
The backing pad allows COMBICLICK® discs to be used on most available angle grinders.

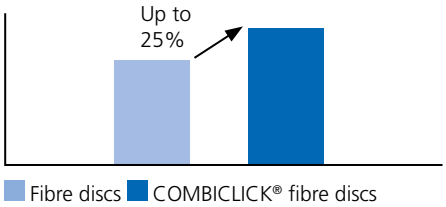
The special geometry of the cooling slots ensures high air throughput, which considerably reduces the thermal load on the abrasive material and the workpiece.

The quick-mounting system, rugged fixture, secure attachment of the disc and optimized cooling system help to provide up to 30% lower workpiece temperature, up to 25% increased stock removal, up to 30% longer disc life and improved utilization of the abrasive.

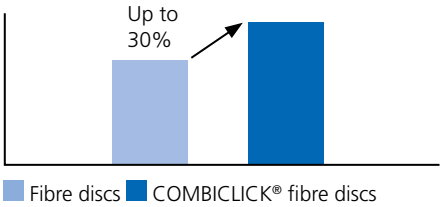
Lower process costs and workpiece temperature



Higher stock removal rate



Longer service life



Advantages:

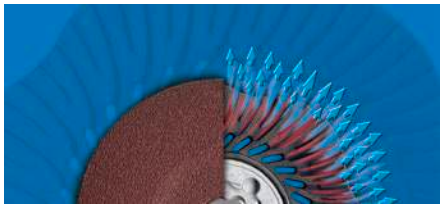
System

Very easy and comfortable.

Clamping mounting system

Extremely fast and easy disc changing reduces process costs.

Cooling effect



Very good cooling of the disc and workpiece.

Flexible grinding

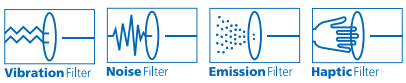
Soft and flexible grinding performance in face-down grinding with 5 inch diameter fibre discs.

COMBICLICK® allows a very flat grinding angle!

With COMBICLICK®, scratches caused by protruding clamping parts are prevented and very high utilization of the available abrasive is attained.

PFERDVALUE®

PFERDERGONOMICS® recommends COMBICLICK® as an innovative product solution to sustainably reduce vibration, noise and dust levels produced by discs, and to improve working comfort.



PFERDEFFICIENCY® recommends COMBICLICK® for long, fatigue-free and resource-saving work in the shortest possible time. The patented quick-mounting system reduces disc changes and setup times.

COMBICLICK® quick-mounting system
Fibre discs

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

Advantages:

- Innovative quick-mounting system guarantees convenient handling and cool grinding.
- High productivity due to long service life and very high stock removal rate.
- Consistent surface finish resulting from high-quality abrasives.

Applications:

- Leveling
- 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.

Compatible power tools:

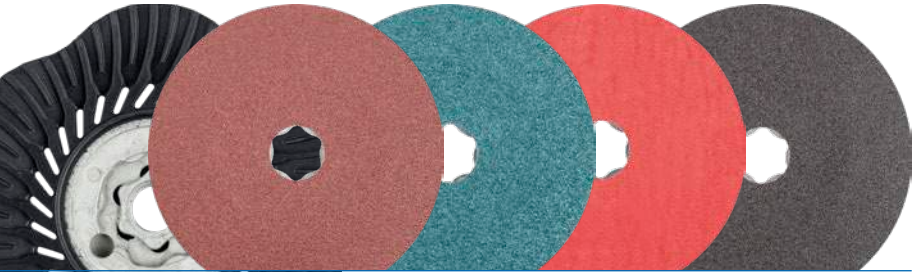
- Angle grinders
- Cordless angle grinders

Ordering notes:

- Order COMBICLICK® backing pads separately. Detailed information and ordering data for backing pads can be found on page 18.

Safety notes:

- The maximum permitted peripheral speed is 15,800 SFPM.
- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.



Quick product selection guide

Material group ▼		Abrasive ▶	Aluminum oxide A	Zirconia Alumina Z	Ceramic oxide CO	Silicon carbide SiC	Aluminum oxide A-COOL	Ceramic oxide CO-COOL
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 aluminum alloys	❍				●	❍
		Brass, copper, zinc	●	❍	❍			
	Hard non-ferrous metals	Hard aluminum 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, with nodular graphite cast iron, white annealed cast iron, black cast iron	●	❍	●			
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●			●		

● = highly recommended ❍ = recommended

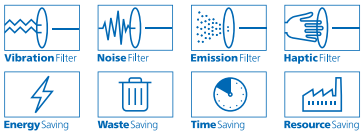
Aluminum oxide A

For universal grinding work from coarse to fine grinding in industry and professional trades.

Abrasive:
Aluminum oxide A

Ordering notes:
- Please order COMBICLICK® backing pad separately.

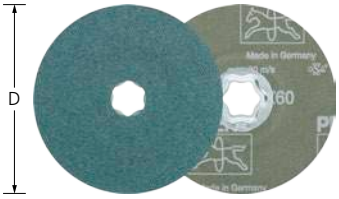
PFERDVALUE®:



D [Inches]	Grit and EDP number						Max. RPM	
	24	36	50	60	80	120		
4-1/2	40091	40092	40093	40094	40095	40097	13,300	25
5	40099	40100	40101	40102	40103	40105	12,200	25

Zirconia alumina Z

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

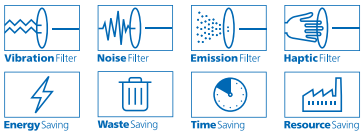


Abrasive:
Zirconia alumina Z

Recommendations for use:
- Use powerful angle grinders in the case of a higher contact pressure.

Ordering notes:
- Please order COMBICLICK® backing pad separately.

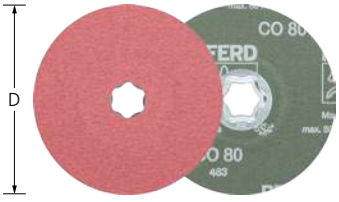
PFERDVALUE®:



D [Inches]	Grit and EDP number						Max. RPM	
	24	36	50	60	80	120		
4-1/2	-	40131	40132	40133	40134	40136	13,300	25
5	40137	40138	40139	40140	40141	40143	12,200	25

Ceramic oxide CO

For aggressive grinding with a very high stock removal rate and very long service life.
The ceramic oxide grain is specifically designed for work on hard materials and coatings.

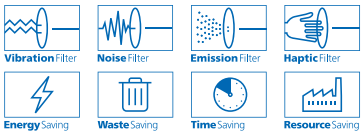


Abrasive:
Ceramic oxide CO

Recommendations for use:
- Use with high-powered angle grinders.

Ordering notes:
- Please order COMBICLICK® backing pad separately.

PFERDVALUE®:



D [Inches]	Grit and EDP number						Max. RPM	
	24	36	50	60	80	120		
4-1/2	40697	40698	40699	40700	40701	40703	13,300	25
5	40704	40705	40706	40707	40708	40710	12,200	25

Silicon carbide SiC

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

Recommended for use on titanium alloys.

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

Abrasive:
Silicon carbide SiC

Ordering notes:
- Please order COMBICLICK® backing pad separately.

PFERDVALUE®:

D [Inches]	Grit and EDP number 36	60	80	120	Max. RPM	
4-1/2	40021	40022	40023	40024	13,300	25
5	40028	40029	40030	40031	12,200	25

Aluminum oxide A-COOL

For universal grinding work from fine to very fine grinding on materials that do not conduct heat well, e.g. stainless steel (INOX) and aluminum.

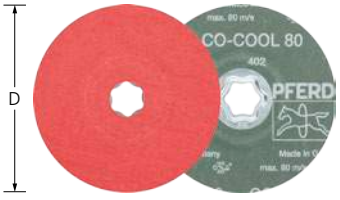
Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

Abrasive:
Aluminum oxide A-COOL

Ordering notes:
- Please order COMBICLICK® backing pad separately.

PFERDVALUE®:

D [Inches]	Grit and EDP number 50	60	80	120	150	180	220	Max. RPM	
4-1/2	-	40302	40303	40305	40306	-	40308	13,300	25
5	40310	40311	40312	40314	40315	40316	40317	12,200	25



Ceramic oxide CO-COOL

For aggressive grinding with maximum stock removal rate on hard materials that 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 loading and result in cooler grinding.

Abrasive:
Ceramic oxide CO-COOL

Ordering notes:
- Please order COMBICLICK® backing pad separately.

PFERDVALUE®:

D [Inches]	Grit and EDP number 24	36	50	60	80	120	Max. RPM	
4-1/2	40725	40726	40727	40728	40729	40731	13,300	25
5	40732	40733	40734	40735	40736	40738	12,200	25
7	40746	40747	40748	40749	-	-	8,500	25

COMBICLICK® non-woven discs are used for face-down grinding.
They are available in the following types: finishing-soft type, surface conditioning-hard type, and unitized.

Advantages:

- Innovative quick-mounting system guarantees convenient handling and cool grinding.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Roughing
- Deburring
- Surface work
- Cleaning
- Work on weld seams
- Structuring surfaces
- Step-by-step fine grinding

Recommendations for use:

- Use COMBICLICK® non-woven discs with COMBICLICK® backing pads on variable speed angle grinders.

Compatible power tools:

- Angle grinders
- Cordless angle grinders

Ordering notes:

- Order COMBICLICK® backing pads separately. Detailed information and ordering data for backing pads can be found on page 18.

Safety notes:

- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.

Surface conditioning, hard type

Recommended for universal work on small and medium-sized metal surfaces, e.g. removing rough grinding traces, removing oxidation and light deburring work. Achieve matte and satin-finished surfaces.

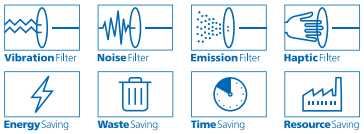
Advantages:
- Little wear due to high tear strength.
- The open structure of the non-woven material prevents loading.

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

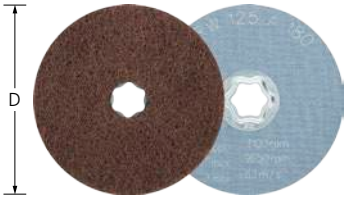
Recommendations for use:
- COMBICLICK® surface conditioning, hard type discs achieve their best performance at a recommended peripheral speed of 3,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and disc wear.
- The addition of oil or water during grinding results in a finer finish, cooler grinding and longer service life.

Ordering notes:
- Please order COMBICLICK® backing pad separately.

PFERDVALUE®:



D [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
	100 C	180 M	240 F			
4-1/2	48100	48101	48103	3,300	10,500	10
5	48110	48111	48113	3,100	9,650	10



Finishing, soft type

Recommended for very fine grinding on small and medium-sized surfaces and contours, and for cleaning metal and painted surfaces. Achieve matte and satin-finished surfaces. Highly open structure.

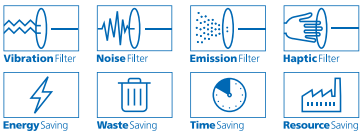
Advantages:
- Can be used for wet and dry grinding.
- The open structure and high flexibility of the non-woven material prevents loading.

Abrasive:
Aluminum oxide A
Available POLINOX® grit sizes:
100 = medium
180 = fine
280 = very fine

Recommendations for use:
- COMBICLICK® finishing, soft type discs achieve their best performance at a recommended peripheral speed of 3,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and disc wear.

Ordering notes:
- Please order COMBICLICK® backing pad separately.

PFERDVALUE®:



D [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
	100	180	280			
4-1/2	48131	48132	48133	3,300	10,500	10
5	48135	48136	48137	3,100	9,650	10

Unitized discs

For achieving a very fine, uniform surface finish which, depending on requirements, is a sufficient preparation for high-gloss polishing. Recommended for work on larger surfaces on components made of stainless steel (INOX).

The different thicknesses/hardnesses of the non-woven material are colour-coded:
W (soft) = grey, MW (medium-soft) = light blue, MH (medium-hard) = dark blue, H (hard) = red

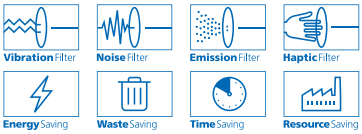
Advantages:
- High edge strength due to extreme durability.
- Can be profiled as desired, enabling optimal adjustment to the contour.

Abrasive:
Aluminum oxide A
Silicon carbide SiC

Recommendations for use:
- COMBICLICK® unitized discs achieve their best performance at a recommended peripheral speed of 3,000–6,900 SFPM.

Ordering notes:
- Further information on unitized products can be found on pages 85–86.

PFERDVALUE®:



D [Inches]	Abrasives	Grit size	Hardness	Spec	EDP number	Opt. RPM	Max. RPM	
4-1/2	SiC	fine	W	2SF	48150	5,000	8,350	5
	SiC	fine	MW	3SF	48154	5,000	8,350	5
	SiC	fine	MH	6SF	48158	5,000	8,350	5
	A	fine	H	8AM	48162	5,000	8,350	5
5	SiC	fine	W	2SF	48166	4,500	7,650	5
	SiC	fine	MW	3SF	48170	4,500	7,650	5
	SiC	fine	MH	6SF	48174	4,500	7,650	5
	A	fine	H	8AM	48178	4,500	7,650	5

COMBICLICK® felt discs are used for face-down grinding on medium-sized and large surfaces. They are supplied in various diameters.

Advantages:

- Innovative quick-mounting system guarantees convenient handling with fast disc changes.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Polishing

Recommendations for use:

- Use COMBICLICK® felt discs with COMBICLICK® backing pads on variable speed angle grinders.
- Felt discs achieve their best performance at a recommended peripheral speed of 1,000–2,000 SFPM. This provides an ideal compromise between polishing performance, thermal load on the workpiece and disc wear.
- When changing the polishing paste, employ a new, unused felt disc.

Compatible power tools:

- 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 18.
- Please order grinding and polishing pastes separately. Detailed information and ordering data for grinding and polishing pastes can be found on pages 121–122.

Safety notes:

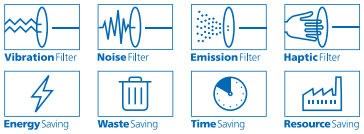
- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.

Felt discs

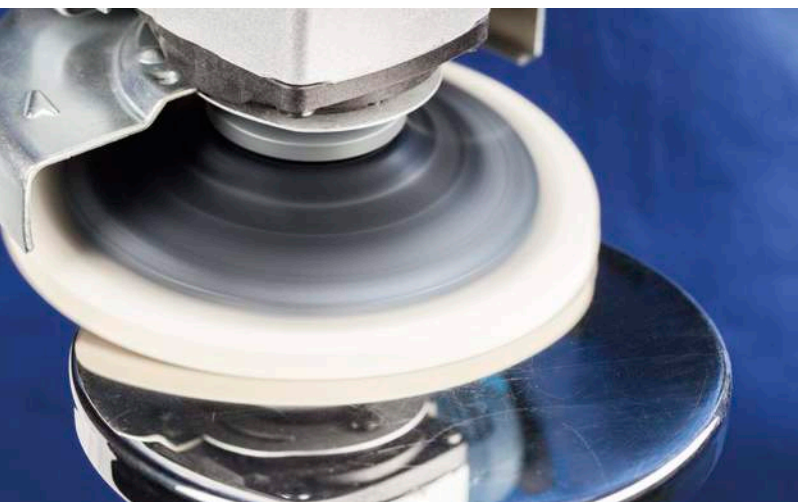
Recommended for polishing with polishing paste bars, grinding pastes or diamond polishing pastes in face-down grinding on medium-sized and large surfaces.

Advantages:
- High productivity due to very long service life.
- Consistent performance over the entire lifespan due to high dimensional stability.

PFERDVALUE®:



D [Inches]	EDP number	Opt. RPM	Max. RPM	
4-1/2	48705	1,900	10,500	5
5	48706	1,650	9,650	5



Backing pads

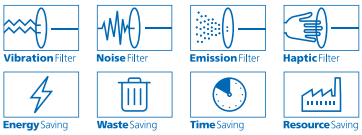
With this backing pad, COMBICLICK® discs can be used on commercially available angle grinders.
The different hardnesses are colour-coded:
CC-GT (medium) = black
CC-H-GT (hard) = blue

Advantages:
- The geometry of the cooling slots significantly reduces the thermal load.
- High productivity due to minimized disc change times.

Recommendations for use:
- CC-H-GT backing pads 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 approved peripheral speed is 15,800 SFPM.
- For backing pads with a 7 inch diameter, do not apply too high a contact pressure in order to prevent the backing pad from overstretching.

PFERDVALUE®:



Disc diameter [Inches]	Thread	Hardness	EDP number	Max. RPM	
4-1/2 and 5	5/8-11	medium	69470	13,300	1
		hard	69478	13,300	1
7	5/8-11	medium	69474	8,500	1

Sets

COMBICLICK® sets

COMBICLICK® sets include a wide variety of coated and non-woven materials to test performance and surface finish results to help determine the right product selections for your applications prior to bulk purchases.

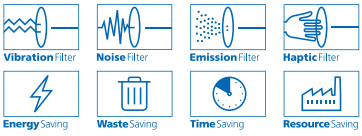
The included discs provide solutions for rough grinding, fine grinding, surface conditioning, prepolish and polishing to a mirror finish.

Contents:
- 3 pcs. each of COMBICLICK® fibre discs:
  - CO-COOL 36 grit
  - CO-COOL 120 grit
  - A-COOL 220 grit
- 1 pc. each of COMBICLICK® non-woven disc:
  - Surface conditioning, hard type, 240 F fine
  - Surface conditioning, hard type, 180 M medium
  - Surface conditioning, hard type, 100 C coarse
  - Finishing, soft type, 280 very fine
  - Finishing, soft type, 180 fine
  - Finishing, soft type, 100 medium
  - Unitized disc SiC W soft
- 1 pc. each of:
  - Universal polishing paste
  - COMBICLICK® felt disc
  - COMBICLICK® backing pad CC-GT 5/8-11

Advantages:
- Getting to know and testing the comprehensive system.
- Coordinated selection of the most common products.

Abrasive:
Aluminum oxide A
Ceramic oxide CO-COOL
Silicon carbide SiC

PFERDVALUE®:



D [Inches]	Thread	EDP number	
4-1/2	5/8-11	48192	1
5	5/8-11	48194	1

The extensive range of fibre discs provides the optimum product for any machining application, from coarse to fine grinding. PFERD provides fibre discs with various grit sizes, abrasives and dimensions. In accordance with ISO 16057, PFERD fibre discs are manufactured in shape A2, type F, and designated "vulcanized fibre discs".

Advantages:

- High productivity due to long service life and very high stock removal rate.
- Consistent surface finish resulting from high-quality abrasives.
- Optimum adaptation to contours due to high flexibility.

Applications:

- Leveling
- 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.

Compatible power tools:

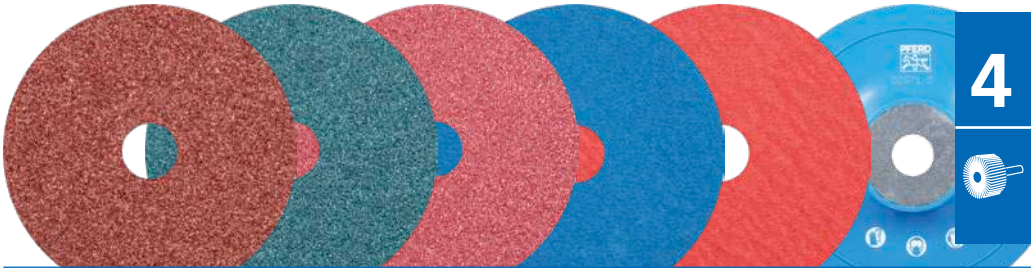
- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order backing pads separately. More detailed information and ordering data for backing pads can be found on page 22.

Safety notes:

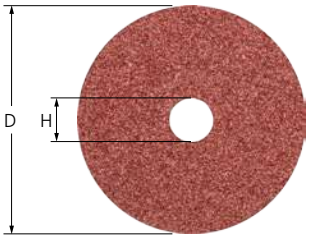
- The maximum approved peripheral speed is 15,800 SFPM.
- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.



Quick product selection guide

Material group ▼		Abrasive ▶	Aluminum oxide A	Zirconia alumina Z	Ceramic oxide CO	Zirconia alumina Z-COOL	Ceramic oxide CO-COOL
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 aluminum alloys	❍			❍	❍
		Brass, copper, zinc	●	❍	❍		
	Hard non-ferrous metals	Hard aluminum 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, with nodular graphite cast iron, white annealed cast iron, black cast iron	●	❍	●		
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●				

● = highly recommended ❍ = recommended



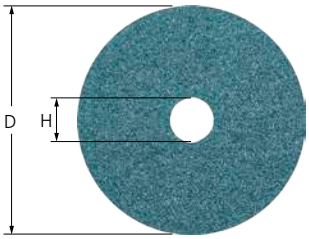
Aluminum oxide A

For universal grinding work from coarse to fine grinding in industry and professional trades.

Abrasive:
Aluminum oxide A

Ordering notes:
- Please order backing pad separately. See page 22.

D [Inches]	H [Inches]	Grit and EDP number								Max. RPM	
		16	24	36	50	60	80	100	120		
4-1/2	7/8	62451	62452	62453	62454	62455	62456	62457	62458	13,300	25
5	7/8	62501	62502	62503	62504	62505	62506	62507	62508	12,200	25
7	7/8	62701	62702	62703	62704	62705	62706	-	-	8,500	25



Zirconia alumina Z

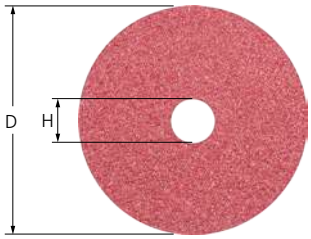
For coarse grinding work with a high stock removal rate and a long service life.

Abrasive:
Zirconia alumina Z

Recommendations for use:
- Use with high-powered angle grinders in the case of a higher contact pressure.

Ordering notes:
- Please order backing pad separately. See page 22.

D [Inches]	H [Inches]	Grit and EDP number					Max. RPM	
		24	36	50	60	80		
4-1/2	7/8	62462	62463	62464	62465	62466	13,300	25
5	7/8	62522	62523	62524	62525	62526	12,200	25
7	7/8	62712	62713	62714	62715	62716	8,500	25



Ceramic oxide CO

For aggressive grinding with a very high stock removal rate and very long service life. Consistently high performance due to self-sharpening ceramic oxide grain.

The ceramic oxide grain is specifically designed for work on hard materials and layers.

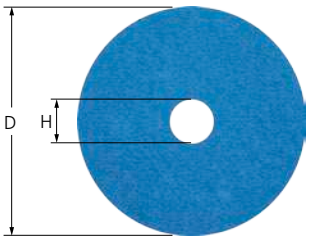
Abrasive:
Ceramic oxide CO

Recommendations for use:
- Use with high-powered angle grinders.

Ordering notes:
- Please order backing pad separately. See page 22.

D [Inches]	H [Inches]	Grit and EDP number					Max. RPM	
		24	36	50	60	80		
4-1/2	7/8	62410	62411	62412	62413	62414	13,300	25
5	7/8	62510	62511	-	-	-	12,200	25
7	7/8	62743	62744	62745	-	-	8,500	25

Zirconia alumina Z-COOL



For coarse grinding work with a high stock removal rate and cool grinding.

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

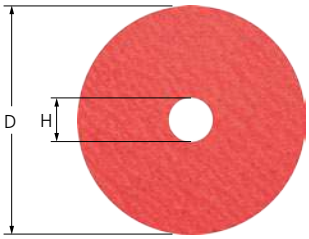
Abrasive:
Zirconia alumina Z-COOL

Recommendations for use:
- Use with high-powered angle grinders in the case of a higher contact pressure.

Ordering notes:
- Please order backing pad separately. See page 22.

D [Inches]	H [Inches]	Grit and EDP number				Max. RPM	
		36	50	60	80		
4-1/2	7/8	62468	62469	62470	62471	13,300	25
5	7/8	62528	62529	62530	62531	12,200	25
7	7/8	62718	62719	62720	62721	8,500	25

Ceramic oxide CO-COOL



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 loading and result in cooler grinding.

Abrasive:
Ceramic oxide CO-COOL

Ordering notes:
- Please order backing pad separately. See page 22.

D [Inches]	H [Inches]	Grit and EDP number						Max. RPM	
		24	36	50	60	80	120		
4-1/2	7/8	62416	62417	62418	62419	62420	62421	13,300	25
5	7/8	62516	62517	62518	62519	62520	62521	12,200	25
7	7/8	62749	62750	62751	62752	62753	62754	8,500	25


Rubber


High-performance


Temperature-resistant

Backing pads for fibre discs

Backing pads for fibre discs used on commercially available angle grinders.

Rubber backing pads:
Rubber backing pad with a ribbed surface for better cooling to improve disc life. Available in three densities.

High-performance backing pads:
High-performance backing pad with a long service life due to abrasion-resistant, glass-fibre-reinforced plastic. Cool grinding due to radially arranged cooling fins, and high fibre disc stock removal rate due to sturdy, rigid design.

Temperature-resistant backing pads:
Temperature-resistant backing pad with a long service life due to the highly temperature-resistant material. High-precision work with flexible density. Maximum stock removal with hard density.

Ordering notes:
- The compatible clamping nut is included.

Accessories:
- Clamping nuts for backing pads

Compatible with these disc dia. [Inches]	Thread size [Inches]	Backing density	EDP number	Compatible clamping nut	Max. RPM	
Rubber backing pads (ribbed surface)						
4-1/2	5/8-11	Regular (R)	69455	69107	13,300	1
5	5/8-11	Regular (R)	69525	69107	12,200	1
7	5/8-11	Flexible (F)	69704	69108	8,500	1
		Regular (R)	69705	69108	8,500	1
		Hard (H)	69706	69108	8,500	1
High-performance backing pads						
4-1/2	5/8-11	Hard (H)	69481	42071	13,300	1
5	5/8-11	Hard (H)	69484	42071	12,200	1
7	5/8-11	Hard (H)	69487	42071	8,500	1
Temperature-resistant backing pads						
4-1/2	5/8-11	Flexible (F)	69480	42071	13,300	1
		Hard (H)	69482	42071	13,300	1
5	5/8-11	Flexible (F)	69483	42071	12,200	1
		Hard (H)	69485	42071	12,200	1
7	5/8-11	Flexible (F)	69486	42071	8,500	1
		Hard (H)	69488	42071	8,500	1

Fibre disc backing pad accessories

Fibre disc backing pad accessories, including clamping nuts and spanner wrench.

Advantages:
- Matching centre hole distances for standard commercial face pin spanners.

Thread size [Inches]	Compatible with these grinder sizes [Inches]	EDP number	
5/8-11	4-5	69107	1
	7-9	69108	1
	4-1/2-7	42071	1
Spanner wrench	-	69115	1

PSA (pressure-sensitive adhesive) discs are suited to grinding larger surfaces. The flexible system includes a PSA disc and associated holder for use on contours. With the disc holder, PSA discs can be used on commercially available, variable speed or slow-running angle grinders with a 5/16-24 UNC thread.

Advantages:

- Quick disc changes due to flexible system.
- Optimum adaptation to contours because of high flexibility.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

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

Compatible power tools:

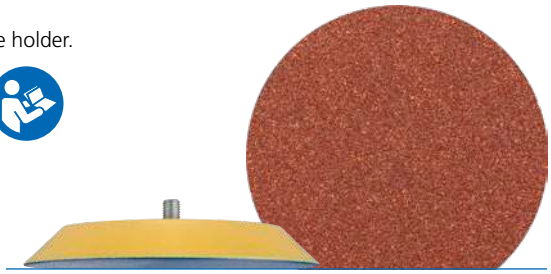
- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order disc holders separately. More detailed information and ordering data for disc holders can be found on page 24.

Safety notes:

- The maximum permitted peripheral speed is 6,300 SFPM.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- Position the PSA discs centrally on the holder.



Aluminum oxide A

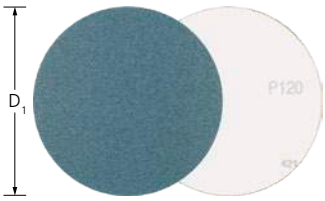
For universal grinding work from coarse to fine grinding in industry and professional trades.

Advantages:
- Recommended for general use on virtually all materials.

Ordering notes:
- Please order disc holder separately.

Abrasive:
Aluminum oxide A

D_1 [Inches]	Grit and EDP number												Opt. RPM	Max. RPM	
	36	40	50	60	80	100	120	150	180	220	240	320			
5	47361	47362	47363	47364	47365	47366	47367	47368	47369	47370	47371	47372	4,600	4,850	50
6	47374	47375	47376	47377	47378	47379	47380	47381	47382	47383	47384	47385	3,800	4,100	50



Zirconia alumina Z

Designed for coarse grinding and high stock removal with a long service life.

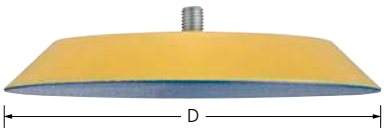
Advantages:
- Recommended for general use on virtually all materials.

Ordering notes:
- Please order disc holder separately. See below.

Abrasive:
Zirconia alumina Z

D_1 [Inches]	Grit and EDP number					Opt. RPM	Max. RPM	
	36	40	60	80	120			
5	47560	47561	47563	47564	47566	4,600	4,850	50
6	47570	47571	47573	47574	47576	3.800	4,100	50

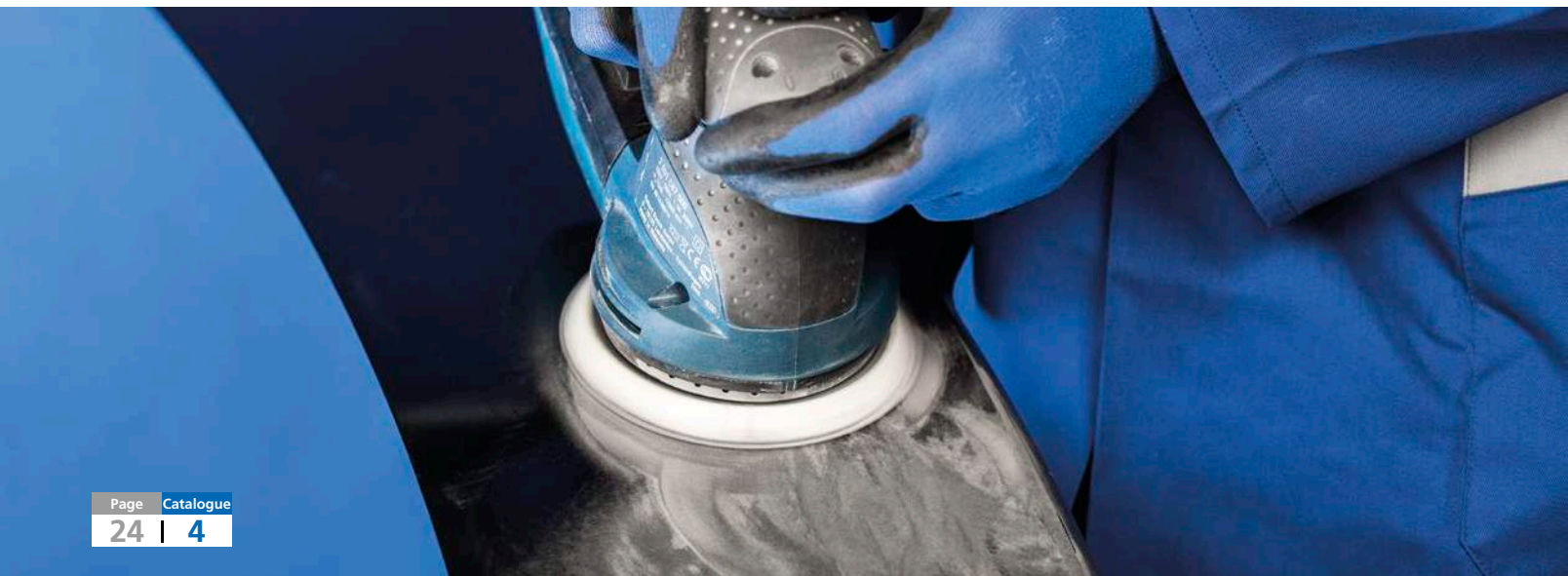
PSA disc holders



Threaded spindle

Backing pad for use with PSA discs. For threaded spindle (dual action machines).

D [Inches]	Thread	EDP number	Max. RPM	
5	5/16-24	47266	10,000	1
6	5/16-24	47268	10,000	1



Velcro-backed abrasive discs
NET type

Velcro-backed abrasive discs in the NET type feature a netting fabric, to which the abrasive grain is bonded with a high-performance bond system, which makes it very durable.

The range comprises two diameters that have been adapted to the most common power tools, with a comprehensive choice of grain sizes, from 80 to 1,000 grit.

Advantages:

- Very long service life and high stock removal rate.
- Very fine, even surfaces can be achieved.
- Dust-free work due to good extraction capability.
- No loading due to netting structure.
- Durable netting structure with high tear strength and edge stability.

Applications:

- Roughing
- Surface grinding
- Cleaning
- Step-by-step fine grinding

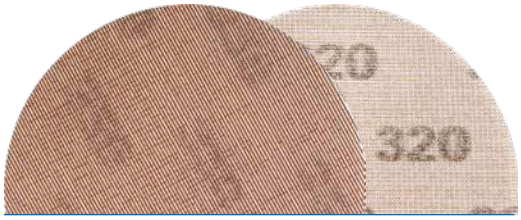
Compatible power tools:

- Eccentric orbital sanders

Safety notes:

Workpiece materials:

- Aluminum
- Additional non-ferrous metals
- Stainless steel (INOX)
- Wood
- Plastics
- Steel, cast steel

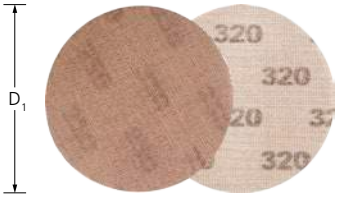


Aluminum oxide A

For dust-free, universal grinding work on medium-sized and large surfaces.

Abrasive:
Aluminum oxide A

Recommendations for use:
- Use the extraction connection on the machine to effectively remove the grinding dust.



D_1 [Inches]	Grit and EDP number											
	80	100	120	150	180	240	320	400	600	800	1000	
5	47520	47521	47522	47523	47524	47525	47526	47527	47528	47529	47530	25
6	47531	47532	47533	47534	47535	47536	47537	47538	47539	47540	47541	25

COMBIDISC® quick-change discs
General information

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

Advantages:

- Reduced down time due to quick disc changes.
- Great convenience due to simple handling and low-vibration working.
- No operational disruptions caused by sticking, slipping or disengaging.

Applications:

- Roughing
- Leveling
- 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 discs with arbors or abrasive disc holders on flexible shaft drives with angle handpieces, compressed-air or electric angle grinders.

Compatible power tools:

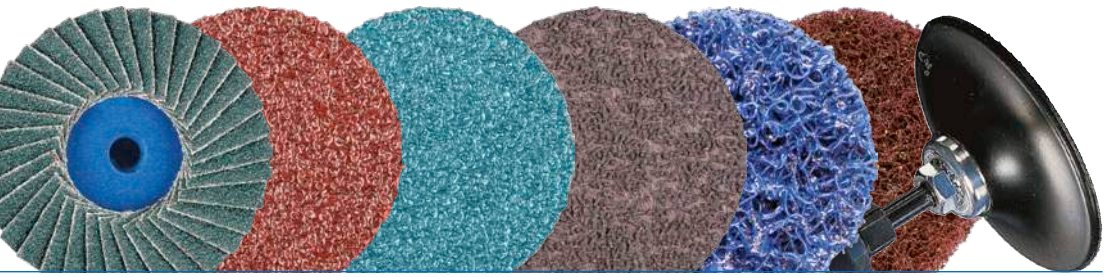
- Flexible shaft drives
- Straight grinders
- Angle grinders
- Cordless angle grinders

Ordering notes:

- Please order arbors or COMBIDISC® abrasive disc holders separately. More detailed information and ordering data can be found on page 37.

Safety notes:

- The maximum permitted peripheral speed is 9,800 SFPM.
- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.



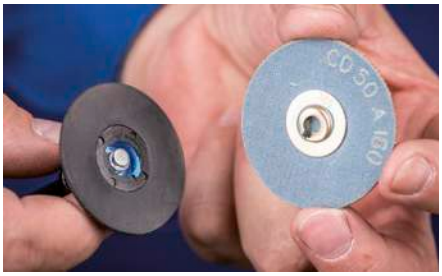
Quick product selection guide

Material group ▼		Abrasive ▶	Aluminum oxide A, A-PLUS, A-CONTOUR	Aluminum 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 aluminum alloys	❍		
		Brass, copper, zinc	●		❍
	Hard non-ferrous metals	Hard aluminum 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, with nodular graphite cast iron, white annealed cast iron, black cast iron	●		❍
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●		

● = highly recommended ❍ = recommended

PFERD offers two alternative mounting systems:

CD system



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

CDR system

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

PFERDVALUE®:

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

Vibration Filter | **Noise** Filter | **Emission** Filter | **Haptic** Filter

PFERDEFFICIENCY® recommends COMBIDISC® products to reduce disc change and setup times.

Time Saving

Recommended rotational speed range

Example:
EDP: 42292 2" CD CO-COOL
Application:
Grinding alloyed steel
Peripheral speed: 4,000–5,000 SFPM
Rotational speed: 7,600–9,600 RPM

D_1 [Inches]	Peripheral speed [SFPM]								
	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	10,000
	Rotational speeds [RPM]								
1	3,800	7,600	11,500	15,300	19,100	22,900	26,700	30,600	38,200
1-1/2	2,500	5,100	7,600	10,200	12,700	15,300	17,800	20,400	25,500
2	1,900	3,800	5,700	7,600	9,600	11,500	13,400	15,300	19,100
3	1,300	2,500	3,800	5,100	6,400	7,600	8,900	10,200	12,700

Silicon carbide SiC	Ceramic oxide CO-COOL	Diamond abrasive discs	POLICLEAN® discs	Non-woven discs Soft type, Hard type, Unitized
	●		●	●
	●		❍	❍
	●		●	●
	❍		●	●
			●	●
❍			●	●
●	●	●	❍	●
	●	●	❍	●
			●	●
●		●	●	●

Mini-POLIFAN® Aluminum oxide A

For universal coarse grinding work with high stock removal rates.

Ideal for dressing weld seams in hard-to-reach places.
Longer service life and higher stock removal rate when compared to abrasive discs.

Abrasive:
Aluminum oxide A

Ordering notes:
- Please order arbors or COMBIDISC® abrasive disc holders separately. See below and pg. 37.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

D_1 [Inches]	Grit and EDP number 40	60	80	120	Opt. RPM	
CD system						
2	42802	42803	42804	42805	12,000–14,000	10
3	42808	42809	42810	42811	8,000–10,000	10
CDR system						
2	42912	42913	42914	42915	12,000–14,000	10
3	42918	42919	42920	42921	8,000–10,000	10

Mini-POLIFAN® Zirconia alumina Z

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

Abrasive:
Zirconia alumina Z

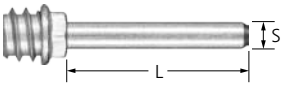
Recommendations for use:
- Use in the case of a higher contact pressure.

Ordering notes:
- Please order arbors or COMBIDISC® abrasive disc holders separately. See below and pg. 37.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

D_1 [Inches]	Grit and EDP number 40	60	80	120	Opt. RPM	
CD system						
2	42814	42815	42816	42817	12,000–14,000	10
3	42820	42821	42822	42823	8,000–10,000	10
CDR system						
2	42924	42925	42926	42927	12,000–14,000	10
3	42930	42931	42932	42933	8,000–10,000	10

Drive arbors



Drive arbors for Mini-POLIFAN® discs

Matching arbor for use with COMBIDISC® Mini-POLIFAN® discs with CD thread.

S [Inches]	L [Inches]	EDP number	Recommended diameters	
1/4	1-1/2	42851	2	1
		42852	3	1

Aluminum oxide A

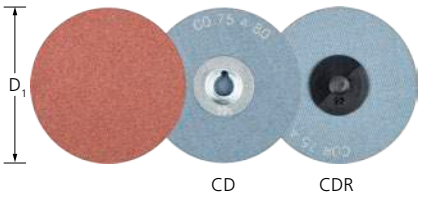
For universal coarse to fine grinding applications in industry and professional trades.

Abrasive:
Aluminum oxide A

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving



D1 [Inches]	Grit and EDP number							Opt. RPM	
	36	50	60	80	120	180	320		
CD system									
1	-	-	42136	42137	42139	42141	42143	15,000–26,000	100
1-1/2	42145	-	42148	42149	42151	42153	42155	10,000–16,000	100
2	42157	42159	42160	42161	42163	42165	42167	8,000–13,000	100
3	42169	42171	42172	42173	42175	42177	42179	5,000–9,000	50
CDR system									
1	-	-	42481	42482	42484	42486	42488	15,000–26,000	100
1-1/2	42490	-	42493	42494	42496	42498	42500	10,000–16,000	100
2	42502	42504	42505	42506	42508	42510	42512	8,000–13,000	100
3	42514	42516	42517	42518	42520	42522	42524	5,000–9,000	50

Aluminum oxide A-PLUS

For universal applications from coarse to fine grinding. Higher stock removal rate due to sturdy backing material. Recommended for use in edge grinding due to high tear strength.

Abrasive:
Aluminum oxide A-PLUS

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

D1 [Inches]	Grit and EDP number				Opt. RPM	
	36 PLUS	60 PLUS	80 PLUS	120 PLUS		
CD system						
2	42330	42331	42332	42333	8,000–13,000	100
3	42335	42336	42337	42338	5,000–9,000	50
CDR system						
2	42670	42671	42672	42673	8,000–13,000	100
3	42675	42676	42677	42678	5,000–9,000	50

Aluminum oxide A compact grain

Extremely well suited for fine and very fine grinding, and for step-by-step preparations for polishing.

The self-sharpening compact grain facilitates a very long service life and achieves consistent surface quality levels throughout the entire service life.

Abrasive:
Aluminum oxide A compact grain (CK)

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	Grit and EDP number									Opt. RPM	
		120	180	240	320	400	600	800	1000	1200		
CD system												
	2	42936	42937	42938	42939	42940	42941	42942	42943	42944	3,800–13,000	100
	3	42945	42946	42947	42948	42949	42950	42951	42952	42953	2,500–9,000	50
CDR system												
	2	42954	42955	42956	42957	42958	42959	42960	42961	42962	3,800–13,000	100
	3	42963	42964	42965	42966	42967	42968	42969	42970	42971	2,500–9,000	50

Zirconia alumina Z

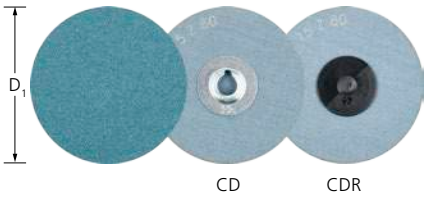
For coarse grinding work with a high stock removal rate and a long service life.

Abrasive:
Zirconia alumina Z

Recommendations for use:
- Use with hard or medium-hard COMBIDISC® abrasive disc holders.

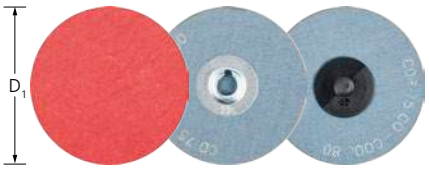
PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving



Ordering notes:
- Please order backing pad separately.
See page 37.

	D_1 [Inches]	Grit and EDP number				Opt. RPM	
		36	50	60	80		
CD system							
	2	42254	42256	42257	42258	3,800–13,000	100
	3	42261	42263	42264	42265	2,500–9,000	50
CDR system							
	2	42593	42595	42596	42597	3,800–13,000	100
	3	42600	42602	42603	42604	2,500–9,000	50



Ceramic oxide CO-COOL

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.

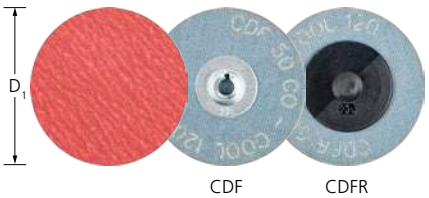
Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

Abrasive:
Ceramic oxide CO-COOL

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	Grit and EDP number					Opt. RPM	
		24	36	60	80	120		
CD system								
	2	42280	42289	42292	42293	42295	3,800–13,000	100
	3	42281	42296	42299	42300	42302	2,500–9,000	50
CDR system								
	2	42619	42628	42631	42632	42634	3,800–13,000	100
	3	42620	42635	42638	42639	42641	2,500–9,000	50



Ceramic oxide CO-COOL mini fibre discs

Exceptionally well-suited to surface and edge grinding. The fibre backing strengthens the abrasive disc and improves stock removal.

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 loading and result in cooler grinding.

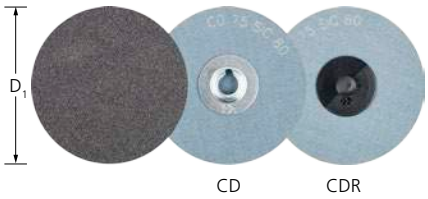
Abrasive:
Ceramic oxide CO-COOL

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	Grit and EDP number				Opt. RPM	
		36	50	80	120		
CDF system							
	2	40492	40494	40496	40497	3,800–13,000	100
	3	40499	40501	40503	40504	2,500–9,000	50
CDFR system							
	2	40632	40634	40636	40637	3,800–13,000	100
	3	40639	40641	40643	40644	2,500–9,000	50

Silicon carbide SiC



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

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

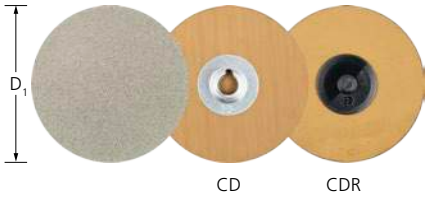
Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	Grit and EDP number 36	60	80	120	240	Opt. RPM	
CD system								
	2	42415	42416	42417	42418	42419	3,800–13,000	100
	3	42420	42421	42422	42423	42424	2,500–9,000	50
CDR system								
	2	42750	42751	42752	42753	42754	3,800–13,000	100
	3	42755	42756	42757	42758	42759	2,500–9,000	50

Diamond



Highly recommended for work on wear-resistant coatings and for hard facings made of tungsten carbide, chromium carbide, titanium carbide, etc. Recommended for work on materials used for aircraft engine construction, e.g. HASTELLOY®, INCONEL® and titanium/titanium alloys. Also highly recommended for work on extremely hard materials such as tungsten carbide, glass, ceramics, enamel, stone and carbon-reinforced plastic (CRP)/glass reinforced plastic (GRP).

Abrasive:
Diamond (D)
D 251 = P 60
D 126 = P 120
D 76 = P 220
(P = Grit size according to ISO 6344)

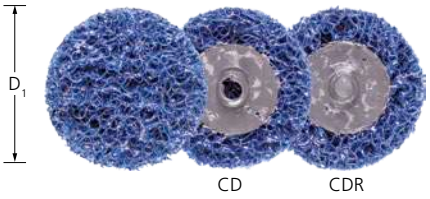
Recommendations for use:
- For the best results, use at a recommended peripheral speed of 2,000–4,000 SFPM.
- Use with hard or medium-hard COMBIDISC® abrasive disc holders.

Ordering notes:
- Grit sizes are indicated in µm.
- Please order backing pad separately. See page 37.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	Grit and EDP number D 251 / P 60	D 126 / P 120	D 76 / P 220	Opt. RPM	
CD system						
	1	40515	40516	40517	7,500–15,000	10
	1-1/2	40518	40519	40520	5,000–10,000	10
	2	40521	40522	40523	3,800–7,500	10
	3	40524	40525	40526	2,500–5,000	10
CDR system						
	1	40655	40656	40657	7,500–15,000	10
	1-1/2	40658	40659	40660	5,000–10,000	10
	2	40661	40662	40663	3,800–7,500	10
	3	40664	40665	40666	2,500–5,000	10



POLICLEAN® PLUS discs

For coarse cleaning work such as removing paint, scale, heat discolouration, rust and adhesive residues in face-down grinding.

POLICLEAN® PLUS discs exhibit a higher stock removal rate with a very long service life.

Applications:
roughing, surface work, cleaning

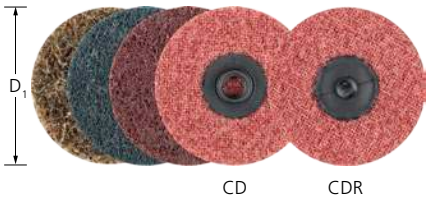
Abrasive:
Aluminum oxide A

Recommendations for use:
- Use with hard or medium-hard COMBIDISC® abrasive disc holders.

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	EDP number	Opt. RPM	
CD system				
	2	44840	5,500–8,000	10
	3	44841	3,800–5,000	10
CDR system				
	2	44842	5,500–8,000	10
	3	44843	3,800–5,000	10



Surface conditioning, hard type

Recommended for universal work on small and medium-sized metal surfaces, e.g. removing rough grinding traces, removing oxidation and light deburring work. Achieve matte and satin-finished surfaces.

Applications:
roughing, deburring, surface work, cleaning, weld dressing, structuring, fine grinding in multiple steps

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

Recommendations for use:
- The addition of oil or water during grinding results in a finer finish, cooler grinding and longer service life.

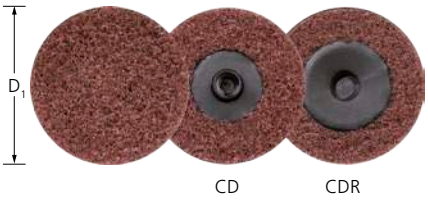
Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

	D_1 [Inches]	Grit, type and EDP number			Opt. RPM	
		100 C	180 M	240 F		
CD system						
	1-1/2	43176	43177	43179	7,000–10,000	50
	2	43180	43181	43183	5,500–7,500	50
	3	43184	43185	43187	3,800–5,000	25
CDR system						
	1-1/2	43234	43235	43237	7,000–10,000	50
	2	43238	43239	43241	5,500–7,500	50
	3	43242	43243	43245	3,800–5,000	25
	4	43246	43247	43248	2,850–4,000	25

Finishing, soft type

Recommended for very fine grinding on small and medium-sized surfaces and contours, and for cleaning metal and painted surfaces. Achieve matte and satin-finished surfaces. Highly open structure.



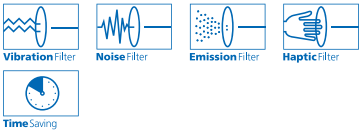
Applications:
roughing, deburring, surface work, cleaning, weld dressing, structuring, fine grinding in multiple steps

Abrasive:
Aluminum oxide A
Available POLINOX® grit sizes:
100 = medium
180 = fine
280 = very fine

Recommendations for use:
- The addition of oil or water during grinding results in a finer finish, cooler grinding and longer service life.

Ordering notes:
- Please order backing pad separately. See page 37.

PFERDVALUE®:



D_1 [Inches]	Grit and EDP number 100	180	280	Opt. RPM	
CD system					
2	43200	43201	43203	5,500–7,500	50
3	43204	43205	43207	3,800–5,000	25
CDR system					
2	43258	43259	43261	5,500–7,500	50
3	43262	43263	43265	3,800–5,000	25

COMBIDISC® quick-change discs
Non-woven discs

Unitized discs

For achieving a very fine, uniform surface finish which, depending on requirements, is a sufficient preparation for high-gloss polishing. Ideal for work on small and medium-sized surfaces of stainless steel (INOX) components.

The different thicknesses/hardnesses of the non-woven material are colour-coded:
W (soft) = grey
MH (medium-hard) = dark blue
H (hard) = red

Further information on unitized products can be found on pages 85-86.

Applications:
roughing, deburring, surface work, cleaning, weld dressing, structuring, fine grinding in multiple steps

Abrasive:
Aluminum oxide A
Silicon carbide SiC

Ordering notes:
- Please order backing pad separately. See page 37.
- All discs have a thickness of 1/4".

PFERDVALUE®:
Vibration Filter, Noise Filter, Emission Filter, Haptic Filter, Time Saving

D [Inches]	Abrasives	Grit size	Hardness	Spec	EDP number	Opt. RPM	Max. RPM	
CD system								
2	SiC	fine	W	2SF	48430	9,500	19,100	25
	A	coarse	W	2AM	48431	9,500	19,100	25
	SiC	fine	MH	6SF	48434	9,500	19,100	25
	A	fine	MH	6AF	48435	9,500	19,100	25
	A	fine	H	8AM	48438	9,500	19,100	25
	A	coarse	H	8AC	48439	9,500	19,100	25
3	SIC	fine	W	2SF	48440	6,400	12,500	25
	A	coarse	W	2AM	48441	6,400	12,500	25
	SIC	fine	MH	6SF	48444	6,400	12,500	25
	A	fine	MH	6AF	48445	6,400	12,500	25
	A	fine	H	8AM	48448	6,400	12,500	25
	A	coarse	H	8AC	48449	6,400	12,500	25
CDR system								
2	SiC	fine	W	2SF	48450	9,500	19.100	25
	A	coarse	W	2AM	48451	9,500	19.100	25
	SiC	fine	MH	6SF	48454	9,500	19.100	25
	A	fine	MH	6AF	48455	9,500	19.100	25
	A	fine	H	8AM	48458	9,500	19.100	25
	A	coarse	H	8AC	48459	9,500	19.100	25
3	SiC	fine	W	2SF	48460	6,400	12,500	25
	A	coarse	W	2AM	48461	6,400	12,500	25
	SiC	fine	MH	6SF	48464	6,400	12,500	25
	A	fine	MH	6AF	48465	6,400	12,500	25
	A	fine	H	8AM	48468	6,400	12,500	25
	A	coarse	H	8AC	48469	6,400	12,500	25

Felt discs

Recommended for polishing with polishing paste bars, grinding pastes or diamond polishing pastes in face-down grinding on small and medium-sized surfaces.

Applications:
polishing

Recommendations for use:
- For the best results, use at a recommended speed of 1,000–2,000 SFPM. This provides an ideal compromise between polishing performance, thermal load on the workpiece and disc wear.
- When applying a different polishing paste, use a new, unused felt disc.

Ordering notes:
- Further information on felt discs can be found on page 115.
- Please order backing pad and polishing paste separately. See page 37 and 121.

Accessories:
- Grinding and polishing pastes

PFERDVALUE®:

Vibration Filter, Noise Filter, Emission Filter, Haptic Filter, Time Saving

	D1 [Inches]	EDP number	Opt. RPM	
CD system				
	2	43215	2,000–4,000	10
	3	43216	1,200–2,500	10
CDR system				
	2	43213	2,000–4,000	10
	3	43214	1,200–2,500	10

Backing pads

Backing pads

Matching backing pads for COMBIDISC® quick-change discs. Available in three different hardness grades.

PFERDVALUE®:

Vibration Filter, Noise Filter, Emission Filter, Haptic Filter, Time Saving

D [Inches]	S [Inches]	EDP number		Max. RPM	
		Type CD	Type CDR		
Soft					
1-1/2	1/4	42108	42456	20,000	1
2	1/4	42111	42459	20,000	1
3	1/4	42114	42462	12,000	1
Medium					
1	1/4	42106	42454	40,000	1
1-1/2	1/4	42109	42457	25,000	1
2	1/4	42112	42460	25,000	1
3	1/4	42115	42463	20,000	1
4	1/4	-	42465	10,000	1
Hard					
1-1/2	1/4	42110	42458	30,000	1
2	1/4	42113	42461	30,000	1
3	1/4	42116	42464	20,000	1

COMBIDISC® quick-change discs
Sets

Advantages:
- Getting to know and testing the comprehensive system.

Abrasive:
- Aluminum oxide A
- Silicon carbide SiC

Recommendations for use:
- Use COMBIDISC® grinding discs with an arbor or abrasive disc holder on flexible shaft drives with an angle handpiece or small compressed-air or electric angle grinders.

PFERDVALUE®:
Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Time Saving

COMBIDISC® prep-to-paint set

Prep-to-paint set includes a selection of coated and non-woven abrasives for removal of surface imperfections such as rust, loose paint or cold drawn mill scale. Selected discs leave the proper surface finish for excellent wet and dry paint and coating adhesion.

Contents of 2" CDR prep-to-paint set
1 pc. each of:
- EDP 42460 – 2" CDR backing pad – medium
- EDP 42913 – 2" CDR Mini-POLIFAN® disc A/O 60 grit
- EDP 44842 – 2" CDR POLICLEAN® PLUS disc

4 pcs. of:
- EDP 42506 – 2" CDR abrasive discs A/O 80 grit
- EDP 43239 – 2" CDR surface conditioning discs medium

Type	Full set EDP number	
Prep-to-paint, 2" CDR attachment	42789	1

COMBIDISC® sanitary finish set

Sanitary finish set includes a selection of coated and non-woven abrasives designed to achieve the industry standard for a sanitary finish.

Contents of 2" CDR sanitary finish set
1 pc. each of:
- EDP 42460 – 2" CDR backing pad – medium
- EDP 42913 – 2" CDR Mini-POLIFAN® disc A/O 60 grit

6 pcs. of:
- EDP 42506 – 2" CDR abrasive discs A/O 80 grit
- EDP 43239 – 2" CDR surface conditioning discs medium

Type	Full set EDP number	
Sanitary finish, 2" CDR attachment	42790	1

COMBIDISC® mirror finish set

Mirror finishing set includes the required components to proceed from raw material removal to a full reflective surface.

Contents of 2" CDR mirror finishing set
1 pc. each of:
- EDP 42460 – 2" CDR backing pad – medium
- EDP 42913 – 2" CDR Mini-POLIFAN® disc A/O 60 grit
- EDP 43213 – 2" CDR felt disc
- EDP 48765 – Small bar pre-polishing paste (green)

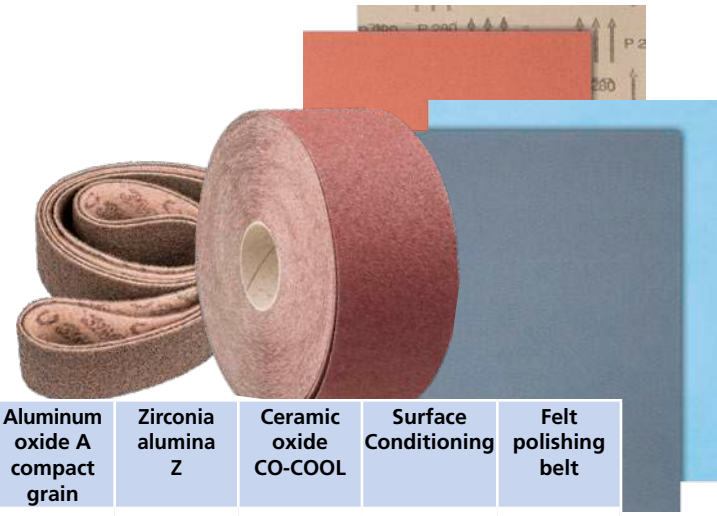
2 pcs. of:
- EDP 48454 – 2" CDR unitized disc medium hard SiC fine

3 pcs. of:
- EDP 43239 – 2" CDR surface conditioning discs medium

Type	Full set EDP number	
Mirror finish, 2" CDR attachment	42791	1

PFERD supplies a comprehensive range of products which utilize flexible abrasives.

- Abrasive belts
- Abrasive sheets, cloth and paper-backed
- POLINOX® hand pads for surface conditioning
- Shop rolls and holders
- Abrasive cords



Quick product selection guide

Material group ▼		Abrasive ▶	Recommended peripheral speeds for short and long belts [SFPM]	Aluminum oxide A	Aluminum oxide A compact grain	Zirconia alumina Z	Ceramic oxide CO-COOL	Surface Conditioning	Felt polishing belt
Steel, cast steel	Non-hardened, non-heat-treated steels	Construction steels, carbon steels, tool steels, non-alloyed steels, cast steel	5,000–7,000	●		❍		●	●
	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed steels, cast steel	4,000–5,000	❍	●	●		❍	●
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels	3,000–5,000		●	❍	●	●	●
Non-ferrous metals	Soft non-ferrous metals, non-ferrous metals	Soft aluminum alloys	5,000–8,000	❍			❍	●	●
		Brass, copper, zinc		●		❍		●	●
	Hard non-ferrous metals	Hard aluminum alloys	4,000–5,000	●		❍		●	●
		Bronze, titanium				❍	●	●	●
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys	1,000–3,000			❍	●	●	●
Cast iron	Grey cast iron, white cast iron	Cast iron with flake graphite, with nodular graphite cast iron, white annealed cast iron, black cast iron	5,000–7,000	●		❍		●	
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	2,000–5,000	●				●	●

● = highly recommended ❍ = recommended

Abrasive belts, sheets, and rolls

General information – abrasive belts

The comprehensive range of short and long belts is tailored to the belt grinders that are commonly found on the market.

Abrasive belts from PFERD are designated as "abrasive belts" in ISO 2976.

Advantages:

- Increased economic efficiency due to aggressive abrasive performance and long service life.
- High tear strength with optimum flexibility.
- Consistent work results due to high grain adhesion.

Applications:

- Leveling
- Deburring
- Work on edges
- Sharpening
- Work on weld seams
- Step-by-step fine grinding

Recommendations for use:

- Use grinding oil which is recommended for the material to considerably increase service life and abrasive performance of the products.
- Benchstand belts are used for light to moderate duty general purpose grinding on low powered machines. Grinding and finishing is typically against a platen or contact wheel.
- Backstand belts are used for general purpose grinding on heavy-duty machines. Grinding and finishing is performed at a contact wheel for the most aggressive action. Applications include deburring, blending, and finishing.

Compatible power tools:

- Belt grinders

Safety notes:

Recommended rotational speed range

Using the table, you can determine the rotational speed in RPM based on the peripheral speed. Please refer to page 39 for the recommended peripheral speeds.

Example:
EDP: 49008, File belt, aluminum oxide A
Diameter of the drive roller: 2 inches
Peripheral speed: 4,000–5,000 SFPM
Rotational speed: 7,400–9,300 RPM

Drive roller dia. [Inches]	Peripheral speed [SFPM]							
	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000
	Rotational speeds [RPM]							
3/4	5,000	10,000	15,000	20,100	25,100	30,100	35,100	40,200
1	3,800	7,600	11,400	15,200	19,000	22,900	26,700	30,500
1-1/2	2,500	5,000	7,500	10,000	12,500	15,000	17,500	20,100
2	1,800	3,700	5,600	7,400	9,300	11,200	13,100	14,900
2-1/2	1,500	3,000	4,500	6,000	7,500	9,000	10,600	12,100
3	1,200	2,500	3,700	5,000	6,200	7,500	8,700	10,000
4	900	1,800	2,800	3,700	4,600	5,600	6,500	7,400
5	700	1,500	2,200	3,000	3,700	4,500	5,200	6,000
6	600	1,200	1,800	2,500	3,100	3,700	4,300	5,000
8	400	900	1,400	1,800	2,300	2,800	3,200	3,700
10	350	700	1,100	1,500	1,800	2,200	2,600	3,000
12	300	600	900	1,200	1,500	1,800	2,100	2,500

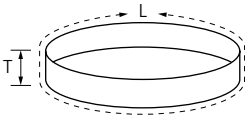
Abrasive belts, sheets, and rolls

Power tool and matching grinding belt dimensions

Manufacturer	Model	Abrasive belts' width x length [Inches]
PFERD	**Compressed-air belt grinder**	
	90711	1/8 x 12
	95000	1/4 x 12 3/8 x 12 1/2 x 12
	Electric belt grinders	
	91410	1/8 x 20-1/2 1/4 x 20-1/2 1/2 x 20-1/2 5/8 x 20-1/2 3/4 x 20-1/2 1/4 x 24 1/2 x 24
	Angle handpieces	
	94385 + 95015	1/8 x 20-1/2 1/4 x 20-1/2 1/2 x 20-1/2 5/8 x 20-1/2 3/4 x 20-1/2 1/4 x 24 1/2 x 24
		1/8 x 12 1/4 x 12 3/8 x 12 1/2 x 12
3M	3M™ file belt sander	1/2 x 18
Atlas Copco	G2410	1/4 x 12
		1/2 x 12
ATA	RAL20L	1/2 x 12
Black & Decker	PF260	1/2 x 18
	DS321	3 x 21

Manufacturer	Model	Abrasive belts' width x length [Inches]
DeWalt	DW432	3 x 21
	DW433	
	DWP352VS	
Dynabrade	40352	1/4-3/4 x 18
	40353	
	40320	
	40321	
	40324	
	40335	
	40381	
	15400	3/4 x 18
	40330	1/4-3/4 x 18-24
	40615	
	40503	
	15360	1/4-3/4 x 24
	15420	
	14000	
	15003	1/4-1/2 x 12
Hitachi	SB10V2	4 x 24
	SB8V2	3 x 21
Genesis	GBS321A	3 x 21
Makita	9910	3 x 18
	9911	
	9902	3 x 21
	9903	
	9920	3 x 24
	9404	4 x 24
	9403	
	9032	1/4, 1/2 x 21

Manufacturer	Model	Abrasive belts' width x length [Inches]
Metabo	BF 18 LTX 90	1/4-3/4 x 18
	BFE 9-20	1/4-3/4 x 18
Milwaukee	6101	1/2 x 18
Porter-Cable	352VS	3 x 21
	362V	4 x 24
Rexon	BD480A	4 x 36
	BD460M	
Ryobi	BE319	3 x 18
	P450	3 x 18
	BD461G	4 x 36
SKIL	7510-01	3 x 18
	3376	4 x 36
Suhner	UBC 10-R	1/4-1/2 x 12
	LBC 16 H	
	WB 10	
	LBB 20 DH	1/4-1/2 x 12
Triton	TA 1200BS	3 x 21
WEN	6307	1/2 x 18
	6502	4 x 36
	6321	3 x 21

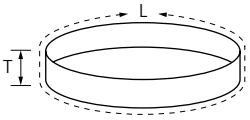


Aluminum oxide A

For universal applications from coarse to fine grinding.

Abrasive:
Aluminum oxide A

L [Inches]	T [Inches]	Grit and EDP number				
		36	60	80	120	
12	1/4	48960	48963	48964	48966	50
	1/2	49024	49027	49028	49030	50
18	1/4	49000	49003	49004	49006	50
	1/2	49032	49035	49036	49038	50
	3/4	49048	49051	49052	49054	50
24	1/4	49008	49011	49012	49014	50
	1/2	49040	49043	49044	49046	50
	3/4	49077	49078	49079	49080	50

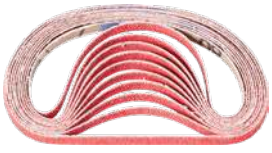


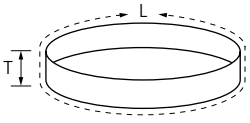
Zirconia alumina Z

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

Abrasive:
Zirconia alumina Z

L [Inches]	T [Inches]	Grit and EDP number				
		36	60	80	120	
12	1/4	49682	49683	49684	49685	50
	1/2	49712	49715	49716	49727	50
18	1/4	49691	49694	49695	49722	50
	1/2	49717	49720	49730	49731	50
	3/4	49740	49743	49744	49745	50
24	1/4	49696	49699	49700	49706	50
	1/2	49734	49738	49739	49752	50
	3/4	49754	49755	49756	49757	50





Ceramic oxide CO-COOL

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 loading and result in cooler grinding.

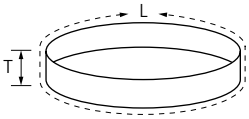
Abrasive:
Ceramic oxide CO-COOL

L [Inches]	T [Inches]	Grit and EDP number				
		40	60	80	120	
12	1/4	49492	49493	49494	49495	50
	1/2	49529	49531	49532	49533	50
18	1/4	49497	49499	49500	49501	50
	1/2	49536	49538	49539	49540	50
	3/4	49560	49562	49563	49564	50
24	1/4	49504	49506	49507	49508	50
	1/2	49543	49545	49546	49547	50
	3/4	49723	49724	49725	49726	50

Aluminum oxide A

For universal grinding work from coarse to fine grinding.

Abrasive:
Aluminum oxide A



L [Inches]	T [Inches]	Grit and EDP number					
		40	60	80	100	120	
21	3	49211	49213	49214	49215	49216	10
24	3	49250	49252	49253	49254	49255	10
	4	49360	49362	49363	49364	49365	10

Abrasive belts, sheets, and rolls

General information – Belts and accessories for pneumatic drums

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

Advantages:

- Excellent economic efficiency due to high abrasive performance and long service life.
- High tear strength with optimum flexibility.
- The cushioned grinding increases the service life of belts by reducing heat build-up and allowing increased flexibility.

Applications:

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

Recommendations for use:

- For use on linear finishing machine (EDP 91217) see our "Power tools" catalogue section 9.

Compatible power tools:

- Drum grinders

Accessories:

- Pneumatic drum
- Threaded spindle extension

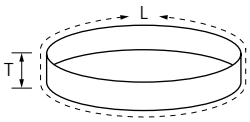
Ordering notes:

- You will find more flap and finishing drums on pages 78, 100–101, and also in catalogue section 8.

Safety notes:

- The maximum permitted peripheral speed is 5,000 SFPM.
- For safety reasons, it is imperative to remain within the stated maximum permitted rotational speed at all times.

Belts and accessories for pneumatic drums

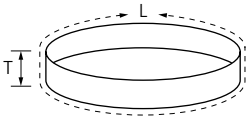


Aluminum oxide A

For universal grinding work from coarse to fine grinding.

Abrasive:
Aluminum oxide A

L [Inches]	T [Inches]	Grit and EDP number					
		40	60	80	100	120	
15-1/2	3-1/2	49312	49314	49315	49316	49317	10



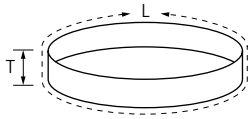
Ceramic oxide CO-COOL

For coarse grinding work with a high stock removal rate and cool grinding.
Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

Abrasive:
Ceramic oxide CO-COOL

L [Inches]	T [Inches]	Grit and EDP number			
		40	60	80	
15-1/2	3-1/2	49641	49642	49643	10

POLIVLIES® surface conditioning belts



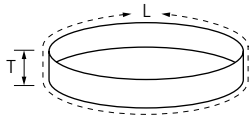
These heavy-duty non-woven surface conditioning belts are manufactured with aluminum oxide impregnated fibre mesh on a tough web backing. The grain is evenly dispersed on the material, resulting in a smooth, uniform finish. The open structure resists loading and can be used wet or dry. The synthetic material will not rust or corrode. Its life can be increased by washing after use. POLIVLIES® belts are designed for buffing, blending, cleaning, light deburring, finishing and polishing on all metals. Particularly well suited for use on stainless and aluminum.

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

Recommendations for use:
- For the best results, use at a recommended speed of 1,000–3,000 SFPM.

L [Inches]	T [Inches]	Grit, type and EDP number			
		100 C	180 M	240 F	
15-1/2	3-1/2	43613	43614	43615	10

Felt polishing belt



Ideal for use on tubular constructions and rails.

Recommendations for use:
- Apply pre-polishing and high-gloss polishing successively during polishing process.
- When changing the polishing paste, also replace the polishing belt so no contaminants are included from previous step.
- For the best results, use at a recommended speed of 1,000–3,000 SFPM.

Accessories:
- Grinding and polishing pastes

L [Inches]	T [Inches]	EDP number	
15-1/2	3-1/2	43659	5

Pneumatic drum

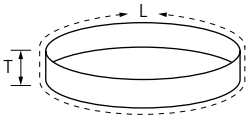
Pneumatic drum holder for 3-1/2" x 15-1/2" belts. The cushioned grinding increases the service life of belts by reducing heat build-up and allowing more flexibility.

For belt size [Inches]	Drum diameter [Inches]	Max. inflation	Internal thread	EDP number	Max. RPM	
3-1/2 x 15-1/2	5	15 psi	5/8-11	49985	3,800	1

Threaded spindle extension for pneumatic drum

Threaded spindle extension allows pneumatic drum to be mounted on linear finishing tool.

Fits power tool spindle (internal thread)	External thread	EDP number	
5/8-11	5/8-11	49986	1

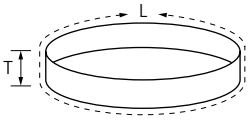


Aluminum oxide A

For universal grinding work from coarse to fine grinding.

Abrasive:
Aluminum oxide A

L [Inches]	T [Inches]	Grit and EDP number					
		36	50	60	80	120	
36	4	-	-	49375	49376	49378	10
42	1	-	49094	49095	49096	49098	10
48	2	49132	49134	49135	49136	49138	10
	6	49464	49466	49467	49468	49470	10
60	2-1/2	49179	49181	49182	49183	-	10

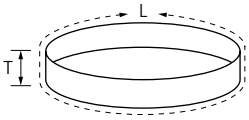


Zirconia alumina Z

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

Abrasive:
Zirconia alumina Z

L [Inches]	T [Inches]	Grit and EDP number			
		36	60	80	
36	4	49879	49882	49883	10
48	2	49786	49789	49790	10
	6	49885	49888	49889	10
60	2	49792	49795	49796	10
	2-1/2	49828	49831	49832	10



Ceramic oxide CO-COOL

For coarse grinding work with a high stock removal rate and cool grinding.
Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

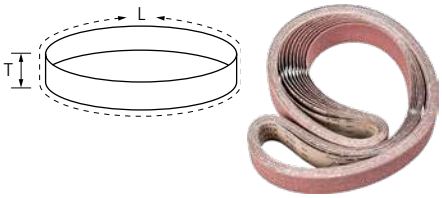
Abrasive:
Ceramic oxide CO-COOL

L [Inches]	T [Inches]	Grit and EDP number				
		40	60	80	120	
36	4	49658	49660	49661	49662	10
48	2	49588	49590	49591	49592	10
	6	49672	49674	49675	49676	10
60	2	49595	49597	49598	49599	10
	2-1/2	49616	49618	49619	49620	10

Aluminum oxide A

For universal grinding work from coarse to fine grinding.

Abrasive:
Aluminum oxide A

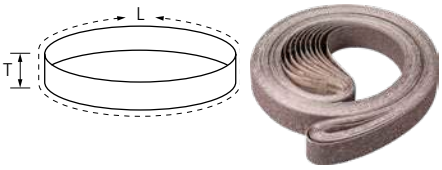


L [Inches]	T [Inches]	Grit and EDP number			
		36	60	80	
132	2	49159	49162	49163	10

Aluminum oxide A compact grain

Extremely well suited to fine and very fine grinding, and for step-by-step preparations for polishing. The self-sharpening compact grain facilitates a very long service life and achieves consistent surface quality levels throughout the entire service life.

Abrasive:
Aluminum oxide A compact grain (CK)

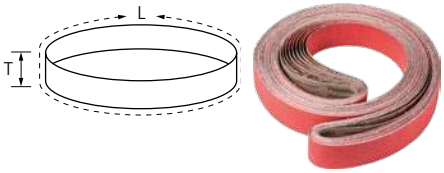


L [Inches]	T [Inches]	Grit and EDP number				
		120	240	400	600	
132	2	49810	49811	49812	49813	10

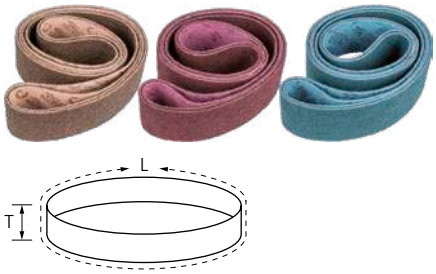
Ceramic oxide CO-COOL

For coarse grinding work with a high stock removal rate and cool grinding.
Active grinding additives in the coating substantially improve the stock removal rate, prevent loading and result in cooler grinding.

Abrasive:
Ceramic oxide CO-COOL



L [Inches]	T [Inches]	Grit and EDP number				
		40	60	80	120	
132	2	49687	49688	49689	49690	10



POLIVLIES® surface conditioning belts

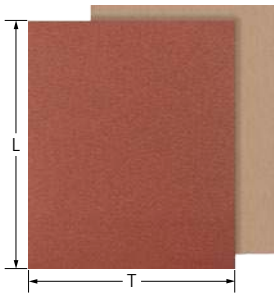
Ideal for universal work on metal surfaces in stationary applications, e.g. removal of rough grinding traces, removal of oxidation and light deburring work. Achieve matte and satin-finished surfaces.

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

Recommendations for use:
- For the best results, use at a recommended speed of 1,000–3,000 SFPM.

L [Inches]	T [Inches]	Grit, type and EDP number			
		100 C	180 M	240 F	
12	1/4	43634	43635	43636	10
	1/2	43643	43644	43645	10
18	1/4	43550	43551	43552	10
	1/2	43556	43557	43558	10
	3/4	43562	43563	43564	10
24	1/4	43553	43554	43555	10
	1/2	43559	43560	43561	10
	3/4	43666	43667	43668	10
36	4	43660	43661	43662	10
48	2	43672	43673	43674	10
	6	43681	43682	43683	10
60	2	43678	43679	43680	10
	2-1/2	43675	43676	43677	10
132	2	43669	43670	43671	10

Abrasive sheets



Cloth-backed sheets, heavy-duty

The brown cloth-backed variant is ideal for universal, heavy-duty use on alloyed and non-alloyed steels, as well as non-ferrous metals.

Advantages:
- Very high grain adhesion on very flexible cloth.
- High abrasive performance.
- Oil and kerosene-resistant.

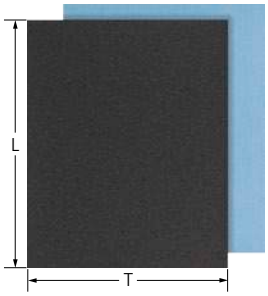
Recommendations for use:
- Tear to the necessary size if required.

Abrasive:
Aluminum oxide A

L [Inches]	T [Inches]	Grit and EDP number							
		40	60	80	100	120	150	180	
11	9	46912	46913	46914	46915	46916	46917	46918	50

L [Inches]	T [Inches]	Grit and EDP number							
		220	240	280	320	400	444	999	
11	9	46919	46920	46921	46922	46924	46925	46926	50

Cloth-backed sheets, standard-duty



The blue cloth-backed variant is the low-cost alternative for normal workloads when working on painted wood and metal surfaces.

Advantages:
- Good grain adhesion on sturdy cloth.
- Good abrasive performance.

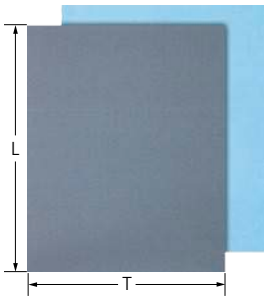
Abrasive:
Aluminum oxide A

Recommendations for use:
- Tear to the necessary size if required.

Ordering notes:
- Grit sizes 40, 60 and 80 are supplied in packaging units of 50 pieces.

L [Inches]	T [Inches]	Grit and EDP number									
		40	60	80	100	120	150	180	220	240	
11	9	46900	46901	46902	46903	46904	46905	46906	46907	46908	100

Paper-backed sheets, water-resistant



The SiC abrasive enables use on paint and glass. Ideal for all wet grinding work on conventional painted surfaces.

Advantages:
- Very high grain adhesion on very flexible and light paper.
- Maximum abrasive performance.
- Can be used for wet and dry grinding.

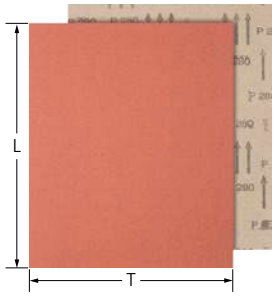
Abrasive:
Silicon carbide SiC

Recommendations for use:
- Tear to the necessary size if required.

L [Inches]	T [Inches]	Grit and EDP number								
		100	120	150	180	220	240	280	320	
11	9	46927	46928	46929	46930	46931	46932	46933	46934	50

L [Inches]	T [Inches]	Grit and EDP number							
		360	400	500	600	800	1000	1200	
11	9	46935	46936	46937	46938	46939	46940	46941	50

Paper-backed sheets, general-purpose



The aluminum oxide A abrasive is the low-cost alternative for normal workloads when working on painted wooden and metal surfaces.

Advantages:
- Good grain adhesion on sturdy paper.
- Good abrasive performance.

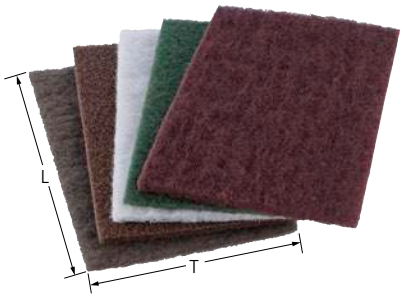
Abrasive:
Aluminum oxide A

Recommendations for use:
- Tear to the necessary size if required.

Ordering notes:
- Grit sizes 40, 60 and 80 are supplied in packaging units of 50 pieces.

L [Inches]	T [Inches]	Grit and EDP number					
		40	60	80	100	120	
11	9	46942	46943	46944	46945	46946	100

L [Inches]	T [Inches]	Grit and EDP number						
		150	180	220	240	280	400	
11	9	46947	46948	46949	46950	46951	46952	100



POLINOX® hand pads

Recommended for very fine grinding on small to large surfaces and contours, and for manually cleaning metal and painted surfaces. Achieve matte and satin-finished surfaces.
Highly open structure.

Advantages:
- Highly flexible, enabling optimal adjustment to the contour.
- Hard-to-reach areas can be accessed.
- Can be used for wet and dry grinding.

Abrasive:
Aluminum oxide A
Silicon carbide SiC

Recommendations for use:
- Cut to the necessary size if required.

Maroon (general purpose)
Most widely used of all hand pads. Aluminum oxide grain, noted for its toughness and durability on tasks such as cleaning, deburring, rust removal, blending and finishing. May be used dry or with solvents.

Green (food service)
General purpose grade pads made from aluminum oxide. Commonly used in the food service industry, these pads are recommended for light duty and finishing applications.

Tan
This heavy-duty pad consists of a dense aluminum oxide grain concentration on heavy backing material. Designed for the most challenging applications, it is extremely durable and resists tearing and fraying. Excellent for removal of oxidation, weld cleaning, deburring, and finishing stainless steel and aluminum.

White
This hand pad contains no abrasive. It is used primarily for applying lubricants, detergents, polishes, etc. to almost any material. Commonly used for cleaning plastics, glass, ceramics, porcelain, chrome, copper and stainless steel.

Grey
Ultra fine silicon carbide pad provides a precise, fine cutting action. Well suited for light cleaning and fine finishing on a variety of materials including metal, plastic, glass and wood.

Ordering notes:
- Bulk quantities available.

L [Inches]	T [Inches]	EDP number	Description	Grit size	Abrasive	Colour	
9	6	44606	medium finish	100	Aluminum oxide	tan	20
		44600	general purpose	180	Aluminum oxide	maroon	20
		44613	food service	180	Aluminum oxide	green	20
		44609	ultra fine	400	Silicon carbide	grey	20
		44618	non-abrasive	-	None	white	20

Mandrel

Mandrel

Small mandrel designed to grip non-woven material.

Applications:
- Used to reach tight internal diameters.

Recommendations for use:
- Grips a 1 inch wide strip of non-woven material cut to length.

L [Inches]	S [Inches]	EDP number	Max. RPM	
7/8	1/4	44837	14,000	1

Due to their high flexibility, shop rolls are ideal for a range of hand-grinding applications.
The matching shop roll holder is ideal for storing and tearing off the belts to the required length.

Advantages:

- Optimum adaptation to contours due to high flexibility.
- Low wear resulting from high tear strength and very high grain adhesion.

Applications:

- Roughing
- Surface work
- Cleaning
- Step-by-step fine grinding

Recommendations for use:

- Cut to the required dimensions if necessary.

Compatible power tools:

- Manual application

Accessories:

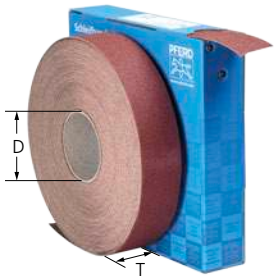
- Shop roll holders

Safety notes:

Heavy-duty shop rolls

Aluminum oxide cloth with a combination resin-over-resin bond most resistant to heat and moisture, very strong bond for best durability. For use on ferrous and non-ferrous metals grinding flat or irregular surfaces, cleaning and polishing of rough ground workpieces.

Abrasive:
Aluminum oxide A

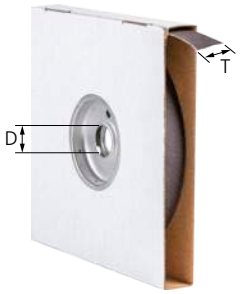


Length [Yards]	T [Inches]	D [Inches]	Grit and EDP number										
			60	80	100	120	150	180	220	240	320	400	
50	1	3	47116	47117	47118	47119	47120	47121	-	47123	47125	47126	1
	1-1/2	3	47166	47167	47168	47169	47170	47171	47172	47173	47175	-	1
	2	3	47216	47217	47218	47219	47220	47221	47222	47223	47225	47226	1

Light, flexible shop rolls

Provides good heat resistance and smooth finishes. Aluminum oxide cloth with resin-over-glue bond, for use on ferrous and non-ferrous metals grinding flat or irregular surfaces, cleaning and polishing of rough ground workpieces.

Abrasive:
Aluminum oxide A



Length [Yards]	T [Inch.]	D [Inch.]	Grit and EDP number											
			50	60	80	100	120	150	180	220	240	320	400	500	
50	1	3	47101	47102	47103	47104	47105	47106	47107	47108	47109	47111	47112	47113	1
	1-1/2	3	47151	47152	47153	47154	47155	47156	47157	47158	47159	47161	47162	47163	1
	2	3	47201	47202	47203	47204	47205	47206	47207	47208	47209	47211	47212	47213	1

SRH 1

SRH 5

Shop roll holders

Holder for wall-mounting: for storing and tearing off to the required length as necessary. With the multi-roll holder, various roll sizes can be combined with each other as desired.

Type	No. of rolls	Recommended for roll widths [Inches]	Recommended for roll dia. [Inches]	EDP number	
Single roll	1	1, 1-1/2 or 2	15	47238	1
Multi-roll	up to 5	1, 1-1/2 or 2	10	47239	1

Screen rolls

Screen rolls

Silicon carbide screen cloth is highly resistant to loading. Offers long life on ferrous and nonferrous metals, soft metals such as copper and lead, wood, plastics, drywall joint compound and other materials. Double sided.

Abrasive:
Silicon carbide SiC

Length Yards]	T [Inches]	Grit and EDP number			
		80	120	180	
10	1-1/2	47233	47234	47235	1

Non-woven shop rolls

Aluminum oxide A and silicon carbide SiC

Ideal for very fine grinding on small to large surfaces and contours, and for manually cleaning metal and painted surfaces. Achieve matte and satin-finished surfaces. Highly open structure.

Advantages:
- Highly flexible, enabling optimal adjustment to the contour.
- Hard-to-reach areas can be accessed.
- Can be used for wet and dry grinding.

Recommendations for use:
- Cut to the necessary size if required.

Abrasive:
Aluminum oxide A
Silicon carbide SiC

Length [Yards]	T [Inches]	Abrasives	Grit and EDP number					
			80	100	180	280	400	
10	4	A	43515	43516	43517	43518	-	1
		SiC	-	-	-	-	43519	1

High flexibility abrasive cord

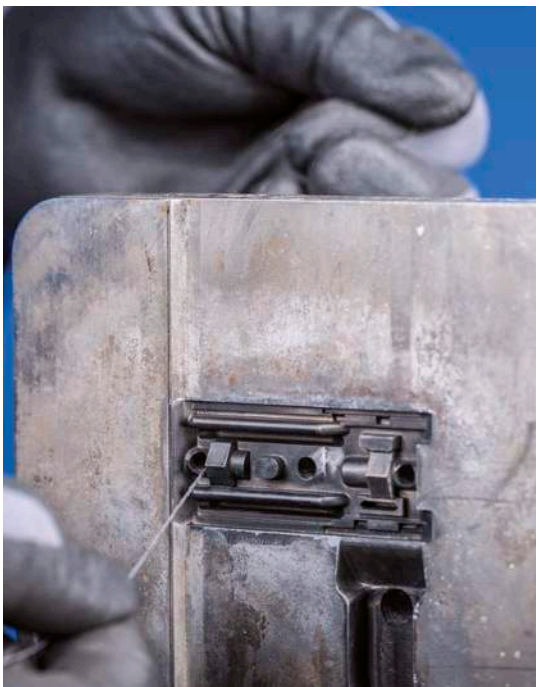
Ideal for very fine deburring and finishing work in hard-to-reach places.

Recommended for work on very small holes, grooves and cut-outs in tool and die making.

Explanation of the abbreviations:
D = Abrasive cord diameter

Abrasive:
Aluminum oxide A
Silicon carbide SiC

D [Inches]	Length [Yards]	Abrasives	Grit and EDP number				
			120	150	180	200	
0.02	16	SiC	-	-	-	49900	1
0.03	16	A		-	-	49901	1
0.04	16	A	-	-	49902	-	1
0.06	16	A	-	49903	-	-	1
0.07	16	A	-	-	49904	-	1
0.08	16	A	49905	-	-		1



Abrasive spiral bands
General information

The comprehensive range of abrasive spiral bands offers the best solution for every application, from fine grinding to aggressive grinding.

Matching, reusable rubber drum holders in two different shapes are available for using abrasive spiral bands:
- Cylindrical
- Conical

In ISO 2421, abrasive spiral bands are designated as "cylindrical abrasive sleeves".

In ISO 15637-1, cylindrical rubber drum holders are designated as "holding fixtures for cylindrical abrasive sleeves".

Advantages:

- Abrasive spiral bands fit securely on the rubber drum holder as the holder expands during use.
- Outstanding service life due to a special manufacturing process – even under the toughest work conditions.
- Highest possible economic efficiency due to particularly high stock removal and aggressiveness of the abrasive.

Applications:

- Roughing
- Leveling
- Deburring
- Surface work
- Work on edges
- Sharpening
- Work on weld seams
- Step-by-step fine grinding

Recommendations for use:

- To change the abrasive spiral bands, raise and lower them while turning clockwise. When doing so, leave the rubber drum holder engaged in the power tool.
- Adhere to the minimum speed for the rubber drum holder to ensure that the abrasive spiral band fits securely.
- For best performance, use with a recommended peripheral speed of 4,000–6,000 SFPM.
- Use grinding oil recommended for the material in order to increase the service life and abrasive performance of the products.

Compatible power tools:

- Flexible shaft drives
- Straight grinders

Safety notes:

- The maximum permitted peripheral speed is 6,000 SFPM.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- Do not allow abrasive spiral bands to protrude beyond the rubber drum holder.

Accessories:

- Rubber drum holders

Recommended rotational speed range

Example:
EDP: 41131, 1" spiral band, aluminum oxide A
Peripheral speed: 4,000–6,000 SFPM
Rotational speed: 15,30–22,900 RPM

Band dia. [Inches]	Peripheral speed [SFPM]		
	4,000	5,000	6,000
	Rotational speeds [RPM]		
3/8	40,700	50,900	61,100
1/2	30,600	38,200	45,800
5/8	24,400	30,600	36,700
3/4	20,400	25,500	30,600
7/8	17,500	21,800	26,200
1	15,300	19,100	22,900
1-1/8	13,600	17,000	20,400
1-1/2	10,200	12,700	15,300
1-3/4	8,700	10,900	13,100
2	7,600	9,600	11,500
2-3/8	6,400	8,000	9,700

Quick product selection guide

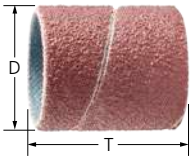
Material group ▼			Abrasive ▶ Aluminum oxide A	Zirconia alumina Z-COOL	Ceramic oxide CO-COOL
Steel, cast steel	Non-hardened, non-heat-treated steels	Construction steels, carbon steels, tool steels, non-alloyed steels, cast steel	●		●
	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed 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 aluminum alloys	❍	❍	❍
		Brass, copper, zinc	●	❍	
	Hard non-ferrous metals	Hard aluminum 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, with nodular graphite cast iron, white annealed cast iron, black cast iron	●		
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	●		

● = highly recommended ❍ = recommended

Aluminum oxide A

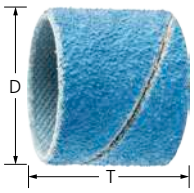
For universal applications from coarse to fine grinding.

Abrasive:
Aluminum oxide A



D [Inches]	J [Inches]	T [Inches]	Grit and EDP number 40	50	60	80	150	240	Compatible holder	Opt. RPM	
Cylindrical type											
3/8	-	3/4	-	-	-	41022	41023	41024	41966	30,000–44,000	100
1/2	-	1	-	-	-	41046	41049	-	41970	30,000–44,000	100
5/8	-	1-1/8	-	41068	41069	41070	41072	41074	41973	26,000–36,000	100
3/4	-	1	-	-	41102	41103	41106	-	41976	20,000–30,000	100
7/8	-	3/4	-	41131	41132	41133	41135	41137	41979	18,000–26,000	100
1	-	1	-	-	41149	41150	41153	-	41982	16,000–22,900	100
1-1/8	-	1-1/8	41190	41191	41192	41193	41195	41197	41985	13,000–19,100	100
1-1/2	-	1	41200	-	41202	41203	41206	-	41988	10,000–15,900	100
1-3/4		1-1/8	41238	41239	41240	41241	41243	41245	41991	8,500–12,700	100
2	-	1	41248	-	41250	41251	41254	-	41994	7,500–11,200	100
2-3/8	-	1-1/8	41295	41296	41297	41298	41300	-	41997	6,500–9,500	100
Tapered type											
3/4	1/2	2-1/2	41350	-	41351	41352	41353	-	42005	19,000–26,000	100
1-1/8	7/8	1-3/16	41355	-	41356	41357	41358	-	42007	13,000–19,100	100
1-1/2	7/8	2-3/8	41360	-	41361	41362	41363	-	42006	10,000–15,900	100

Abrasive spiral bands
Abrasive spiral bands



Zirconia alumina Z-COOL type

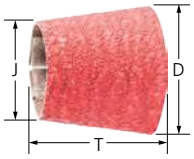
For coarse grinding work with a high stock removal rate and cool grinding.

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

Abrasive:
Zirconia alumina Z-COOL

Ordering notes:
- Grit size 150 is supplied with aluminum oxide A-COOL (brown).

D [Inches]	T [Inches]	Grit and EDP number				Compatible holder	Opt. RPM	
		36	50	80	150			
Cylindrical shape								
5/8	1-1/8	-	41405	41406	41407	41973	26,000– 36,000	100
7/8	3/4	-	41408	41409	41410	41979	18,000–26,000	100
1-1/8	1-1/8	41415	41416	41417	41418	41985	13,000–19,100	100
1-3/4	1-1/8	41419	41420	41421	41422	41991	8,500–12,700	100
2-3/8	1-1/8	41427	41428	41429	41430	41997	6,500–9,500	100



Ceramic oxide CO-COOL

For aggressive grinding with maximum stock removal rate on hard and tough 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 loading and results in cooler grinding.

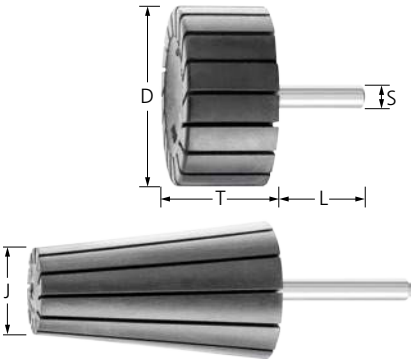
The packaging size is ideally suited to industrial requirements.

Abrasive:
Ceramic oxide CO-COOL

D [Inches]	J [Inches]	T [Inches]	Grit and EDP number				Compatible holder	Opt. RPM	
			36	60	80	120			
Tapered shape									
3/4	1/2	2-1/2	41388	41389	41390	41391	42005	19,000–26,000	100
1-1/8	7/8	1-3/16	41392	41393	41394	41395	42007	13,000–19,100	100
1-1/2	7/8	2-3/8	41396	41397	41398	41399	42006	10,000–15,900	100

Rubber drum holders

Matching rubber drum holder for conical and cylindrical abrasive spiral bands.



D [Inches]	J [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
Cylindrical shape							
3/8	-	3/4	1/4	1-5/8	41966	44,000	5
1/2	-	1	1/4	1-5/8	41970	44,000	5
5/8	-	1-1/8	1/4	1-5/8	41973	36,000	5
3/4	-	1	1/4	1-5/8	41976	30,000	5
7/8	-	3/4	1/4	1-5/8	41979	26,000	5
1	-	1	1/4	1-5/8	41982	22,900	5
1-1/8	-	1-1/8	1/4	1-1/4	41985	19,100	5
1-1/2	-	1	1/4	1-1/4	41988	15,900	5
1-3/4	-	1-1/8	1/4	1-1/4	41991	12,700	5
2	-	1	1/4	1-1/4	41994	11,200	5
2-3/8	-	1-1/8	1/4	1-1/4	41997	9,500	5
Tapered shape							
3/4	1/2	2-1/2	1/4	1-5/8	42005	26,000	5
1-1/8	7/8	1-3/16	1/4	1-5/8	42007	19,100	5
1-1/2	7/8	2-3/8	1/4	1-5/8	42006	15,900	5

POLIROLL® cartridge rolls
General information

POLIROLL® cartridge rolls are suited for work in hard-to-reach places.

They consist of spirally wound coated abrasives. The abrasive grain is embedded in the resinoid coating on the sturdy backing material, which achieves the best possible abrasive performance.

Advantages:

- Consistently high abrasive performance throughout the entire service life due to fresh abrasive grain being constantly freed up in operation.
- Secure fit of the POLIROLL® when in use due to self-tensioning provided by grooved, conical arbor.
- Easy cartridge changing.

Applications:

- Leveling
- Deburring
- Work on edges
- Sharpening
- Work on weld seams
- Step-by-step fine grinding

Recommendations for use:

- Grind with the tip instead of the flat surface so as not to damage the bond through exposure to heat.
- Mount POLIROLL® with the bonded side facing towards the arbor.
- Use grinding oil recommended for the material in order to increase the service life and abrasive performance of the products.

Compatible power tools:

- Flexible shaft drives
- Straight grinders

Safety notes:

- The maximum permitted peripheral speed is 2,300 SFPM.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

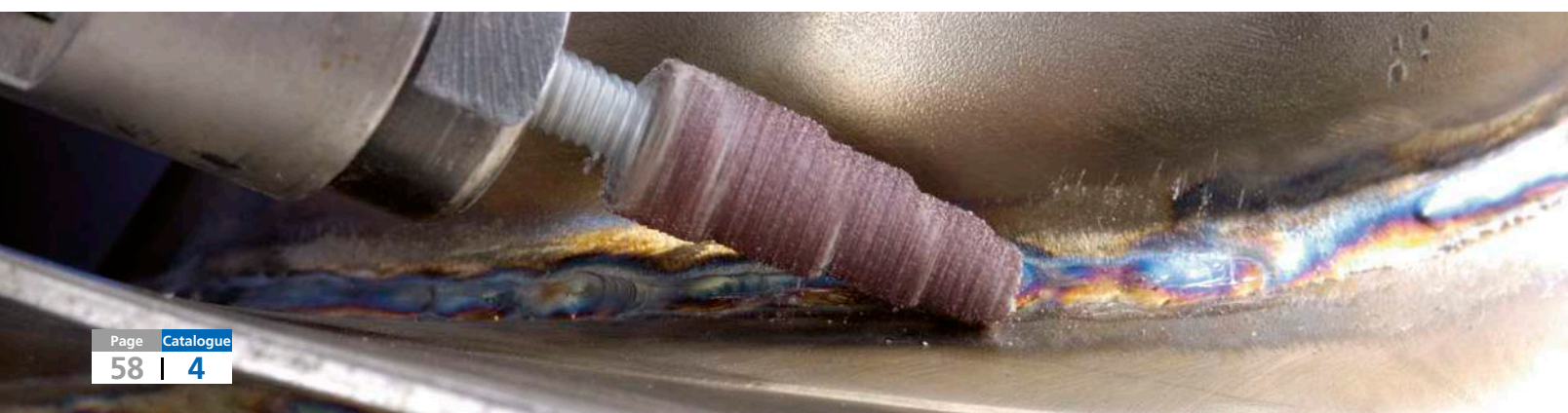
Accessories:

- Arbors for POLIROLL®

Recommended rotational speed range

Example:
EDP: 41667, 3/4 x 1 cylindrical cartridge roll
Peripheral speed: 1,600 SFPM
Rotational speed: 8,100 RPM

Roll dia. [Inches]	Peripheral speed [SFPM]		
	1,000	1,600	2,200
	Rotational speeds [RPM]		
1/4	15,300	24,400	33,600
5/16	12,000	19,600	26,900
3/8	10,200	16,300	22,400
1/2	7,600	12,200	16,800
5/8	6,100	9,800	13,400
3/4	5,100	8,100	11,200
1	3,800	6,100	8,400



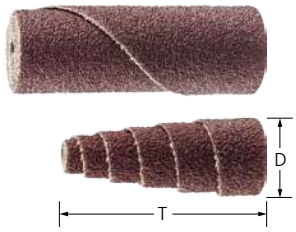
Aluminum oxide A

For universal grinding work on metals and other materials.

Workpiece materials:
aluminum, copper, brass, grey/nodular cast iron, annealed cast iron, steel, cast steel, hardened, heat-treated steels

Abrasive:
Aluminum oxide A

Ordering notes:
Compatible arbor must be ordered separately.

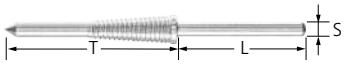


D [Inches]	T [Inches]	Arbor hole [Inches]	Grit and EDP number			Compatible arbor	Opt. RPM	
			60	80	120			
Cylindrical shape								
1/4	1	1/8	41468	41469	41471	42060	20,000	50
	1-1/2	1/8	41479	41480	41482	42061	20,000	50
5/16	1-1/2	1/8	41512	41513	41515	42061	18,500	50
3/8	1	1/8	41523	41524	41526	42060	16,000	50
	1-1/2	1/8	41534	41535	41537	42061	16,000	50
	2	1/8	41545	41546	41548	42062	16,000	50
1/2	1	1/8	41567	41568	41570	42060	12,000	50
	1-1/2	1/8	41589	41590	41592	42061	12,000	50
	2	1/8	41600	41601	41603	42062	12,000	50
5/8	1-1/2	1/8	41633	41634	41636	42061	9,500	50
3/4	1	1/8	41666	41667	41669	42060	8,000	50
	1-1/2	3/16	41677	41678	41680	42063	8,000	50
	2	3/16	41721	41722	41724	42064	8,000	50
1	1-1/2	1/4	41743	41744	41746	42066	6,000	25
	2	1/4	41776	41777	41779	42067	6,000	25
Conical shape								
3/8	1	1/8	41800	41801	41803	42060	16,000	50
	1-1/2	1/8	41807	41808	41810	42061	16,000	50
1/2	1	1/8	41817	41818	41820	42060	12,000	50
	1-1/2	1/8	41827	41828	41830	42061	12,000	50
	2	1/8	41837	41838	41840	42062	12,000	50
3/4	1-1/2	3/16	41874	41875	41876	42063	8,000	50
	2	3/16	41882	41883	41884	42064	8,000	50

Drive arbors

Tapered and untapered cartridge roll holders

Arbors for POLIROLL® cartridge rolls.



Advantages:
- Roll can be changed without unclamping the arbor from the power tool collet.

S [Inches]	P [Inches]	T [Inches]	L [Inches]	EDP number	Max. RPM	
1/4	1/8	1	1	42060	25,000	1
	1/8	1-1/2	1	42061	25,000	1
	1/8	2	1	42062	24,000	1
	3/16	1-1/2	1	42063	12,000	1
	3/16	2	1	42064	12,000	1
	1/4	1-1/2	1	42066	9,000	1
	1/4	2	1	42067	9,000	1

POLICAP® seamless abrasive caps
General information

The broad, material-specific range of POLICAP® abrasive caps and cones offer solutions with the highest possible stock removal rate for both universal and specialized grinding applications.

POLICAP® products have a seamless design, and the entire surface can be used.

Reusable holders are available when using abrasive caps and cones.

Advantages:

- Abrasive caps and cones fit securely on the holder as it expands during use.
- Consistent shape accuracy and excellent fine grinding due to a special manufacturing process.
- Easy product changing.

Applications:

- Leveling
- Surface work
- Step-by-step fine grinding

Recommendations for use:

- To change the abrasive caps and cones, raise and lower them while turning clockwise. When doing so, leave the abrasive holder engaged in the power tool and fix in place.
- For best performance, use with a recommended peripheral speed of 2,000–4,000 SFPM.

Compatible power tools:

- Flexible shaft drives
- Straight grinders

Safety notes:

- The maximum permitted peripheral speed is 5,000 SFPM.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

Accessories:

- Rubber holders for abrasive caps and cones

Type	Application
Aluminum oxide A  A60/80 A150 A280	For universal use on steel materials (hardened, heat-treated, non-hardened). Especially developed for specific applications, e.g. in tool and die making, in addition to corresponding repair tasks. Also recommended for work on plastics, wood and fillers in model-making applications.
SiC-COOL (Silicon carbide with active grinding layer) 	Ideal for work on components made from titanium, aluminum and their respective alloys. Ideally suited to use in aircraft and turbine construction, in addition to associated maintenance tasks. The special grain selection and the active grinding additive in the bond facilitate cool grinding, reduce the workpiece temperature and prevent chips from adhering.
CO-COOL (Ceramic oxide grain with active grinding layer) 	The specific structure of the ceramic oxide grain and the active-grinding bond components make this ideal for work on stainless steels (INOX) and the high-temperature-resistant nickel-based and cobalt-based alloys that are frequently used in turbine construction, e.g. INCONEL®, HASTELLOY®. The active grinding additives prevent loading and facilitate cooler grinding with considerably higher stock removal rate.

Quick product selection guide

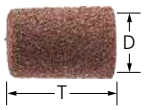
Material group ▼		Abrasive ▶	Aluminum oxide A	Silicon carbide SiC-COOL	Ceramic oxide CO-COOL
Steel, cast steel	Non-hardened, non-heat-treated steels	Construction steels, carbon steels, tool steels, non-alloyed steels, cast steel	●		❍
	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed 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 aluminum alloys	❍	●	❍
		Brass, copper, zinc	●		
	Hard non-ferrous metals	Hard aluminum 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, with nodular graphite cast iron, white annealed cast iron, black cast iron	●		❍
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	❍	●	

● = highly recommended ❍ = recommended

Recommended rotational speed range

Example:
EDP 46065, cylindrical, shape A, dia. 1/2"
Peripheral speed: 2,000–4,000 SFPM
Rotational speed: 15,300–30,600 RPM

Cap dia. [Inches]	Peripheral speed [SFPM]			
	2,000	3,000	4,000	5,000
	Rotational speeds [RPM]			
3/16	40,700	61,100	81,500	101,900
9/32	27,200	40,700	54,300	67,900
3/8	20,400	30,600	40,700	50,900
1/2	15,300	22,900	30,600	38,200
5/8	12,200	18,300	24,400	30,600
7/8	8,700	13,100	17,500	21,800
1-1/2	5,100	7,600	10,200	12,700



A 60/80


A 150


A 280

Cylindrical, shape A

POLICAP® abrasive caps in cylindrical shape A.

Abrasive:
Aluminum oxide A
Grit size colour code:
60 and 80 = brown
150 = black
280 = red-brown

D [Inches]	T [Inches]	Grit and EDP number				Compatible holder	Opt. RPM	
		60	80	150	280			
3/16	3/8	-	46029	46030	46031	42008	40,000	50
9/32	1/2	46032	-	46033	46034	42009	30,000	50
3/8	5/8	46035	-	46036	46037	42010	20,000	50
1/2	11/16	46065	-	46066	46067	42021	16,000	50
5/8	1	46068	-	46069	46070	42022	12,000	50

Cylindrical, shape A holders

Matching POLICAP® abrasive cap holder in cylindrical shape A.

D [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
3/16	3/8	1/8	1-1/4	42008	95,000	5
9/32	1/2	1/8	1-1/4	42009	65,000	5
3/8	5/8	1/8	1-1/4	42010	45,000	5
1/2	11/16	1/4	1-5/8	42021	35,000	5
5/8	1	1/4	1-5/8	42022	30,000	5

Cylindrical, shape A set

110-piece set of various POLICAP® abrasive caps with matching holders in cylindrical shape A.

Contents:
- 105 pieces POLICAP® abrasive caps
- 5 pieces POLICAP® abrasive cap holders (see table for details)

Advantages:
- Sturdy, reusable plastic packaging.

Abrasive:
Aluminum oxide A
60 and 80 = brown
150 = black
280 = red-brown

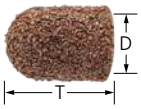
Case dimensions [Inches]	D [Inches]	T [Inches]	S [Inches]	Grit and included EDP				POLICAP® qty. included [each]	POLICAP® holder included EDP [1 piece]	Set EDP number	
				60	80	150	280				
7 x 5-3/4 x 1-1/2	3/16	3/8	1/8	-	46029	46030	46031	10	42008	46093	1
	9/32	1/2	1/8	46032	-	46033	46034	10	42009		
	3/8	5/8	1/8	46035	-	46036	46037	5	42010		
	1/2	11/16	1/4	46065	-	46066	46067	5	42021		
	5/8	1	1/4	46068	-	46069	46070	5	42022		

Cylindrical with radius end, shape C

POLICAP® abrasive caps in cylindrical shape C with radius end.

Abrasive:
Aluminum oxide A
Silicon carbide SiC-COOL (grey)
Ceramic oxide CO-COOL (red)

Grit size colour code for aluminum oxide A:
60 and 80 = brown
150 = black
280 = red-brown



A 60/80


A 150


A 280

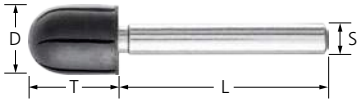

SiC-COOL


CO-COOL

D [Inches]	T [Inches]	Grit and EDP number 60	80	120	150	280	Compatible holder	Opt. RPM	
Aluminum oxide A									
3/16	7/16	-	46038	-	46039	46040	42011	40,000	50
9/32	1/2	46041	-	-	46042	46043	42012	30,000	50
3/8	5/8	46044	-	-	46045	46046	42013	20,000	50
1/2	11/16	46071	-	-	46072	46073	42023	16,000	50
5/8	1	46074	-	-	46075	46076	42024	12,000	50
Silicon carbide SiC-COOL									
3/16	7/16	-	46101	-	46102	-	42011	40,000	50
9/32	1/2	-	46104	-	46105	-	42012	30,000	50
3/8	5/8	-	46107	-	46108	-	42013	20,000	50
1/2	11/16	-	46110	-	46111	-	42023	16,000	50
5/8	1	-	46113	-	46114	-	42024	12,000	50
Ceramic oxide CO-COOL									
3/16	7/16	-	46116	46117	-	-	42011	40,000	50
9/32	1/2	-	46119	46120	-	-	42012	30,000	50
3/8	5/8	-	46122	46123	-	-	42013	20,000	50
1/2	11/16	-	46125	46126	-	-	42023	16,000	50
5/8	1	-	46128	46129	-	-	42024	12,000	50

Cylindrical with radius end, shape C holders

Matching POLICAP® abrasive cap holder in cylindrical shape C with radius end.



D [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
3/16	7/16	1/8	1-1/4	42011	95,000	5
9/32	1/2	1/8	1-1/4	42012	65,000	5
3/8	5/8	1/8	1-1/4	42013	45,000	5
1/2	11/16	1/4	1-5/8	42023	35,000	5
5/8	1	1/4	1-5/8	42024	30,000	5

POLICAP® seamless abrasive caps

Abrasive caps, cap holders, and sets

Cylindrical with radius end, shape C set

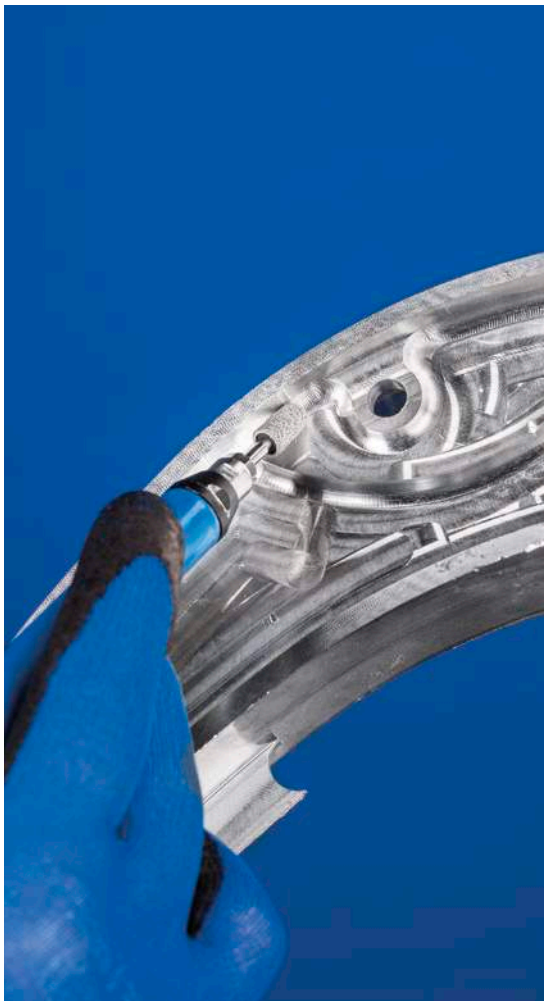
110-piece set of various POLICAP® abrasive caps with matching holders in cylindrical shape C with radius end.

Contents:
- 105 pieces POLICAP® abrasive caps
- 5 pieces POLICAP® abrasive cap holders (see table for details)

Advantages:
- Sturdy, reusable plastic packaging.

Abrasive:
Aluminum oxide A
60 and 80 = brown
150 = black
280 = red-brown

Case dimensions [Inches]	D [Inches]	T [Inches]	S [Inches]	Grit and included EDP				POLICAP® qty. included [each]	POLICAP® holder included EDP [1 piece]	Set EDP number	
				60	80	150	280				
7 x 5-3/4 x 1-1/2	3/16	7/16	1/8	-	46038	46039	46040	10	42011	46094	1
	9/32	1/2	1/8	46041	-	46042	46043	10	42012		
	3/8	5/8	1/8	46044	-	46045	46046	5	42013		
	1/2	11/16	1/4	46071	-	46072	46073	5	42023		
	5/8	1	1/4	46074	-	46075	46076	5	42024		



Cylindrical with pointed cone end, shape G

A 60/80 A 150 A 280

POLICAP® abrasive caps in tapered conical shape G with radius end.
The taper angle of the cone is 30°.

Abrasive:
Aluminum oxide A
Grit size colour code:
60 and 80 = brown
150 = black
280 = red-brown

D [Inches]	T [Inches]	Grit and EDP number				Compatible holder	Opt. RPM	
		60	80	150	280			
3/16	7/16	-	46047	46048	46049	42014	40,000	50
9/32	1/2	46050	-	46051	46052	42015	30,000	50
3/8	5/8	46053	-	46054	46055	42016	20,000	50
1/2	11/16	46077	-	46078	46079	42025	16,000	50
5/8	1	46080	-	46081	46082	42026	12,000	50

Cylindrical with pointed cone end, shape G holders

Matching POLICAP® abrasive cap holder in tapered shape G with radius end.

D [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
3/16	7/16	1/8	1-1/4	42014	95,000	5
9/32	1/2	1/8	1-1/4	42015	65,000	5
3/8	5/8	1/8	1-1/4	42016	45,000	5
1/2	11/16	1/4	1-5/8	42025	35,000	5
5/8	1	1/4	1-5/8	42026	30,000	5

Cylindrical with pointed cone end, shape G set

110-piece set of various POLICAP® abrasive caps with matching holders in tapered conical shape G with radius end.

Contents:
- 105 pieces POLICAP® abrasive caps
- 5 pieces POLICAP® abrasive cap holders (see table for details)

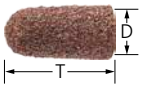
Advantages:
- Sturdy, reusable plastic packaging.

Abrasive:
Aluminum oxide A
60 and 80 = brown
150 = black
280 = red-brown

Case dimensions [Inches]	D [Inches]	T [Inches]	S [Inches]	Grit and included EDP				POLICAP® qty. included [each]	POLICAP® holder included EDP [1 piece]	Set EDP number	
				60	80	150	280				
7 x 5-3/4 x 1-1/2	3/16	7/16	1/8	-	46047	46048	46049	10	42014	46095	1
	9/32	1/2	1/8	46050	-	46051	46052	10	42015		
	3/8	5/8	1/8	46053	-	46054	46055	5	42016		
	1/2	11/16	1/4	46077	-	46078	46079	5	42025		
	5/8	1	1/4	46080	-	46081	46082	5	42026		

POLICAP® seamless abrasive caps

Abrasive caps, cap holders, and sets



A 60/80


A 150


A 280


SiC-COOL


CO-COOL

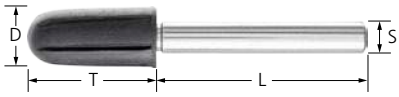
Tapered with radius end, shape L

POLICAP® abrasive caps in conical shape L with radius end.

Abrasive:
Aluminum oxide A
Silicon carbide SiC-COOL (grey)
Ceramic oxide CO-COOL (red)

Grit size colour code for aluminum oxide A:
60 and 80 = brown
150 = black
280 = red-brown

D [Inches]	T [Inches]	Grit and EDP number					Compatible holder	Opt. RPM	
		60	80	120	150	280			
Aluminum oxide A									
1/4	5/8	-	46083	-	46084	46085	42017	40,000	50
7/16	1	46056	-	-	46057	46058	42018	20,000	50
5/8	1-1/4	46059	-	-	46060	46061	42019	12,000	50
27/32	1-9/16	46062	-	-	46063	46064	42020	9,500	50
Silicon carbide SiC-COOL									
1/4	5/8	-	46131	-	46132	-	42017	40,000	50
7/16	1	-	46134	-	46135	-	42018	20,000	50
5/8	1-1/4	-	46137	-	46138	-	42019	12,000	50
27/32	1-9/16	-	46140	-	46141	-	42020	9,500	50
Ceramic oxide CO-COOL									
1/4	5/8	-	46143	46144	-	-	42017	40,000	50
7/16	1	-	46146	46147	-	-	42018	20,000	50
5/8	1-1/4	-	46149	46150	-	-	42019	12,000	50
27/32	1-9/16	-	46152	46153	-	-	42020	9,500	50



Tapered with radius end, shape L holders

Matching POLICAP® abrasive cap holder in conical shape L with radius end.

D [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
1/4	5/8	1/4	1-5/8	42017	95,000	5
7/16	1	1/4	1-5/8	42018	40,000	5
5/8	1-1/4	1/4	1-5/8	42019	30,000	5
27/32	1-9/16	1/4	1-5/8	42020	20,000	5

POLICAP® sets

Set of various POLICAP® abrasive caps with matching holders.

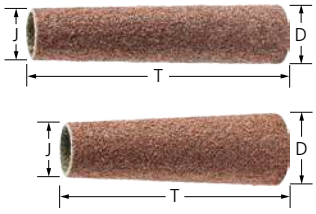
Contents PCS 285:
- 270 pieces POLICAP® abrasive caps
- 15 pieces POLICAP® abrasive cap holders (see table for details)

Contents PCS 650:
- 640 pieces POLICAP® abrasive caps
- 10 pieces POLICAP® abrasive cap holders (see table for details)

Advantages:
- Sturdy, reusable plastic packaging.

Abrasive:
Aluminum oxide A
Grit size colour code:
150 = black
280 = red-brown

Case dimensions [Inches]	Shape	D [Inches]	T [Inches]	S [Inches]	Grit and included EDP				POLICAP® qty. included [each]	POLICAP® holder included EDP [1 piece]	Set EDP number	
					60	80	150	280				
POLICAP® set PCS 285												
13 x 9-1/4 x 2	A	3/16	3/8	1/8	-	46029	46030	46031	6	42014	46090	1
		9/32	1/2	1/8	46032	-	46033	46034	6	42015		
		3/8	5/8	1/8	46035	-	46036	46037	6	42016		
		1/2	11/16	1/4	46065	-	46066	46067	6	42025		
		5/8	1	1/4	46068	-	46069	46070	6	42026		
	C	3/16	7/16	1/8	-	46038	46039	46040	6	42011		
		9/32	1/2	1/8	46041	-	46042	46043	6	42012		
		3/8	5/8	1/8	46044	-	46045	46046	6	42013		
		1/2	11/16	1/4	46071	-	46072	46073	6	42023		
		5/8	1	1/4	46074	-	46075	46076	6	42024		
	G	3/16	7/16	1/8	-	46047	46048	46049	6	42014		
		9/32	1/2	1/8	46050	-	46051	46052	6	42015		
		3/8	5/8	1/8	46053	-	46054	46055	6	42016		
		1/2	11/16	1/4	46077	-	46078	46079	6	42025		
		5/8	1	1/4	46080	-	46081	46082	6	42026		
POLICAP® set PCS 650												
13 x 9-1/4 x 2	A	3/16	3/8	1/8	-	-	46030	46031	50	42014	46091	1
		9/32	1/2	1/8	-	-	46033	46034	50	42015		
		3/8	5/8	1/8	-	-	46036	46037	25	42016		
		1/2	11/16	1/4	-	-	46066	46067	25	42025		
		5/8	1	1/4	-	-	46069	46070	10	42026		
	G	3/16	7/16	1/8	-	-	46048	46049	50	42014		
		9/32	1/2	1/8	-	-	46051	46052	50	42015		
		3/8	5/8	1/8	-	-	46054	46055	25	42016		
		1/2	11/16	1/4	-	-	46078	46079	25	42025		
		5/8	1	1/4	-	-	46081	46082	10	42026		



Abrasive cones

POLICAP® abrasive cones with a tapered cylindrical shape.

Abrasive:
Aluminum oxide A
Grit size colour code:
60 = brown
150 = black
280 = red-brown

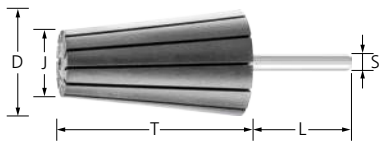
D [Inches]	J [Inches]	T [Inches]	Grit and EDP number			Compatible holder	Opt. RPM	
			60	150	280			
5/16	3/16	3-3/8	46008	46009	46010	42001	12,000	10
1/2	7/16	3-3/8	46011	46012	-	42002	12,000	10
3/4	5/8	3-3/8	46014	46015	-	42003	12,000	10
7/8	3/4	3-3/8	46017	46018	-	42004	12,000	10
3/4	1/2	2-1/2	46020	46021	-	42005	18,500	10
1-1/2	7/8	2-3/8	46023	-	-	42006	13,000	10

Rubber abrasive cone holders, shape L

Matching POLICAP® rubber abrasive cone holder in conical shape L with radius end.

Advantages:
- The abrasive spiral bands are firmly held in place on the holder as the rubber surface offers excellent adhesion.

D [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
5/16	3-3/8	1/4	1-9/16	42001	20,000	5
1/2	3-3/8	1/4	1-9/16	42002	15,000	5
3/4	3-3/8	1/4	1-9/16	42003	13,000	5
7/8	3-3/8	1/4	1-9/16	42004	12,000	5



Rubber drum holder

Matching POLICAP® rubber drum holder with a tapered cylindrical shape.

Advantages:
- The abrasive spiral bands are firmly held in place on the holder as the holder expands during use.

D [Inches]	J [Inches]	T [Inches]	S [Inches]	L [Inches]	EDP number	Max. RPM	
3/4	1/2	2-1/2	1/4	1-5/8	42005	26,000	5
1/2	7/8	2-3/8	1/4	1-5/8	42006	15,900	5

On mounted flap wheels, coated abrasive flaps are arranged radially around the wheel axis in a fan-type structure. Their flexibility enables them to adapt perfectly to the contours of the workpiece. The abrasive grain is embedded in the sturdy, flexible cloth backing material by means of a resinoid bond.

In ISO 3919, mounted flap wheels are designated as "flap wheels with shaft".

Factors that influence working results:

- **Flap wheel wear and thermal load:**
  Flap wheel wear and the thermal load of the workpiece are reduced by decreasing the contact pressure, peripheral speed, and adding grinding oil.
- **Stock removal:**
  Stock removal rate should be increased by using a coarser granulation and not by increasing the contact pressure. This avoids unnecessary flap wheel wear and prevents the thermal load of the workpiece.
- **Surface roughness:**
  Increasing the peripheral speed achieves a slightly finer surface. Increasing the contact pressure makes the surface slightly more coarse. The softer the material to be finished, the coarser the surface (when using the same grit sizes).

Advantages:

- Optimum adaptation to contours due to high flexibility.
- Consistently high stock removal throughout the entire service life as new, aggressive abrasive material is constantly exposed.
- Face-down use very close to edges and in corners is possible due to the flat, molded-core design.

Applications:

- Leveling
- Deburring
- Surface work
- Work on weld seams
- Structuring surfaces
- Step-by-step fine grinding

Recommendations for use:

- For best performance, use with a recommended peripheral speed of 3,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and flap wheel wear.
- Use grinding oil which is recommended for the material in order to considerably increase the service life and abrasive performance of the flap wheels.

Compatible power tools:

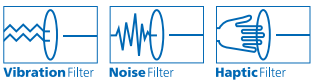
- Flexible shaft drives
- Straight grinders

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- Safety is only guaranteed when:
  - The clamping depth is at least 5/8.
  - The specified maximum rotational speed is not exceeded with unsupported shank lengths.
- The contact pressure has to be reduced significantly when the optimum rotational speed is exceeded.

PFERDVALUE®:

PFERDERGONOMICS® recommends mounted flap wheels to sustainably reduce vibration and noise levels during use and to improve working comfort.



Quick product selection guide

Material group ▼			Abrasive ▶ Aluminum oxide A	Zirconia alumina Z-COOL	Ceramic oxide CO-COOL	Silicon carbide SiC-COOL
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 aluminum alloys	❍			●
		Brass, copper, zinc	●	❍	❍	
	Hard non-ferrous metals	Hard aluminum 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, with nodular graphite cast iron, white annealed cast iron, black cast iron	●	❍	●	
Plastics, other materials		Fibre-reinforced plastics, thermoplastics, wood, chipboard, paintwork	❍			●

● = highly recommended ❍ = recommended

Recommended rotational speed range

Example:
EDP 45251, Aluminum oxide A, dia. 2"
Peripheral speed: 3,000–4,000 SFPM
Rotational speed: 5,700–7,600 RPM

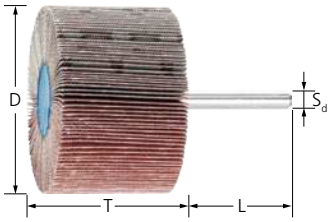
Wheel dia. [Inches]	Peripheral speed [SFPM]		
	3,000	4,000	7,900
	Rotational speeds [RPM]		
3/8	30,600	40,700	80,500
5/8	18,300	24,400	48,300
3/4	15,300	20,400	40,200
1	11,500	15,300	30,200
1-3/16	9,700	12,900	25,400
1-3/8	8,300	11,100	21,900
1-1/2	7,600	10,200	20,100
2	5,700	7,600	15,100
2-1/2	4,600	6,100	12,100
3	3,800	5,100	10,100

Aluminum oxide A

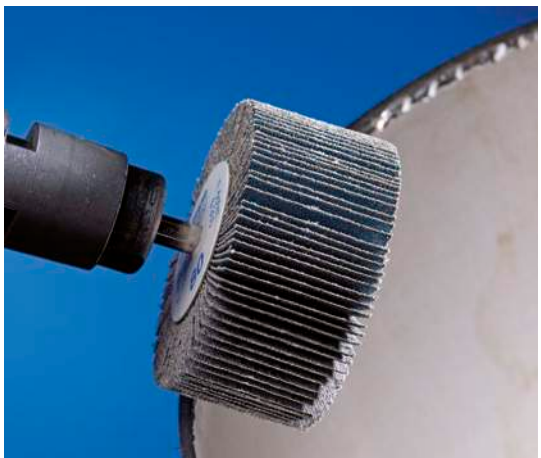
For universal applications from coarse to fine grinding.

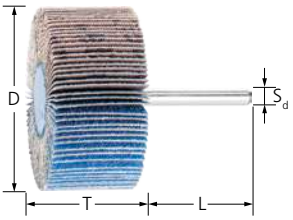
Abrasive:
Aluminum oxide A

PFERDVALUE®:



D [Inches]	T [Inches]	Grit and EDP number							Opt. RPM	Max. RPM	
		40	60	80	120	180	240	320			
Shank dia. 1/8" x 1-1/2" [S_d x L]											
3/8	3/8	-	45070	45071	45072	45074	45075	-	38,000	75,000	10
	5/8	-	45077	45078	45079	45081	45082	-	38,000	75,000	10
5/8	3/8	-	45091	45092	45093	45095	45096	-	25,000	50,000	10
	5/8	-	45098	45099	45100	45102	45103	-	25,000	50,000	10
3/4	3/8	-	45154	45155	45156	45157	45158	-	19,000	38,100	10
1	1	-	45178	45179	45180	45181	45182	-	15,000	25,400	10
1-3/16	3/8	-	45013	45014	45015	45016	45017	-	12,000	25,400	10
Shank dia. 1/4" x 1-1/2" [S_d x L]											
3/4	3/8	-	45160	45161	45162	-	-	-	19,000	38,100	10
1	5/8	-	45172	45173	45174	45175	-	-	15,000	25,000	10
	1	45463	45184	45185	45186	45187	45188	45189	15,000	25,000	10
1-3/16	1/4	-	45007	45008	45009	-	-	-	12,000	25,000	10
1-3/8	5/8	-	45226	45227	45228	45229	45230	-	10,900	23,000	10
1-1/2	1/2	45244	45245	45246	45247	-	-	-	9,600	23,000	10
	1	-	45232	45233	45234	45235	45236	45237	9,600	23,000	10
2	1/2	-	45251	45252	45253	-	-	-	7,000	23,000	10
	3/4	-	45258	45259	45260	45261	-	-	7,000	23,000	10
	1	45461	45238	45239	45240	45241	45242	45243	7,000	23,000	10
	1-1/2	-	45190	45191	45192	-	-	-	7,000	15,000	10
2-1/2	1/2	45305	45264	45265	45266	-	-	-	6,300	23,000	10
	1	-	45270	45271	45272	45273	45274	45275	6,300	23,000	10
	1-1/2	45306	45276	45277	45278	-	-	-	6,300	13,000	10
3	1/2	45220	45196	45197	45198	-	-	-	4,800	20,000	10
	1	45462	45208	45209	45210	45211	45212	45213	4,800	20,000	10
	2	-	45214	45215	45216	-	-	-	4,800	6,000	10





Zirconia alumina Z-COOL

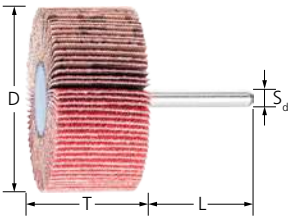
For coarse grinding work with a high stock removal rate and cool grinding.

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

Abrasive:
Zirconia alumina Z-COOL

PFERDVALUE®:
Vibration Filter · Noise Filter · Haptic Filter

D [Inches]	T [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
		60	80	120			
Shank dia. 1/4" x 1-1/2" [S_d x L]							
1	1	45465	45466	45467	15,000	25,000	10
1-1/2	1	45469	45470	45471	9,600	25,000	10
2	1	45473	45474	45475	7,000	23,000	10
2-1/2	1	45477	45478	45479	7,000	23,000	10
	1-1/2	45488	45489	45490	6,300	13,000	10
3	1/2	45497	45498	45499	4,800	20,000	10
	1	45481	45482	45483	4,800	20,000	10



Ceramic oxide CO-COOL

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 loading and result in cooler grinding.

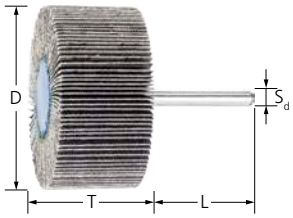
Abrasive:
Ceramic oxide CO-COOL

PFERDVALUE®:
Vibration Filter · Noise Filter · Haptic Filter

D [Inches]	T [Inches]	Grit and EDP number				Opt. RPM	Max. RPM	
		40	60	80	120			
Shank dia. 1/4" x 1-1/2" [S_d x L]								
1	1	45279	45280	45281	45282	15,000	25,000	10
1-1/2	1	45284	45285	45286	45287	9,600	25,000	10
2	1	45289	45290	45291	45292	7,000	23,000	10
2-1/2	1	45434	45435	45436	45437	7,000	23,000	10
	1-1/2	45443	45444	45445	45446	6,300	13,000	10
3	1/2	45456	45457	45458	45459	4,800	20,000	10
	1	45294	45295	45296	45297	4,800	20,000	10

Silicon carbide SiC

For universal grinding work on components made from aluminum, 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

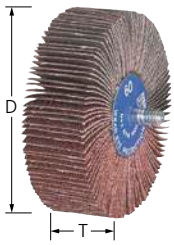
PFERDVALUE®:
Vibration Filter | Noise Filter | Haptic Filter

D [Inches]	T [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
		60	80	120			
Shank dia. 1/4" x 1-1/2" [S_d x L]							
1	1/2	45415	45416	45417	15,000	25,000	10
	1	45485	45486	45487	15,000	25,000	10
2	1/2	45426	45427	45428	7,000	23,000	10
	1	45491	45492	45493	7,000	23,000	10
3	1/2	45429	45438	45439	4,800	20,000	10
	1	45494	45495	45496	4,800	20,000	10

Quick-change flap wheels and accessories

Aluminum oxide A

This flap wheel spins on and off without the use of tools. Unique design prevents shaft from pulling out of core while maintaining perfect balance at operating speed. Each package contains 1 shank adaptor with 1/4-20 thread.



Abrasive:
Aluminum oxide A

PFERDVALUE®:
Vibration Filter | Noise Filter | Haptic Filter

D [Inches]	T [Inches]	Thread	Grit and EDP number						Opt. RPM	Max. RPM	
			40	60	80	120	180	240			
1	5/8	1/4-20	-	45300	45301	45302	-	-	15,000	25,000	10
	1	1/4-20	45316	45310	45311	45312	45313	45314	15,000	25,000	10
1-1/2	1/2	1/4-20	-	45330	45331	45332	-	-	9,600	23,000	10
	1	1/4-20	45318	45340	45341	45342	-	-	9,600	23,000	10
2	1/2	1/4-20	-	45350	45351	45352	-	-	7,000	23,000	10
	1	1/4-20	45369	45370	45371	45372	45373	45374	7,000	23,000	10
2-1/2	1/2	1/4-20	-	45410	45411	45412	-	-	6,300	23,000	10
	1	1/4-20	-	45420	45421	45422	45423	-	6,300	23,000	10
3	1/2	1/4-20	45317	45430	45431	45432	-	-	4,800	20,000	10
	1	1/4-20	45449	45450	45451	45452	45453	45454	4,800	20,000	10

Threaded shank adapter for quick-change flap wheels

1/4" shank with 1/4-20 female thread.

Shank dia. [Inches]	Thread	EDP number	
1/4	1/4-20	45299	10

Flap wheels
Unmounted flap wheels and accessories

On unmounted flap wheels, coated abrasive flaps are arranged radially around the wheel axis in a fan-type structure. Their flexibility enables them to adapt perfectly to the contours of the workpiece. The abrasive grain is embedded in the sturdy, flexible cloth backing material by means of a resinoid bond.

In ISO 5429, unmounted flap wheels are designated as "flap wheels".

Factors that influence working results:

- **Flap wheel wear and thermal load:**
  Flap wheel wear and the thermal load of the workpiece are reduced by decreasing the contact pressure and peripheral speed, and adding grinding oil.
- **Stock removal:**
  Stock removal rate should be increased by using a coarser grit and not by increasing the contact pressure. This avoids unnecessary flap wheel wear and prevents the thermal load of the workpiece.
- **Surface roughness:**
  Increasing the peripheral speed achieves a slightly finer surface. Increasing the contact pressure makes the surface slightly more coarse. The softer the material to be finished, the coarser the surface (when using the same grit sizes).

Advantages:

- Optimum adaptation to contours due to high flexibility.
- Consistently high stock removal throughout the entire service life as new, aggressive abrasive material is constantly freed up.
- Face-down use very close to edges and in corners is possible due to the special clamping system.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Leveling
- Deburring
- Surface work
- Work on weld seams
- Structuring surfaces
- Step-by-step fine grinding

Recommendations for use:

- For best performance, use with a recommended peripheral speed of 3,000–6,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and service life.
- Use grinding oil which is recommended for the material in order to considerably increase the service life and abrasive performance of the flap wheels.
- For best performance, use a power tool with 1,000–1,500 watts.

Ordering notes:

- Unmounted flap wheels with diameters 4, 6 and 6-1/2" are supplied with the centre hole diameter of 1". 8" unmounted flap wheel is supplied with a centre hole diameter of 1-3/4".

Safety notes:

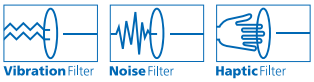
- Unmounted flap wheels are generally to be used with the matching clamping flanges.
- The maximum permitted peripheral speed is defined as follows:
  - Unmounted flap wheels = 9,800 SFPM
  - Unmounted flap wheels for angle grinders = 15,800 SFPM
- Flap drums = 6,300 SFPM
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- The contact pressure has to be reduced significantly when the optimum rotational speed is exceeded.

Accessories:

- Arbors with clamping flange
- Reducing flanges for unmounted flap wheels

PFERDVALUE®:

PFERDERGONOMICS® recommends unmounted flap wheels to sustainably reduce vibration and noise levels during use and to improve working comfort.



Recommended rotational speed range

Example:
EDP 45620, Aluminum oxide A, dia. 6"
Peripheral speed: 3,000–6,000 SFPM
Rotational speed: 1,900–3,800 RPM

Wheel dia. [Inches]	Peripheral speed [SFPM]						
	3,000	4,000	5,000	6,000	7,900	9,900	15,800
	Rotational speeds [RPM]						
4	2,900	3,800	4,800	5,700	7,500	9,500	15,100
4-1/2	2,500	3,400	4,200	5,100	6,700	8,400	13,400
5	2,300	3,100	3,800	4,600	6,000	7,600	12,100
6	1,900	2,500	3,200	3,800	5,000	6,300	10,100
7	1,600	2,200	2,700	3,300	4,300	5,400	8,600
8	1,400	1,900	2,400	2,900	3,800	4,700	7,500

Aluminum oxide A

For universal applications from coarse to fine grinding.

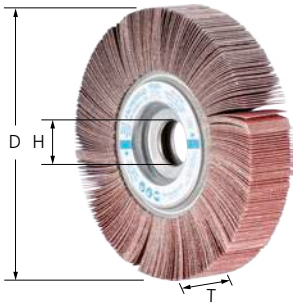
Abrasive:
Aluminum oxide A

Compatible power tools:
flexible shaft drive, straight grinder

Ordering notes:
- Please order the matching arbor separately.
- Matching arbor for a diameter of 4–6": EDP 45714
- Matching arbor for a diameter of 8–10": EDP 45715

PFERDVALUE®:

Vibration Filter | Noise Filter | Haptic Filter



D [Inches]	T [Inches]	H [Inches]	Grit and EDP number						Opt. RPM	Max. RPM	
			40	60	80	120	180	240			
4	1	1	45530	45532	45533	45535	45536	-	5,500	9,500	2
	2	1	-	45552	45553	45555	-	-	5,500	9,500	2
6	1	1	45600	45602	45603	45605	45607	-	3,500	6,300	2
	1-1/2	1	45610	45612	45613	-	-	-	3,500	6,300	2
	2	1	45620	45622	45623	45625	45626	45627	3,500	6,300	2
8	1	1-3/4	-	45642	45643	45645	-	-	2,600	4,700	2
	2	1-3/4	-	45652	45653	45655	-	-	2,600	4,700	2

Ceramic oxide CO-COOL

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 loading and result in cooler grinding.

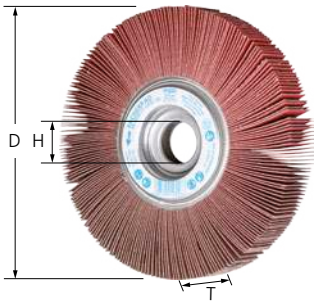
Abrasive:
Ceramic oxide CO-COOL

Compatible power tools:
flexible shaft drive, straight grinder

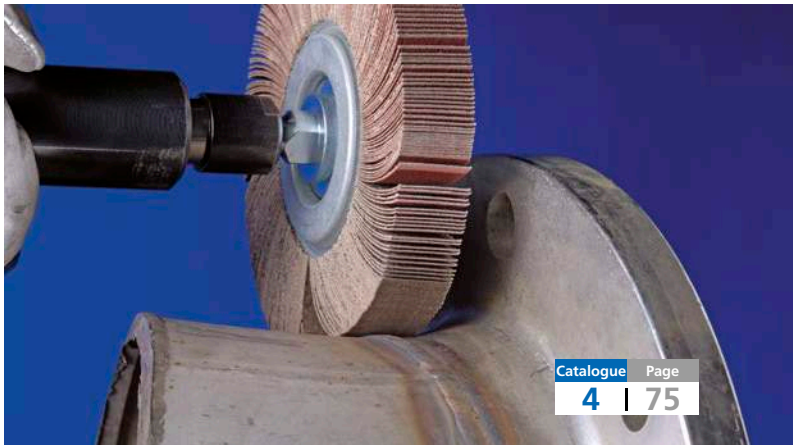
Ordering notes:
- Please order the matching arbor separately.
- Matching arbor for a diameter of 6": EDP 45714

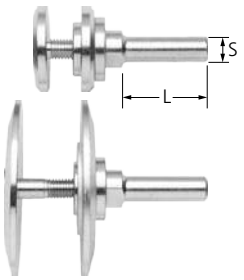
PFERDVALUE®:

Vibration Filter | Noise Filter | Haptic Filter



D [Inches]	T [Inches]	H [Inches]	Grit and EDP number				Opt. RPM	Max. RPM	
			40	60	80	120			
6	1	1	45840	45841	45842	45843	3,500	6,300	2
	2	1	45844	45845	45846	45847	3,500	6,300	2





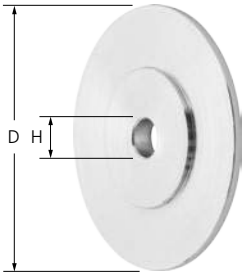
Clamping flanges for unmounted flap wheels

For mounting PFERD unmounted flap wheels.
The clamping flanges are designed to lie countersunk in the wheel.

Advantages:
- Can be used face-down very close to edges and in angles due to special clamping system.

Ordering notes:
- Included in delivery: Arbor, clamping diameter of 1/2", 2 flanges and matching screws (for different unmounted flap wheel widths).
- Contents include one arbor (1/2" clamping dia.), two flanges, compatible clamping screws (for various flap wheel widths)

S [Inches]	L [Inches]	Fits arbor hole size [Inches]	For wheel diameter [Inches]	EDP number	
1/2	1-1/2	1	4–6	45714	1
1/2	1-1/2	1-3/4	8–10	45715	1



Reducing flanges for unmounted flap wheels

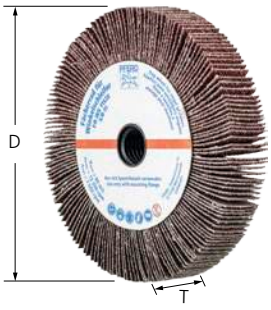
For mounting unmounted flap wheels and POLINOX® unmounted flap wheels on drive spindles.
The clamping flanges are designed to lie countersunk in the wheel.

Advantages:
- Can be adapted to an existing drive spindle by drilling.
- Can be used face-down very close to edges and in angles due to unique clamping system.

Ordering notes:
- Included in delivery: 1 pair

Fits arbor hole size [Inches]	D [Inches]	H [Inches]	Max. H [Inches]	For wheel diameter [Inches}	EDP number	
1	1-1/2	1/2	7/8	4–6	45720	1
	1-1/2	5/8	7/8	4–6	45721	1
	1-1/2	3/4	7/8	4–6	45722	1
1-3/4	3-1/4	1/2	1-1/2	8–10	45725	1
	3-1/4	5/8	1-1/2	8–10	45726	1
	3-1/4	3/4	1-1/2	8–10	45727	1
	3-1/4	1	1-1/2	8–10	45728	1

Aluminum oxide A



The ideal flap wheel for use on angle grinders in assembly shop operations.
For universal applications from coarse to fine grinding.

Advantages:
- Can be mounted directly on the angle grinder without additional clamping devices.

Abrasive:
Aluminum oxide A

Recommendations for use:
- For the best results, use at a recommended peripheral speed of 7,900–9,800 SFPM.

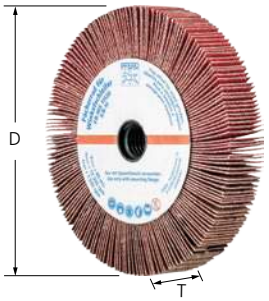
Safety notes:
- As a rule, unmounted flap wheels should be used with the appropriate clamping flanges for the angle grinder.

PFERDVALUE®:

Compatible power tools:
angle grinder, cordless angle grinder

D [Inches]	T [Inches]	Thread	Grit and EDP number							Opt. RPM	Max. RPM	
			40	60	80	120	180	240	320			
4-1/2	3/4	5/8-11	45751	45753	45754	45755	45757	45758	45759	7,500	13,300	2
5	3/4	5/8-11	45761	45763	45764	45765	45767	45768	45769	6,850	12,200	2

Ceramic oxide CO-COOL



The ideal flap wheel for use on angle grinders in assembly shop operations.
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 loading and result in cooler grinding.

Advantages:
- Can be mounted directly on the angle grinder without additional clamping devices.

Abrasive:
Ceramic oxide CO-COOL

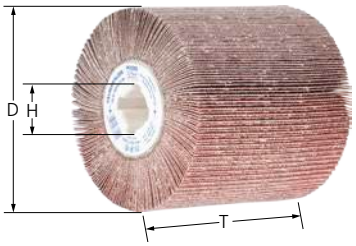
Recommendations for use:
- For the best results, use at a recommended peripheral speed of 7,900–9,800 SFPM.

Safety notes:
- As a rule, unmounted flap wheels should be used with the appropriate clamping flanges for the angle grinder.

PFERDVALUE®:

Compatible power tools:
angle grinder, cordless angle grinder

D [Inches]	T [Inches]	Thread	Grit and EDP number				Opt. RPM	Max. RPM	
			40	60	80	120			
4-1/2	5/8	5/8-11	45740	45741	45742	45743	7,500	13,300	2
5	5/8	5/8-11	45744	45745	45746	45747	6,850	12,200	2



Aluminum oxide A

For universal work on medium-sized and large metallic surfaces, e.g. fine grinding work on large radii in container, food service and apparatus construction, and achieving consistent linear scratch patterns on large surfaces and contours in manual applications.

Ideal for all conventional keyway systems.

Abrasive:
Aluminum oxide A

Recommendations for use:
- For the best results, use at a recommended peripheral speed of 3,000-6,000 SFPM.

Compatible power tools:
drum grinders

Ordering notes:
- Additional drum products can be found on pages 44, 45, 100, 101 and 120, as well as in catalogue section 8.
- Refer to our "Power tools" catalogue section 9 for information on the linear finishing tool, EDP 91217.

PFERDVALUE®:

Vibration Filter | Noise Filter | Haptic Filter

D [Inches]	T [Inches]	H [Inches]	Grit and EDP number						Opt. RPM	Max. RPM	
			40	60	80	120	150	180			
4	4	3/4	45780	45781	45782	45783	45784	45785	3,800	6,100	1

The POLIFLAP® system is ideal for blending and restoring surface textures, fine grinding of radii, contours, curved areas or large surfaces.

Safety notes:

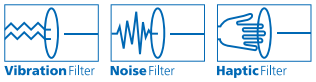
- The maximum permitted peripheral speed is 6,300 SFPM.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

Accessories:

- POLIFLAP® abrasive flaps
- POLIFLAP® rubber flaps

PFERDVALUE®:

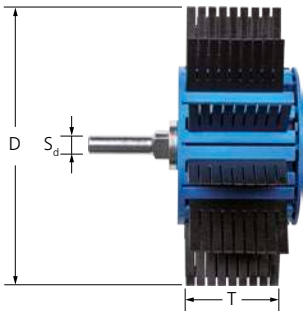
PFERDERGONOMICS® recommends the POLIFLAP® system to sustainably reduce vibration and noise levels during use and to improve working comfort.



POLIFLAP® system

POLIFLAP® wheel

The wheel consists of a shank-mounted support and rubber flaps. It must be completed with appropriate abrasive flaps. The customized arrangement of abrasive and rubber flaps results in a highly versatile product.



Advantages:
- Optimal harmonization of different surface structures.
- Creates a consistently high surface quality over the entire service life as new, sharp abrasive is constantly exposed.
- Comfortable to use due to particularly lightweight design.

Recommendations for use:
- For optimum results on stainless steel (INOX), use at a rotational speed between 1,400–1,700 RPM.
- In the event of excessive wear, we recommend replacing the flaps frequently.

Compatible power tools:
flexible shaft drive, straight grinder

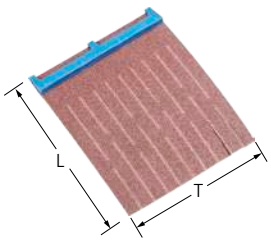
Ordering notes:
- Supplied without abrasive flaps. Please order abrasive flaps separately in the desired grit size.

PFERDVALUE®:

D [Inches]	T [Inches]	S_d [Inches]	EDP number	Opt. RPM	Max. RPM	
7	2-3/8	3/8	45950	1,500	3,500	1

POLIFLAP® abrasive flaps

Abrasive flaps for POLIFLAP® grinding wheels, for achieving visual effects ranging from coarse to very fine.

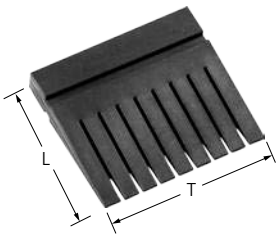


Advantages:
- Comfortable to use and easy to replace once worn.

Ordering notes:
- The packaging unit corresponds to a complete POLIFLAP® grinding wheel.

Abrasive:
Aluminum oxide A

L [Inches]	T [Inches]	Grit and EDP number								
		60	80	100	120	150	180	220	320	
2-3/8	3	45960	45961	45962	45963	45964	45965	45966	45968	12



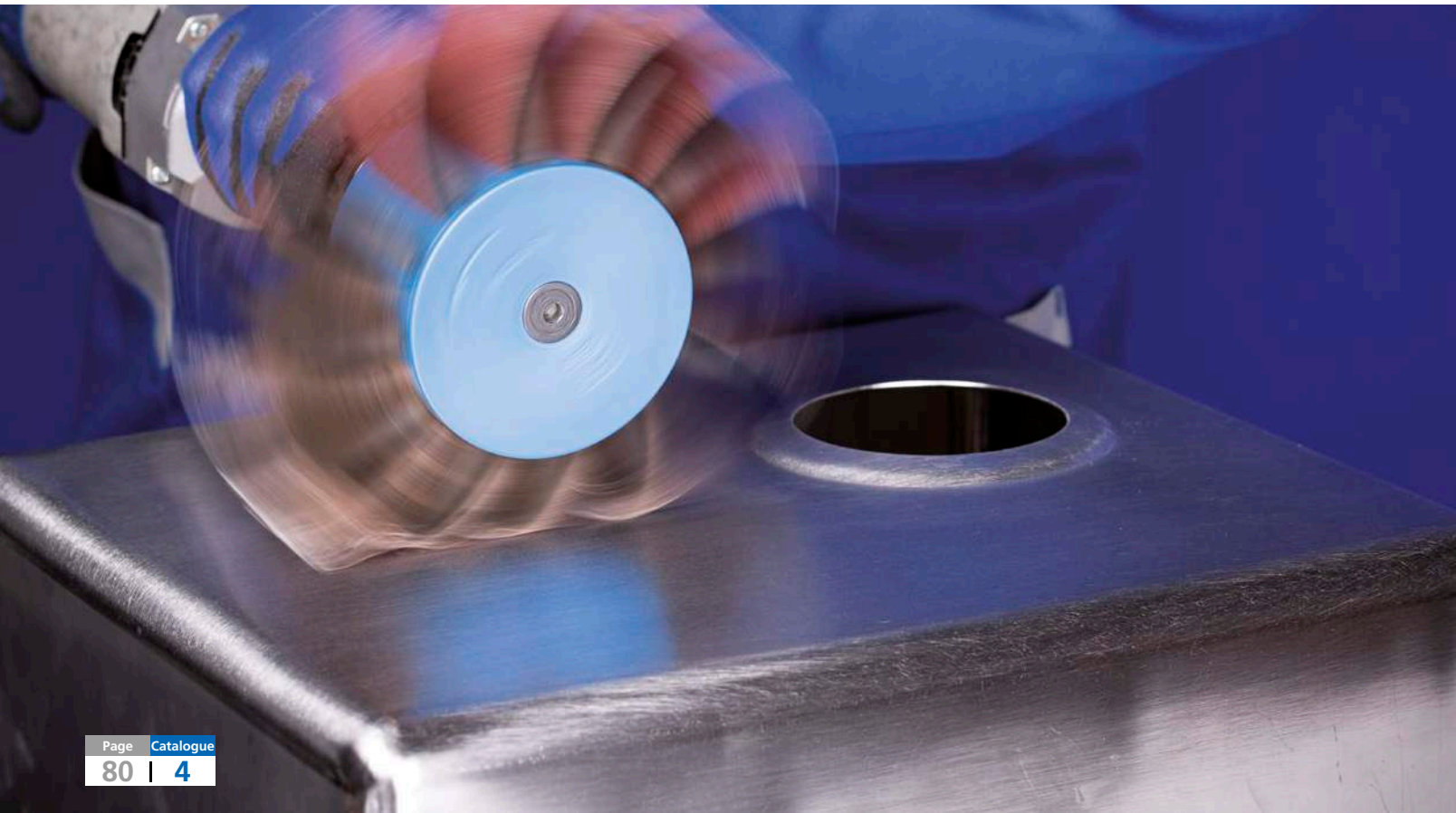
POLIFLAP® rubber flaps

Rubber flaps to match the POLIFLAP® grinding wheel. They lie between the abrasive flaps, and support the abrasive effect and the flexibility of the system.

Advantages:
- Comfortable to use as easy to replace once worn.

Ordering notes:
- The packaging unit corresponds to a complete POLIFLAP® grinding wheel.

L [Inches]	T [Inches]	EDP number	
2	2	45951	12



POLISTAR-TUBE consists of multi-layered coated abrasive stars riveted together. They are designed specifically for working on the inner surfaces of pipes and pipe bends.

They are used in combination with the matching flexible shafts from catalogue section 9:
- For diameters 2" to 3-1/8"– 4 PST-T DIN 10/M4 (EDP 94264)
- For diameters 3-1/2"to 4"– 7 PST-T DIN 10/M5 (EDP 94274)

Advantages:

- Optimum adaptation to contours due to high flexibility.
- For achieving very fine surface quality grades of up to 8 µin (0.2 µm).
- Stainless steel rivets prevents contamination of stainless steel (INOX) workpieces.

Recommendations for use:

- For best performance, use with a recommended peripheral speed of 3,000–4,000 SFPM.
- Select the POLISTAR diameter based on the respective pipe's inner diameter:
  - Dia. 2" for inner pipe dia. 1-3/8"–1-5/8"
  - Dia. 2-1/4" for inner pipe dia. 1-5/8"– 1-3/4"
  - Dia. 2-3/4" for inner pipe dia. 1-3/4"–2"
  - Dia. 3-1/8" for inner pipe dia. 2"–2-1/4"
  - Dia. 3-1/2" for inner pipe dia. 2-1/4"– 2-3/8"
  - Dia. 4" for inner pipe dia. 2-3/8"–2-5/8"
- Select the appropriate grit size for the desired roughness value:
  - Grit size 60 = 39–51 µin (1.0 - 1.3 µm) R_a
  - Grit size 120 = 24–39 µin (0.6 - 1.0 µm) R_a
  - Grit size 180 = 16–24 µin (0.4 - 0.6 µm) R_a
  - Grit size 240 = 12–16 µin (0.3 - 0.4 µm) R_a
  - Grit size 320 = 8–12 µin (0.2 - 0.3 µm) R_a

Compatible power tools:

- Flexible shaft drives
- Straight grinders

Ordering notes:

- Please order arbors separately.
- POLISTAR-TUBE with a grit size of 60 are always supplied with 4 layers.

Safety notes:

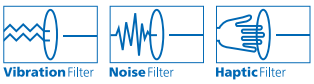
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

Accessories:

- Arbors for POLISTAR-TUBE

PFERDVALUE®:

PFERDERGONOMICS® recommends POLISTAR-TUBE to sustainably reduce vibration and noise levels during use and to improve working comfort.



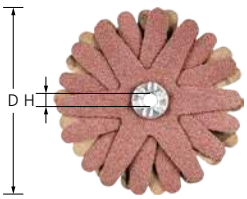
POLISTAR-TUBE

POLISTAR-TUBE

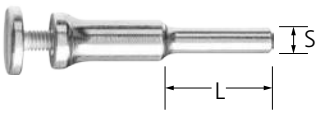
Engineered for use in pipes and pipe bends.

Abrasive:
Aluminum oxide A

PFERDVALUE®:



D [Inches]	H [mm]	No. of Layers	Grit and EDP number					Compatible arbor	Opt. RPM	Max. RPM	
			60	120	180	240	320				
2	4	6	44015	44016	44017	44018	44019	44062	3,000	7,650	10
2-1/4	4	6	44020	44021	44022	44023	44024	44062	2,500	6,350	10
2-3/4	4	6	44025	44026	44027	44028	44029	44062	2,200	5,450	10
3-1/8	4	6	44030	44031	44032	44033	44034	44062	1,900	4,750	10
3-1/2	5	8	44035	44036	44037	44038	44039	44063	1,700	4,250	10
4	5	8	44040	44041	44042	44043	44044	44063	1,500	3,820	10



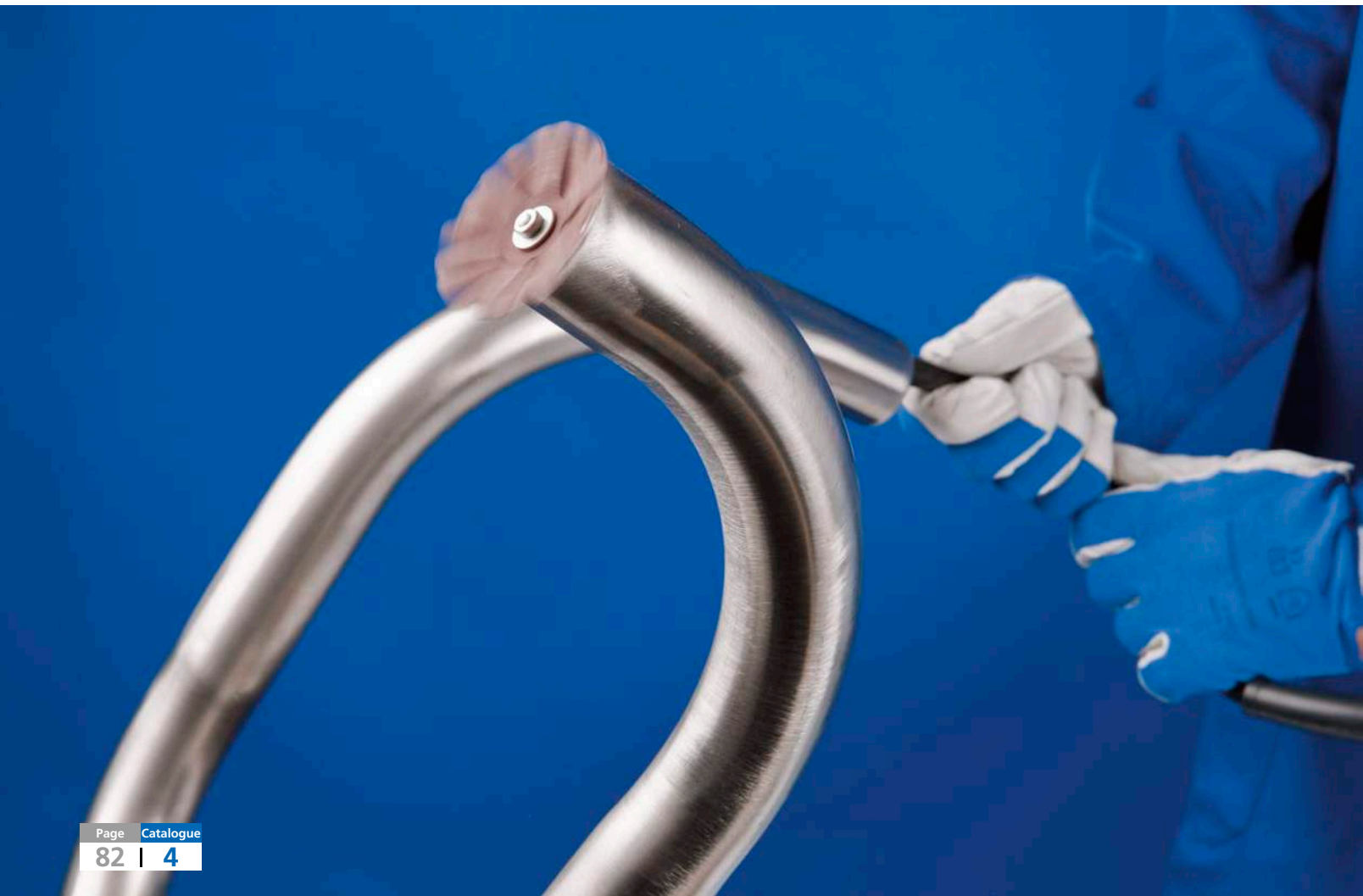
Arbors for POLISTAR-TUBE

Matching arbor for POLISTAR-TUBE.

Advantages:

- High productivity as the consumable can be changed quickly.

Fits arbor hole size [mm]	S [Inches]	L [Inches]	Clamping width [Inches]	EDP number	
4	1/4	1	0 - 3/8	44062	1
5	1/4	1	0 - 3/8	44063	1



Grinding products for work on metallic and non-metallic workpieces are sub-divided into three groups:

- **Bonded abrasives**
  (e.g. grinding discs)
- **Flexible abrasives**
  (e.g. belts, discs, strips, rolls) These products are used for coarse, fine and very fine grinding, in addition to stock removal.
- **Non-woven abrasives**
  This group is primarily designed for surface structuring and conditioning.

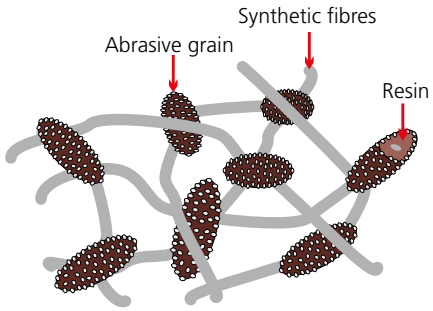
Non-woven abrasives consist of polyamide fibres, synthetic resins and abrasive grain.

The non-woven fibre structure is impregnated or interspersed with resin and abrasive grain. The very loose connection between the individual fibres ensures a high level of flexibility and gives a strong spring-type effect to the non-woven material. It is flexible and supple, and leaves behind a very distinctive surface structure.

The satin-finished grinding result is unique and cannot be achieved with other abrasives. The consistent distribution of the abrasive grain in the non-woven structure guarantees a continuous supply of new, fresh and sharp abrasive grain throughout the entire grinding application.

Although non-woven abrasives have a completely differently structure to coated abrasives, the same abrasive materials are used for both groups of products:

- Aluminum oxide (Al_2O_3) is very durable, features an extremely long service life and has very high aggressiveness on hardened steel. The achieved surface finish is distinguished by its increased shine. Discolouration is prevented when working on aluminum.
- Silicon carbide (SiC) is even sharper, harder and cuts very easily. In no time at all, it produces a finer grinding pattern on the surfaces of many materials which remains slightly matte for a long time.



The user selects a specific grit size for conventionally bonded abrasives or coated abrasives. The designation system for non-woven abrasives is outlined in the following table:

PFERD designation	Comparable grit size [mesh]
Very coarse	50– 80
Coarse	80–100
Medium	100–180
Fine	180–220
Very fine	220–400

Use

The use of non-woven abrasives begins where other grinding products reach their limits or no longer achieve the desired results. The elastic properties of the polyamide fibres and the positive effect of the non-woven abrasives result in finishing products which produce outstanding results yet work gently.

Non-woven abrasives are water-tight, washable and very durable. They don't load, leave no rust behind on surfaces and are non-conductive.

Non-woven abrasive can be used to outstanding effect for deburring, cleaning and for work on the surfaces of many metals, including aluminum, brass, copper, nickel, stainless steel (INOX) and titanium. It is also ideal for work on other materials which are difficult to grind, such as ceramic, glass and plastic. Non-woven abrasive can be used for wet or dry grinding.

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Non-woven products

Non-woven abrasives are recommended for manufacturing a wide range of different products, such as hand pads, drums, discs, belts, points and mounted grinding wheels.

The abrasive properties of these products are tailored to a variety of applications and represent outstanding solutions for numerous metal machining and processing tasks.

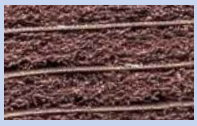
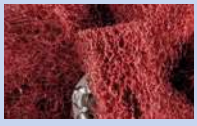
The PFERD range comprises:
- COMBICLICK®/COMBIDISC® non-woven discs
- Non-woven shop rolls, hand pads
- POLINOX® mounted flap wheels, grinding discs, grinding wheels and finishing drums

Additional types
Non-woven abrasive can also be manufactured with a fabric reinforcement. The non-woven abrasive material gains considerably higher aggressiveness and stability as a result.

Fabric-reinforced, non-woven abrasive is ideal for manufacturing discs and non-woven belts.

The PFERD range comprises:
- COMBICLICK®/COMBIDISC® non-woven discs
- POLIVLIES® flap discs and hook and loop discs
- Abrasive belts, non-woven type

PFERD designation

Unitized PNER		Due to different combinations of compaction, fibres, grain and the appropriate bond, this product can be used for a wide range of surface finishing applications, from relatively coarse grinding to preparing the surface for polishing.
Convolute PNK		The non-woven abrasive is wound around a core and foamed up. The products can be optimized for a variety of applications by implementing different foam, fibre, grain and bond combinations. The spectrum of application ranges from fine deburring through to preparations for polishing.
Radial construction PNL		Made of radially arranged flaps of non-woven abrasive material. The flaps are very tightly packed, which achieves a longer service life. The flap wheel's main application is surface work.
Interleaved construction PNZ		The non-woven abrasive is arranged in multiple radial flaps, with one abrasive cloth interlayer between each set of flaps. This flap combination facilitates greater stock removal and a coarser surface finish.
Corregated construction PNG		The non-woven abrasive comprises several very wavy strips of non-woven material wound around a core. The wavy structure of the non-woven material permits seamless brush matting of surfaces.
Axial-layered construction PNR		The non-woven abrasive is arranged in multiple (axial) disc layers. Since the individual non-woven discs are not interconnected, the abrasive surface adapts easily to different workpiece contours, e.g. when working on profiles or pipes.
Cross buffs PNST		The non-woven abrasive is star-shaped and stacked in layers which are connected in the centre. It offers outstanding performance, specifically when used for tight work areas such as holes, recesses and hard-to-reach places.

POLINOX® unitized wheels and discs 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 service 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	W	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	MW	Medium-soft variant with increased edge strength and extended service life, for tough blending and polishing applications. Well suited to machining contours.
Medium-hard	MH	Medium-hard variant with increased edge strength and extended service life, for tough deburring and cleaning applications.
Hard	H	Hard variant with very high stock removal rate, good edge strength and long service life, for tough deburring and polishing applications.

Comparison table

PFERD Unitized wheels				3M	Standard Abrasives	Norton	BIBIELLE
Type	**Colour code**	**Abrasive**	**Grain**				
Soft	W	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	MW	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	MH	A	Fine	Cut & polish 5A fine or SST 5A fine	731	UW1-6AF or Nex-6AF	-
Hard	H	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

Non-woven products
General information – POLINOX® unitized wheels and discs

Advantages:

- Increased economic efficiency due to high abrasive performance and long service life.
- For achieving very good surface quality standards.
- Perfect adaptation to contours due to free profiling.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

Cleaning
- Universal cleaning before painting.
- Removal of rust, scratches, coatings, heavy scaling, oxide layers of aluminum 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 molds and dies.
- Polishing and finishing of surgical instruments and implants.

Recommendations for use:

- Considerably reduce peripheral speed for work on materials with poor heat-conducting properties, e.g. titanium and stainless steel.
- For best performance, use at a recommended peripheral speed of 3,000–6,900 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and unitized wheel wear.

Compatible power tools:

- Flexible shaft drives
- Straight grinders
- Bench grinders

Safety notes:

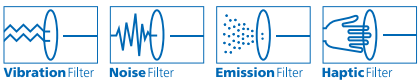
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

Accessories:

- Arbor for POLINOX® unitized wheels

PFERDVALUE®:

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



Recommended rotational speed range

Example:
EDP 48288, 3" POLINOX® unitized wheel
Peripheral speed: 5,000 SFPM
Rotational speed: 6,300 RPM

Wheel dia. [Inches]	Peripheral speed [SFPM]						
	3,000	4,000	5,000	6,000	6,300	7,000	9,900
	Rotational speeds [RPM]						
1	11,400	15,200	19,000	22,900	24,400	26,700	38,100
2	5,700	7,600	9,500	11,400	12,200	13,300	19,000
3	3,800	5,000	6,300	7,600	8,100	8,900	12,700
4	2,800	3,800	4,700	5,700	6,100	6,600	9,500
4-1/2	2,400	3,300	4,100	4,900	5,300	5,800	8,300
5	2,200	3,000	3,800	4,500	4,800	5,300	7,600
6	1,900	2,500	3,100	3,800	4,000	4,400	6,300

POLINOX® unitized wheels

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

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

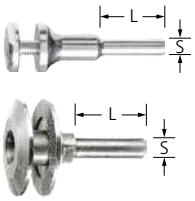
Abrasive:
Aluminum oxide A
Silicon carbide SiC

Recommendations for use:
- Grinding wheels with a 6-inch diameter can also be used on bench grinders, such as for reworking surgical instruments.

PFERD designation:
PNER

PFERDVALUE®:

D [Inches]	T [Inches]	H [Inches]	Abrasive	Grit size	Hardness	Spec.	EDP number	Opt. RPM	Max. RPM	Compatible arbors	
Unitized wheels for straight grinders, flexible shaft machines, and bench grinders											
2	1/8	1/4	A	fine	H	8AM	48268	9,500	15,300	69029	10
3	1/8	1/4	A	fine	H	8AM	48288	6,400	10,200	69029	10
			A	coarse	W	2AM	48247	6,400	10,200	69029	10
			A	fine	MH	6AF	48248	6,400	10,200	69029	10
			A	coarse	H	8AC	48249	6,400	10,200	69029	10
			SiC	fine	W	2SF	48245	6,400	10,200	69029	10
			SiC	fine	MW	3SF	48246	6,400	10,200	69029	10
	1/4	1/4	SiC	fine	W	2SF	48290	6,400	10,200	69029	5
			A	coarse	W	2AM	48291	6,400	10,200	69029	5
			SiC	fine	MW	3SF	48292	6,400	10,200	69029	5
			A	fine	MW	3AF	48293	6,400	10,200	69029	5
			A	fine	MH	6AF	48295	6,400	10,200	69029	5
			A	coarse	H	8AC	48299	6,400	10,200	69029	5
	1/2	1/4	SiC	fine	W	2SF	48310	6,400	10,200	69029	5
			A	coarse	W	2AM	48311	6,400	10,200	69029	5
			SiC	fine	MW	3SF	48312	6,400	10,200	69029	5
			A	fine	MW	3AF	48313	6,400	10,200	69029	5
			A	fine	MH	6AF	48315	6,400	10,200	69029	5
			A	coarse	H	8AC	48319	6,400	10,200	69029	5
6	1	1	SiC	fine	W	2SF	48420	3,200	5,100	45714	1
			SiC	fine	MW	3SF	48422	3,200	5,100	45714	1
			A/O	fine	MW	3AF	48423	3,200	5,100	45714	1
			A/O	fine	MH	6AF	48425	3,200	5,100	45714	1
			A/O	coarse	H	8AC	48429	3,200	5,100	45714	1
Unitized wheels for variable-speed angle grinders, and fillet weld grinders											
5	1/4	7/8	SiC	fine	MW	3SF	48352	4,500	6,100	-	5
			A	fine	MW	3AF	48353	4,500	6,100	-	5
			A	fine	MH	6AF	48355	4,500	6,100	-	5
			A	fine	H	8AM	48358	4,500	6,100	-	5
			A	coarse	H	8AC	48359	4,500	6,100	-	5
6	1/8	1	SiC	fine	MW	3SF	48360	3,800	5,100	-	5
			SiC	fine	MH	6SF	48361	3,800	5,100	-	5
			A	fine	H	8AM	48362	3,800	5,100	-	5
	1/4	1	SiC	fine	W	2SF	48363	3,800	5,100	-	5
			SiC	fine	MW	3SF	48364	3,800	5,100	-	5
			A	fine	H	8AM	48365	3,800	5,100	-	5



Arbors for POLINOX® unitized wheels

Matching arbor for POLINOX® unitized wheels.

Advantages:
- Increased economic efficiency as the arbor can be changed quickly.

Fits arbor hole size [Inches]	S [Inches]	L [Inches]	Clamping width [Inches]	EDP number	
1/2	1/4	1	1/8–1/4	69029	1
1	1/2	1-1/2	1–2	45714	1

POLINOX® unitized discs

POLINOX® unitized discs

POLINOX® unitized discs are used for face-down grinding on variable-speed angle grinders. Especially well-suited to work on larger surfaces. The compressed, non-woven material is bonded to a glass-fabric base.

Abrasive:
Silicon carbide SiC

Ordering notes:
T = thickness

PFERD designation:
PNER

PFERDVALUE®:

D [Inches]	T [Inches]	H [Inches]	Abrasive	Grit size	Hardness	Spec.	EDP number	Opt. RPM	Max. RPM	
Plain arbor hole										
4-1/2	1/2	7/8	SiC	fine	W	2SF	48470	6,000	10,000	5
					MW	3SF	48472	6,000	10,000	5
					MH	6SF	48474	6,000	10,000	5
5	1/2	7/8	SiC	fine	W	2SF	48480	5,400	10,000	5
					MW	3SF	48482	5,400	10,000	5
					MH	6SF	48484	5,400	10,000	5
Threaded hub										
4-1/2	1/2	5/8-11	SiC	fine	W	2SF	48490	6,000	10,000	5
					MW	3SF	48492	6,000	10,000	5
					MH	6SF	48494	6,000	10,000	5
5	1/2	5/8-11	SiC	fine	W	2SF	48500	5,400	10,000	5
					MW	3SF	48502	5,400	10,000	5
					MH	6SF	48504	5,400	10,000	5

POLINOX® convolute wheels consist of non-woven abrasive which is spiral-wound around a core and foamed up. The foam supports the non-woven component and improves its service life and abrasive performance.

This particular bond results in non-woven wheels with a very good surface finish, high stock removal rate and long service life. These properties are particularly apparent when deburring, blending, finishing and polishing soft metals, alloyed and high-alloy steels, in addition to titanium alloys. The wheels can be used on automated appliances and bench grinders, in addition to portable power tools such as straight grinders. By dressing the wheels, they can also be adapted to the geometry of special workpieces.

Five different types are available:

Type	Colour code	Properties
Soft	W	Soft variant with very good abrasive performance on contours. Very good for blending surfaces.
Medium-soft	MW	Medium-soft variant with increased flexibility and extended service life for tough blending applications and for light deburring and polishing work. Well suited to machining contours.
Medium-hard	MH	Medium-hard variant with increased edge strength and extended service life, for tough deburring applications and other deburring, blending and cleaning work.
Hard	H	Hard variant with very high stock removal rate, good edge strength and long service life, for moderate to heavy-duty deburring and polishing applications.
Extra-hard	EH	Extra-hard variant with very high edge strength for demanding deburring work.

Comparison table

PFERD Convolute wheels				3M	Standard Abrasives	Norton	BIBIELLE
Type	Colour code	Abrasive	Grain				
Soft	W	A	Coarse	CP-WL 5AM	MF CV 5AM	MF CF 5AM	BCW-MF 5AM
Medium-soft	MW	SiC	Fine	LDW 7SF	LDW 7SF	Series 2000 7SF	BCW-DB 7SF
Medium-hard	MH	SiC	Fine	EXL Deburring 8SF	Deburring 8SF	Series 1000 8SF	BCW-DB 8SF
		A	Coarse	EXL Deburring 8AM	GP Plus 8AM	Series 1000 8AM	BCW-DB 8AM
Hard	H	SiC	Fine	Deburring 9SF	EXL Deburring 9SF	Series 1000 9SF	BCW-DB 9SF
Extra-hard	EH	SiC	Fine	XP-WL 10SF	GP Plus 10SF	Series 4000 9SF	BCW-DB 9SF-R

Non-woven products
General information – POLINOX® convolute wheels

Advantages:

- Increased profitability due to high abrasive performance and long service life.
- For achieving very good surface quality standards.
- Perfect adaptation to contours due to free profiling.

Workpiece materials:

- Can be used on nearly all materials.

Abrasive:

- Aluminum oxide A
- Silicon carbide SiC

Applications:

- Rounding of edges.
- Fine grinding of implants.
- Matte finishing of flat surfaces.
- Removing joints on cast and forged parts.
- Weld dressing of intersections on turbine blades.
- Polishing molds and dies.
- Removal of processing traces on surgical instruments.

Recommendations for use:

- Considerably reduce peripheral speed for work on materials with poor heat-conducting properties, e.g. titanium and stainless steel.
- For best performance, use with a recommended peripheral speed of 4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and convolute wheel wear.

Compatible power tools:

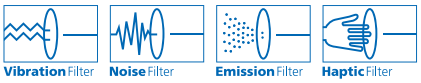
- Flexible shaft drives
- Straight grinders
- Bench grinders

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- The spiral-wound construction requires that these wheels only be run in a single indicated direction. Failure to do so will lead to destruction of the wheel and an increased risk of accidents.

PFERDVALUE®:

PFERDERGONOMICS® recommends POLINOX® convolute wheels to sustainably reduce vibration, noise and dust levels produced by products and to improve working comfort.



Recommended rotational speed range

Example:
EDP: 48200, 6 x 1/2 x 1
Peripheral speed: 4,000 SFPM
Rotational speed: 2,500 RPM

Wheel dia. [Inches]	Peripheral speed [SFPM]				
	3,000	4,000	5,000	6,000	8,000
	Rotational speeds [RPM]				
6	1,900	2,500	3,100	3,800	5,000
8	1,400	1,900	2,400	2,900	3,800
10	1,100	1,500	1,900	2,200	3,000

POLINOX® convolute wheels

Varied application options, for example:
- Rounding of edges
- Fine grinding of implants
- Weld dressing of intersections on turbine blades
- Removal of processing traces on surgical instruments
- Create matte surface finishes.

Abrasive:
- Aluminum oxide A
- Silicon carbide SiC

PFERD designation:
PNK

PFERDVALUE®:

D [Inches]	T [Inches]	H [Inches]	Abrasive	Grit size	Hardness	Spec.	EDP number	Opt. RPM	Max. RPM	
6	1/2	1	SiC	fine	MW	7SF	48200	2,500	5,100	1
			A	coarse	MH	8AM	48201	2,500	5,100	1
			SiC	fine	MH	8SF	48202	2,500	5,100	1
			SiC	fine	H	9SF	48203	2,500	5,100	1
			SiC	fine	EH	10SF	48222	2,500	5,100	1
	1	1	A	coarse	W	5AM	48199	2,500	5,100	1
			SiC	fine	MW	7SF	48204	2,500	5,100	1
			A	coarse	MH	8AM	48205	2,500	5,100	1
			SiC	fine	MH	8SF	48206	2,500	5,100	1
			SiC	fine	H	9SF	48207	2,500	5,100	1
			SiC	fine	EH	10SF	48223	2,500	5,100	1
8	1/2	3	SiC	fine	MW	7SF	48208	1,900	3,850	1
			A	coarse	MH	8AM	48209	1,900	3,850	1
			SiC	fine	MH	8SF	48210	1,900	3,850	1
			SiC	fine	H	9SF	48211	1,900	3,850	1
			SiC	fine	EH	10SF	48224	1,900	3,850	1
	1	3	A	coarse	W	5AM	48220	1,900	3,850	1
			SiC	fine	MW	7SF	48212	1,900	3,850	1
			A	coarse	MH	8AM	48213	1,900	3,850	1
			SiC	fine	MH	8SF	48214	1,900	3,850	1
			SiC	fine	H	9SF	48215	1,900	3,850	1
			SiC	fine	EH	10SF	48225	1,900	3,850	1
	2	3	A	coarse	W	5AM	48221	1,900	3,850	1
			SiC	fine	MW	7SF	48216	1,900	3,850	1
			A	coarse	MH	8AM	48217	1,900	3,850	1
			SiC	fine	MH	8SF	48218	1,900	3,850	1
			SiC	fine	H	9SF	48219	1,900	3,850	1
			SiC	fine	EH	10SF	48226	1,900	3,850	1

Reducing flanges for POLINOX® convolute wheels

For mounting POLINOX® convolute wheels with an 8" diameter on stationary machines such as double grinding machines (bench grinders).

Advantages:
- High accuracy of fit.
- Hole can be expanded as desired.

Ordering notes:
- Included in delivery: 1 pair

Fits arbor hole size [Inches]	H [Inches]	EDP number	
1	1/2	45720	1
	5/8	45721	1
	3/4	45722	1
3	5/8	45690	1
	1	45692	1
	1-1/4	45693	1

POLINOX® mounted and unmounted flap wheels and cross buffs consist of non-woven polyamide abrasive, into which abrasive grain is integrated.

The wide range of hardness grades and different configurations allow a variety of surface structures and roughness levels to be achieved.

Advantages:

- Optimum adaptation to contours due to high flexibility.
- Cool grinding and low thermal load of the workpiece.
- No loading due to open structure and high flexibility of the non-woven material.

Workpiece materials:

- Can be used on nearly all materials.

Recommendations for use:

- For best performance, use with a recommended peripheral speed of 2,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and flap wheel/cross buff wear.

Accessories:

- Arbors for POLINOX® cross buffs and unmounted flap wheels

Safety notes:

- The maximum permitted peripheral speed is 6,300 SFPM.
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

PFERDVALUE®:

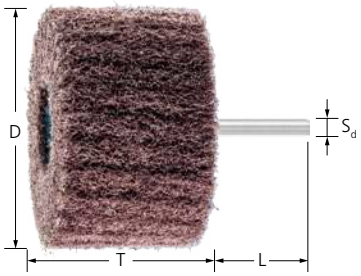
PFERDERGONOMICS® recommends POLINOX® mounted and unmounted flap wheels to sustainably reduce vibration and noise levels during use and to improve working comfort.

Recommended rotational speed range

Example:
46223, Interleaved construction 4" mounted flap wheel
Peripheral speed: 3,000 SFPM
Rotational speed: 2,900 RPM

Wheel dia. [Inches]	Peripheral speed [SFPM]				
	2,000	3,000	4,000	6,000	6,300
	Rotational speeds [RPM]				
3/4	10,200	15,300	20,400	30,600	32,100
1-1/2	5,100	7,600	10,200	15,300	16,000
2	3,800	5,700	7,600	11,500	12,000
2-1/2	3,100	4,600	6,100	9,200	9,600
4	1,900	2,900	3,800	5,700	6,000
5	1,500	2,300	3,100	4,600	4,800
6	1,300	1,900	2,500	3,800	4,000
8	1,000	1,400	1,900	2,900	3,000

Non-woven products
POLINOX® mounted flap wheels



Radial construction

Made of radially arranged flaps of non-woven abrasive material. A long service life is achieved through the dense packing of the flaps.

This flap wheel is recommended for surface work.

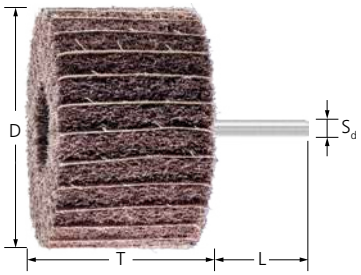
Abrasive:
Aluminum oxide A

PFERD designation:
PNL

Compatible power tools:
flexible shaft drive, straight grinder

PFERDVALUE®:

D [Inches]	T [Inches]	S_d [Inches]	L [Inches]	Grit and EDP number 100	180	280	Opt. RPM	Max. RPM	
1	1	1/4	1-1/2	46198	46199	46200	10,000	20,000	10
1-1/2	3/4	1/4	1-1/2	46201	46202	46203	7,500	15,000	10
2	1	1/4	1-1/2	46204	46205	46206	6,000	12,000	10
2-3/8	2	1/4	1-1/2	46207	46208	46209	5,000	10,000	10
3	1	1/4	1-1/2	46251	46252	46253	4,000	7,500	10
	2	1/4	1-1/2	46210	46211	46212	4,000	7,500	10



Interleaved construction

The non-woven abrasive material is arranged in multiple radial flaps, with abrasive cloth interlayers.

This flap structure facilitates improved stock removal and achieves a coarser surface finish.

Abrasive:
Aluminum oxide A

PFERD designation:
PNZ

Compatible power tools:
flexible shaft drive, straight grinder

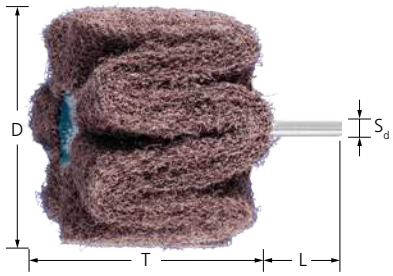
PFERDVALUE®:

D [Inches]	T [Inches]	S_d [Inches]	L [Inches]	Grit and EDP number 100	180	Opt. RPM	Max. RPM	
1	1	1/4	1-1/2	46196	46197	10,000	20,000	10
1-1/2	3/4	1/4	1-1/2	46219	46225	7,500	15,000	10
2	1	1/4	1-1/2	46220	46226	6,000	12,000	10
2-3/8	2	1/4	1-1/2	46221	46227	5,000	10,000	10
3	1	1/4	1-1/2	46269	46270	4,000	7,500	10
	2	1/4	1-1/2	46222	46228	4,000	7,500	10
4	2	1/4	1-1/2	46223	46229	3,000	6,000	10

Corrugated construction

Made of several wavily arranged strips of non-woven abrasive material, wound around a core.

The wavy structure of the non-woven abrasive material permits seamless matte finishing of surfaces.



Abrasive:
Aluminum oxide A
Silicon carbide SiC

PFERD designation:
PNG

Compatible power tools:
flexible shaft drive, straight grinder

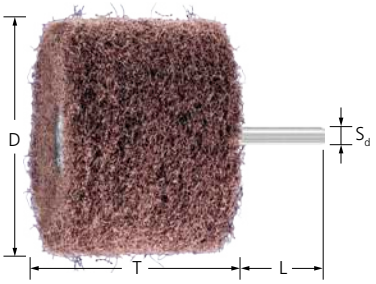
PFERDVALUE®:
Vibration Filter | Noise Filter | Haptic Filter

D [Inches]	T [Inches]	S_d [Inches]	L [Inches]	Grit and EDP number 100	180	280	Opt. RPM	Max. RPM	
Aluminum oxide A									
3	2	1/4	1-1/2	46236	46237	46238	4,000	7,500	10
4	2	1/4	1-1/2	46232	46230	46231	3,000	6,000	5
Silicon carbide (SiC)									
3	2	1/4	1-1/2	46239	46240	46241	4,000	7,500	10
4	2	1/4	1-1/2	46233	46234	46235	3,000	6,000	5

Axial-layered construction

The non-woven abrasive material is arranged in multiple (axial) disc layers.

Since the individual non-woven discs are not interconnected, the abrasive surface adapts easily to different workpiece contours, e.g. when working on profiles or pipes.



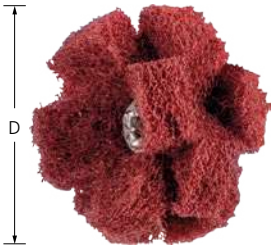
Abrasive:
Aluminum oxide A

PFERD designation:
PNR

Compatible power tools:
flexible shaft drive, straight grinder

PFERDVALUE®:
Vibration Filter | Noise Filter | Haptic Filter

D [Inches]	T [Inches]	S_d [Inches]	L [Inches]	Grit and EDP number 100	180	280	Opt. RPM	Max. RPM	
2-3/8	2	1/4	1-1/2	46213	46214	46215	5,000	10,000	10
3	2	1/4	1-1/2	46216	46217	46218	4,000	7,500	10



POLINOX® cross buffs

Ideal for cleaning, deburring and fine grinding of inner surfaces and contours.
Highly recommended for hard-to-reach places such as drilled holes and indentations.

Abrasive:
Aluminum oxide A

PFERD designation:
PNST

Compatible power tools:
flexible shaft drive, straight grinder

PFERDVALUE®:
Vibration Filter | Noise Filter | Haptic Filter

Ordering notes:
- Please order the matching arbor separately.

D [Inches]	No. of layers [pcs.]	Thread	Grit and EDP number			Compatible arbor	Opt. RPM	Max. RPM	
			80	100	280				
3/4	2	8-32	-	44198	44199	44830	15,000	25,100	20
1	2	8-32	44202	44200	44201	44830	10,000	19,100	20
1-1/2	3	8-32	44210	44208	44209	44830	7,500	12,600	20
2	2	8-32	44212	44213	44214	44830	5,500	9,500	20

Drive arbor for POLINOX® cross buffs

Arbors for POLINOX® cross buffs.

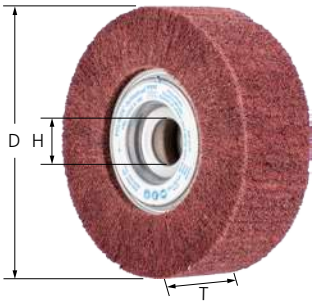
Advantages:
- Increased economic efficiency due to quick cross buff changes.

S [Inches]	L [Inches]	Thread	Mounting length [Inches]	EDP number	Max. RPM	
1/4	3	8-32	1-1/4	44830	25,000	1

Radial construction

Made of radially arranged flaps of non-woven abrasive material. A long service life is achieved through the dense packing of the flaps.

This unmounted flap wheel is ideal for work on large surfaces.



Abrasive:
Aluminum oxide A

PFERD designation:
PNL

Compatible power tools:
flexible shaft drive, straight grinder, bench grinder

PFERDVALUE®:
Vibration Filter Noise Filter Haptic Filter

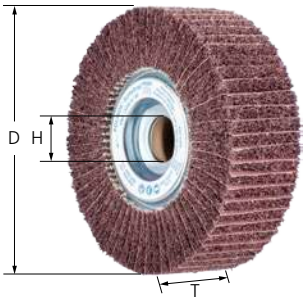
Ordering notes:
■ Please order the matching arbor separately.

D [Inches]	T [Inches]	H [Inches]	Grit and EDP number			Compatible arbor	Opt. RPM	Max. RPM	
			100	180	280				
6	2	1	43128	43129	43130	45714	2,000	4,000	1
8	2	1-3/4	43137	43138	43139	45715	1,500	3,000	1

Interleaved construction

The non-woven abrasive material is arranged in multiple radial flaps, with abrasive cloth interlayers. This flap structure facilitates improved stock removal and achieves a coarser surface finish.

This unmounted flap wheel is ideal for work on large surfaces.



Abrasive:
Aluminum oxide A

PFERD designation:
PNZ

Compatible power tools:
flexible shaft drive, straight grinder, bench grinder

PFERDVALUE®:
Vibration Filter Noise Filter Haptic Filter

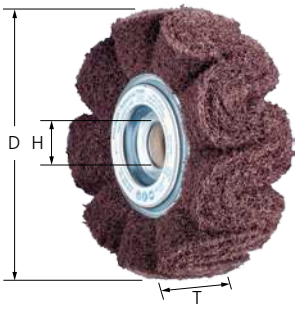
Ordering notes:
■ Please order the matching arbor separately.

D [Inches]	T [Inches]	H [Inches]	Grit and EDP number		Compatible arbor	Opt. RPM	Max. RPM	
			100	180				
6	2	1	43045	43046	45714	2,000	4,000	1
8	2	1-3/4	43048	43049	45715	1,500	3,000	1

Corrugated construction

Made of several wavily arranged strips of non-woven abrasive material, wound around a core.

The wavy structure of the non-woven abrasive material permits seamless matte finishing of surfaces.



Abrasive:
Aluminum oxide A

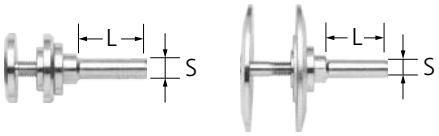
PFERD designation:
PNG

Compatible power tools:
flexible shaft drive, straight grinder, bench grinder

PFERDVALUE®:
Vibration Filter Noise Filter Haptic Filter

Ordering notes:
■ Please order the matching arbor separately.

D [Inches]	T [Inches]	H [Inches]	Grit and EDP number			Compatible arbor	Opt. RPM	Max. RPM	
			100	180	280				
6	2	1	43030	43031	43032	45714	2,000	4,000	1
8	2	1-3/4	43036	43037	43038	45715	1,500	3,000	1

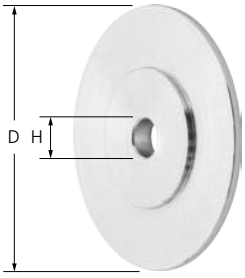


Drive arbors

Matching arbor for POLINOX® unmounted flap wheels.

Advantages:
- Increased economic efficiency due to quick flap wheel changes.

Fits arbor hole size [Inches]	S [Inches]	L [Inches]	Clamping width [Inches]	For wheel diameter [Inches}	EDP number	
1	1/2	1-1/2	1–2	4–6	45714	1
1-3/4	1/2	1-1/2	1–2	8–10	45715	1



Reducing flanges

For mounting unmounted flap wheels and POLINOX® unmounted flap wheels on drive spindles. The clamping flanges are designed to lie countersunk in the flap wheel.

Advantages:
- Can be adapted to an existing drive spindle by drilling.
- Can be used face-down very close to edges and in angles due to special clamping system.

Ordering notes:
- Included in delivery: 1 pair

Fits arbor hole size [Inches]	D [Inches]	H [Inches]	Max. H [Inches]	For wheel diameter [Inches}	EDP number	
1	1-1/2	1/2	7/8	4-6	45720	1
	1-1/2	5/8	7/8	4-6	45721	1
	1-1/2	3/4	7/8	4-6	45722	1
1-3/4	3-1/4	1/2	1-1/2	8-10	45725	1
	3-1/4	5/8	1-1/2	8-10	45726	1
	3-1/4	3/4	1-1/2	8-10	45727	1
	3-1/4	1	1-1/2	8-10	45728	1

POLINOX® unmounted flap wheels, threaded

Radial construction

Made of radially arranged flaps of non-woven abrasive material. A long service life is achieved through the dense packing of the flaps.

The unmounted flap wheel is designed for working on medium-sized surfaces with variable-speed angle grinders and fillet weld grinders, and can be mounted directly onto the drive system's spindle without the need for additional clamping devices.

Abrasive:
Aluminum oxide A

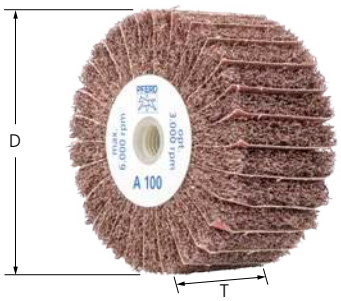
Compatible power tools:
angle grinder, cordless angle grinder

PFERD designation:
PNL

PFERDVALUE®:
Vibration Filter · Noise Filter · Haptic Filter

D [Inches]	T [Inches]	Thread [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
			100	180	280			
4	2	5/8-11	43188	43189	43190	3,000	6,000	5

Interleaved construction



The non-woven abrasive material is arranged in multiple radial flaps, with abrasive cloth interlayers. This flap structure facilitates improved stock removal and achieves a coarser surface finish.

The unmounted flap wheel is designed for working on medium-sized surfaces with variable-speed angle grinders and fillet weld grinders, and can be mounted directly onto the drive system's spindle without the need for additional clamping devices.

Abrasive:
Aluminum oxide A

PFERD designation:
PNZ

Compatible power tools:
angle grinder, cordless angle grinder

PFERDVALUE®:
Vibration Filter · Noise Filter · Haptic Filter

D [Inches]	T [Inches]	Thread [Inches]	Grit and EDP number		Opt. RPM	Max. RPM	
			100	180			
4	2	5/8-11	43013	43014	3,000	6,000	5

Corrugated construction

Made of several wavily arranged strips of non-woven abrasive material, wound around a core. The wavy structure of the non-woven abrasive material permits seamless matte finishing of surfaces.

The unmounted flap wheel is designed for working on medium-sized surfaces with variable-speed angle grinders and fillet weld grinders, and can be mounted directly onto the drive system's spindle without the need for additional clamping devices.

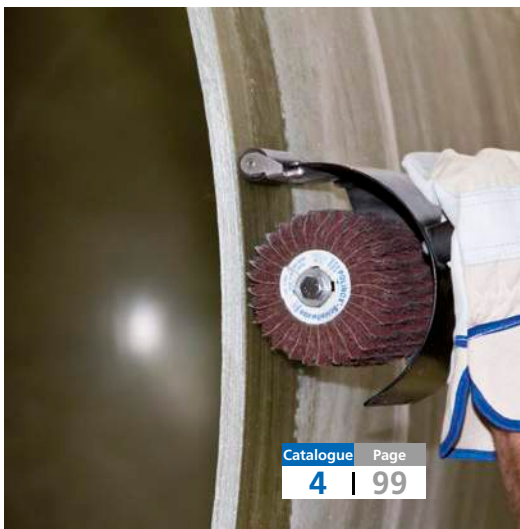
Abrasive:
Aluminum oxide A

PFERD designation:
PNG

Compatible power tools:
angle grinder, cordless angle grinder

PFERDVALUE®:
Vibration Filter · Noise Filter · Haptic Filter

D [Inches]	T [Inches]	Thread [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
			100	180	280			
4	2	5/8-11	43024	43025	43026	3,000	6,000	5
5	2	5/8-11	43107	43108	43109	2,300	4,900	1



POLINOX® finishing drums are especially suited to work on flat surfaces.

Advantages:

- Long service life due to tightly packed flaps.
- Cool grinding and low thermal load of the workpiece.
- No loading due to open structure and high flexibility of the non-woven material.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Roughing
- Deburring
- Surface work
- Cleaning
- Structuring (matte finishing and satin finishing)
- Step-by-step fine grinding

Compatible power tools:

- Drum grinders

Ordering notes:

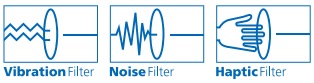
- The 3/4" centre hole diameter with 4 keyways fits all conventional drum grinders.
- Additional drum products can be found on pages 45, 78 and 120, as well as in catalogue section 8.

Safety notes:

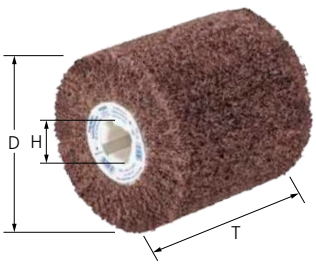
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

PFERDVALUE®:

PFERDERGONOMICS® recommends POLINOX® finishing drums to sustainably reduce vibration and noise levels during use and to improve working comfort.



POLINOX® finishing drums



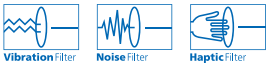
Radial construction

Made of radially arranged flaps of non-woven abrasive material. A long service life is achieved through the dense packing of the flaps.

Abrasive:
Aluminum oxide A

PFERD designation:
PNL

PFERDVALUE®:



D [Inches]	T [Inches]	Bore/ Thread [Inches]	Grit and EDP number				Opt. RPM	Max. RPM	
			80	100	180	280			
4	4	3/4	43102	43103	43104	43105	2,500	4,800	1
5	4	5/8-11	-	46786	46787	46788	2,300	3,100	1

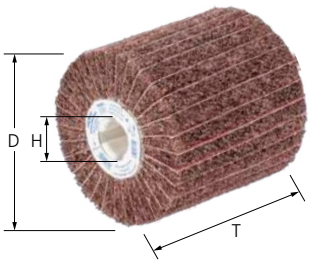
Interleaved construction

Made of radially arranged flaps of non-woven abrasive material. There is also abrasive cloth situated between the flaps. The flap structure facilitates improved stock removal and achieves a coarser surface finish.

Abrasive:
Aluminum oxide A

PFERD designation:
PNZ

PFERDVALUE®:



D [Inches]	T [Inches]	Bore/ Thread [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
			60	80	120			
4	4	3/4	43113	43114	43115	2,500	4,800	1
5	4	5/8-11	46789	46790	46791	2,300	3,100	1

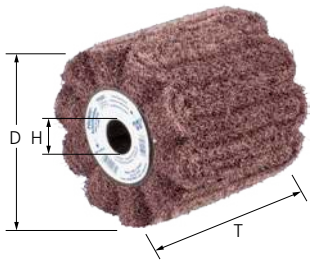
Corrugated construction

Made of several wavily arranged strips of non-woven abrasive material, wound around a core. The wavy structure of the non-woven abrasive material permits seamless brush matting of large surfaces.

Abrasive:
Aluminum oxide A

PFERD designation:
PNG

PFERDVALUE®:



D [Inches]	T [Inches]	Bore [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
			100	180	280			
4	4	3/4	43003	43004	43005	2,000	4,800	1

Linear finishing set

Complete linear finishing set for rough grinding to surface finishing. Set features linear finishing tool, as well as a selection of coated grinding belts, POLIVLIES® non-woven surface conditioning belts, and POLINOX® non-woven finishing drums. Pneumatic drum holder for belts also included.

Contents of the linear finishing set:

1 pc. each of:
- EDP 91217 – linear finishing tool, UWER 15/35 SI D19 120V
- EDP 49985 – 3-1/2" x 15-1/2" pneumatic drum 5/8-11 thread
- EDP 49986 – threaded spindle extension for pneumatic drum
- EDP 46790 5 x 4" POLINOX® interleaved grinding drum, 80 grit

2 pcs. each of:
- EDP 43613 – 3-1/2" x 15-1/2" POLIVLIES® non-woven belt, coarse grit
- EDP 43614 – 3-1/2" x 15-1/2" POLIVLIES® non-woven belt, medium grit
- EDP 43615 – 3-1/2" x 15-1/2" POLIVLIES® non-woven belt, fine grit

10 pcs. of:
- EDP 49314 – 3-1/2" x 15-1/2" coated belt A/O, 60 grit

Case dimensions [Inches]	EDP number	
6-1/3 x 10 x 22-4/5	49999	1

Radial construction

Non-woven abrasive flaps with a fibreglass backer, for face-down finishing work. Densely-stacked flaps for long service life.

The disc is designed for working on large surfaces with variable-speed angle grinders.

Abrasive:
Aluminum oxide A

PFERD designation:
PNL

Compatible power tools:
angle grinder, cordless angle grinder

PFERDVALUE®:

Ordering notes:
T = thickness

D [Inches]	T [Inches]	H [Inches]	Grit and EDP number			Opt. RPM	Max. RPM	
			100	180	280			
4-1/2	3/4	7/8	45891	45892	45893	2,500	5,300	5
5	3/4	7/8	45894	45895	45896	2,300	3,800	5

Interleaved construction

Interleaved abrasive and non-woven flaps with a fibreglass backer for face-down finishing work. Densely-stacked flaps for long service life and increased stock removal.

The disc is designed for working on large surfaces with variable-speed angle grinders.

Abrasive:
Aluminum oxide A

PFERD designation:
PNZ

Compatible power tools:
angle grinder, cordless angle grinder

PFERDVALUE®:

Ordering notes:
T = thickness

D [Inches]	T [Inches]	H [Inches]	Grit and EDP number		Opt. RPM	Max. RPM	
			100	180			
4-1/2	3/4	7/8	45911	45912	2,500	5,300	5
5	3/4	7/8	45915	45916	2,300	3,800	5

High-strength masking tape

High-strength masking tape

Used to create a clear separation between different grinding patterns in adjacent areas. The masking tape protects surfaces which have already been worked on, or which are not supposed to be worked on.

Advantages:
- 3/4" width: High elasticity and tear strength.
- 2" width: Reusable and extremely high durability.
- High edge stability.

Recommendations for use:
- 3/4" width: Use only during finish machining with soft, flexible products, e.g. non-woven products.
- To avoid its inadvertent removal, ensure that the masking tape is only applied in the running direction of the tool.

Workpiece materials:
aluminum, stainless steel (INOX)

L [Feet]	T [Inches]	EDP number	
82	3/4	43000	1
10	2	43001	1

PFERD supplies POLIVLIES® flap discs and hook and loop discs in various grit sizes, diameters and types. These are recommended for work on large surfaces made from stainless steel (INOX).

Advantages:

- Increased economic efficiency due to high abrasive performance and long service life.
- Creates a consistently high surface quality throughout the entire service life as new, sharp abrasive material is constantly exposed.
- Conforms to contours due to high flexibility.

Workpiece materials:

- Can be used on nearly all materials.

Compatible power tools:

- Angle grinders
- Cordless angle grinders

Ordering notes:

T = thickness

Safety notes:

- The specified maximum permitted rotational speed must never be exceeded.

Aluminum oxide A

For universal coarse to fine grinding applications in industry and professional trades.

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

Recommendations for use:
- For the best results, use at a recommended peripheral speed of 6,000–6,900 SFPM.

PFERD designation:
PVL

D [Inches]	T [Inches]	H [Inches]	Grit, type and EDP number			Opt. RPM	Max. RPM	
			100 C	180 M	240 F			
Plain arbor hole								
4-1/2	3/4	7/8	43273	43274	43275	5,000–5,800	13,300	5
5	3/4	7/8	43276	43277	43278	4,600–5,300	12,200	5
Threaded hub								
4-1/2	3/4	5/8-11	43285	43286	43287	5,000–5,800	13,300	5
5	3/4	5/8-11	43288	43289	43290	4,600–5,300	12,200	5

Ceramic oxide CO-COOL

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 loading and result in cooler grinding.

Abrasive:
Coated abrasive flaps: Ceramic oxide CO-COOL
Non-woven material: Aluminum oxide A
Available POLIVLIES® grit sizes:
100 C = coarse (yellow-brown)
180 M = medium (red-brown)
240 F = fine (blue)

Recommendations for use:
- For the best results, use at a recommended peripheral speed of 6,000–6,900 SFPM

PFERD designation:
PVZ

D [Inches]	T [Inches]	H [Inches]	Grit, type and EDP number			Opt. RPM	Max. RPM	
			CO-COOL 60 / A 100 C	CO-COOL 80 / A 180 M	CO-COOL 120 / A 240 F			
Plain arbor hole								
4-1/2	3/4	7/8	43297	43298	43299	5,000–5,800	13,300	5
5	3/4	7/8	43300	43301	43302	4,600–5,300	12,200	5
Threaded hub								
4-1/2	3/4	5/8-11	43309	43310	43311	5,000–5,800	13,300	5
5	3/4	5/8-11	43312	43313	43314	4,600–5,300	12,200	5

POLIVLIES® hook and loop discs

POLIVLIES® hook and loop discs are suited to grinding large surfaces. The pre-punched holes mean that they can be ideally centred on and used with various backing pads.

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

Recommendations for use:
- For the best results, use at a recommended peripheral speed of 3,000– 4,000 SFPM.
- Use with POLIVLIES® hook and loop disc holder.
- Break out the pre-punched centering hole if required.

Ordering notes:
- Please order POLIVLIES® hook and loop disc holders separately.

PFERD designation:
PVKR

D_1 [Inches]	Grit, type and EDP number			Opt. RPM	Max. RPM	Compatible backing pad	
	100 C	180 M	240 F				
4-1/2	43446	43447	43449	3,300	5,300	43407	10
5	43450	43451	43453	3,000	4,850	43408	10
7	43458	43459	43461	2,200	3,500	43409	10

POLIVLIES® hook and loop disc holders

POLIVLIES® hook and loop disc holders

Backing pads for POLIVLIES® hook and loop discs.

Advantages:
- Increased economic efficiency as the discs can be changed quickly.
- Enables surface finishing without visible transitions.
- Centering pin enables faster central clamping.

D [Inches]	Thread [Inches]	EDP number	Max. RPM	
With centering pin				
4-1/2	5/8-11	43407	5,300	1
5	5/8-11	43408	4,850	1
7	5/8-11	43409	3,500	1
Without centering pin				
4-1/2	5/8-11	43410	5,300	1
5	5/8-11	43412	4,850	1
7	5/8-11	43420	3,500	1

POLICLEAN® PLUS is a coarsely structured, abrasive, non-woven cleaning fabric that was developed from a special combination of synthetic fibres and abrasive grain.

The comprehensive range of POLICLEAN® PLUS products contain:
- POLICLEAN® PLUS wheels
- POLICLEAN® PLUS mounted wheels
- COMBIDISC® POLICLEAN® PLUS discs (see COMBIDISC® discs, page 34)
- POLICLEAN® PLUS discs

Advantages:

- High flexibility and open structure mean ideal adaptation to contours and no loading of the product itself.
- The POLICLEAN® PLUS material exhibits considerably higher stock removal rates with a long service life, and is also very aggressive.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Roughing
- Surface work
- Cleaning
- Removing heat discolouration
- Removing paint
- Derusting
- Descaling
- Removing oxidation

Abrasive:

- Aluminum oxide A

Recommendations for use:

- For best performance, use with a recommended peripheral speed of 3,000–4,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and product wear.

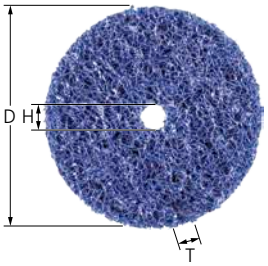
Safety notes:

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

Recommended rotational speed range

Example:
EDP: 44791, 4" POLICLEAN® PLUS wheel
Peripheral speed: 3,000–4,000 SFPM
Rotational speed: 2,900–3,800 RPM

Wheel dia. [Inches]	Peripheral speed [SFPM]				
	2,000	3,000	4,000	6,000	8,000
	Rotational speeds [RPM]				
3	2,500	3,800	5,100	7,600	10,200
4	1,900	2,900	3,800	5,700	7,600
4-1/2	1,700	2,500	3,400	5,100	6,800
5	1,500	2,300	3,100	4,600	6,100
6	1,300	1,900	2,500	3,800	5,100



POLICLEAN® PLUS wheels

For coarse cleaning work such as removing paint, scale, heat discolouration, rust and adhesive residues in peripheral grinding.

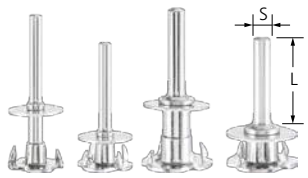
POLICLEAN® PLUS discs exhibit a higher stock removal rate with a very long service life.

Recommendations for use:
- For work on larger surfaces, pack several POLICLEAN® PLUS wheels with the appropriate arbor.

Compatible power tools:
flexible shaft drive, power drill, straight grinder

Ordering notes:
- Please order the matching arbor separately.

D [Inches]	T [Inches]	H [Inches]	EDP number	Opt. RPM	Max. RPM	
3	1/2	1/4	44790	4,000–5,100	10,000	6
4	1/2	1/2	44791	3,000–3,800	7,500	4
6	1/2	1/2	44792	2,000–2,500	5,100	4



Drive arbors for POLICLEAN® PLUS wheels

Arbors for POLICLEAN® PLUS wheels. The different variants provide space for 1 or 2 wheels.

Advantages:
- Increased economic efficiency due to quick wheel changes.

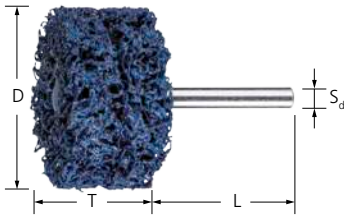
Recommendations for use:
- When replacing the wheels, leave the arbor clamped in the power tool.

Fits arbor hole size [Inches]	S [Inches]	L [Inches]	Compatible POLICLEAN® PLUS wheel	EDP number	No. of wheels	
1/2	1/4	1-1/2	44790, 44791, 44972	44835	1 wheel	1
	1/4	1-1/2	44790, 44791, 44972	44836	2 wheels	1
	3/8	1-1/2	44790, 44791, 44972	44838	1 wheel	1
	3/8	1-1/2	44790, 44791, 44972	44839	2 wheels	1

POLICLEAN® PLUS mounted wheels

For coarse cleaning work such as removing paint, scale, heat discolouration, rust and adhesive residues in peripheral grinding.

Compatible power tools:
flexible shaft drive, power drill, straight grinder



D [Inches]	T [Inches]	S_d [Inches]	L [Inches]	EDP number	Opt. RPM	Max. RPM	
2	1/2	1/4	1-1/2	44884	6,000–7,000	15,000	5
	1	1/4	1-1/2	44885	6,000–7,000	15,000	5
3	1/2	1/4	1-1/2	44886	4,000–5,100	10,000	5
	1	1/4	1-1/2	44887	4,000–5,100	10,000	5
4	1/2	1/4	1-1/2	44888	3,000–3,800	7,500	5

POLICLEAN® PLUS discs

The non-woven cleaning material is glued to a fibreglass backer. This makes POLICLEAN® PLUS discs ideal for use in face-down grinding.

For coarse cleaning work such as removing paint, scale, heat discolouration, rust and adhesive residues.

POLICLEAN® PLUS discs exhibit a high stock removal rate with a very long service life.

Recommendations for use:
- Preferably for use on slow-running angle grinders.
- For the best results, use at a recommended peripheral speed of 6,000–6,900 SFPM.

Compatible power tools:
angle grinder, cordless angle grinder

Ordering notes:
T = thickness

D [Inches]	T [Inches]	H [Inches]	EDP number	Opt. RPM	Max. RPM	
Plain arbor hole						
4-1/2	1/2	7/8	44874	5,000–7,000	10,000	5
5	1/2	7/8	44875	5,000–7,000	10,000	5
Threaded hub						
4-1/2	1/2	5/8-11	44879	5,000–7,000	10,000	5
5	1/2	5/8-11	44880	5,000–7,000	10,000	5

Poliflex® finishing points
General information

Poliflex® finishing points are manufactured with high shape accuracy, consistent quality and tight dimensional tolerances.

They are ideal for fine grinding, structuring and preparations for polishing work, and are very frequently used for tool and die making applications.

Advantages:

- For achieving very high surface quality standards.
- High productivity due to long service life and very high stock removal rate.
- Excellent working comfort due to precise concentricity.

Applications:

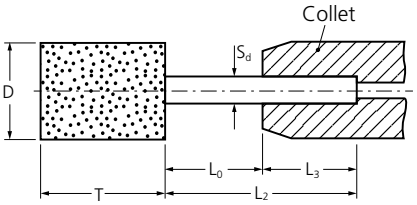
- Structuring (matte finishing, brush matting and satin finishing)
- Step-by-step fine grinding

Recommendations for use:

- Depending on the application, profile with a diamond dresser or with ceramic dressing stones at a low rotational speed. Please refer to catalogue section 3 for detailed information and ordering data for dressing products.

Explanation of the code system according to EN 12413:

D = Grinding point outer diameter
T = Grinding point width
S_d = Shank diameter
L_0 = Unsupported shank length
L_2 = Shank length
L_3 = Clamping length of shank



Safety notes:

The following maximum operating speeds are permitted for Poliflex® finishing points:

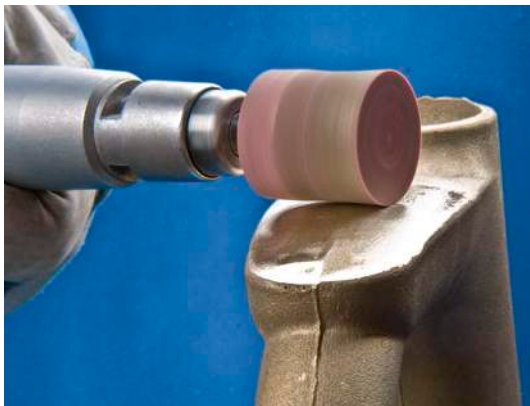
GR	**3,000 SFPM**
LR	**6,000 SFPM**

- The maximum rotational speeds for the various shank lengths and shank diameters are defined in DIN 69170 based on EN 12413. These must be adhered to in order to avoid buckling of the shank during use. Regardless of the shank length, the clamping length (L_3) of the shank must be at least 1/2".
- Each packaging unit of PFERD finishing points comes with rotational speed specifications for the unsupported shank length (L_0) of that wheel. Proper concentric accuracy and correct clamping of the power tool must also be ensured.

Recommended rotational speed range

Example:
EDP 36491, A21 120 grit, rubber bond
Poliflex® dia.: 1"
Peripheral speed: 3,000 SFPM
Rotational speed: 11,500 RPM

Finishing point dia. [Inches]	Peripheral speed [SFPM]					
	2,000	2,400	3,000	4,000	5,000	6,000
	Rotational speeds [RPM]					
1/4	30,600	36,700	45,800	61,100	76,400	91,700
5/16	24,400	29,300	36,700	48,900	61,100	73,300
3/8	20,400	24,400	30,600	40,700	50,900	61,100
1/2	15,300	18,300	22,900	30,600	38,200	45,800
5/8	12,200	14,700	18,300	24,400	30,600	36,700
11/16	11,100	13,300	16,700	22,200	27,800	33,300
3/4	10,200	12,200	15,300	20,400	25,500	30,600
7/8	8,700	10,500	13,100	17,500	21,800	26,200
1	7,600	9,200	11,500	15,300	19,100	22,900
1-1/4	6,100	7,300	9,200	12,200	15,300	18,300



Poliflex® finishing points
Quick product selection guide

To make it easier to choose the right Poliflex® finishing point, we have designed our range around material groups, main areas of application and special operational requirements.

How do you find the best Poliflex® finishing point?

The table below shows which variations of abrasives and bonds are recommended for various materials. The differentiation of the selection criteria allows the user to find the best finishing point by material, application and surface finish. The bond and grain mixture have a large impact on the abrasive performance, service life and aggressiveness of the points. They also determine the look of the surface.

Choose your Poliflex® finishing point by:

❶ Material of component ❷ Type of application ❸ Desired surface finish ❹ Bond ❺ Reference catalogue page for more information

❶ Material group ▼			❷ Application ▼	❸ Surface finish ▼	Bond ▶	Elastomer bond	
					Abrasive (grain mixtures) ▶	AR	AW
							
					❹ Designation/ bond ▶	GR	LR
					Recommended peripheral speed ▶	2,000–2,400 SFPM	2,000–3,000 SFPM
Steel, cast steel	Non-hardened, non-heat-treated steels	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, tempering steels, cast steel	**Surface grinding**	Matte surface		❍	
				Shiny surface		●	❍
			Edge grinding with high dimensional stability	Matte surface		❍	
				Shiny surface			
	Hardened, heat-treated steels	Tool steels, tempering steels, alloyed steels, alloyed cast steel	**Surface grinding**	Matte surface		❍	
				Shiny surface		❍	●
			Edge grinding with high dimensional stability	Matte surface			
				Shiny surface			
Stainless steel (INOX)	Rust- and acid-resistant steels	Austenitic and ferritic stainless steels	**Surface grinding**	Matte surface			
				Shiny surface		●	❍
			Edge grinding with high dimensional stability	Matte surface			
				Shiny surface			❍
			General use	Structured surface			
Non-ferrous metals	Soft non-ferrous metals, non-ferrous metals	Aluminum alloys, brass, copper, zinc	**Surface grinding**	Matte surface			
				Shiny surface		❍	●
			Edge grinding with high dimensional stability	Matte surface			
				Shiny surface		❍	●
	Hard non-ferrous metals	Bronze, titanium, titanium alloys, hard aluminum alloys	**Surface grinding**	Matte surface			
				Shiny surface		❍	
			Edge grinding with high dimensional stability	Matte surface			
				Shiny surface			
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys	**Surface grinding**	Matte surface			
				Shiny surface		●	
			Edge grinding with high dimensional stability	Matte surface			
				Shiny surface			
● = highly recommended ❍ = recommended					❺ Catalogue page ▶	110–111	112–113

Poliflex® finishing points
Rubber bond

Poliflex® finishing points with the rubber bond are manufactured with pink aluminum oxide. The rubber (GR) bond is an elastomer-based soft bond. Ideal for use on surfaces.

Advantages:

- For achieving a fine, shiny surface finish.
- **Rubber bond:** Soft grinding due to soft, elastic bond.

Abrasive:

- White aluminum oxide AW

Applications:

- Step-by-step fine grinding

Compatible power tools:

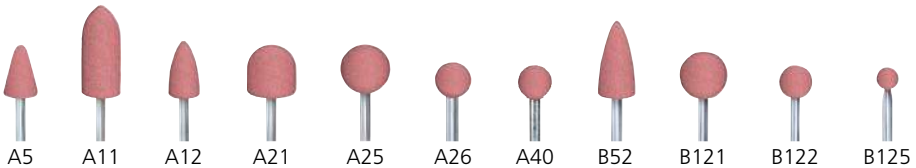
- Flexible shaft drives
- Straight grinders

Recommendations for use:

- Depending on the application, profile with a diamond dresser or with ceramic dressing stones at a low rotational speed. Please refer to catalogue section 3 for detailed information and ordering data for dressing products.
- **Rubber bond:** For best performance, use with a recommended peripheral speed of 2,000–2,400 SFPM.

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- The clamping length of the shank must be at least 1/2".



Series A and B

Finishing points available in a variety of shapes for fine grinding of small surfaces.

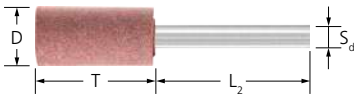
Dimensional specifications:
- D = Mounted point outer diameter
- T = Mounted point width
- S_d = Shank diameter
- L_2 = Shank length

PFERD designation:
GR

Shape	D [Inches]	T [Inches]	Grit	EDP number	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/8" x 1-1/4" [S_d x L_2]								
B122	3/8	3/8	120	36361	24,000	68,740	37,790	10
B125	1/4	1/4	120	36401	36,000	75,330	50,640	10
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
A5	3/4	1-1/8	120	36461	12,000	38,550	31,270	10
A11	7/8	2	120	36471	10,000	25,420	20,100	10
A12	11/16	1-1/4	120	36481	13,000	38,050	30,790	10
A21	1	1	120	36491	9,000	35,510	28,840	10
A25	1	1	120	36451	9,000	35,510	28,840	10
A26	5/8	5/8	120	36431	14,000	48,980	40,410	10
A40	3/4	3/4	120	36441	12,000	50,930	50,930	10
B52	3/8	3/4	120	36501	24,000	78,340	54,390	10
B121	1/2	1/2	120	36421	18,000	69,310	45,850	10

Series W

Finishing points in cylindrical shape, for fine grinding of small surfaces.



PFERD designation:
GR

Shape	D [Inches]	T [Inches]	Grit	EDP number	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/8" x 1-1/4" [S_d x L_2]								
W162	1/4	3/8	120	36101	36,000	67,210	44,040	10
W168	5/16	5/16	120	36111	29,000	65,900	42,790	10
W170	5/16	1/2	120	36121	29,000	54,860	34,040	10
W174	3/8	1/4	120	36131	24,000	65,510	42,440	10
W175	3/8	3/8	120	36141	24,000	57,530	35,990	10
W176	3/8	5/8	120	36151	24,000	50,460	30,450	10
W185	1/2	1/2	120	36171	18,000	42,750	24,370	10
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
W178	3/8	1	120	36191	24,000	40,360	30,780	10
W193	5/8	3/8	120	36231	14,500	44,330	34,340	10
W196	5/8	1	120	36251	14,500	34,670	25,340	10
W204	3/4	3/4	120	36281	12,000	36,510	27,040	10
W220	1	1	120	36311	9,000	30,370	21,410	10
W230	1-1/4	1-1/4	120	36331	7,200	25,200	16,760	5

Poliflex® finishing points
Leather bond

Poliflex® finishing points with the leather bond are manufactured with white aluminum oxide. The leather (LR) bond is a hard, sturdy bond. Ideal for use on surfaces.

Advantages:

- For achieving a fine, shiny surface finish.
- High productivity due to long service life and very high stock removal rate.

Abrasive:

- Aluminum oxide A

Applications:

- Step-by-step fine grinding

Compatible power tools:

- Flexible shaft drives
- Straight grinders

Recommendations for use:

- Depending on the application, profile with a diamond dresser or with ceramic dressing stones at a low rotational speed. Please refer to catalogue section 3 for detailed information and ordering data for dressing products.
- **Leather bond:** For best performance, use with a recommended peripheral speed of 3,000–4,000 SFPM.

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- The clamping length of the shank must be at least 1/2".

Series A and B

Finishing points available in a variety of shapes for fine grinding of small surfaces.

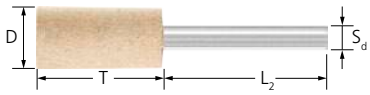
Dimensional specifications:
- D = Mounted point outer diameter
- T = Mounted point width
- S_d = Shank diameter
- L_2 = Shank length

PFERD designation:
LR

Shape	D [Inches]	T [Inches]	Grit	EDP number	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/8" x 1-1/4" [S_d x L_2]								
B122	3/8	3/8	120	36365	40,000	68,740	37,790	10
B125	5/16	5/16	120	36405	60,000	75,330	50,640	10
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
A5	3/4	1-1/8	120	36465	20,000	38,550	31,270	10
A11	7/8	2	120	36475	17,000	25,420	20,100	10
A12	11/16	1-1/4	120	36485	22,000	38,050	30,790	10
A21	1	1	120	36495	15,000	35,510	28,840	10
A25	1	1	120	36455	15,000	35,510	28,840	10
A26	5/8	5/8	120	36435	24,000	48,980	40,410	10
A40	3/4	3/4	120	36445	20,000	50,930	50,930	10
B52	3/8	3/4	120	36505	40,000	78,340	54,390	10
B121	1/2	1/2	120	36425	30,000	69,310	45,850	10

Series W

Fine finishing points in cylindrical shape, for fine grinding of small surfaces.



PFERD designation:
LR

Shape	D [Inches]	T [Inches]	Grit	EDP number	Recom. RPM 1/2" overhang	Max. RPM 1/2" overhang	Max. RPM 1" overhang	
Shank diameter 1/8" x 1-1/4" [S_d x L_2]								
W162	1/4	3/8	120	36105	60,000	67,210	44,040	10
W168	5/16	5/16	120	36115	48,000	65,900	42,790	10
W170	5/16	1/2	120	36125	48,000	54,860	34,040	10
W174	3/8	1/4	120	36135	40,000	65,510	42,440	10
W175	3/8	3/8	120	36145	40,000	57,530	35,990	10
W176	3/8	5/8	120	36155	40,000	50,460	30,450	10
W185	1/2	1/2	120	36175	30,000	42,750	24,370	10
W186	1/2	3/4	120	36185	30,000	31,220	15,900	10
Shank diameter 1/4" x 1-1/2" [S_d x L_2]								
W178	3/8	1	120	36195	40,000	40,360	30,780	10
W193	5/8	3/8	120	36235	24,000	44,330	34,340	10
W196	5/8	1	120	36255	24,000	34,670	25,340	10
W204	3/4	3/4	120	36285	24,000	36,510	27,040	10
W206	3/4	1-1/4	120	36295	20,000	29,810	20,870	10
W220	1	1	120	36315	15,000	30,370	21,410	10
W230	1-1/4	1-1/4	120	36335	13,000	25,200	16,760	10

Poliflex® finishing wheels
General information – Textile wheels

Poliflex® wheels with the textile (TX) bond are manufactured with standard aluminium oxide. The textile fabric inlays make the TX bond a very hard, sturdy bond. Recommended for use on edges.

Advantages:

- For achieving a fine, matte surface finish.
- High profitability due to high abrasive performance and long service life.

Abrasive:

- Aluminum oxide A

Applications:

- Step-by-step fine grinding
- Surface grinding
- Weld removal
- Blending
- Deburring
- Edge grinding

Compatible power tools:

- Angle grinder
- Cordless angle grinder

Recommendations for use:

- Poliflex® textile wheels grind and finish in one operation.

Safety notes:

- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.
- Poliflex® textile wheels perform best at a recommended peripheral speed of 6,000–9,800 SFPM.

Textile wheels

TX INOX + ALU

Textile wheels are cotton-fibre based abrasive products developed for medium to light grinding, weld blending, deburring and surface finishing of stainless steel and aluminum. Textile wheels grind and finish in one operation.

Workpiece materials:
stainless steel (INOX), aluminum

Applications:
surface grinding, weld removal, blending, deburring and edge grinding

Abrasive:
Aluminum oxide A

PFERD designation:
TX

Ordering notes:
U = thickness

D [Inches]	U [Inches]	H [Inches]	Grit and EDP number 36	54	Max. RPM	
Depressed centre (type 27) – plain arbor hole						
4-1/2	1/4	7/8	61433	61434	13,300	10
Depressed centre (type 27) – threaded arbor hole						
4-1/2	1/4	5/8-11	61442	61443	13,300	10

The comprehensive range of polishing products include:
- Felt points
- Mounted felt flap wheels
- Felt wheels
- Felt flap discs
- Cloth rings

Felt points and discs are predominantly used for high-gloss polishing.

Advantages:

- Felt points and discs: Precise retention of geometric shapes due to the hardness of these products.
- Felt flap discs, cloth rings and mounted felt flap wheels: Excellent adaptation to contours due to high flexibility.
- Can be freely shaped, meaning they can be used on complicated geometries.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Polishing

Recommendations for use:

- For best performance, use with a recommended peripheral speed of 1,000–2,000 SFPM. This provides an ideal compromise between stock removal rate, surface quality, thermal load on the workpiece and service life.
- **Felt points and discs:**
  Use diamond polishing pastes and polishing paste bars.
- **Cloth rings and mounted felt flap wheels:**
  Use polishing and grinding pastes.
- When changing the polishing paste, use a brand-new polishing product.

Safety notes:

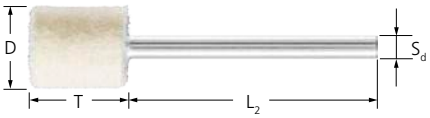
- For safety reasons, the specified maximum permitted rotational speed must never be exceeded.

Recommended rotational speed range

Example:
EDP 48520, Cylindrical shape, dia. 1/4"
Peripheral speed: 1,000–2,000 SFPM
Rotational speed: 15,300–30,600 RPM

Example:
EDP 48576, Conical pointed shape, dia. 3/4"
Peripheral speed: 2,000–3,000 SFPM
Rotational speed: 10,200–15,300 RPM

Polishing product dia. [Inches]	Peripheral speed [SFPM]					
	1,000	2,000	3,000	4,000	5,000	6,300
	Rotational speeds [RPM]					
1/4	15,300	30,600	45,800	61,100	76,400	96,300
5/16	12,200	24,400	36,700	48,900	61,100	77,000
3/8	10,200	20,400	30,600	40,700	50,900	64,200
1/2	7,600	15,300	22,900	30,600	38,200	48,100
9/16	6,800	13,600	20,400	27,200	34,000	42,800
3/4	5,100	10,200	15,300	20,400	25,500	32,100
1	3,800	7,600	11,500	15,300	19,100	24,100
1-1/4	2,500	5,100	7,600	10,200	12,700	16,000
2	1,900	3,800	5,700	7,600	9,600	12,000
2-1/4	1,600	3,200	4,800	6,400	8,000	10,100
3	1,300	2,500	3,800	5,100	6,400	8,000
4	1,000	1,900	2,900	3,800	4,800	6,000
4-1/2	800	1,700	2,500	3,400	4,200	5,300
5	800	1,500	2,300	3,100	3,800	4,800
6	600	1,300	1,900	2,500	3,200	4,000
8	500	1,000	1,400	1,900	2,400	3,000

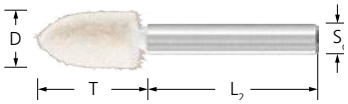


Cylindrical shape

Cylindrical shape points, primarily for peripheral use. Feature a centre hole to facilitate face-down polishing.

Compatible power tools:
flexible shaft drive, straight grinder

D [Inches]	T [Inches]	EDP number	Opt. RPM	Max. RPM	
Shank diameter 1/8" x 1-5/8" [S_d x L_2]					
1/4	3/8	48520	16,000–32,000	79,500	10
5/16	3/8	48521	12,000–24,000	59,500	10
3/8	9/16	48522	10,000–20,000	47,500	10
Shank diameter 1/4" x 1-5/8" [S_d x L_2]					
3/8	9/16	48523	10,000–20,000	47,500	10
9/16	3/4	48524	6,000–12,000	31,500	10
3/4	1	48525	5,000–10,000	23,500	10
1	1-1/4	48526	4,000–8,000	19,000	10

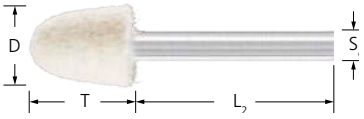


Conical pointed shape

The conical pointed shape is mainly used for work on radii and contours.

Compatible power tools:
flexible shaft drive, straight grinder

D [Inches]	T [Inches]	EDP number	Opt. RPM	Max. RPM	
Shank diameter 1/8" x 1-5/8" [S_d x L_2]					
5/16	1/2	48570	12,000–24,000	59,500	10
3/8	3/4	48571	10,000–20,000	47,500	10
1/2	3/4	48573	8,000–16,000	39,500	10
Shank diameter 1/4" x 1-5/8" [S_d x L_2]					
3/8	3/4	48572	10,000–20,000	47,500	10
9/16	3/4	48574	6,000–12,000	31,500	10
9/16	1-1/4	48575	6,000–12,000	31,500	10
3/4	1	48576	5,000–10,000	23,500	10



Conical shape with radius end

The conical shape is mainly used for work on radii.

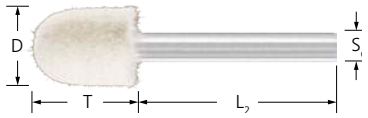
Compatible power tools:
flexible shaft drive, straight grinder

D [Inches]	T [Inches]	EDP number	Opt. RPM	Max. RPM	
Shank diameter 1/4" x 1-5/8" [S_d x L_2]					
9/16	3/4	48600	6,000–12,000	31,500	10
3/4	1	48601	5,000–10,000	23,500	10
1	1-1/4	48602	4,000–8,000	19,000	10
1-1/4	1-3/8	48603	3,000–6,000	15,500	10

Cylindrical shape with radius end

The cylindrical shape with radius end is mainly used for work on small, concave contours.

Compatible power tools:
flexible shaft drive, straight grinder



D [Inches]	T [Inches]	EDP number	Opt. RPM	Max. RPM	
Shank diameter 1/8" x 1-5/8" [S_d x L_2]					
5/16	1/2	48630	12,000–24,000	59,500	10
3/8	9/16	48631	10,000–20,000	47,500	10
Shank diameter 1/4" x 1-5/8" [S_d x L_2]					
9/16	3/4	48632	6,000–12,000	31,500	10
3/4	1	48633	5,000–10,000	23,500	10
1	1-1/4	48634	4,000–8,000	19,000	10

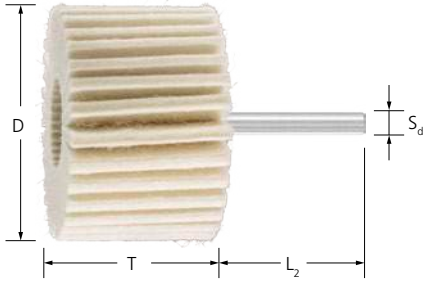
Mounted felt flap wheels

Mounted felt flap wheels are used for pre-polishing and high-gloss polishing on small to medium-sized components.

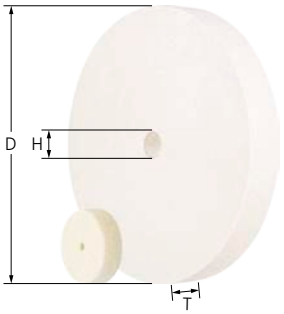
Advantages:
- Low thermal load on the workpiece.

Compatible power tools:
flexible shaft drive, straight grinder

Recommendations for use:
- Use the hard type for pre-polishing flat surfaces, and the soft type for high-gloss polishing and processing workpieces with lots of contours.
- If very fine finishes need to be achieved, the two types can be used successively.



D [Inches]	T [Inches]	Type and EDP number		Opt. RPM	Max. RPM	
		W (soft)	H (hard)			
Shank diameter 1/4" x 1-1/2" [S_d x L_2]						
1	3/8	48540	48541	7,500	24,500	5
1	1	48542	48543	7,500	24,500	5
2	1	48546	48547	3,800	12,000	5
3	1	48550	48551	2,400	7,500	5
3	2	48552	48553	2,400	7,500	5



Felt wheels

Felt wheels are mainly used peripherally.

Compatible power tools:
flexible shaft drive, straight grinder

Ordering notes:
- Please order the matching arbor separately.

D [Inches]	T [Inches]	H [Inches]	EDP number	Opt. RPM	Max. RPM	Recommended arbors	
1-1/4	1/4	1/4	48690	3,000–6,000	20,000	69029	5
1-3/4	3/8	1/4	48691	2,000–4,000	13,500	69029	5
2-1/4	3/8	1/4	48692	1,500–3,000	10,000	69029	5
3	3/8	3/8	48693	1,000–2,000	7,500	69027	5
4	3/4	3/8	48695	900–1,800	6,100	69031	1
5	3/4	3/4	48697	750–1,500	4,900	69032	1
6	1	3/4	48699	600–1,200	4,000	69032	1
8	1-1/4	3/4	48700	500–1,000	3,000	69032	1

Felt flap discs

Felt flap discs

Felt flap discs are used for pre-polishing and high-gloss polishing on medium-sized to large components.

Advantages:
- Low thermal load on the workpiece.

Recommendations for use:
- Use the hard type for pre-polishing flat surfaces, and the soft type for high-gloss polishing and processing workpieces with many contours.
- If very fine finishes need to be achieved, the two types can be used successively.

Compatible power tools:
angle grinder, cordless angle grinder

Ordering notes:
T = thickness

D [Inches]	T [Inches]	H [Inches]	Type and EDP number		Opt. RPM	Max. RPM	
			W (soft)	H (hard)			
4-1/2	7/8	7/8	48802	48803	1,650	8,350	5
5	7/8	7/8	48804	48805	1,500	7,650	5

Cloth rings

Cloth rings are used for pre-polishing and high-gloss polishing with polishing pastes. If the intention is to achieve very smooth surface finishes, use several or even all variants successively.

Cloth rings are available in four types:
ST (sisal cloth) = Coarse pre-polishing
TH (hard cloth) = Pre-polishing
TW (soft cloth) = High-gloss polishing
FL (flannel) = High-gloss polishing/buffing

Recommendations for use:
- Pre-polishing of steel and INOX: Cloth rings ST or TH with green polishing paste.
- Pre-polishing of aluminum and brass: Cloth rings ST or TH with grey polishing paste.
- Pre-polishing of non-ferrous metals: Cloth rings ST or TH with brown polishing paste.
- High-gloss polishing on all metals: Cloth rings TW or FL with pink polishing paste.
- High-gloss polishing on plastics: Cloth rings TW or FL with beige polishing paste.
- Type TW and FL cloth rings achieve their best performance at a recommended peripheral speed of 1,000–3,000 SFPM.
- Type ST and TH cloth rings achieve their best performance at a recommended peripheral speed of 2,000–3,000 SFPM.

Compatible power tools:
flexible shaft drive, straight grinder

Ordering notes:
- Please order arbor separately.

D [Inches]	H [Inches]	Face width [Inches]		Type and EDP number				Opt. RPM	Max. RPM	Recommended arbors		
		Sisal	Hard, soft and flannel	ST	TH	TW	FL			Sisal	Hard, soft and flannel	
3	3/8	3/4	3/8	48710	48720	48730	48740	2,500	7,500	69027	69027	5
4	3/8	3/4	3/8	48711	48721	48731	48741	1,900	6,100	69027	69027	5
6	3/4	1	3/8	48713	48723	48733	48743	1,250	4,000	69032	69032	5
8	3/4	1	3/8	48714	48724	48734	48744	950	3,000	69032	-	5

Drive arbors for cloth rings

Matching arbors for felt wheels and cloth rings.

Advantages:
- Increased economic efficiency due to quick product changes.

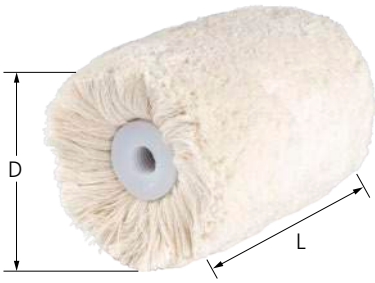
EDP 69029

EDP 69027

EDP 84656

EDP 69032

Fits arbor hole size [Inches]	S [Inches]	L [Inches]	Clamping width [Inches]	EDP number	
1/4	1/4	7/8	3/16–3/4	69029	1
3/8	1/4	7/8	0–5/16	69027	1
1/2, 5/8	1/4	3/4	1/8–1/2	84656	1
1/2, 3/4	3/8	1	1/4–1	69032	1



Buffing drum

Buffing drum is made from densely packed soft cotton yarn and is used for high-gloss polishing with polishing pastes. Numerous string ends hold buffing compounds and high pliability enables finishes on irregular surfaces.

Advantages:
- Extremely flexible for polishing contours.
- Quickly achieves a polished surface.

Recommendations for use:
- Use a sufficient amount of polishing paste to achieve a polished finish.

Compatible power tools:
drum grinder

Ordering notes:
- Additional drum products can be found on pages 45, 78, 100 and 101, as well as in catalogue section 8.
- Refer to our "Power tools" catalogue section 9 for information on the linear finishing tool, EDP 91217.

D [Inches]	L [Inches]	Thread [Inches]	EDP number	Opt. RPM	Max. RPM	
4	4	5/8-11	48842	3,500	3,500	1

PFERD offers grinding pastes for use in extremely fine grinding work, such as when grinding in valve seats, shaft bearings and as a preparation for polishing with felt polishing products and cloth rings.
PFERD offers five different polishing paste bars that are clearly marked with different colours to easily identify the respective application task. You can find the key for the respective colours in the table below.

Advantages:

- High productivity.
- Quick results.
- Coordinated system.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Polishing
- Step-by-step fine grinding

Grinding pastes

Oil-soluble grinding pastes with sharp-edged SiC grain.

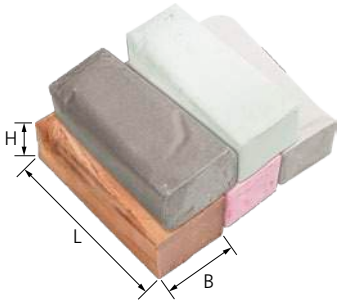
Grit size	EDP number	Contents [oz]	Contents [grams]	
90	48770	8.82	250	1
150	48771	8.82	250	1
280	48772	8.82	250	1
360	48773	8.82	250	1
600	48774	8.82	250	1
800	48775	8.82	250	1

Polishing paste bars

Apart from being used with felt products, polishing pastes are also used in combination with cloth rings and buffing drums for pre-polishing and high-gloss polishing. If the intention is to achieve very smooth surface finishes, use several or even all types successively.

Intended applications for the different types:
ST (sisal cloth) = Coarse pre-polishing with green, grey, or brown pastes
TH (hard cloth) = Pre-polishing with green, grey, or brown pastes
TW (soft cloth) = High-gloss polishing with pink or beige pastes
FL (flannel) = High-gloss polishing/buffing with pink or beige pastes

Polishing paste bars are available in a small pack and bulk packs.



Type	Use for	EDP number	Contents [oz]	Contents [grams]	Colour	B [Inches]	H [Inches]	L [Inches]	
Bulk pack									
pre-polishing	Steel + stainless steel (INOX)	48760	38.8	1,100	green	2-3/4	2	5-1/2	1
	Aluminum + brass	48761	45.8	1,300	grey	2-3/4	2	5-1/2	1
	Non-ferrous metals	48762	40.5	1,150	brown	2-3/4	2	5-1/2	1
high-gloss polishing	All metals	48763	40.5	1,150	pink	2-3/4	2	5-1/2	1
	plastics	48764	38.8	1,100	beige	2-3/4	2	5-1/2	1
Small pack									
pre-polishing	Steel + stainless steel (INOX)	48765	3.8	108	green	1	1-1/4	3-1/2	1
	Aluminum + brass	48766	5.0	142	grey	1	1-1/4	3-1/2	1
	Non-ferrous metals	48767	3.9	111	brown	1	1-1/4	3-1/2	1
high-gloss polishing	All metals	48768	4.7	132	pink	1	1-1/4	3-1/2	1
	plastics	48769	3.6	104	beige	1	1-1/4	3-1/2	1

Grinding and polishing pastes
Diamond polishing pastes

Diamond polishing pastes are used for work on hard materials, such as tungsten carbide and hardened steels. They are used in combination with felt polishing elements.
Diamond polishing pastes can be diluted and dissolved with water and alcohol.

Available grit sizes:
30 (coarse) = P 500
15 (medium) = P 1200
10 (medium-fine) = P 2000
7 (fine) = P 3000
3 (very fine) = P 5000
1 (ultra-fine) = P 14000
(P = Grit size according to ISO 6344)

Advantages:

- High productivity.
- Quick results.
- Precisely coordinated granulation rows.

Workpiece materials:

- Can be used on almost all hard materials, such as tungsten carbide and hardened steels.

Applications:

- Polishing
- Step-by-step fine grinding

Ordering notes:

- The grit sizes are specified in µm.

Diamond polishing pastes

Diamond polishing pastes guarantee quick and efficient work, particularly in tool and die making.

Recommendations for use:

- When using diamond polishing pastes, use the coarse paste first.
- If extensive surface improvements are required, use several grit sizes one after another, each finer than the previous, cleaning well between pastes.
- When changing grit size, make sure that a new, clean polishing product (e.g. felt point or felt wheel) is used.

Grit size [µm]	EDP number	Contents		Colour of sealing cap	
		[oz]	[grams]		
30	48799	0.35	10	brown	1
15	48798	0.35	10	blue	1
10	48797	0.35	10	light blue	1
7	48796	0.35	10	red	1
3	48795	0.35	10	green	1
1	48794	0.35	10	yellow	1

Highly effective cleaners and maintenance products that can be applied to a very wide range of components.

Workpiece materials:

- Can be used on nearly all materials.

Applications:

- Cleaning
- Preserving
- Protecting

Universal cleaner

Highly effective, universal workshop cleaner for cleaning and de-greasing components as a preparation for painting. Removes polishing paste residue, processing oils, corrosion-protection oils, light waxes and other types of contamination.

Advantages:
- Biodegradable surfactants.
- Short drying time.
- Non-combustible.
- Appropriate for multi-purpose use.

Recommendations for use:
- Spray, briefly leave on, and wipe off with a cloth.

Contents		EDP number	
[fl oz]	[ml]		
16.9	500	48747	1

INOX SHINER maintenance product

Maintenance product for protecting and caring for stainless steel (INOX), aluminum, non-ferrous metals, glass and plastic. Removes dust, fingerprints, oil and light scale deposits.

Advantages:
- Leaves a dry, glossy protective film.
- Very easy to use.
- No cleaning marks.
- Appropriate for multi-purpose use.

Recommendations for use:
- Spray, apply evenly on the surface with a soft dry cloth or paper towel and wipe dry.
- Conduct a compatibility test beforehand on surfaces with a mirror finish.

Contents		EDP number	
[fl oz]	[ml]		
16.9	500	48748	1

X-LOCK quick-change system
General information

With the BOSCH X-LOCK system for angle grinders, you can change discs quickly and comfortably. Instead of a round centre hole, the X-LOCK system features an X-shaped contour, which allows the disc to be fixed on the angle grinder in a form-fitting manner. This guarantees that different discs 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.

X-LOCK Technology by BOSCH

Advantages:

- Quick and comfortable disc changes.
- Discs are fixed securely since they audibly click into place.
- X-LOCK products can also be used on conventional angle grinders with 5/8-11 thread.

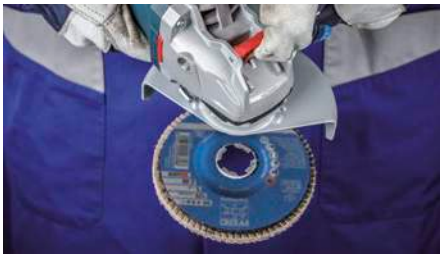
Recommendations for use:

- Place the disc on the X-LOCK quick-change system of your angle grinder and secure it by lightly pressing it down. The disc will audibly click into place.

How it works:

Place the disc on the X-LOCK holder in a form-fitting manner.

Lightly press the disc down until it audibly clicks into place.



Release the disc by using the lever.

POLIVLIES® with X-LOCK quick-change system

Aluminum oxide A

For universal coarse to fine grinding applications in industry and professional trades.

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

Recommendations for use:
- For the best results, use at a recommended peripheral speed of 6,000–6,900 SFPM.

Notes:
- For more information on POLIVLIES® flap discs, see page 103.

D [Inches]	T [Inches]	H [Inches]	Grit, type and EDP number			Opt. RPM	Max. RPM	
			100 C	180 M	240 F			
X-LOCK								
4-1/2	3/4	X-LOCK (7/8)	43303	43304	43305	5,000–5,800	13,300	5
5	3/4	X-LOCK (7/8)	43306	43307	43308	4,600–5,300	12,200	5

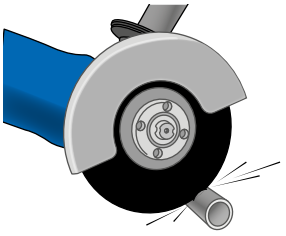
Cut-off wheels, flap discs and grinding wheels

PFERD

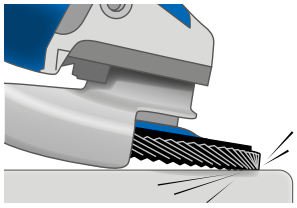
6

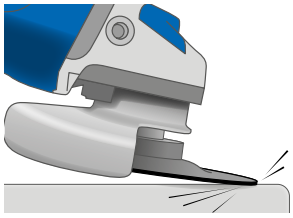
Cut-off wheels, flap discs and grinding wheels
Table of contents

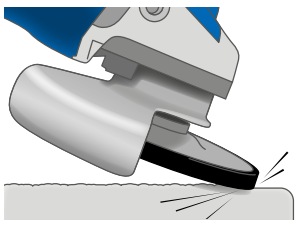
Cutting



Grinding







Cutting and grinding with X-LOCK quick-change system

PFERD quality

All PFERD products are developed, manufactured and tested in accordance with the strictest quality requirements. As a founding member of the "Organization for the Safety of Abrasives (oSa)", PFERD conforms to strict inspection requirements going beyond ANSI B7.1, EN 12413 and EN 13743.

PFERD quality management is certified according to ISO 9001.

Technical support

PFERD offers individual targeted support to solve unique application problems. Our experienced sales representatives and technical specialists are available to assist you.

Contact your local sales representative to learn more or visit us at pferd.com.

PFERDTOOL-CENTER

The **PFERD**TOOL-CENTER is a premium display system that can be custom-designed to meet your specific product and presentation requirements. For more information from a PFERD expert, contact us today at **pferd.com**.

Training

At our state-of-the-art **PFERD**ACADEMY, attendees receive highly specialized and practical training from the world of grinding and cutting.

A progressive series of classes enables you to become a certified PFERD specialist.

Mounted points, cones and plugs, and bench grinding wheels for different materials and applications can be found in catalogue section 3.

Fine grinding and finishing products for the perfect surface finish (e.g. fibre discs, COMBICLICK®, POLIVLIES® flap discs, mounted flap wheels, etc.) can be found in catalogue section 4.

Cut-off wheels for stationary applications (e.g. chop saws, rail cutting machines, heavy duty cutting machines, large diameter cut-off wheels made to order) can be found in catalogue section 7.

Cut-off wheels, flap discs and grinding wheels
Quick product selection guide

Product selection

Cutting	Grinding		
	Coated abrasives		Bonded abrasives
			
Cut-off wheels for **Angle grinders** page 12 **Gas saw** page 22 **Die grinders** page 24	**POLIFAN® flap discs** page 28	**CC-GRIND® grinding discs** page 41	**Grinding wheels** page 47 **Cup wheels** page 62

Product lines and colour coding

Universal Line PSF ★★☆☆

Choose the Universal Line PSF for processing of the most common materials. Products achieve good results with increased economic efficiency.

Performance Line SG ★★★☆

The wide range Performance Line SG offers high-performance solutions for every application and material. Products achieve optimum results with excellent economic efficiency.

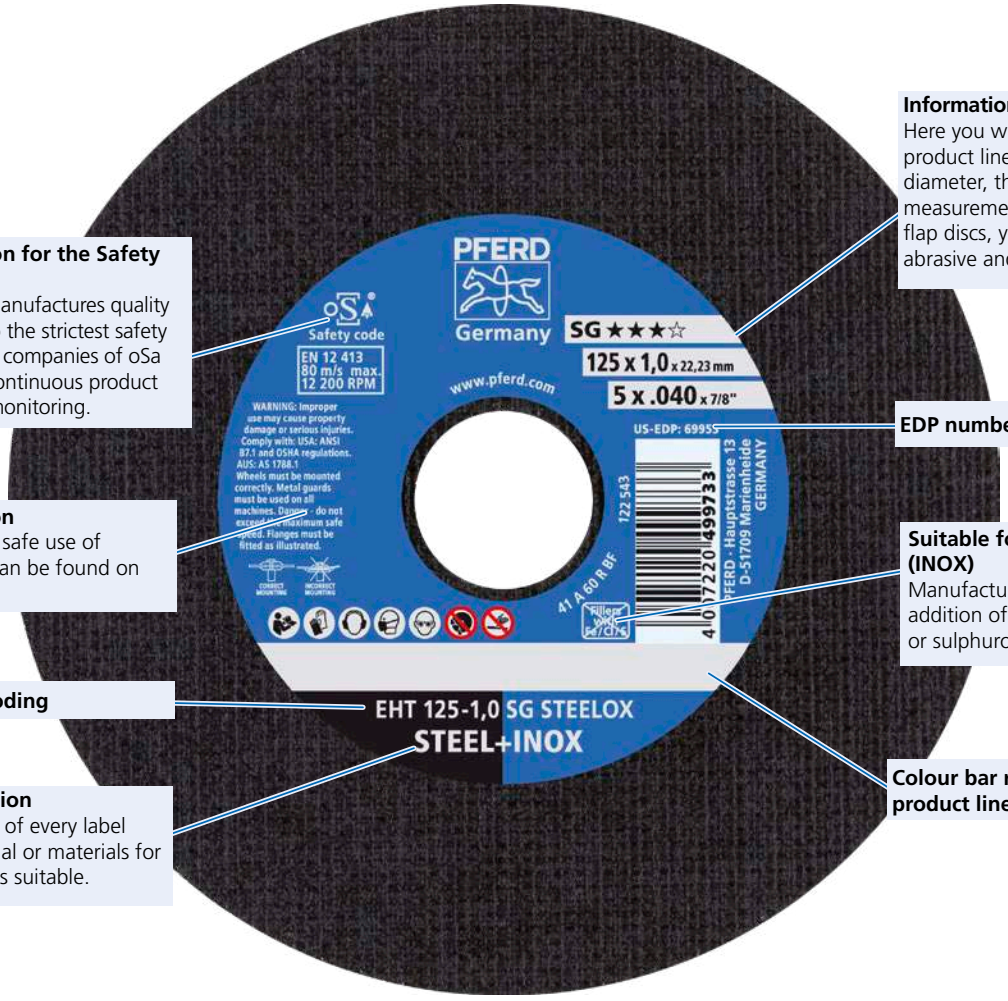
Special Line SGP ★★★★

Special Line SGP includes products engineered for specific tasks and offers the user key advantages over conventional products. This quality line also includes products that, due to their particularly high performance, offer ultimate economic efficiency.

Material and colour coding

Steel, cast steel	Steels up to 1,200 MPa (174,000 psi) (<38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, cast steel, alloyed steels
	Hardened, heat-treated steels over 1,200 MPa (174,000 psi) (>38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels, e.g. **AISI/ASTM** 301 410 304 412 316 416 316Ti
Aluminum	Non-hardened and hardened wrought alloys, cast aluminum alloys with low silicon content, cast aluminum alloys without silicon	
Other non-ferrous metals	Non-ferrous metals, soft	Brass, copper, zinc
	Non-ferrous metals, hard	Bronze, titanium
	High-temperature-resistant materials	Inconel, Hastelloy
Cast iron	Grey cast iron	Cast iron with flake graphite Cast iron with nodular graphite/nodular cast iron
	Annealed cast iron	White cast iron/pot metal cast, black cast iron
Stone	Asphalt, pumice, sandstone, concrete, reinforced concrete, concrete blocks, roofing tiles, granite, clinker, exposed aggregate concrete, tiles, ceramic tiles, slate	

Label



oSa – Organization for the Safety of Abrasives
PFERD voluntarily manufactures quality tools conforming to the strictest safety standards. Member companies of oSa are committed to continuous product safety and quality monitoring.

Safety information
Information on the safe use of abrasive products can be found on pages 7 and 8.

Material colour coding

Material information
The bottom section of every label indicates the material or materials for which the product is suitable.

Information bar
Here you will find the product line, star rating, diameter, thickness, and arbor measurements. For POLIFAN® flap discs, you will also find the abrasive and grit size here.

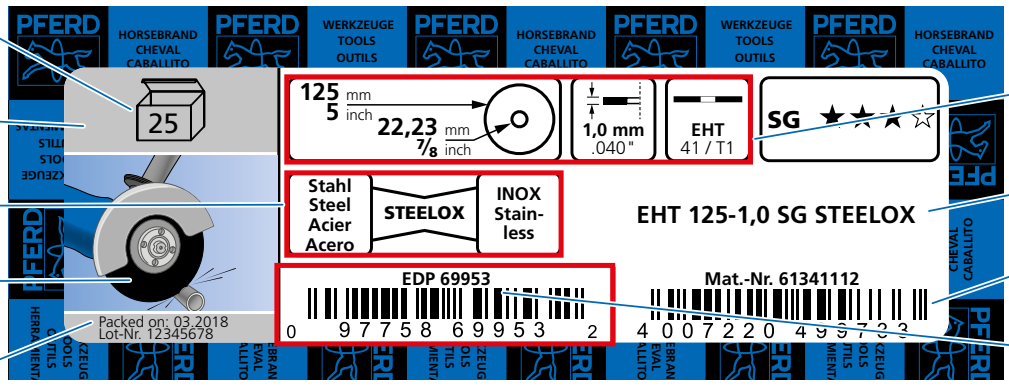
EDP number

Suitable for stainless steel (INOX)
Manufactured without addition of ferrous, chlorinated or sulphurous fillers.

Colour bar referencing product line

Packaging label

PFERD supplies cut-off wheels, flap discs and grinding wheels in robust industrial packaging that protects the products against damage. All important technical and ordering information can be found on the new packaging label below.



Cut-off wheels, flap discs and grinding wheels
Solutions for stainless steel (INOX) and aluminum

Working on stainless steel (INOX)

Stainless steel (INOX) has many strengths and advantages over steel, especially its resistance against corrosion. However, it also imposes special demands on abrasive products.

PFERD offers a wide range of specially developed products that will not contaminate the workpiece and create lower heat build-up than conventional products preventing discolouration and corrosion.

8 tips for preventing corrosion

Use the right grinding product!

1. Fillers with Fe / Cl / S — Only use grinding products **without** ferrous (Fe), chlorinated (Cl) or sulphurous (S) fillers that are specifically designed for stainless steel (INOX). This prevents residues that can result in corrosion. Products feature the symbol above and the addition of **INOX** or **STEELOX** (steel + INOX).
2. To prevent corrosion, the heat build-up in the workpiece must be reduced. Use grinding products specially developed for use on stainless steel (INOX) and the largest possible grit size.

Observe during use!

3. Work with less contact pressure and oscillating movement to prevent heat discolouration, particularly with thin-walled workpieces.
4. Wheels that have previously been used on steel must not be used for work on stainless steel (INOX). Remaining steel particles can cause impurities and corrosion.
5. Try to avoid sparks falling on the workpiece and be sure that no swarf is left on the surface.

Important: Proceed straight to finishing!

6. Immediately proceed to finishing operations to achieve the target surface finish, so that the stainless steel (INOX) builds up its passivation layer. Suitable products can be found in catalogue section 4 “Fine grinding and finishing products”.
7. If heat discolouration/oxidation occurs during grinding, additional options are available in catalogue section 4 “Fine grinding and finishing products” and catalogue section 8 “Power and maintenance brushes”.
8. Clean each workpiece thoroughly after completion of all the mechanical work.

Working on aluminum

The term "aluminum" refers to a series of alloys in which the element aluminum is the main component. These range from soft to tough and hard aluminum alloys.

Conventional grinding products for steel often cannot be used for work on aluminum. Particularly with soft alloys, adhesion of materials and loading (clogging) of the grinding product can occur. PFERD has developed a series of special products for processing aluminum.

These products contain no fillers that can leave residues on the workpiece. The surfaces can be welded immediately after cutting or grinding.

Specialized products for use on aluminum

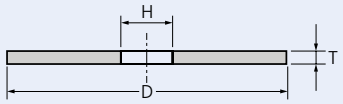
SG ALU grinding wheels

POLIFAN® flap discs
A-COOL SG ALU + INOX (with a specially developed topsizing that prevents chips from adhering)

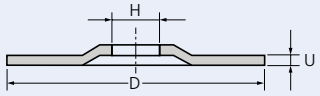
POLIFAN® flap discs
A SGP CURVE ALU for fillet weld grinding (the only flap disc with flaps on the circumference and a specially developed topsizing that prevents chips from adhering)

SG ALU grinding and cut-off wheels

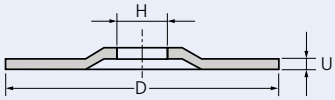
Product types and dimensions



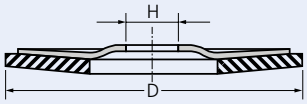
Cut-off wheel, flat type EHT (type 1/41)



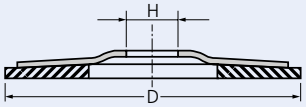
Cut-off wheel, depressed-centre type EH (type 27/42)



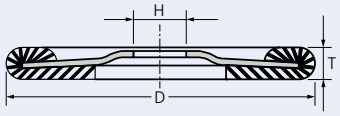
Combination wheel DUODISC®, depressed-centre type E (type 27)



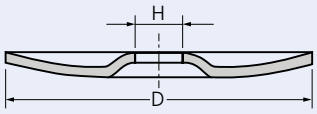
Flap disc, conical type PFC (type 29)



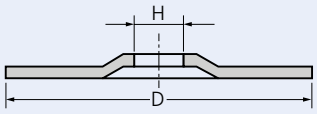
Flap disc, flat type PFF (type 27)



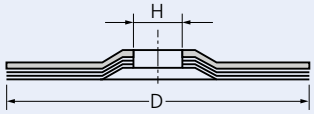
Flap disc, radial type PFR (CURVE)



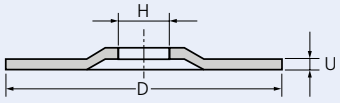
CC-GRIND®-SOLID



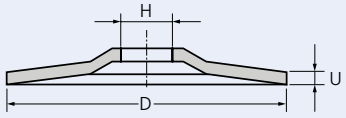
CC-GRIND®-FLEX



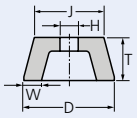
CC-GRIND®-STRONG



Grinding wheel E (type 27)



Grinding wheel ETF (type 28)



Conical cup wheel ETT (type 11)

Cutting and grinding safety

Abrasive wheel manufacturers, power tool manufacturers and users contribute equally to ensuring safety during cutting and grinding operations.

PFERD manufacturers all its products according to the current safety standards. During cutting and grinding, the user is responsible for correct use of the power tool as well as correct handling and use of the abrasives.

The information required for the safe use of grinding wheels, cut-off wheels, cup wheels, flap wheels, POLIFAN® flap discs and CC-GRIND® grinding discs from PFERD is summarized here. In addition to this, user information relating to the power tool used, as well as the applicable provisions on health and safety at work, should always be observed.

Explanation of the labeling of abrasive products

- Always observe the instructions on the abrasive, the grinder and all accompanying user information. Abrasives made by PFERD conform to the highest quality and safety requirements and are marked according to the following key European and international safety standards:
  - ANSI B7.1 or B7.7
  - OSHA regulations
  - EN 12413, EN 13236, or EN 13743
- Use a grinder that is suitable for the respective application. A product that can not be clearly identified should never be used.
- Observe any use restrictions, warnings and safety instructions on the abrasive and on the accompanying labels or packaging:


= Not permitted for hand-held grinding!


= Not permitted for face grinding!


= Not permitted for wet grinding!


= Do not use if damaged!


= Follow the safety instructions!


= Wear eye protection!


= Wear hearing protection!


= Wear gloves!


= Wear a dust mask!

= Observe the minimum contact angle!

Cut-off wheels, flap discs and grinding wheels

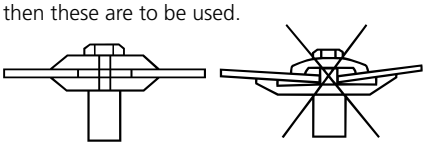
Technical information and safety notes

Storage of abrasive wheels

- Abrasive wheels should be stored in such a way as to prevent any adverse effects caused by moisture, frost or large temperature variations and so as to avoid mechanical damage. Do not use resinoid-bonded abrasive wheels or abrasive products using coated abrasives that have been exposed to severe humidity, damp, or high temperatures.

Mounting of abrasive wheels

- Only use grinders that are intended for use with the relevant product.
- Never use a grinder that is not in good condition.
- Use only abrasive wheels whose outer diameter and centre-hole diameter and/or thread match the specifications of the grinder.
- Never use damaged abrasive wheels. Abrasive wheels must be visually inspected and checked for any possible damage before each use.
- Keep mounting components clean and in good mechanical condition.
- Replace them if they become damaged or worn. If the manufacturer of the grinder provides tools for fixation of the abrasive tools (e.g. a key), then these are to be used.



- Tighten the clamping mechanism finger tight.
- In principle, only clamping flanges having a contact surface with the same outer diameter and which are identically shaped on the contact side are to be used. According to relevant US standard, for wheels of type 27 and 28 equal to or greater than 7" (180 mm) the locking nut shall seat within the depressed portion of the wheel. The flange adjacent to the wheel shall be equal to or greater than one-third of the wheel diameter and the outer part of the flange shall be free and clear from the wheel. For details see ANSI B7.1.
- If required, use blotters between the abrasive wheel and clamping components.
- Prevent the grinder from accidentally turning on, by disconnecting the power supply before mounting or changing the abrasive wheel.
- Never exceed the maximum operating speed of an abrasive wheel. Make sure that the speed of the grinder (rev/min, 1/min, RPM or min-1) does not exceed the maximum permissible speed given on the abrasive wheel, the accompanying label or packaging.
- Do not make any unauthorized changes to abrasive wheels.
- If a diamond cut-off wheel is marked with a specified direction of rotation, this must be complied with.
- Each time that a wheel is mounted, perform a trial run at operating speed with the guard properly installed, for at least 1 minute. During the trial run, hold the grinder in such a way that in the event of any failure of the abrasive wheel you are not struck by any fragments.
- Stationary cut-off wheels must only be used on appropriate stationary cut-off grinding machines. They are not permitted for hand-held or manually guided grinding. The maximum permitted power output must never be exceeded, in case there is a marking on the label.
- Clamping flanges for stationary cut-off wheels must meet today's requirements according to ANSI B7.1. Our PFERD sales department will be happy to advise you.

Use of abrasive wheels

- Ensure that the correct abrasive product is selected. Never use a product if it cannot be properly identified.
- Always be aware of the potential dangers during use of abrasive wheels.
- Always use protective equipment and guards in compliance with the operating instructions for the grinder and make sure they are properly mounted and in good condition, before you switch on the grinder.
- Comply with the ANSI B7.1 regulations on safety guards depending on the mounted wheel:
  - Type 1 wheels must be used with a guard covering at least 180° of the lateral wheel surface and face.
  - Type 6 and 11 cup wheels must be used with a guard covering 180° of the wheel's lateral surface towards the operator and the wheel's face towards the driving flange. Additionally, the guard must have a height-adjustable skirt.
  - Type 27, 28, and 29 wheels must be used with a guard covering 180° of the wheels lateral surface towards the operator and the wheel's face towards the driving flange. Additionally, the outer edge of the guard has to provide a lip curling inward at the whole 180° coverage in order to protect the user in case of wheel breakage.
- The workpiece must be fixed without tension by appropriate clamping devices or by its own weight.
- The grinder must always be turned on before the abrasive wheel comes into contact with the workpiece.
- Always bring abrasive wheels carefully into contact with the workpiece surface.
- Always guide cut-off wheels in a straight line. No lateral load should be applied to the cut-off wheel and it should not be used for face grinding.
- Only use diamond cut-off wheels on materials listed on the label.
- Grinders may only be put down once they have been turned off and have come to a complete stop.

Hazards due to product breakage, abrasive particles, sparks, dust, fumes, noise, vibration and bodily contact with the abrasive product at operation speed

- Warning! The grinding process may generate dust and fumes. Inhalation of grinding dust can lead to severe lung damage. Sufficient extraction or other appropriate measures must be provided and appropriate personal protective equipment must be worn at all times.
- The use of appropriate personal protective equipment is required for all grinding operations to provide protection against mechanical impacts, abrasive particles, sparks, dust and fumes, noise and vibration. This includes eye protection, ear protection, respiratory protection and hand protection. Long-sleeved, flame-resistant clothing and appropriate safety footwear must be worn. Tie back long hair and do not wear loose clothing, ties or jewelry. These rules apply not only to the operator of the grinder but also to any other persons in the working environment.
- Predominantly, dust and fumes in a grinding process originate from the workpiece material. Review the Safety Data Sheet (SDS) of the workpiece material.
- Do not use abrasive wheels in the vicinity of flammable materials.
- Flammable and explosive substances must be removed from the working environment before starting work. This includes, for example, dust deposits, cardboard, packaging material, textiles, wood and wood chips, as well as flammable liquids and gases.
- In the event of excessive vibrations stop the grinder and investigate these. Take immediate action if, when using an abrasive wheel, you begin to experience tingling, stinging or numbness in the hand or arms.
- Prevent accidental start-up of the grinder before mounting or changing an abrasive product. Isolate grinders from their power source where necessary.
- Never remove guards from grinders where fitted and ensure they are in good condition and properly adjusted before starting the grinder.
- After switching off the grinder, ensure the product has come to rest before leaving the grinder unattended.

Disposal of abrasive wheels

- Worn or defective abrasive wheels must be disposed of according to all local and/or national regulations.
- Note that abrasive wheels may become contaminated by work on certain materials.
- Abrasive wheels for disposal should be destroyed in a clearly visible manner in order to prevent re-use.
- Further information can be obtained from Voluntary Product information provided by the supplier.

PFERD

Cut-off wheels

6

Cut-off wheels
Quick product selection guide

Product group selection guide

Power tool	Application	Product line	Steel (STEEL)	Stainless steel (INOX)	Aluminum (ALU)	Cast iron (CAST)	Stone (STONE)
Angle grinder	Cutting	Universal Line PSF ★★☆☆	 PSF STEEL Page 12  PSF STEELOX Page 13	 PSF STEELOX Page 13			
		Performance Line SG ★★★☆	 SG STEEL Page 15  SG STEELOX Page 16	 SG INOX Page 17  SG STEELOX Page 16	 SG ALU Page 18		
		Special Line SGP ★★★★	 SGP CERAMIC STEEL Page 19  SGP STEELOX Page 20	 SGP STEELOX Page 20			
	Cutting and grinding	Universal Line PSF ★★☆☆	 PSF DUO STEELOX Page 14	 PSF DUO STEELOX Page 14			
Die grinder	Cutting	Performance Line SG ★★★☆	 SG STEELOX Page 24	 SG STEELOX Page 24	 SG STEELOX Page 24	 SG STEELOX Page 24	
Circular saw	Cutting	Performance Line SG ★★★☆	 SG STEELOX Page 21	 SG STEELOX Page 21			
Portable gas saw, cut-off grinder	Cutting	Performance Line SG ★★★☆	 SG STEEL Page 22			 SG CAST + STONE Page 23	 SG STONE Page 23  SG CAST + STONE Page 23

Cut-off wheel width selection

Diameter 4-5”			PFERDVALUE®
Thin cut-off wheels	.030”	Maximum precision and cutting quality for sheet metal work	Vibration Filter, Noise Filter, Emission Filter, Haptic Filter, Energy Saving, Time Saving
	.040”	Universal width with a focus on speed, comfort and cutting quality	
	.045”	Universal width with a focus on service life and comfort	
Cut-off wheels	> .045”	Heavy-duty use	-

Diameter 6-9”			PFERDVALUE®
Thin cut-off wheels	< 3/32”	Universal width with a focus on speed, comfort and cutting quality	Vibration Filter, Noise Filter, Emission Filter, Haptic Filter, Energy Saving, Time Saving
Cut-off wheels	3/32”	Universal width with a focus on service life and comfort	-
	> 3/32”	Heavy-duty use	-

Thin cut-off wheels
PFERD is a global leader in performance and safety of thin cut-off wheels. We maximize the performance and benefits for our users with
- Thinner, faster cutting with minimal burr formation
- Highest possible productivity
- Comfort and safety

Intensive research, development and targeted implementation in our state-of-the-art production facilities guarantee the highest quality and compliance with safety standards.

High quality standards, in conjunction with design principles that are focused on the ergonomics of operator health and safety, play a prominent role at PFERD.

Thin cut-off wheels for cordless angle grinders
.040” cut-off wheels are highly recommended for cordless angle grinders due to their narrow kerf, superior cutting characteristics and optimal handling. They deliver more cuts per battery charge, making them very economical.

Cut-off wheels
Universal Line PSF ★★☆☆

PSF STEEL ★★☆☆

Fast-cutting cut-off wheel for steel with long service life.

Advantages:
- Reduced cutting time.
- Increased economic efficiency due to long service life.

Workpiece materials:
steel

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

Abrasive:
Aluminum oxide A

Technical information:
A 46 P

PFERDVALUE®:
Thin cut-off wheels:

Vibration Filter | Noise Filter | Emission Filter | Haptic Filter | Energy Saving | Time Saving

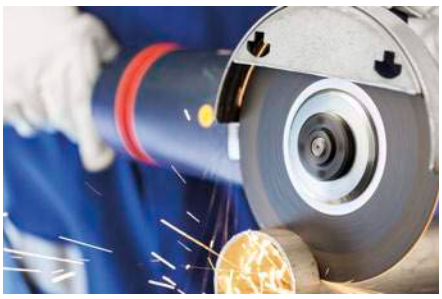
D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4	.040	5/8	69940	15,300	25
	.045	5/8	69944	15,300	25
4-1/2	.040	7/8	69945	13,300	25
	.045	7/8	69949	13,300	25
5	.040	7/8	69950	12,200	25
	.045	7/8	69954	12,200	25
6	.045	7/8	69964	10,200	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	69908	13,300	25
	3/32	7/8	69909	13,300	25
5	.045	7/8	69910	12,200	25
	3/32	7/8	69911	12,200	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	69912	13,300	10
	3/32	5/8-11	69913	13,300	10
5	.045	5/8-11	69914	12,200	10
	3/32	5/8-11	69915	12,200	10

Accessories

Flange set for cut-off wheels

Special accessory providing increased lateral stability and improved power transfer to abrasive cut-off wheels. Made of high-grade tool steel.

Recommendation for use:
Provides superior lateral stability and precise wheel control, especially with 7" and 9" diameter thin cut-off wheels (≤ .080" thickness).



D [Inches]	Machine spindle thread [Inches]	EDP number	
3	5/8-11	69038	1

PSF STEELOX ★★☆☆

Fast-cutting cut-off wheel for steel and stainless steel (INOX) with long service life.

Advantages:
- Single solution for steel and stainless steel (INOX).
- Reduced cutting time.
- Increased economic efficiency due to long service life.
- Ideal for use with cordless angle grinders.

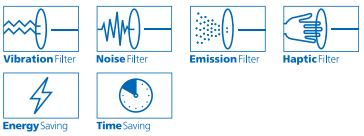
Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

Abrasive:
Aluminum oxide A

Technical information:
A 46 P

PFERDVALUE®:
Thin cut-off wheels:

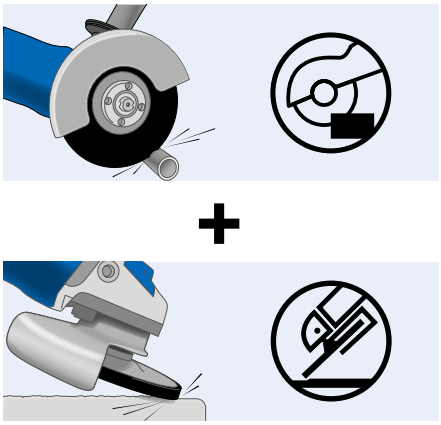


D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4-1/2	.040	7/8	63540	13,300	25
	.045	7/8	63550	13,300	25
5	.040	7/8	63541	12,200	25
	.045	7/8	63551	12,200	25
6	.045	7/8	63559	10,200	25
7	.045	7/8	63553	8,500	25
	3/32	7/8	63566	8,500	25
9	.065	7/8	63554	6,600	25
	3/32	7/8	63567	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	63717	13,300	25
	3/32	7/8	63718	13,300	25
5	.045	7/8	63719	12,200	25
	3/32	7/8	63720	12,200	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63721	13,300	10
	3/32	5/8-11	63722	13,300	10
5	.045	5/8-11	63723	12,200	10
	3/32	5/8-11	63724	12,200	10

Cut-off wheels
Universal Line PSF ★★☆☆

DUODISC®

The DUODISC® combination wheel is the safest solution for cutting and grinding with just one wheel. It meets the strictest requirements stated in global safety standards for cutting and grinding wheels.



Advantages:

- Safe solution for cutting and surface grinding with just one wheel.
- Time savings due to reduced wheel changes when alternating between cutting and surface grinding.
- Single solution for steel and stainless steel (INOX).
- .065" thickness is ideal for cordless angle grinders.
- Excellent solution for mill scale.

PSF DUODISC® STEELOX combination wheel ★★☆☆

Combination wheel for steel and stainless steel (INOX) with fast cutting action and long service life.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting, deburring, surface grinding, fillet weld grinding, notching, weld dressing

Abrasive:
Aluminum oxide A

Technical information:
A 46 P

PFERDVALUE®:
TimeSaving

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	.065	7/8	63320	13,300	10
	1/8	7/8	63333	13,300	10
5	.065	7/8	63321	12,200	10
	1/8	7/8	63334	12,200	10
6	1/8	7/8	63335	10,200	10
7	1/8	7/8	63336	8,500	10
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.065	5/8-11	63326	13,300	10
	1/8	5/8-11	63339	13,300	10
5	.065	5/8-11	63327	12,200	10
	1/8	5/8-11	63340	12,200	10
6	1/8	5/8-11	63341	10,200	10
7	1/8	5/8-11	63342	8,500	10

SG STEEL ★★★☆

Fast-cutting cut-off wheel for steel with very long service life.

Advantages:
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

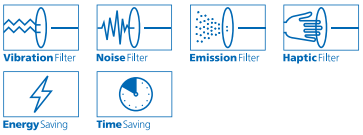
Workpiece materials:
steel

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

Abrasive:
High-performance aluminum oxide A

Technical information:
A 46 S

PFERDVALUE®:
Thin cut-off wheels:



D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4	3/32	5/8	63502	15,300	25
4-1/2	.040	7/8	69947	13,300	25
	.045	7/8	69934	13,300	25
	3/32	7/8	63503	13,300	25
5	.040	7/8	69952	12,200	25
	.045	7/8	69955	12,200	25
	3/32	7/8	63505	12,200	25
6	.045	7/8	69965	10,200	25
7	.045	7/8	69975	8,500	25
	1/8	7/8	63508	8,500	25
9	1/8	7/8	63510	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4	3/32	5/8	63102	15,300	25
4-1/2	.045	7/8	63162	13,300	25
	3/32	7/8	63103	13,300	25
	1/8	7/8	63104	13,300	25
5	.045	7/8	63163	12,200	25
	3/32	7/8	63105	12,200	25
	1/8	7/8	63106	12,200	25
6	.045	7/8	63164	10,200	25
	1/8	7/8	63107	10,200	25
7	.045	7/8	63165	8,500	25
	1/8	7/8	63109	8,500	25
9	1/8	7/8	63111	6,600	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63182	13,300	10
	3/32	5/8-11	63114	13,300	10
	1/8	5/8-11	63115	13,300	10
5	.045	5/8-11	63183	12,200	10
	3/32	5/8-11	63116	12,200	10
	1/8	5/8-11	63117	12,200	10
6	.045	5/8-11	63184	10,200	10
	1/8	5/8-11	63119	10,200	10
7	1/8	5/8-11	63112	8,500	10
9	1/8	5/8-11	63113	6,600	10

Cut-off wheels
Performance Line SG ★★★☆

SG STEELOX ★★★☆

Fast-cutting cut-off wheel for steel and stainless steel (INOX) with very long service life.

Advantages:
- Single solution for steel and stainless steel (INOX).
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

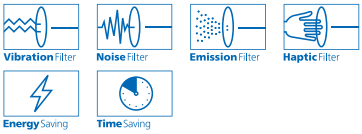
Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

Abrasive:
High-performance aluminum oxide A

Technical information:
A 46 R

PFERDVALUE®:
Thin cut-off wheels:



D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4	.040	5/8	69943	15,300	25
	.045	5/8	63613	15,300	25
4-1/2	.040	7/8	69948	13,300	25
	.045	7/8	63607	13,300	25
5	.040	7/8	69953	12,200	25
	.045	7/8	63608	12,200	25
6	.045	7/8	63614	10,200	25
7	.045	7/8	63616	8,500	25
	3/32	7/8	63609	8,500	25
9	3/32	7/8	63611	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	63167	13,300	25
	3/32	7/8	63202	13,300	25
	1/8	7/8	63204	13,300	25
5	.045	7/8	63168	12,200	25
	3/32	7/8	63205	12,200	25
	1/8	7/8	63206	12,200	25
6	.045	7/8	63169	10,200	25
	3/32	7/8	63208	10,200	25
7	.045	7/8	63170	8,500	25
	3/32	7/8	63207	8,500	25
9	3/32	7/8	63209	6,600	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63187	13,300	10
	3/32	5/8-11	63212	13,300	10
	1/8	5/8-11	63213	13,300	10
5	.045	5/8-11	63188	12,200	10
	3/32	5/8-11	63214	12,200	10
	1/8	5/8-11	63215	12,200	10
6	.045	5/8-11	63189	10,200	10
	3/32	5/8-11	63216	10,200	10
7	3/32	5/8-11	63210	8,500	10
9	3/32	5/8-11	63211	6,600	10

SG INOX ★★★☆

Fast-cutting cut-off wheel for stainless steel (INOX) with very long service life.

Advantages:
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

Workpiece materials:
stainless steel (INOX)

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

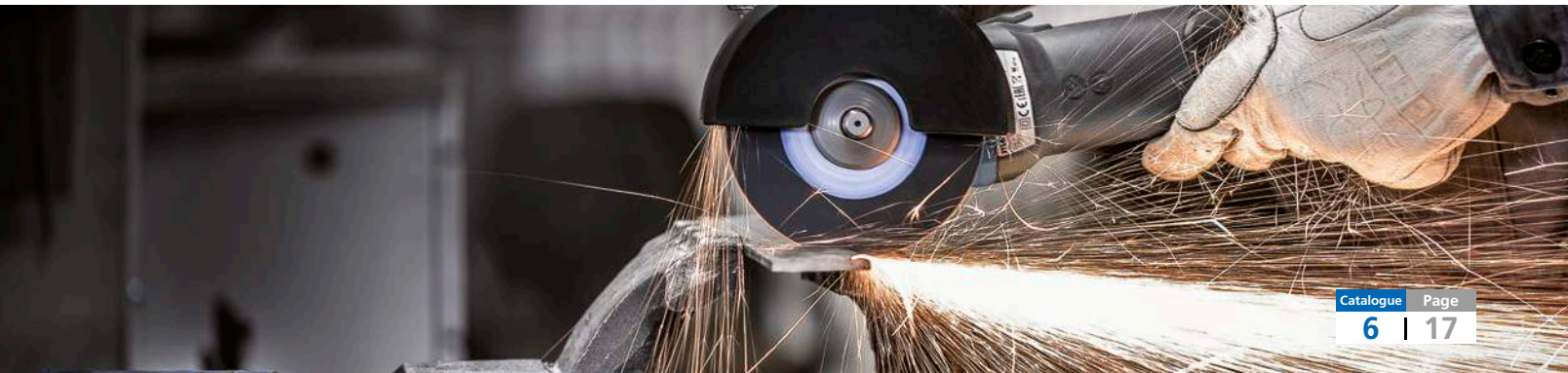
Abrasive:
High-performance aluminum oxide A

Technical information:
A 46 R

PFERDVALUE®:
Thin cut-off wheels:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4-1/2	.030	7/8	63641	13,300	25
	.040	7/8	63642	13,300	25
	.045	7/8	63643	13,300	25
5	.030	7/8	63645	12,200	25
	.040	7/8	63646	12,200	25
	.045	7/8	63647	12,200	25
6	.045	7/8	63649	10,200	25
7	.045	7/8	63650	8,500	25
	3/32	7/8	63651	8,500	25
9	.065	7/8	63653	6,600	25
	3/32	7/8	63654	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	63713	13,300	25
	3/32	7/8	63644	13,300	25
5	.045	7/8	63714	12,200	25
	3/32	7/8	63648	12,200	25
7	3/32	7/8	63652	8,500	25
9	3/32	7/8	63655	6,600	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63711	13,300	10
	3/32	5/8-11	63707	13,300	10
5	.045	5/8-11	63712	12,200	10
	3/32	5/8-11	63708	12,200	10
7	3/32	5/8-11	63709	8,500	10
9	3/32	5/8-11	63710	6,600	10



Cut-off wheels
Performance Line SG ★★★☆

SG ALU ★★★☆

Fast-cutting cut-off wheel for aluminum and other non-ferrous metals with very long service life.

Advantages:
- Operates without the cutting wheel loading even on soft aluminum alloys due to the special abrasive mixture and bond formula.
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.
- Contains no fillers that could leave residues on the workpiece. The surface can be welded immediately.

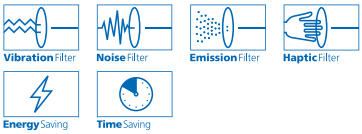
Workpiece materials:
aluminum, other non-ferrous metals

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

Abrasive:
High-performance aluminum oxide A and silicon carbide C

Technical information:
C 30 N

PFERDVALUE®:
Thin cut-off wheels:



D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4-1/2	.040	7/8	63589	13,300	25
	.045	7/8	63595	13,300	25
	3/32	7/8	63602	13,300	25
5	.040	7/8	63590	12,200	25
	.045	7/8	63596	12,200	25
	3/32	7/8	63603	12,200	25
6	.045	7/8	63597	10,200	25
7	.045	7/8	63598	8,500	25
	1/8	7/8	63605	8,500	25
9	1/8	7/8	63606	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	63177	13,300	25
	3/32	7/8	63131	13,300	25
5	.045	7/8	63178	12,200	25
	3/32	7/8	63133	12,200	25
6	.045	7/8	63179	10,200	25
7	.045	7/8	63180	8,500	25
	1/8	7/8	63135	8,500	25
9	1/8	7/8	63136	6,600	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63197	13,300	10
	3/32	5/8-11	63137	13,300	10
5	.045	5/8-11	63198	12,200	10
	3/32	5/8-11	63139	12,200	10
6	.045	5/8-11	63199	10,200	10
7	1/8	5/8-11	63141	8,500	10
9	1/8	5/8-11	63142	6,600	10

CERAMIC

Fast-cutting cut-off wheel with ceramic oxide grain for steel with outstanding service life. Optimized for use on steel workpieces with larger cross sections.

Advantages:

- Super fast-cutting even on large cross sections due to high-performance ceramic oxide grain in a special bond formula.
- Maximum economic efficiency due to very long service life.

CERAMIC SGP STEEL ★★★★

Workpiece materials:
steel

Applications:
cutting large cross-sections, cutting solid materials

Abrasive:
Ceramic oxide CO

Technical information:
CO 46 Q

PFERDVALUE®:
Thin cut-off wheels:

Vibration Filter | Noise Filter | Emission Filter | Haptic Filter | Energy Saving | Time Saving

D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4-1/2	.040	7/8	63657	13,300	25
	.045	7/8	63658	13,300	25
	.080	7/8	63659	13,300	25
5	.040	7/8	63660	12,200	25
	.045	7/8	63661	12,200	25
	.080	7/8	63662	12,200	25
6	.045	7/8	63663	10,200	25
7	.045	7/8	63664	8,500	25
	3/32	7/8	63665	8,500	25
9	.065	7/8	63666	6,600	25
	3/32	7/8	63668	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	63639	13,300	25
5	.045	7/8	63640	12,200	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63669	13,300	10
5	.045	5/8-11	63670	12,200	10

Cut-off wheels
Special Line SGP ★★★★

SGP STEELOX ★★★★

Fast-cutting cut-off wheel for steel and stainless steel (INOX) with an excellent service life. Specially optimized for use on thin metal sheets and hollow sections.

Advantages:
- Excellent service life on thin sheet metal and hollow sections due to hard, wear-resistant bond formula.
- Single solution for steel and stainless steel (INOX).
- Reduced cutting time.

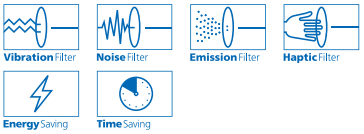
Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting thin sheet metal and hollow sections

Abrasive:
High-performance aluminum oxide A

Technical information:
A 46 S

PFERDVALUE®:
Thin cut-off wheels:



D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
4-1/2	.030	7/8	69817	13,300	25
	.040	7/8	69845	13,300	25
	.045	7/8	69846	13,300	25
	3/32	7/8	63635	13,300	25
5	.030	7/8	69818	12,200	25
	.040	7/8	69855	12,200	25
	.045	7/8	69857	12,200	25
	3/32	7/8	63636	12,200	25
6	.045	7/8	69865	10,200	25
7	.045	7/8	69872	8,500	25
	3/32	7/8	63533	8,500	25
	1/8	7/8	63637	8,500	25
9	.065	7/8	63633	6,600	25
	3/32	7/8	63638	6,600	25
Depressed centre (type 27/42) – plain arbor hole					
4-1/2	.045	7/8	63172	13,300	25
	3/32	7/8	63231	13,300	25
5	.045	7/8	63173	12,200	25
	3/32	7/8	63233	12,200	25
6	.045	7/8	63174	10,200	25
7	.045	7/8	63175	8,500	25
	3/32	7/8	63235	8,500	25
9	3/32	7/8	63236	6,600	25
Depressed centre (type 27/42) – threaded arbor hole					
4-1/2	.045	5/8-11	63192	13,300	10
	3/32	5/8-11	63237	13,300	10
5	.045	5/8-11	63193	12,200	10
	3/32	5/8-11	63239	12,200	10
6	.045	5/8-11	63194	10,200	10
7	3/32	5/8-11	63241	8,500	10
9	3/32	5/8-11	63242	6,600	10

Cut-off wheels for circular metal cutting saws

Performance Line SG ★★★☆

SG STEELOX ★★★☆

Fast-cutting universal cut-off wheel for use on circular saws with a very long service life. Available in diamond and round arbor hole styles. Diamond version includes 5/8" and 1/2" adapters.

Advantages:
- Single solution for steel and stainless steel (INOX).
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting

Abrasive:
Aluminum oxide A

Technical information:
A 24 S

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole diamond bore					
7	1/8	Diamond, 5/8 - 1/2	63842	8,500	25
8	1/8	Diamond, 5/8 - 1/2	63843	7,600	25
Flat (type 1/41) – plain arbor hole 5/8 round bore					
7	.045	5/8	63667	8,500	25
8	1/8	5/8	63853	7,600	25

Cut-off wheels for portable gas saws

Performance Line SG ★★★☆

PFERD portable wheels offer market-leading performance. Manufactured with a combination of heavy reinforcement and a high concentration of premium abrasive grain, they are the preferred brand of professional contractors, demolition personnel, rescue personnel and municipalities. They withstand extremely tough operating environments with high consistency and reliability. Designed for operator safety and comfort.

These wheels generate unparalleled productivity resulting in overall cost-savings.

SG STEEL ★★★☆

Fast-cutting cut-off wheel for use with portable gas saws featuring a very long service life.

Advantages:
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

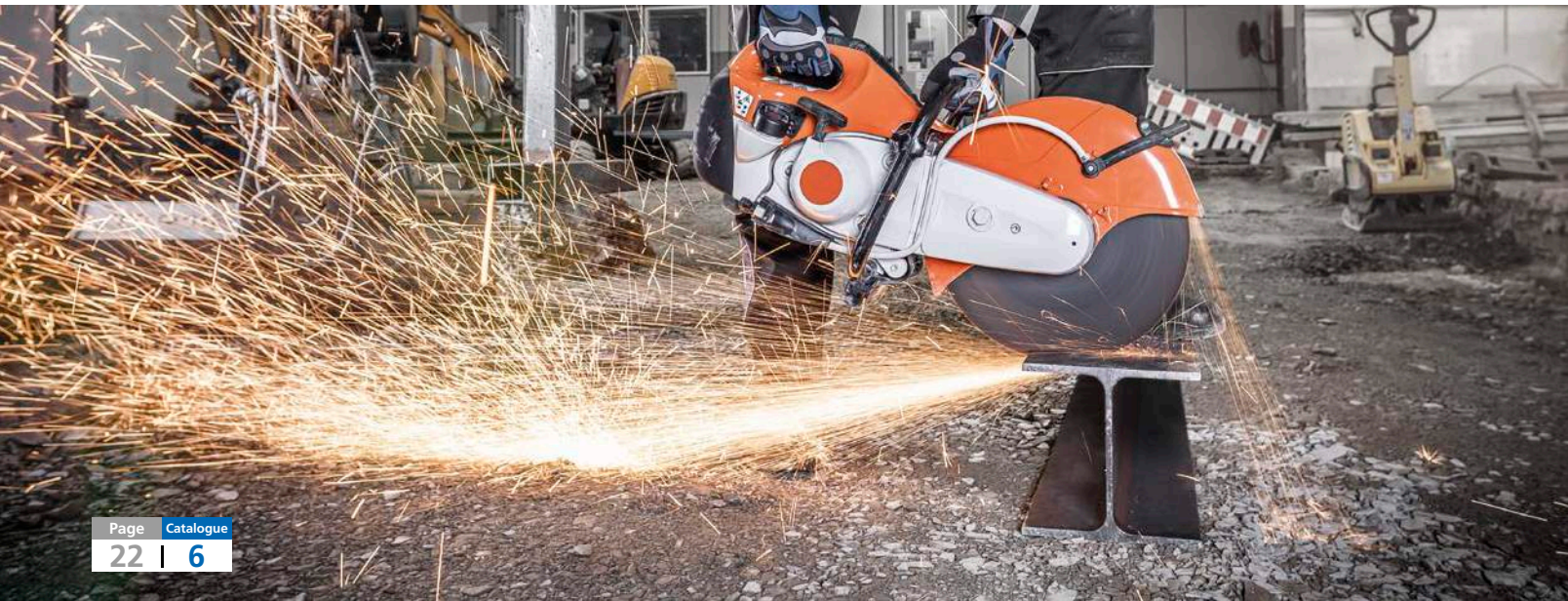
Workpiece materials:
steel, cast iron

Applications:
cutting

Abrasive:
Premium aluminum oxide A

Technical information:
A 24 S

D [Inches]	T [Inches]	H	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
12	1/8	20 mm	64010	6,400	20
	1/8	1″	64015	6,400	20
14	3/16	20 mm	64016	5,500	10
	3/16	1″	64018	5,500	10
16	3/16	20mm	64020	4,800	10
	3/16	1″	64019	4,800	10



SG STONE ★★★☆

Fast-cutting cut-off wheel for use with portable gas saws featuring a very long service life.

Advantages:
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

Workpiece materials:
cast iron, reinforced concrete, ductile cast iron

Applications:
cutting

Abrasive:
Silicon carbide C

Technical information:
C 24 R

D [Inches]	T [Inches]	H	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
12	1/8	20 mm	64230	6,400	20
14	3/16	20 mm	64236	5,500	10
	3/16	1″	64238	5,500	10
16	3/16	1″	64239	4,800	10

SG CAST + STONE ★★★☆

Fast-cutting cut-off wheel for use with portable gas saws featuring a very long service life.

Advantages:
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

Workpiece materials:
stone, cast iron, aluminum, other non-ferrous materials, concrete, asphalt

Applications:
cutting

Abrasive:
Special aluminum oxide A and silicon carbide C

Technical information:
AC 24 Q

D [Inches]	T [Inches]	H	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
12	1/8	20 mm	64118	6,400	20
	1/8	1″	64120	6,400	20
14	3/16	20 mm	64123	5,500	10
	3/16	1″	64124	5,500	10
16	3/16	20mm	64117	4,800	10

Cut-off wheels for die grinders
Performance Line SG ★★★☆

SG STEELOX ★★★☆

Fast-cutting universal cut-off wheel for use on die grinders with a very long service life.

Advantages:
- Ideal for hard-to-reach areas.
- Universal cut-off wheel for all metals.
- Reduced cutting time.
- Maximum economic efficiency due to very long tool life.

Workpiece materials:
steel, stainless steel (INOX), nickel-based alloys, cast iron, aluminum, other non-ferrous metals

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

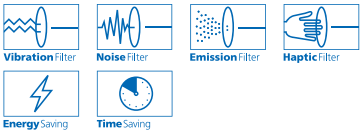
Abrasive:
High-performance aluminum oxide A

Technical information:
A 60 P

Ordering notes:
- Please order the matching arbor separately.

Safety notes:
- Observe the maximum rotational speed for the cut-off wheel and arbor stated on the enclosed instruction sheets – the lower of the two sets the limit.

PFERDVALUE®:
Thin cut-off wheels:



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41) – plain arbor hole					
2	.040	1/4	69201	30,000	50
		3/8	69203	30,000	50
	.045	1/4	69207	30,000	50
		3/8	69211	30,000	50
	1/8	3/8	69217	30,000	50
3	.040	1/4	69301	25,000	50
		3/8	69303	25,000	50
	.045	1/4	69305	25,000	50
		3/8	69309	25,000	50
	1/8	3/8	69317	25,000	50
4	.040	1/4	69401	19,000	25
		3/8	69403	19,000	25
	.045	1/4	69405	19,000	25
		3/8	69411	19,000	25
	1/8	3/8	69420	19,000	25

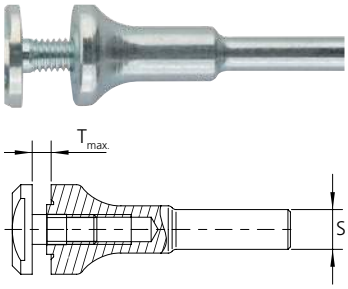
Arbors for small cut-off wheels

Accessory for mounting small cut-off wheels on straight grinders. Rugged product with maximum shank fracture resistance.

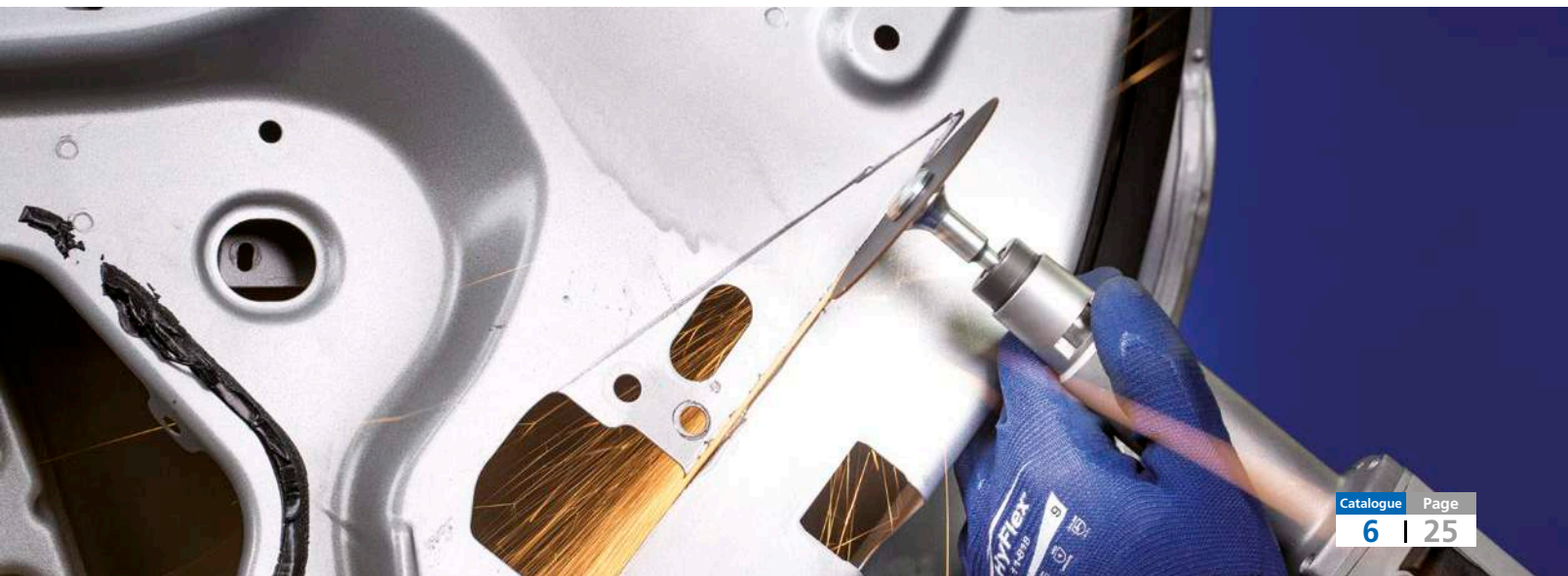
Safety notes:

- For use on PFERD small cut-off wheels ranging from 2" up to 4" in diameter.
- Observe the maximum rotational speed for the cut-off wheel and arbor – the lower speed takes precedence (see table to the right).
- Slide in the mandrel as far as possible into the collet of your power tool, i.e. the conical part of the mandrel beginning just after the collet.

Cut-off wheel diameter [Inches]	Max. RPM
2	30,000
3	20,000
4	15,000

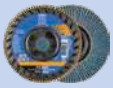
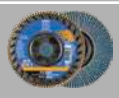
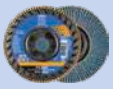


Max. wheel dia. [Inches]	Fits arbor hole size [Inches]	EDP number	Shank dia. (S) [Inches]	Clamping width (T) [Inches]	Flange dia. [Inches]	Overall Length [Inches]	
3	1/4	69026	1/4	0 - 5/16	3/4	2-1/8	1
	3/8	69027	1/4	0 - 5/16	3/4	2-1/8	1
	1/4, 3/8	69028	1/4	0 - 5/16	3/4	2-1/8	1
4	1/4	69033	1/4	0 - 5/16	1	2-1/8	1
	3/8	69034	1/4	0 - 5/16	1	2-1/8	1
	1/4, 3/8	69035	1/4	0 - 5/16	1	2-1/8	1



POLIFAN® flap discs

Product group selection guide

Application	Product line	Steel (STEEL)	Stainless steel (INOX)	Aluminum (ALU)
■ Surface grinding ■ Work on weld seams ■ Blending	**Universal Line PSF** ★★☆☆	 Z PSF STEELOX Page 29  Z PSF EXTRA STEELOX Page 30  Z PSF TRIM STEELOX Page 31	 Z PSF STEELOX Page 29  Z PSF EXTRA STEELOX Page 30  Z PSF TRIM STEELOX Page 31	
	Performance Line SG ★★★☆	 A SG STEELOX Page 32  Z SG POWER STEELOX Page 34	 A-COOL SG INOX + ALU Page 33  CO-FREEZE SG INOX Page 36	 A-COOL SG INOX + ALU Page 33
	Special Line SGP ★★★★	 Z SGP STRONG STEEL Page 37		
■ Chamfering ■ Deburring	**Universal Line PSF** ★★☆☆	 Z PSF STEELOX Page 29  Z PSF EXTRA STEELOX Page 30  Z PSF TRIM STEELOX Page 31	 Z PSF STEELOX Page 29  Z PSF EXTRA STEELOX Page 30  Z PSF TRIM STEELOX Page 31	
	Performance Line SG ★★★☆	 Z SG POWER STEELOX Page 34	 Z SG POWER STEELOX Page 34  CO-COOL SG STEELOX Page 35	 A-COOL SG INOX + ALU Page 33
	Special Line SGP ★★★★	 Z SGP STRONG STEEL Page 37		
■ Work on fillet welds	**Special Line SGP** ★★★★	 Z SGP CURVE STEELOX Page 38	 CO SGP CURVE STEELOX Page 39	 A SGP CURVE ALU Page 39

Abrasive: A = aluminum oxide, Z = zirconia alumina, CO = ceramic oxide
Coatings: COOL = Special topsizing, FREEZE = Special topsizing for ultra-cool grinding

Grit size selection

	Grit size			
	36/40	50/60	80	120
Application: Work on weld seams	■	■		
Application: Chamfering	■	■		
Application: Deburring		■	■	
Application: Prepare surface for finishing		■	■	■

Note: With POLIFAN® flap discs, grit that is one grade coarser can be selected in order to achieve the same surface finish as with fibre discs.

Shape selection

Shape	Application
Flat type PFF (type 27)	Larger grinding area for surface grinding. An optimal contact angle of 0–15° offers maximum flap disc usage.
Conical type PFC (type 29)	Narrower grinding area for work on weld seams, chamfering and deburring. An optimal contact angle of 10–25° offers maximum flap disc usage.
Radial type PFR (CURVE)	Unique design for work on fillet welds. After the circumference has worn down, it can still be used as a conventional flap disc.

POLIFAN® flap discs
Highlights from the PFERD range

POLIFAN®-POWER

For demanding requirements, the high-performance POLIFAN® Z-SG-POWER flap disc is the first choice for the machining of steel. This versatile POLIFAN® flap disc offers an optimal combination of outstanding service life and extremely high stock removal rates.

Advantages:
- Reduced labour time and maximum economic efficiency due to the aggressive stock removal rate.
- Maintains maximum aggressiveness throughout the entire service life.
- Fewer wheel changes due to the excellent service life.

For more information see page 34.

POLIFAN®-STRONG

Users who rely on top performance choose the POLIFAN®-STRONG flap disc. It surpasses conventional flap discs and redefines the highest levels of efficiency. With its patented and unique design, it achieves an unsurpassed stock removal rate. It also has an astonishingly long service life over conventional flap discs.

Advantages:
- Fast grinding through constant grinding aggressiveness down to the last abrasive grain.
- Ultimate economic efficiency due to the extremely fast stock removal rate.
- Extremely long service life due to its patented flap design.

For more information see page 37.

POLIFAN®-CURVE

The patented flap disc POLIFAN®-CURVE has been specially developed for work on fillet welds. It is the only flap disc in the world featuring a radial configuration of flaps allowing for grinding with all surfaces of the disc.

Advantages:
- High stock removal rate ensures reduced labour time and significant increase in productivity.
- Outstanding service life when working on fillet welds.
- Precise and optimum grinding of the fillet weld geometry.
- Excellent surface finish allows for easier visual inspections of the fillet weld.

For more information see page 38.

Z PSF STEELOX ★★☆☆

Zirconia alumina flap disc with aggressive stock removal rate and long service life.

Advantages:
- Reduced labour time and increased economic efficiency due to the aggressive stock removal rate.
- Long service life.
- Good option for low-powered angle grinders (< 9 amps).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
surface grinding, weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:

Vibration Filter | Noise Filter | Emission Filter | Haptic Filter | Energy Saving | Time Saving

D [Inches]	H [Inches]	Grit and EDP number 40	60	80	120	Max. RPM	
Flat (type 27, PFF) – plain arbor hole							
4-1/2	7/8	62014	62015	62016	-	13,300	10
5	7/8	63011	63012	63013	-	12,200	10
6	7/8	63051	63052	-	-	10,200	10
7	7/8	62024	62025	62026	-	8,500	10
Conical (type 29, PFC) – plain arbor hole							
4-1/2	7/8	62052	62053	62054	62055	13,300	10
5	7/8	63031	63032	63033	63034	12,200	10
6	7/8	63071	63072	-	-	10,200	10
7	7/8	62062	62063	62064	62065	8,500	10
Flat (type 27, PFF) – threaded arbor hole							
4-1/2	5/8-11	62033	62034	62035	-	13,300	10
5	5/8-11	63015	63016	63017	-	12,200	10
6	5/8-11	63056	63057	-	-	10,200	10
7	5/8-11	62043	62044	62045	-	8,500	10
Conical (type 29, PFC) – threaded arbor hole							
4-1/2	5/8-11	62071	62072	62073	62074	13,300	10
5	5/8-11	63035	63036	63037	63038	12,200	10
6	5/8-11	63076	63077	-	-	10,200	10
7	5/8-11	62081	62082	62083	62084	8,500	10

POLIFAN® flap discs
Universal Line PSF ★★☆☆

Z PSF EXTRA STEELOX ★★☆☆

Zirconia alumina flap disc with aggressive stock removal rate and long service life.

Advantages:
- Reduced labour time and increased economic efficiency due to the aggressive stock removal rate.
- Very long service life due to the high-density flap arrangement.
- Good option for low-powered angle grinders (< 9 amps).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
surface grinding, weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:

Vibration Filter | Noise Filter | Emission Filter | Haptic Filter | Energy Saving | Time Saving

D [Inches]	H [Inches]	Grit and EDP number					Max. RPM	
		36	40	60	80	120		
Flat (type 27, PFF) – plain arbor hole								
4-1/2	7/8	60457	60458	60460	60461	60462	13,300	10
5	7/8	60464	60465	60467	60468	60469	12,200	10
7	7/8	60478	60479	60481	-	-	8,500	10
Conical (type 29, PFC) – plain arbor hole								
4-1/2	7/8	60625	60626	60628	60629	60630	13,300	10
5	7/8	60632	60633	60635	60636	60637	12,200	10
6	7/8	60639	60640	60642	60643	60644	10,200	10
7	7/8	60646	60647	60649	-	-	8,500	10
Flat (type 27, PFF) – threaded arbor hole								
4-1/2	5/8-11	60485	60486	60488	60489	60490	13,300	10
5	5/8-11	60492	60493	60495	60496	60497	12,200	10
7	5/8-11	60506	60507	60509	-	-	8,500	10
Conical (type 29, PFC) – threaded arbor hole								
4-1/2	5/8-11	60653	60654	60656	60657	60658	13,300	10
5	5/8-11	60660	60661	60663	60664	60665	12,200	10
6	5/8-11	60667	60668	60670	60671	60672	10,200	10
7	5/8-11	60674	60675	60677	-	-	8,500	10

Z PSF TRIM STEELOX ★★☆☆

Zirconia alumina flap disc with trimmable plastic backer. Aggressive stock removal rate and long service life.

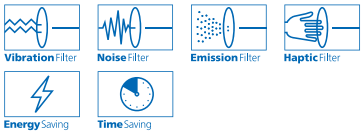
Advantages:
- Reduced labour time and increased economic efficiency due to the aggressive stock removal rate.
- Long service life.
- Plastic backer can be trimmed to expose unused coated material once the outside edge has worn down.
- Good option for low-powered angle grinders (< 9 amps).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
surface grinding, weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:



D [Inches]	H [Inches]	Grit and EDP number			Max. RPM	
		40	60	80		
Flat (type 27, PFF) – plain arbor hole						
4-1/2	7/8	68098	68099	68100	13,300	10
5	7/8	68104	68105	68106	12,200	10
Flat (type 27, PFF) – threaded arbor hole						
4-1/2	5/8-11	68158	68159	68160	13,300	10
5	5/8-11	68164	68165	68166	12,200	10

POLIFAN® flap discs
Performance Line SG ★★★☆

A SG STEELOX ★★★☆

Aluminum oxide flap disc with high stock removal rate and very long service life.

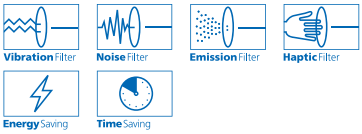
Advantages:
- Reduced labour time and increased economic efficiency due to the high stock removal rate.
- Fewer tool changes due to the very long tool life.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
surface grinding, weld dressing, blending

Abrasive:
Aluminum oxide A

PFERDVALUE®:



D [Inches]	H [Inches]	Grit and EDP number				Max. RPM	
		40	60	80	120		
Flat (type 27, PFF) – plain arbor hole							
4	5/8	62140	62142	62144	62146	15,300	10
4-1/2	7/8	62150	62152	62154	62156	13,300	10
5	7/8	62158	62160	62162	62164	12,200	10
7	7/8	62168	62170	62172	62174	8,500	10
Conical (type 29, PFC) – plain arbor hole							
4-1/2	7/8	62202	62203	62204	62205	13,300	10
5	7/8	62213	62214	62215	62216	12,200	10
7	7/8	62208	62209	62210	62211	8,500	10
Flat (type 27, PFF) – threaded arbor hole							
4-1/2	5/8-11	62250	62252	62254	62256	13,300	10
5	5/8-11	62258	62260	62262	62264	12,200	10
7	5/8-11	62268	62270	62272	62274	8,500	10
Conical (type 29, PFC) – threaded arbor hole							
4-1/2	5/8-11	62302	62303	62304	62305	13,300	10
5	5/8-11	62313	62314	62315	62316	12,200	10
7	5/8-11	62308	62309	62310	62311	8,500	10

A-COOL SG INOX + ALU ★★★☆

Top-sized aluminum oxide flap disc with particularly cool grinding on materials with poor thermal conduction such as stainless steel (INOX) and aluminum.

Advantages:
- Less heat generation compared to conventional flap discs.
- Special top-sized abrasive material prevents loading on soft metals such as aluminum.

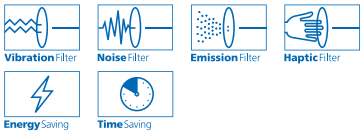
Workpiece materials:
stainless steel (INOX), aluminum, other non-ferrous metals

Applications:
surface grinding, weld dressing, blending, chamfering, deburring

Abrasive:
Aluminum oxide A with cooling topsizing (COOL)

Recommendations for use:
- Use only grit sizes 40 and 60 for aluminum.

PFERDVALUE®:



D [Inches]	H [Inches]	Grit and EDP number			Max. RPM	
		40	60	80		
Flat (type 27, PFF) – plain arbor hole						
4-1/2	7/8	62361	62362	62363	13,300	10
5	7/8	62365	62366	62367	12,200	10
7	7/8	62369	62370	62371	8,500	10
Conical (type 29, PFC) – plain arbor hole						
4-1/2	7/8	62231	62232	62233	13,300	10
5	7/8	62235	62236	62237	12,200	10
Flat (type 27, PFF) – threaded arbor hole						
4-1/2	5/8-11	62373	62374	62375	13,300	10
5	5/8-11	62377	62378	62379	12,200	10
7	5/8-11	62381	62382	62383	8,500	10
Conical (type 29, PFC) – threaded arbor hole						
4-1/2	5/8-11	62241	62242	62243	13,300	10
5	5/8-11	62244	62245	62246	12,200	10

POLIFAN® flap discs
Performance Line SG ★★★☆

Z SG POWER STEELOX ★★★☆

The POLIFAN® Z SG POWER flap disc features an aggressive stock removal rate and excellent service life to achieve the highest level of efficiency. It is the best conventional flap disc for steel.

Advantages:
- Reduced labour time and maximum economic efficiency due to the aggressive stock removal rate.
- Maintains maximum aggressiveness throughout the entire service life.
- Fewer wheel changes due to the excellent service life.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

Recommendations for use:
- Also suitable for surface grinding on steel.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	Grit and EDP number						Max. RPM	
		24	36	40	60	80	120		
Flat (type 27, PFF) – plain arbor hole									
4	5/8	-	-	62138	62139	-	-	15,300	10
4-1/2	7/8	-	62173	62176	62178	-	-	13,300	10
5	7/8	-	62181	62182	62184	-	-	12,200	10
7	7/8	-	62187	62188	62190	-	-	8,500	10
Conical (type 29, PFC) – plain arbor hole									
4-1/2	7/8	62221	62191	62222	62223	62220	62259	13,300	10
5	7/8	-	62192	62225	62226	62261	62263	12,200	10
6	7/8	-	-	62186	62189	-	-	10,200	10
7	7/8	-	62193	62228	62229	-	-	8,500	10
Flat (type 27, PFF) – threaded arbor hole									
4-1/2	5/8-11	-	62273	62276	62278	-	-	13,300	10
5	5/8-11	-	62281	62282	62284	-	-	12,200	10
7	5/8-11	-	62287	62288	62290	-	-	8,500	10
Conical (type 29, PFC) – threaded arbor hole									
4-1/2	5/8-11	62321	62194	62322	62323	62324	62275	13,300	10
5	5/8-11	-	62195	62325	62326	62291	62293	12,200	10
6	5/8-11	-	-	62286	62289	-	-	10,200	10
7	5/8-11	-	62196	62328	62329	-	-	8,500	10

CO-COOL SG STEELOX ★★★☆

Cool grinding POLIFAN® flap disc for materials that are difficult to grind such as high-alloy and rust-resistant steel, nickel-based alloys or titanium alloys.

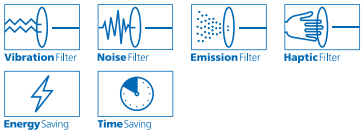
Advantages:
- The self-sharpening action of the ceramic oxide grain guarantees optimal results, even on materials that are difficult to grind.
- Reduced heat build-up in the workpiece compared with other flap discs.

Workpiece materials:
steel, mill scale, stainless steel (INOX), nickel-based alloys, hard aluminum alloys

Applications:
surface grinding, weld dressing, chamfering, deburring

Abrasive:
Ceramic oxide CO with cooling topsizing (COOL)

PFERDVALUE®:



D [Inches]	H [Inches]	Grit and EDP number		Max. RPM	
		40	60		
Flat (type 27, PFF) – plain arbor hole					
4-1/2	7/8	62597	62599	13,300	10
5	7/8	62603	62605	12,200	10
7	7/8	62615	-	8,500	10
Conical (type 29, PFC) – plain arbor hole					
4-1/2	7/8	62651	62653	13,300	10
5	7/8	62657	62659	12,200	10
7	7/8	62669	-	8,500	10
Flat (type 27, PFF) – threaded arbor hole					
4-1/2	5/8-11	62621	62623	13,300	10
5	5/8-11	62627	62629	12,200	10
7	5/8-11	62639	-	8,500	10
Conical (type 29, PFC) – threaded arbor hole					
4-1/2	5/8-11	62675	62677	13,300	10
5	5/8-11	62681	62683	12,200	10
7	5/8-11	62693	-	8,500	10

POLIFAN® flap discs
Performance Line SG ★★★☆

CO-FREEZE SG INOX ★★★☆

POLIFAN® flap disc designed for stainless steel (INOX) with ultra-cool grinding. Due to the ceramic oxide CO with cooling topsizing (FREEZE), there is no heat discolouration – no reworking is required.

Advantages:
- The FREEZE topsizing significantly reduces heat build-up in the workpiece compared with standard flap discs.
- Reduced labour time and increased economic efficiency due to the aggressive stock removal rate.
- Maximum aggressiveness over the entire service life.
- Fewer wheel changes due to the excellent service life.
- Sparks are minimized. Damage to stainless steel workpieces from sparks is almost entirely eliminated.

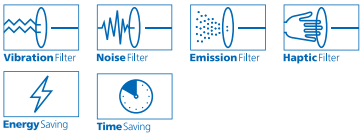
Workpiece materials:
stainless steel (INOX), nickel-based alloys

Applications:
surface grinding, weld dressing

Abrasive:
Ceramic oxide CO with extreme cooling topsizing (FREEZE)

Recommendations for use:
- During use, the flaps exhibit an unusual wear pattern after just a few seconds. Highly effective fillers form a shiny cooling film on the flaps (this should not be mistaken for "glazing"). This provides the basis for ultra-cool grinding.

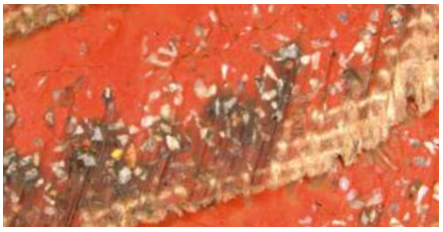
PFERDVALUE®:



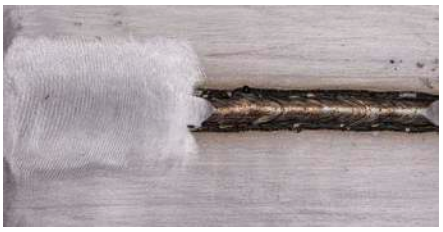
D [Inches]	H [Inches]	Grit and EDP number			Max. RPM	
		36	50	80		
Flat (type 27, PFF) – plain arbor hole						
4-1/2	7/8	60804	60805	60806	13,300	10
5	7/8	60807	60808	60809	12,200	10
Conical (type 29, PFC) – plain arbor hole						
4-1/2	7/8	60810	60811	60812	13,300	10
5	7/8	60813	60814	60815	12,200	10
7	7/8	60816	60817	-	8,500	10
Flat (type 27, PFF) – threaded arbor hole						
4-1/2	5/8-11	61082	61083	61084	13,300	10
5	5/8-11	61085	61086	61087	12,200	10
Conical (type 29, PFC) – threaded arbor hole						
4-1/2	5/8-11	61088	61089	61090	13,300	10
5	5/8-11	61091	61092	61093	12,200	10
7	5/8-11	61094	61095	-	8,500	10

CO-FREEZE SG INOX flap disc

FREEZE wear pattern: a shiny cooling film on the flaps (this should not be mistaken for "glazing").



Optimum results: no discolouration due to low thermal load.



Flap disc with conventional abrasive material

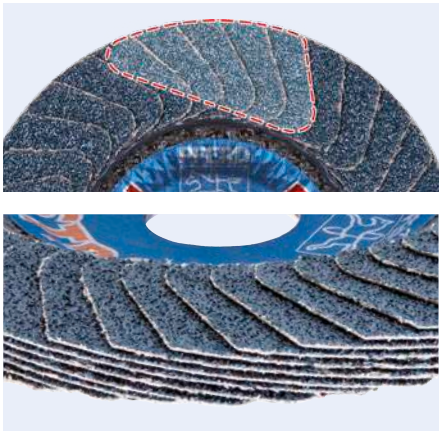
Heat discolouration/oxidation due to high heat build-up. Secondary grinding operation is required to prevent the risk of corrosion.

POLIFAN®-STRONG STEEL

Users who rely on top performance choose the innovative POLIFAN®-STRONG flap disc. It surpasses conventional flap discs and redefines the highest levels of efficiency. Due to its patented and unique design, it achieves an unsurpassed stock removal rate. It also has an astonishingly long service life over conventional flap discs.

Advantages:

- Fast grinding through constant grinding aggressiveness down to the last abrasive grain.
- Ultimate economic efficiency due to extremely fast stock removal rate.
- Extremely long service life due to patented flap design.



Long, compact arranged flaps

Z SGP STRONG STEEL ★★★★

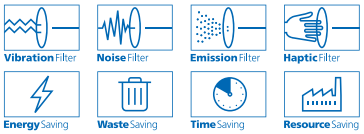
Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring

Abrasive:
Zirconia alumina Z

Recommendations for use:
- Grit size 36 is ideal for high stock removal, e.g. during work on weld seams.
- Grit size 50 is ideal for work on edges, e.g. chamfering or achieving a finer surface finish.

PFERDVALUE®:



D [Inches]	H [Inches]	Grit and EDP number		Max. RPM	
		36	50		
Conical (type 29, PFC) – plain arbor hole					
4-1/2	7/8	62945	62947	13,300	10
5	7/8	62955	62957	12,200	10
7	7/8	62975	62977	8,500	10
Conical (type 29, PFC) – threaded arbor hole					
4-1/2	5/8-11	62950	62952	13,300	10
5	5/8-11	62960	62962	12,200	10
7	5/8-11	62980	62982	8,500	10

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POLIFAN®-CURVE

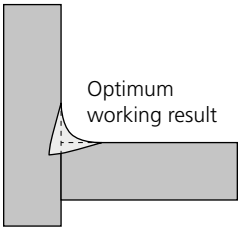
The patented POLIFAN®-CURVE flap disc has been specially developed for work on fillet welds. It is the only flap disc in the world that has flaps on both the grinding side and on the rear side, as well as on the radius.

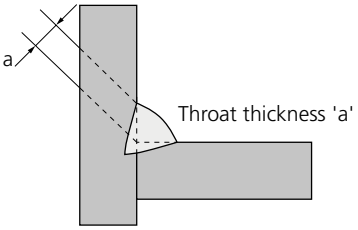
Advantages:

- Reduced labour time and ultimate economic efficiency due to the extremely aggressive stock removal rate.
- Outstanding tool life when working on fillet welds.
- Precise and optimum grinding of the fillet weld geometry.

Recommendations for use:

- Size M (medium): For fillet weld radii > 3/16" or throat thickness ≤ 1/4" with 90° joint, width at the radius: 7/16" or 9/16" with diameter 6".
- Size L (large): For fillet weld radii > 5/16" or throat thickness > 1/4" with 90° joint, width at the radius: 9/16" or 5/8" with diameter 6" or 7".





Z SGP CURVE STEELOX ★★★★

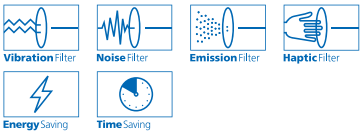
High-performance flap disc for maximum stock removal on steel and stainless steel (INOX).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
fillet weld edge grinding, weld dressing, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:



D [Inches]	H [Inches]	Size and EDP number		Grit	Max. RPM	
		Size medium	Size large			
Radial type PFR (CURVE) – plain arbor hole						
4-1/2	7/8	67192	67339	40	13,300	10
5	7/8	67196	67343	40	12,200	10
6	7/8	67200	67347	40	10,200	10
7	7/8	-	67351	40	8,500	10
Radial type PFR (CURVE) – threaded arbor hole						
4-1/2	5/8-11	67212	67359	40	13,300	10
5	5/8-11	67216	67363	40	12,200	10
6	5/8-11	67220	67367	40	10,200	10
7	5/8-11	-	67371	40	8,500	10

CO SGP CURVE STEELOX ★★★★

High-performance flap disc that achieves a superior surface finish on steel and stainless steel (INOX).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
fillet weld edge grinding, weld dressing, chamfering, deburring

Abrasive:
Ceramic oxide CO with cooling topsizing (COOL)

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	Size and EDP number		Grit	Max. RPM	
		Size medium	Size large			
Radial type PFR (CURVE) – plain arbor hole						
4-1/2	7/8	67234	67381	60	13,300	10
5	7/8	67197	67344	60	12,200	10
Radial type PFR (CURVE) – threaded arbor hole						
4-1/2	5/8-11	67258	67405	60	13,300	10
5	5/8-11	67217	67364	60	12,200	10

A SGP CURVE ALU ★★★★

High-performance flap disc that achieves a superior surface finish on aluminum.

Workpiece materials:
aluminum, other non-ferrous metals

Applications:
fillet weld edge grinding, weld dressing, chamfering, deburring

Abrasive:
Aluminum oxide A with cooling topsizing (COOL)

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	Size and EDP number	Grit	Max. RPM	
		Size large			
Radial type PFR (CURVE) – plain arbor hole					
4-1/2	7/8	67646	40	13,300	10
5	7/8	67651	40	12,200	10
Radial type PFR (CURVE) – threaded arbor hole					
4-1/2	5/8-11	67671	40	13,300	10
5	5/8-11	67676	40	12,200	10

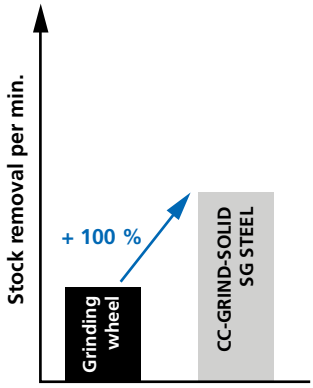
CC-GRIND® grinding discs

CC-GRIND®-SOLID

With the CC-GRIND®-SOLID, PFERD offers a modern, high-performance and ergonomic alternative to conventional grinding wheels.

Advantages:
- Maximum productivity due to highly aggressive abrasive.
- Significantly more ergonomic than a conventional grinding wheel: noise and vibrations are reduced by 50%, dust by 80%.
- Layered structure of the integrated fibreglass backing support guarantees use that is just as durable and safe as with a conventional grinding wheel.
- Superior surface finish compared to conventional grinding wheels.

For more information see page 43.



CC-GRIND®-FLEX

The CC-GRIND®-FLEX is the semi-flexible addition to the CC-GRIND® family. It was specially developed for work on weld seams. Butt welds can be smoothed completely flat. This gets rid of any dents and bumps that are visible, particularly after painting or varnishing.

Advantages:
- Maximum productivity due to highly aggressive abrasive.
- Significantly more ergonomic than a conventional grinding wheel: noise and vibrations are reduced by 50%, dust by 80%.
- Layered structure of the integrated fibreglass backing support guarantees use that is just as durable and safe as with a conventional grinding wheel.
- Complete smoothing of butt welds – without dents or bumps.
- Superior surface finish compared to conventional grinding wheels.

For more information see page 44.

CC-GRIND®-STRONG

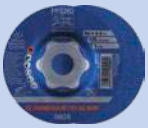
The CC-GRIND®-STRONG bridges the gap between conventional grinding wheels and the modern alternative CC-GRIND®-SOLID. It combines the fast, ergonomic grinding of a CC-GRIND®-SOLID with a resin bonded abrasive as a backer. The bonded portion of the disc not only serves as a supporting backer, but is also used during grinding.

Advantages:
- Three times the service life compared to CC-GRIND®-SOLID SG STEEL due to the unique combination of stacked coated discs with a bonded abrasive support.
- Maximum productivity due to highly aggressive abrasive.
- Significantly more ergonomic than a conventional grinding wheel: noise and vibrations are reduced by 50%, dust by 70%.
- Superior surface finish compared to conventional grinding wheels.

For more information see page 45.

CC-GRIND® grinding discs
Quick product selection guide

Product group selection guide

Application	Product line	Steel (STEEL)			Stainless steel (INOX)
		CC-GRIND®-SOLID	CC-GRIND®-FLEX	CC-GRIND®-STRONG	CC-GRIND®-SOLID
■ Surface grinding ■ Levelling ■ Work on weld seams ■ Chamfering ■ Deburring	Performance Line SG ★★★☆	 CC-GRIND®-SOLID SG STEEL Page 43		 CC-GRIND®-STRONG SG STEEL Page 45	 CC-GRIND®-SOLID SG INOX Page 43
■ Levelling butt welds	Performance Line SG ★★★☆		 CC-GRIND®-FLEX SG STEEL Page 44		

CC-GRIND® mounting flange set

The CC-GRIND® mounting flange set optimally aligns the CC-GRIND®-SOLID and -FLEX in the angle grinder protective guard. This allows a very flat contact angle with maximum efficiency.

The black backing pad is placed on the original mounting flange of the angle grinder. The silver flange nut replaces the original flange nut.

D [Inches]	H [Inches]	EDP number	
4-1/2, 5	5/8-11	69116	1
6, 7	5/8-11	69117	1

CC-GRIND®-SOLID SG STEEL ★★★☆

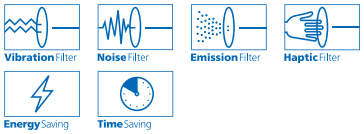
Workpiece materials:
steel

Applications:
surface grinding, weld dressing, chamfering, deburring

Recommendations for use:
- For optimum results, use with a flat contact angle and the SFS CC-GRIND® flange set.
- Only use the face of the disc, not suitable for peripheral grinding (on edge).

Ordering notes:
- Please order flange set SFS separately.

PFERDVALUE®:



D [Inches]	H [Inches]	EDP number	Compatible mounting flange set	Max. RPM	
SOLID – plain arbor hole					
4-1/2	7/8	61200	EDP 69116 (5/8-11)	13,300	10
5	7/8	61201	EDP 69116 (5/8-11)	12,200	10
6	7/8	61202	EDP 69117 (5/8-11)	10,200	10
7	7/8	61203	EDP 69117 (5/8-11)	8,500	10
SOLID – threaded arbor hole					
4-1/2	5/8-11	61220	–	13,300	10
5	5/8-11	61221	–	12,200	10
6	5/8-11	61222	–	10,200	10
7	5/8-11	61223	–	8,500	10

CC-GRIND®-SOLID SG INOX ★★★☆

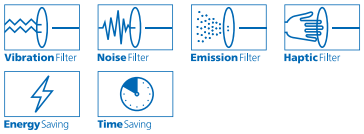
Workpiece materials:
stainless steel (INOX)

Applications:
weld dressing, chamfering, deburring

Recommendations for use:
- For optimum results, use with a flat contact angle and the SFS CC-GRIND® flange set.
- Only use the face of the disc, not suitable for peripheral grinding (on edge).

Ordering notes:
- Please order flange set SFS separately.

PFERDVALUE®:



D [Inches]	H [Inches]	EDP number	Compatible mounting flange set	Max. RPM	
SOLID – plain arbor hole					
4-1/2	7/8	61215	EDP 69116 (5/8-11)	13,300	10
5	7/8	61216	EDP 69116 (5/8-11)	12,200	10
7	7/8	61218	EDP 69117 (5/8-11)	8,500	10
SOLID – threaded arbor hole					
4-1/2	5/8-11	61235	–	13,300	10
5	5/8-11	61236	–	12,200	10
7	5/8-11	61238	–	8,500	10

CC-GRIND® grinding discs
Performance Line SG ★★★☆

CC-GRIND®-FLEX SG STEEL ★★★☆

Workpiece materials:
steel

Applications:
weld dressing, surface grinding

Recommendations for use:
- For optimum results, use with a flat contact angle and the SFS CC-GRIND® flange set.
- Only use the face of the disc, not suitable for peripheral grinding (on edge).

Ordering notes:
- Please order flange set SFS separately.

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	Grit size FINE	Grit size COARSE	Max. RPM	
FLEX – plain arbor hole					
4-1/2	7/8	61186	61188	13,300	10
5	7/8	61190	61192	12,200	10

CC-GRIND® mounting flange set

The CC-GRIND® mounting flange set optimally aligns the CC-GRIND®-SOLID and -FLEX in the angle grinder protective guard. This allows a very flat contact angle with maximum efficiency.

The black backing pad is placed on the original mounting flange of the angle grinder. The silver flange nut replaces the original flange nut.

D [Inches]	H [Inches]	EDP number	
4-1/2, 5	5/8-11	69116	1
6, 7	5/8-11	69117	1

CC-GRIND®-STRONG

The CC-GRIND®-STRONG is the stepping stone between the classic grinding wheel (the backing pad also grinds) and the modern alternative CC-GRIND®-SOLID (fast, ergonomic grinding).

Advantages:

- Three times the service life compared to CC-GRIND®-SOLID SG STEEL due to the unique combination of stacked coated discs with a bonded abrasive support.
- Maximum productivity due to highly aggressive abrasive.
- Significantly more ergonomic than a conventional grinding wheel: noise and vibrations are reduced by 50%, dust by 70%.
- Superior surface finish compared to conventional grinding wheels.

CC-GRIND®-STRONG SG STEEL ★★★☆

Workpiece materials:
steel, mill scale

Applications:
weld dressing, chamfering, deburring

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	EDP number	Max. RPM	
STRONG – plain arbor hole				
4-1/2	7/8	61262	13,300	10
5	7/8	61263	12,200	10
STRONG – threaded arbor hole				
4-1/2	5/8-11	61266	13,300	10
5	5/8-11	61267	12,200	10

Grinding wheels

CERAMIC COMFORT

The CERAMIC SG COMFORT is a hybrid grinding wheel for steel. It combines a top layer of coated abrasive and a rough grinding wheel.

Advantages:
- Due to the combination of a coated abrasive layer and a rough grinding wheel with a high stock removal rate, the CERAMIC SG COMFORT offers significantly reduced labour time and maximum economic efficiency.
- Fewer wheel changes due to the very long service life.
- Can be used for peripheral grinding (on edge).
- Significantly lower noise emissions and vibration when compared to conventional grinding wheels.

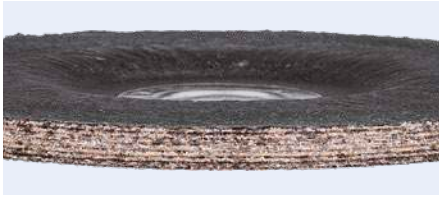
For more information please see page 58.

WHISPER

Due to its patented multi-layer design, the WHISPER grinding wheel generates significantly less vibration and noise than conventional grinding wheels. The noise exposure is decreased by up to 12 dBA, a reduction of more than 90%. The flexible construction enables soft, comfortable grinding with outstanding surface finish.

Advantages:
- Universally suitable for steel and stainless steel (INOX).
- Significantly lower noise emissions and vibration than with conventional grinding wheels.
- Comfortable grinding.
- Excellent solution for mill scale.

For more information please see page 59.



CERAMIC

High-performance grinding wheel with ceramic oxide grain for cool grinding with excellent productivity.

Advantages:
- Outstanding aggressiveness and service life due to the self-sharpening effect of the high-performance abrasive ceramic oxide grain.
- Labour cost savings due to much higher material removal rate compared to conventional grinding wheels.
- Reduced operator strain – maximum performance with minimal contact pressure.

For more information please see page 61.

Grinding wheels
Quick product selection guide

Product group selection guide

Application	Product line	Steel (STEEL)	Stainless steel (INOX)	Aluminum (ALU)	Cast iron (CAST)	Stone material (STONE)
■ Surface grinding ■ Work on weld seams ■ Chamfering ■ Deburring ■ Fillet weld grinding ■ Root seam processing ■ Grouting	**Universal Line PSF** ★★☆☆	 PSF STEEL Page 50  PSF STEELOX Page 51	 PSF STEELOX Page 51			
	Performance Line SG ★★★☆	 SG STEEL Page 52  SG NOTCHING STEELOX Page 54  ZIRKON SG CAST + STEEL Page 56  CERAMIC SG COMFORT STEEL Page 58	 SG INOX Page 53  SG NOTCHING STEELOX Page 54	 SG ALU Page 55	 ZIRKON SG CAST + STEEL Page 56	 SG CAST + STONE Page 57
	Special Line SGP ★★★★	 WHISPER SGP STEELOX Page 59  ZIRKON SGP STEEL Page 60  CERAMIC SGP STEELOX Page 61	 WHISPER SGP STEELOX Page 59  CERAMIC SGP STEELOX Page 61			


CC-GRIND® grinding discs can be found on page 41.


The DUODISC® combination wheels for cutting and deburring can be found on page 14.


Cup wheels can be found on page 62.

PFERD 1/8" thick pipeline grinding wheels are designed for grinding and cutting of pipeline root pass, weld and flame cut grinding. The wheels listed below are unique to the pipeline market. Specializing in the pipeline industry, PFERD also produces a wide variety of other abrasive wheels including 1/4" thick grinding wheels, cut-off wheels and flap discs.

Picture	D [Inches]	U [Inches]	7/8" plain arbor hole EDP number	5/8-11" arbor hole EDP number	Page number
PSF STEELOX ★★☆☆ for steel and stainless steel (INOX)					
	4-1/2	1/8	63410	63414	51
	5	1/8	63411	63415	
	6	1/8	63398	63418	
	7	1/8	63412	63416	
	9	1/8	63413	63417	
SG STEEL ★★★☆ for steel					
	4-1/2	1/8	63400	63405	52
	5	1/8	63406	63407	
	6	1/8	63399	63408	
	7	1/8	63401	63403	
	9	1/8	63402	63404	
SG INOX ★★★☆ for stainless steel (INOX)					
	4-1/2	1/8	61104	61113	53
SG NOTCHING STEELOX ★★★☆ for steel and stainless steel (INOX)					
	4-1/2	1/8	63421	63427	54
	5	1/8	63422	63428	
	6	1/8	63423	63429	
	7	1/8	63424	63430	
	9	1/8	63425	63431	
SG ALU ★★★☆ for aluminum					
	4-1/2	1/8	61311	61312	55
ZIRKON SG CAST + STEEL ★★★☆ for steel and cast iron					
	4-1/2	1/8	63251	63255	56
	5	1/8	63252	63256	
	6	1/8	63250	63259	
	7	1/8	63253	63257	
	9	1/8	63254	63258	
CERAMIC SGP STEELOX ★★★★ for steel and stainless steel (INOX)					
	4-1/2	1/8	60088	60093	61
	5	1/8	60089	60094	
	6	1/8	60090	60095	
	7	1/8	60091	60096	
	9	1/8	60092	60097	

PSF STEEL ★★☆☆

General purpose grinding wheel with high stock removal rate and long service life for steel.

Advantages:
- Reduced labour time and increased economic efficiency due to the high stock removal rate.
- Long service life.
- Also suitable for low-powered angle grinders (< 9 amps). Achieves high stock removal rates even at low contact pressure.

Workpiece materials:
steel, cast iron

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Aluminum oxide A

Technical information:
A 24 R

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/4	7/8	60006	13,300	10
5	1/4	7/8	60007	12,200	10
7	1/4	7/8	60009	8,500	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/4	5/8-11	60014	13,300	10
5	1/4	5/8-11	60015	12,200	10
7	1/4	5/8-11	60017	8,500	10

PSF STEELOX ★★☆☆

General purpose grinding wheel with high stock removal rate and good service life for steel and stainless steel (INOX).

Advantages:
- Universally suitable for steel and stainless steel (INOX).
- Reduced labour time and increased economic efficiency due to the high stock removal rate.
- Good service life.
- Also suitable for low-powered angle grinders (< 9 amps). Achieves high stock removal rates even at low contact pressure.

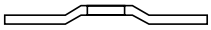
Workpiece materials:
steel, stainless steel (INOX)

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Aluminum oxide A

Technical information:
A 24 L

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4	1/4	5/8	61000	15,300	10
4-1/2	1/8	7/8	63410	13,300	10
	1/4	7/8	61002	13,300	10
5	1/8	7/8	63411	12,200	10
	1/4	7/8	61003	12,200	10
6	1/8	7/8	63398	10,200	10
	1/4	7/8	61011	10,200	10
7	1/8	7/8	63412	8,500	10
	1/4	7/8	61004	8,500	10
9	1/8	7/8	63413	6,600	10
	1/4	7/8	61005	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	63414	13,300	10
	1/4	5/8-11	61001	13,300	10
5	1/8	5/8-11	63415	12,200	10
	1/4	5/8-11	61008	12,200	10
6	1/8	5/8-11	63418	10,200	10
	1/4	5/8-11	61012	10,200	10
7	1/8	5/8-11	63416	8,500	10
	1/4	5/8-11	61006	8,500	10
9	1/8	5/8-11	63417	6,600	10
	1/4	5/8-11	61007	6,600	10

SG STEEL ★★★☆

Grinding wheel for steel with high stock removal and very long service life.

Advantages:
- Reduced labour time and maximum economic efficiency due to the high stock removal rate.
- Fewer wheel changes due to the very long service life.

Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Premium aluminum oxide A

Technical information:
A 24 R

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4	1/4	5/8	61024	15,300	10
4-1/2	1/8	7/8	63400	13,300	10
	1/4	7/8	61026	13,300	10
5	1/8	7/8	63406	12,200	10
	1/4	7/8	61028	12,200	10
6	1/8	7/8	63399	10,200	10
	1/4	7/8	61030	10,200	10
7	1/8	7/8	63401	8,500	10
	1/4	7/8	61032	8,500	10
9	1/8	7/8	63402	6,600	10
	1/4	7/8	61035	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	63405	13,300	10
	1/4	5/8-11	61038	13,300	10
5	1/8	5/8-11	63407	12,200	10
	1/4	5/8-11	61040	12,200	10
6	1/8	5/8-11	63408	10,200	10
	1/4	5/8-11	61042	10,200	10
7	1/8	5/8-11	63403	8,500	10
	1/4	5/8-11	61044	8,500	10
9	1/8	5/8-11	63404	6,600	10
	1/4	5/8-11	61047	6,600	10
Saucer (type 28) – plain arbor hole					
7	1/4	7/8	61701	8,500	10
9	1/4	7/8	61702	6,600	10
Saucer (type 28) – threaded arbor hole					
7	1/4	5/8-11	61703	8,500	10
9	1/4	5/8-11	61704	6,600	10

SG INOX ★★★☆

Grinding wheel for stainless steel (INOX) with high stock removal rate and very long service life.

Advantages:
- Soft, cool grinding on stainless steel (INOX).
- Reduced labour time and maximum economic efficiency due to the high stock removal rate.
- Fewer wheel changes due to the very long service life.

Workpiece materials:
stainless steel (INOX)

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Premium aluminum oxide A

Technical information:
A 24 N

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4	1/4	5/8	61103	15,300	10
4-1/2	1/8	7/8	61104	13,300	10
	1/4	7/8	61105	13,300	10
5	1/4	7/8	61106	12,200	10
6	1/4	7/8	61107	10,200	10
7	1/4	7/8	61108	8,500	10
9	1/4	7/8	61109	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	61113	13,300	10
	1/4	5/8-11	61114	13,300	10
5	1/4	5/8-11	61111	12,200	10
6	1/4	5/8-11	61116	10,200	10
7	1/4	5/8-11	61110	8,500	10
9	1/4	5/8-11	61112	6,600	10

SG NOTCHING STEELOX ★★★☆

Specialized notching wheel for steel and stainless steel (INOX) with very long service life.

Advantages:
- Universally suitable for steel and stainless steel (INOX).
- Fewer wheel changes due to the very long service life.
- High edge stability.
- Ideal for working on stainless steel (INOX) TIG-welds.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
notching, root pass grinding, cutting

Abrasive:
Premium aluminum oxide A

Technical information:
A 46 R

Recommendations for use:
- Must be used only on the edge and perpendicular to the workpiece.
- 1/8" thick notching wheels are ideal for edge grinding and cutting of pipeline root pass, and notching for weld repairs.

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/8	7/8	63421	13,300	10
5	1/8	7/8	63422	12,200	10
6	1/8	7/8	63423	10,200	10
7	1/8	7/8	63424	8,500	10
9	1/8	7/8	63425	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	63427	13,300	10
5	1/8	5/8-11	63428	12,200	10
6	1/8	5/8-11	63429	10,200	10
7	1/8	5/8-11	63430	8,500	10
9	1/8	5/8-11	63431	6,600	10

SG ALU ★★★☆

Grinding wheel for aluminum and other non-ferrous metals with high stock removal rate and very long service life.

Advantages:
- Operates without the grinding wheel loading even on soft aluminum alloys.
- Reduced labour time and maximum economic efficiency due to the high stock removal rate.
- Fewer wheel changes due to the very long service life.
- Contains no fillers that could leave residues on the workpiece. The surface can be welded without secondary operations.

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Premium aluminum oxide A and silicon carbide C

Technical information:
C 24 N

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

Workpiece materials:
aluminum, other non-ferrous metals

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/8	7/8	61311	13,300	10
	1/4	7/8	61301	13,300	10
5	1/4	7/8	61302	12,200	10
6	1/4	7/8	61309	10,200	10
7	1/4	7/8	61304	8,500	10
9	1/4	7/8	61305	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	61312	13,300	10
	1/4	5/8-11	61303	13,300	10
5	1/4	5/8-11	61308	12,200	10
6	1/4	5/8-11	61310	10,200	10
7	1/4	5/8-11	61306	8,500	10
9	1/4	5/8-11	61307	6,600	10

ZIRKON SG CAST + STEEL ★★★☆

Zirconia alumina grinding wheel for cast iron and steel with excellent material removal rate and very long service life.

Advantages:
- Reduced labour time and increased economic efficiency due to the high stock removal rate.
- Fewer wheel changes due to the very long service life.

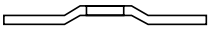
Workpiece materials:
grey/nodular cast iron, steel

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Zirconia alumina Z and special aluminum oxide A

Technical information:
ZA 30 S

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/8	7/8	63251	13,300	10
	1/4	7/8	61602	13,300	10
5	1/8	7/8	63252	12,200	10
	1/4	7/8	61604	12,200	10
6	1/8	7/8	63250	10,200	10
	1/4	7/8	61613	10,200	10
7	1/8	7/8	63253	8,500	10
	1/4	7/8	61605	8,500	10
9	1/8	7/8	63254	6,600	10
	1/4	7/8	61606	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	63255	13,300	10
	1/4	5/8-11	61603	13,300	10
5	1/8	5/8-11	63256	12,200	10
	1/4	5/8-11	61614	12,200	10
6	1/8	5/8-11	63259	10,200	10
	1/4	5/8-11	61616	10,200	10
7	1/8	5/8-11	63257	8,500	10
	1/4	5/8-11	61607	8,500	10
9	1/8	5/8-11	63258	6,600	10
	1/4	5/8-11	61608	6,600	10

SG CAST + STONE ★★★☆

Grinding wheel for cast iron and casting scale and hard aluminum alloys with high material removal rate and very long service life.

Advantages:
- Reduced labour time and increased economic efficiency due to the high stock removal rate.
- Fewer wheel changes due to the very long service life.

Workpiece materials:
cast iron, casting scale, concrete, hard aluminum alloys

Applications:
chamfering, deburring, surface grinding

Abrasive:
Premium aluminum oxide A and silicon carbide C

Technical information:
AC 24 Q

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/4	7/8	61501	13,300	10
5	1/4	7/8	61502	12,200	10
7	1/4	7/8	61504	8,500	10
9	1/4	7/8	61505	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/4	5/8-11	61508	13,300	10
5	1/4	5/8-11	61509	12,200	10
7	1/4	5/8-11	61506	8,500	10
9	1/4	5/8-11	61507	6,600	10
Saucer (type 28) – plain arbor hole					
7	1/4	7/8	61705	8,500	10
9	1/4	7/8	61706	6,600	10
Saucer (type 28) – threaded arbor hole					
7	1/4	5/8-11	61707	8,500	10
9	1/4	5/8-11	61708	8,500	10

CERAMIC COMFORT

The CERAMIC SG COMFORT is a hybrid grinding wheel for steel. It combines a top layer of coated abrasive and a rough grinding wheel.

Advantages:

- Due to the combination of a coated abrasive layer and a rough grinding wheel with a high stock removal rate, the CERAMIC SG COMFORT offers significantly reduced labour time and maximum economic efficiency.
- Fewer wheel changes due to the very long service life.
- Can be used for peripheral grinding (on edge).
- Significantly lower noise emissions and vibration when compared to conventional grinding wheels.

CERAMIC SG COMFORT STEEL ★★★☆

Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring, surface grinding

Abrasive:
Ceramic oxide grain CO and special aluminum oxide A

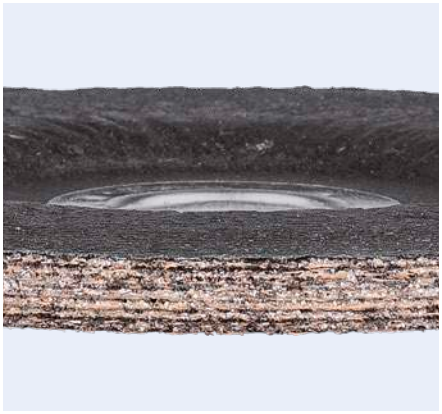
PFERDVALUE®:

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

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	5/16	7/8	60150	13,300	10
5	5/16	7/8	60151	12,200	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	5/16	5/8-11	60155	13,300	10
5	5/16	5/8-11	60156	12,200	10

WHISPER

Due to its patented multi-layer design, the WHISPER grinding wheel generates significantly less vibration and noise than conventional grinding wheels. The noise exposure is decreased by up to 12 dBA, a reduction of more than 90%. The flexible construction enables soft, comfortable grinding with outstanding surface finish.



Advantages:

- Universally suitable for steel and stainless steel (INOX).
- Significantly lower noise emissions and vibration than with conventional grinding wheels.
- Comfortable grinding.
- Excellent solution for mill scale.

SGP WHISPER STEELOX ★★★★

Workpiece materials:
steel, mill scale, stainless steel (INOX)

Applications:
weld dressing, surface grinding, fillet weld edge grinding

Abrasive:
Special aluminum oxide A

Technical information:
A 46 H

PFERDVALUE®:

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/4	7/8	61582	13,300	10
5	1/4	7/8	61583	12,200	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/4	5/8-11	61588	13,300	10
5	1/4	5/8-11	61589	12,200	10

ZIRKON SGP STEEL ★★★★

Zirconia alumina grinding wheel with a very high material removal rate and an excellent service life.

Advantages:
- Reduced labour time and maximum economic efficiency due to the very high material removal rate.
- Fewer wheel changes due to the excellent service life.

Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Zirconia alumina Z and special aluminum oxide A

Technical information:
ZA 24 R

PFERDVALUE®:
Waste Saving, Time Saving

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/4	7/8	61553	13,300	10
5	1/4	7/8	61554	12,200	10
6	1/4	7/8	61555	10,200	10
7	1/4	7/8	61556	8,500	10
9	1/4	7/8	61557	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/4	5/8-11	61560	13,300	10
5	1/4	5/8-11	61561	12,200	10
6	1/4	5/8-11	61562	10,200	10
7	1/4	5/8-11	61563	8,500	10
9	1/4	5/8-11	61564	6,600	10

CERAMIC

High-performance grinding wheel with ceramic oxide grain for cool grinding with excellent productivity.

Advantages:

- Outstanding aggressiveness and service life due to the self-sharpening effect of the high-performance abrasive ceramic oxide grain.
- Labour cost savings due to much higher material removal rate compared to conventional grinding wheels.
- Reduced operator strain – maximum performance with minimal contact pressure.

CERAMIC SGP STEELOX ★★★★

Workpiece materials:
steel, stainless steel (INOX)

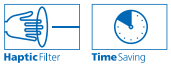
Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Ceramic oxide grain CO

Technical information:
CO 24 Q

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

PFERDVALUE®:

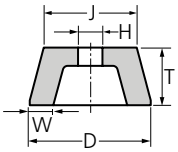


D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27) – plain arbor hole					
4-1/2	1/8	7/8	60088	13,300	10
	1/4	7/8	60055	13,300	10
5	1/8	7/8	60089	12,200	10
	1/4	7/8	60056	12,200	10
6	1/8	7/8	60090	10,200	10
	1/4	7/8	60057	10,200	10
7	1/8	7/8	60091	8,500	10
	1/4	7/8	60058	8,500	10
9	1/8	7/8	60092	6,600	10
	1/4	7/8	60059	6,600	10
Depressed centre (type 27) – threaded arbor hole					
4-1/2	1/8	5/8-11	60093	13,300	10
	1/4	5/8-11	60063	13,300	10
5	1/8	5/8-11	60094	12,200	10
	1/4	5/8-11	60064	12,200	10
6	1/8	5/8-11	60095	10,200	10
	1/4	5/8-11	60065	10,200	10
7	1/8	5/8-11	60096	8,500	10
	1/4	5/8-11	60066	8,500	10
9	1/8	5/8-11	60097	6,600	10
	1/4	5/8-11	60067	6,600	10

Cup wheels
Performance Line SG ★★★☆

Product group selection guide

Application	Steel (STEEL)	Cast iron (CAST)	Stone (STONE)
■ Surface grinding ■ Chamfering ■ Deburring ■ Work on weld seams	SG STEEL SG CAST + STEEL	SG CAST + STEEL	SG STONE



SG STEEL ★★★☆

Cup wheel with high grinding performance and long service life.

Advantages:
- High grinding performance.
- Long service life.

Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring, surface grinding

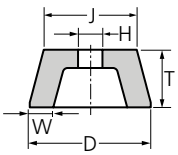
Abrasive:
Aluminum oxide A

Technical information:
A 16 Q

Recommendations for use:
- Place at a slight incline to work on weld seams.

Safety notes:
- The permissible maximum operating speed is 9,800 SFPM.

D [Inches]	J [Inches]	EDP number	T [Inches]	H [Inches]	W [Inches]	Max. RPM	
Conical cup wheel ETT (shape 11)							
4	3-1/2	61801	2	5/8-11	1	9,360	2
5	3-3/4	61802	2	5/8-11	1-1/2	7,510	2
6	4-3/4	61803	2	5/8-11	1-1/2	6,280	2



SG CAST + STEEL ★★★☆

Cup wheel with high grinding performance and long service life.

Advantages:
- High grinding performance.
- Long service life.

Workpiece materials:
cast iron, steel

Applications:
weld dressing, chamfering, deburring, surface grinding

Abrasive:
Zirconia alumina Z

Technical information:
ZA 16 Q

Recommendations for use:
- Place at a slight incline to work on weld seams.

Safety notes:
- The permissible maximum operating speed is 9,800 SFPM.

D [Inches]	J [Inches]	EDP number	T [Inches]	H [Inches]	W [Inches]	Max. RPM	
Conical cup wheel ETT (shape 11)							
4	3-1/2	61817	2	5/8-11	1	9,360	2
5	3-3/4	61818	2	5/8-11	1-1/2	7,510	2
6	4-3/4	61819	2	5/8-11	1-1/2	6,280	2

SG STONE ★★★☆

Cup wheel with high grinding performance and long service life.

Advantages:
- High grinding performance.
- Long service life.

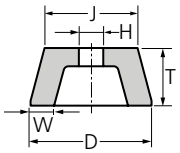
Workpiece materials:
grey/nodular cast iron (GG/GJL, GGG/GJS), casting scale, concrete, stone

Applications:
chamfering, deburring, surface grinding

Abrasive:
Silicon carbide C

Technical information:
C 16 Q

Safety notes:
- The permissible maximum operating speed is 9,800 SFPM.



D [Inches]	J [Inches]	EDP number	T [Inches]	H [Inches]	W [Inches]	Max. RPM	
Conical cup wheel ETT (shape 11)							
4	3-1/2	61805	2	5/8-11	1	9,360	2
5	3-3/4	61806	2	5/8-11	1-1/2	7,510	2
6	4-3/4	61807	2	5/8-11	1-1/2	6,280	2

XLOCK cut-off wheels, flap discs and grinding wheels

With the BOSCH X-LOCK system for angle grinders, you can change discs quickly and comfortably. Instead of a round centre hole, the X-LOCK system features an X-shaped contour, which allows the disc to be fixed on the angle grinder in a form-fitting manner. This guarantees that different discs 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.

XLOCK
Technology by BOSCH

Advantages:

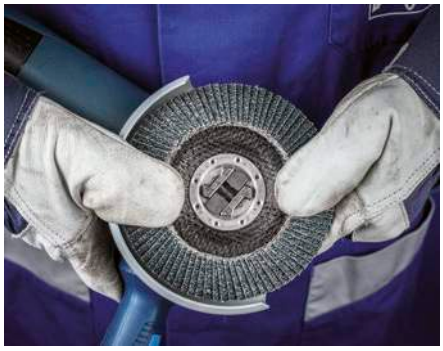
- Quick and comfortable disc changes.
- Discs are fixed securely since they audibly click into place.
- X-LOCK products can also be used on conventional angle grinders with 5/8-11 thread.

Recommendations for use:

- Place the disc on the X-LOCK quick-change system of your angle grinder and secure it by lightly pressing it down. The disc will audibly click into place.

How it works:

Place the disc on the X-LOCK holder in a form-fitting manner.



Lightly press the disc down until it audibly clicks into place.

Release the disc by using the lever.

Cut-off wheels with XLOCK quick-change system

Universal Line PSF ★★☆☆

PSF STEELOX ★★☆☆

Fast-cutting cut-off wheel for steel and stainless steel (INOX) with long service life.

Advantages:
- Quick and comfortable disc changes.
- Single solution for steel and stainless steel (INOX).
- Reduced cutting time.
- Increased economic efficiency due to long tool life.
- Ideal for use with cordless angle grinders.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

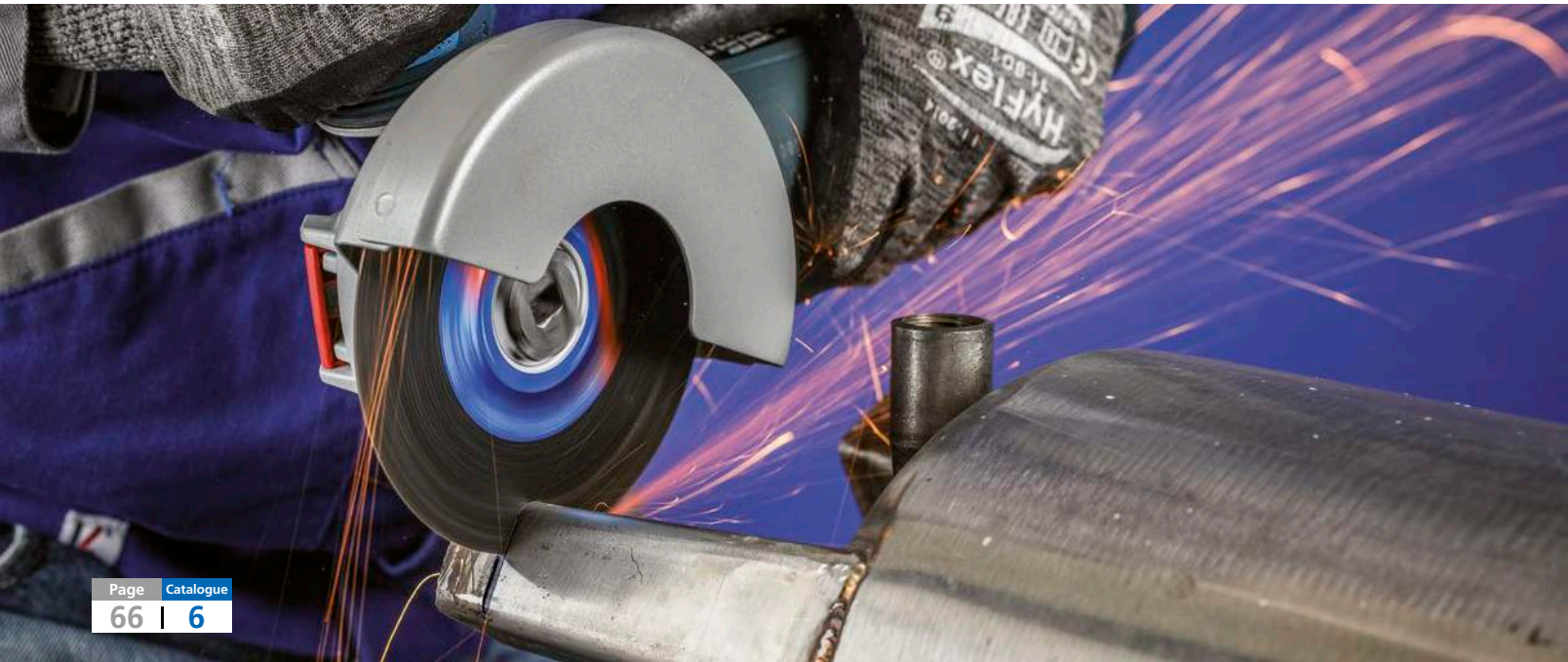
Abrasive:
Aluminum oxide A

Technical information:
A 46 P

PFERDVALUE®:
Thin cut-off wheels:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41)		X-LOCK			
4-1/2	.040	X-LOCK (7/8)	63735	13,300	25
	.045	X-LOCK (7/8)	63736	13,300	25
5	.040	X-LOCK (7/8)	63737	12,200	25
	.045	X-LOCK (7/8)	63738	12,200	25
Depressed centre (type 27/42)		X-LOCK			
4-1/2	.045	X-LOCK (7/8)	63743	13,300	25
	3/32	X-LOCK (7/8)	63739	13,300	25
5	.045	X-LOCK (7/8)	63744	12,200	25
	3/32	X-LOCK (7/8)	63740	12,200	25



SG STEELOX ★★★☆

Fast-cutting cut-off wheel for steel and stainless steel (INOX) with very long service life.

Advantages:
- Quick and comfortable disc changes.
- Single solution for steel and stainless steel (INOX).
- Reduced cutting time.
- Maximum economic efficiency due to very long service life.

Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting sheet metal, cutting hollow sections, cutting solid materials

Abrasive:
High-performance aluminum oxide A

Technical information:
A 46 R

PFERDVALUE®:
Thin cut-off wheels:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	T/U [Inches]	H [Inches]	EDP number	Max. RPM	
Flat (type 1/41)		X-LOCK			
4-1/2	.040	X-LOCK (7/8)	63751	13,300	25
	.045	X-LOCK (7/8)	63752	13,300	25
5	.040	X-LOCK (7/8)	63753	12,200	25
	.045	X-LOCK (7/8)	63754	12,200	25
Depressed centre (type 27/42)		X-LOCK			
4-1/2	.045	X-LOCK (7/8)	63745	13,300	25
	3/32	X-LOCK (7/8)	63755	13,300	25
5	.045	X-LOCK (7/8)	63746	12,200	25
	3/32	X-LOCK (7/8)	63756	12,200	25

POLIFAN® flap discs with XLOCK quick-change system

Universal Line PSF ★★☆☆

Z PSF STEELOX ★★☆☆

Zirconia alumina flap disc with aggressive stock removal rate and long service life.

Advantages:
- Quick and comfortable disc changes.
- Reduced labour time and increased economic efficiency due to the aggressive stock removal rate.
- Long service life.
- Good option for low-powered angle grinders (< 9 amps).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
surface grinding, weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	Grit and EDP number			Max. RPM	
		40	60	80		
Conical (type 29, PFC)		X-LOCK				
4-1/2	X-LOCK (7/8)	60761	60762	60763	13,300	10
5	X-LOCK (7/8)	60764	60765	60766	12,200	10

Z PSF EXTRA STEELOX ★★☆☆

Zirconia alumina flap disc with aggressive stock removal rate and long service life.

Advantages:
- Quick and comfortable disc changes.
- Reduced labour time and increased economic efficiency due to the aggressive stock removal rate.
- Very long service life due to the high-density flap arrangement.
- Good option for low-powered angle grinders (< 9 amps).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
surface grinding, weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:

Vibration Filter · Noise Filter · Emission Filter · Haptic Filter · Energy Saving · Time Saving

D [Inches]	H [Inches]	Grit and EDP number			Max. RPM	
		40	60	80		
Flat (type 27, PFF)		X-LOCK				
4-1/2	X-LOCK (7/8)	60741	60742	60743	13,300	10
5	X-LOCK (7/8)	60744	60745	60746	12,200	10

POLIFAN® flap discs with XLOCK quick-change system

Performance Line SG ★★★☆

Z SG POWER STEELOX ★★★☆

The POLIFAN® Z SG POWER flap disc features an aggressive stock removal rate and excellent service life to achieve the highest level of efficiency. It is the best conventional flap disc for steel.

Advantages:
- Quick and comfortable disc changes.
- Reduced labour time and maximum economic efficiency due to the aggressive stock removal rate.
- Maintains maximum aggressiveness throughout the entire service life.
- Fewer wheel changes due to the excellent service life.

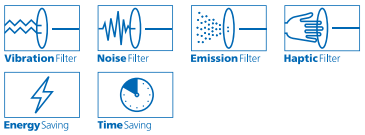
Workpiece materials:
steel, stainless steel (INOX)

Applications:
weld dressing, blending, chamfering, deburring

Abrasive:
Zirconia alumina Z

Recommendations for use:
- Also suitable for surface grinding on steel.

PFERDVALUE®:



D [Inches]	H [Inches]	Grit and EDP number			Max. RPM	
		40	60	80		
Conical (type 29, PFC)		X-LOCK				
4-1/2	X-LOCK (7/8)	60775	60776	60777	13,300	10
5	X-LOCK (7/8)	60778	60779	60780	12,200	10

POLIFAN® flap discs with XLOCK quick-change system

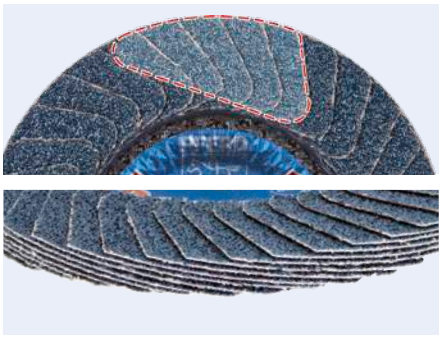
Special Line SGP ★★★★

POLIFAN®-STRONG STEEL

Users who rely on top performance choose the innovative POLIFAN®-STRONG flap disc. It surpasses conventional flap discs and redefines the highest levels of efficiency. Due to its patented and unique design, it achieves an unsurpassed stock removal rate. It also has an astonishingly long service life over conventional flap discs.

Advantages:

- Quick and comfortable disc changes.
- Fast grinding through constant grinding aggressiveness down to the last abrasive grain.
- Ultimate economic efficiency due to extremely fast stock removal rate.
- Extremely long service life due to patented flap design.



Long, compact arranged flaps

Z SGP STRONG STEEL ★★★★

Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring

Abrasive:
Zirconia alumina Z

Recommendations for use:
- Grit size 36 is ideal for high stock removal, e.g. during work on weld seams.
- Grit size 50 is ideal for work on edges, e.g. chamfering or achieving a finer surface finish.

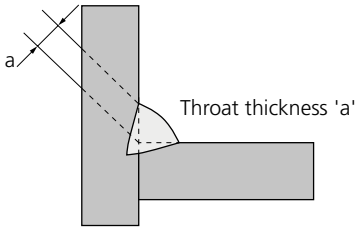
PFERDVALUE®:

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

D [Inches]	H [Inches]	Grit and EDP number		Max. RPM	
		36	50		
Conical (type 29, PFC)	 X-LOCK				
4-1/2	X-LOCK (7/8)	60787	60788	13,300	10
5	X-LOCK (7/8)	60789	60790	12,200	10

POLIFAN®-CURVE

The patented flap disc POLIFAN®-CURVE 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:

- Quick and comfortable disc changes.
- Reduced labour time and ultimate economic efficiency due to the extremely aggressive stock removal rate.
- Outstanding tool life when working on fillet welds.
- Precise and optimum grinding of the fillet weld geometry.

Recommendations for use:

- Size M (medium): For fillet weld radii > 3/16" or throat thickness ≤ 1/4" with 90° joint, width at the radius: 7/16".
- Size L (large): For fillet weld radii > 5/16" or throat thickness > 1/4" with 90° joint, width at the radius: 9/16".

Z SGP CURVE STEELOX ★★★★

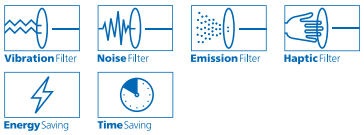
High-performance flap disc for maximum stock removal on steel and stainless steel (INOX).

Workpiece materials:
steel, stainless steel (INOX)

Applications:
fillet weld edge grinding, weld dressing, chamfering, deburring

Abrasive:
Zirconia alumina Z

PFERDVALUE®:



D [Inches]	H [Inches]	Size and EDP number		Grit	Max. RPM	
		Size medium	Size large			
Radial type PFR (CURVE)			X-LOCK			
4-1/2	X-LOCK (7/8)	67796	67797	40	13,300	10
5	X-LOCK (7/8)	67798	67799	40	12,200	10

Grinding wheels with XLOCK quick-change system

Universal Line PSF ★★☆☆ | Performance Line SG ★★★☆

PSF STEEL ★★☆☆

General purpose grinding wheel with high stock removal rate and long service life for steel.

Advantages:
- Quick and comfortable disc changes.
- Reduced labour time and increased economic efficiency due to the high stock removal rate.
- Long service life.
- Also suitable for low-powered angle grinders (< 9 amps). Achieves high stock removal rates even at low contact pressure.

Workpiece materials:
steel, cast iron

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Aluminum oxide A

Technical information:
A 24 R

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27)		 **X-LOCK**			
4-1/2	1/4	X-LOCK (7/8)	60171	13,300	10
5	1/4	X-LOCK (7/8)	60172	12,200	10

SG STEEL ★★★☆

Grinding wheel for steel with high stock removal and very long service life.

Advantages:
- Quick and comfortable disc changes.
- Reduced labour time and maximum economic efficiency due to the high stock removal rate.
- Fewer disc changes due to the very long service life.

Workpiece materials:
steel

Applications:
weld dressing, chamfering, deburring, surface grinding, fillet weld edge grinding

Abrasive:
Premium aluminum oxide A

Technical information:
A 24 R

Recommendations for use:
- 1/8" thick grinding wheels are ideal for edge/root pass grinding.

D [Inches]	U [Inches]	H [Inches]	EDP number	Max. RPM	
Depressed centre (type 27)		 **X-LOCK**			
4-1/2	1/8	X-LOCK (7/8)	60181	13,300	10
	1/4	X-LOCK (7/8)	60182	13,300	10
5	1/8	X-LOCK (7/8)	60183	12,200	10
	1/4	X-LOCK (7/8)	60184	12,200	10

Cut-off wheels for stationary applications

PFERD

7

7

Cut-off wheels for stationary applications
Table of contents

Cut-off wheels for stationary applications

Large diameter cut-off wheels made to order

PFERD quality

Stationary cut-off wheels from PFERD are developed, manufactured and tested in accordance with the strictest quality requirements.

Research and development, our in-house and plant construction, and the continuous testing to quality and safety standards in our internal laboratories all guarantee high PFERD quality.

PFERD quality management is certified according to ISO 9001.

Technical support

PFERD offers individual targeted support to solve unique application problems. Our experienced sales representatives and technical specialists are available to assist you.

Contact your local sales representative to learn more or visit us at pferd.com.

Cut-off wheels for stationary applications
Technical information and safety notes

PFERD is a founding member of oSa

PFERD voluntarily manufactures quality products conforming to the strictest safety standards. Member companies of oSa (the Organization for Safety of Abrasives) are committed to continuous product safety and quality monitoring. PFERD products carry the oSa mark.

Safety standard

Abrasives made by PFERD conform to the highest quality and safety requirements and are marked according to the following key European and international safety standards:

- ANSI B7.1
- OSHA regulations
- EN 12413

Maximum operating speed

The maximum permissible operating speed [m/s] can be found on the product labels and in the product tables of this catalogue. The maximum permissible rotational speed specification applies to the nominal diameter of the unused wheels. For safety reasons, these must never be exceeded.

Safety notes

= Wear eye protection!

= Wear hearing protection!

= Wear a dust mask!

= Wear gloves!

= Please read the safety notes!

= Do not use if damaged!

= Not permitted for hand-held or manually guided grinding!

User information

Please observe the user information provided with all products on the safe use of stationary cut-off wheels as well as the user information for the grinding machine used.

Proper clamping of cut-off wheels

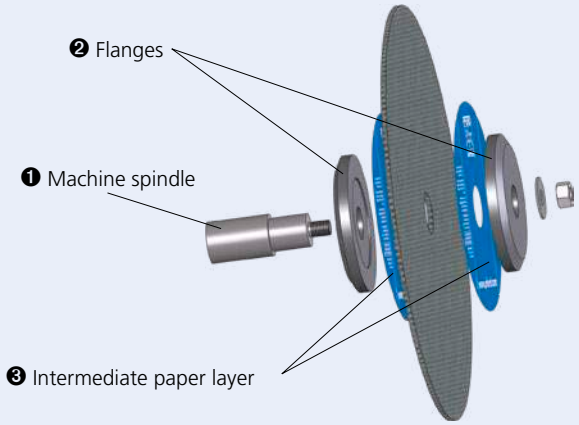
The correct clamping of the cut-off wheel is a prerequisite for optimum performance and is essential to ensure user safety. The adjacent illustration shows the right way to do it:

❶ Machine spindle with high concentricity.

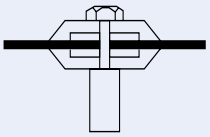
❷ Equally sized flanges.

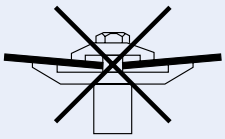
❸ Intermediate paper layers (blotters), if required for secure clamping and safe use. Our recommendations:

- After every second wheel change, change the intermediate paper layers (blotters).
- As from a wheel diameter > 16 inches, always use intermediate paper layers (blotters).



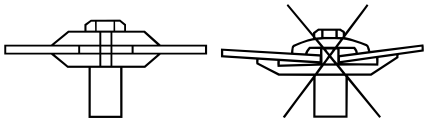
Safety notes:
The safe use of PFERD products depends largely on proper clamping systems. Both flanges between which a grinding product is mounted must have the same outer diameter and same support area (according to EN 13218, ANSI B7.1, AS 1788.1).


correct


incorrect

Storage of stationary cut-off wheels
- Stationary cut-off wheels should be stored in such a way as to prevent any adverse effects caused by moisture, frost or large temperature variations and so as to avoid mechanical damage. Do not use resinoid-bonded abrasive wheels or abrasive products using coated abrasives that have been exposed to severe humidity, damp, or high temperatures.

Mounting of stationary cut-off wheels
- Only use stationary machines that are intended for use with the relevant product.
- Never use a stationary machine that is not in good condition.
- Use only stationary cut-off wheels whose outer diameter and centre-hole diameter and/or thread match the specifications of the stationary machine.
- Never use damaged stationary cut-off wheels. Stationary cut-off wheels must be visually inspected and checked for any possible damage before each use.
- Keep mounting components clean and in good mechanical condition.
- Replace them if they become damaged or worn. If the manufacturer of the stationary machine provides tools for fixation of the stationary cut-off wheels (e.g. a key), then these are to be used.



- In principle, only clamping flanges having a contact surface with the same outer diameter and which are identically shaped on the contact side are to be used.
- If required, use blotters between the stationary cut-off wheel and clamping components.
- To prevent the stationary machine from accidentally turning on, disconnect the power supply before mounting or changing the stationary cut-off wheel.
- Never exceed the maximum operating speed of a stationary cut-off wheel. Make sure that the speed of the stationary machine (rev/min, 1/min, RPM or min^{-1}) does not exceed the maximum permissible speed given on the stationary cut-off wheel, the accompanying label or packaging.
- Do not make any unauthorized changes to stationary cut-off wheels.
- Each time that a wheel is mounted, perform a trial run at operating speed with the guard properly installed, for at least 1 minute. During the trial run, move away from the stationary machine in such a way that in the event of any failure of the stationary cut-off wheel you are not struck by any fragments.
- Stationary cut-off wheels must only be used on appropriate stationary cut-off grinding machines. They are not permitted for hand-held or manually guided grinding. The maximum permitted power output must never be exceeded. Be sure, that machine power is not too high for the stationary cut-off wheel.
- Clamping flanges for stationary cut-off wheels must meet today's requirements according to ANSI B7.1. Our PFERD sales department will be happy to advise you.

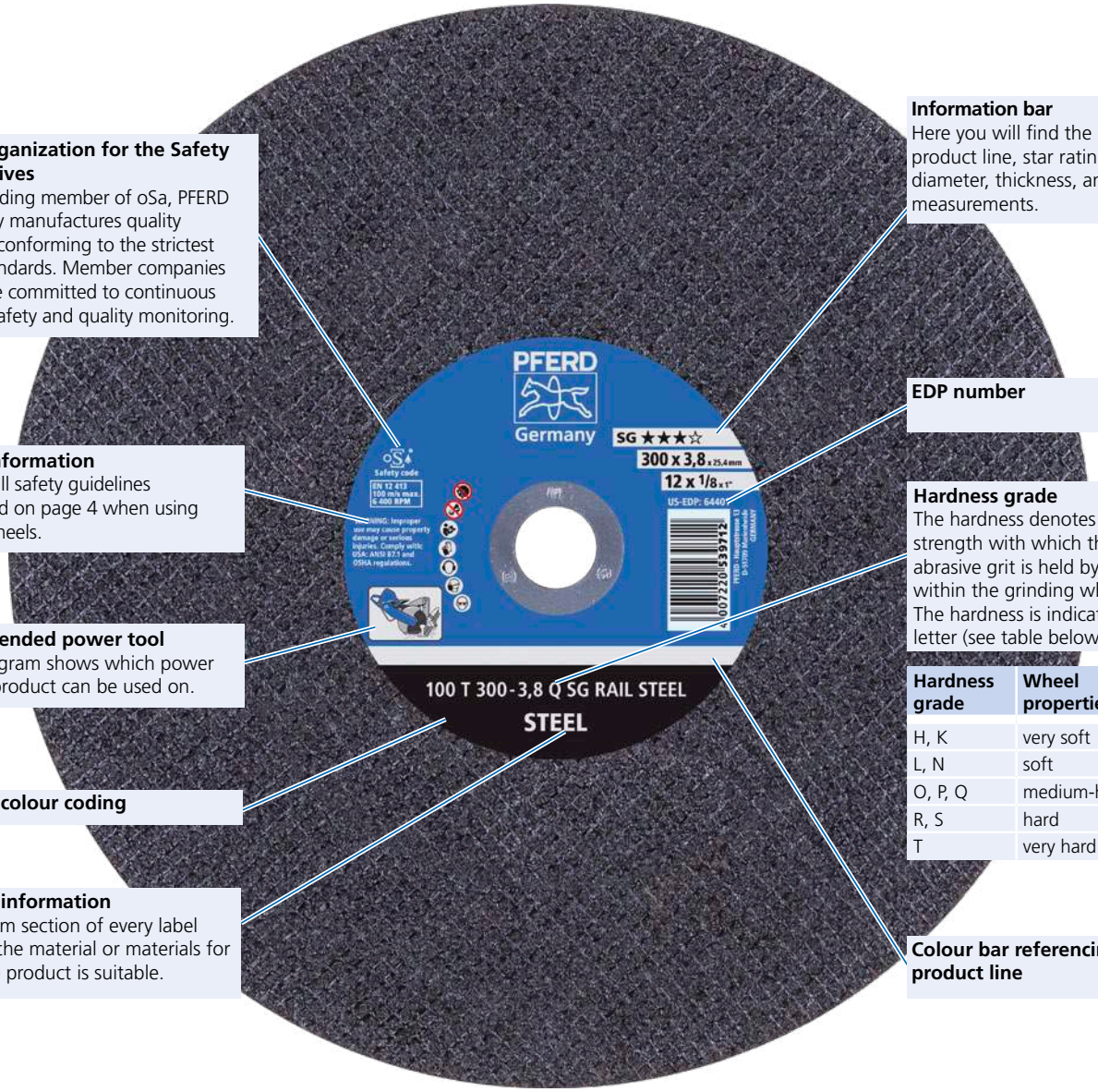
Use of stationary cut-off wheels
- Ensure that the correct stationary cut-off wheel is selected. Never use a product if it cannot be properly identified.
- Always be aware of the potential dangers during use of stationary cut-off wheels.
- Always use protective equipment and guards in compliance with the operating instructions for the stationary machine and make sure they are properly mounted and in good condition, before you switch on the stationary machine.
- Comply with the ANSI B7.1 regulations on safety guards depending on the mounted wheel:
  - Type 1 wheels must be used with a guard covering at least 180° of the lateral wheel surface and face.
- The workpiece must be fixed without tension by appropriate clamping devices.
- The stationary machine must always be turned on before the abrasive wheel comes into contact with the workpiece.
- Always bring stationary cut-off wheels carefully into contact with the workpiece surface.
- Always guide stationary cut-off wheels in a straight line. No lateral load should be applied to the stationary cut-off wheel and it should not be used for face grinding. Use only on stationary cut-off machines. Stationary cut-off wheels are not allowed to be used on handheld gas saw machines.
- Stationary machines like a CHOPSAW machine may only be transported once they have been turned off and have come to a complete stop.

Hazards due to product breakage, abrasive particles, sparks, dust, fumes, noise, vibration and bodily contact with the abrasive product at operation speed
- Warning! The cutting process may generate dust and fumes. Inhalation of cutting dust can lead to severe lung damage. Sufficient extraction or other appropriate measures must be provided and appropriate personal protective equipment must be worn at all times.
- The use of appropriate personal protective equipment is required for all cutting operations to provide protection against mechanical impacts, abrasive particles, sparks, dust and fumes, noise and vibration. This includes eye protection, ear protection, respiratory protection, and hand protection. Long-sleeved, flame-resistant clothing and appropriate safety footwear must be worn. Tie back long hair and do not wear loose clothing, ties or jewelry. These rules apply not only to the operator of the stationary machine but also to any other persons in the working environment.
- Predominantly, dust and fumes in a cutting process originate from the workpiece material. Review the Safety Data Sheet (SDS) of the workpiece material.
- Do not use stationary cut-off wheels in the vicinity of flammable materials.
- Flammable and explosive substances must be removed from the working environment before starting work. This includes, for example, dust deposits, cardboard, packaging material, textiles, wood and wood chips, as well as flammable liquids and gases.
- In the event of excessive vibrations stop the stationary machine and investigate.
- Prevent accidental start-up of the stationary machine before mounting or changing an stationary cut-off wheel, isolate the stationary machine from the power source.
- Never remove guards from stationary machines and ensure they are in good condition and properly adjusted before starting the stationary machine.
- After switching off the stationary machine, ensure the product has come to a complete stop before leaving the stationary machine unattended.

Disposal of stationary cut-off wheels
- Worn or defective stationary cut-off wheels must be disposed of according to all local and/or national regulations.
- Note that stationary cut-off wheels may become contaminated by work on certain materials.
- Stationary cut-off wheels for disposal should be destroyed in a clearly visible manner in order to prevent re-use.
- Further information can be obtained from Voluntary Product information provided by the supplier.

Cut-off wheels for stationary applications
Wheel and packaging label information

Label



oSa – Organization for the Safety of Abrasives
As a founding member of oSa, PFERD voluntarily manufactures quality products conforming to the strictest safety standards. Member companies of oSa are committed to continuous product safety and quality monitoring.

Safety information
Observe all safety guidelines mentioned on page 4 when using cut-off wheels.

Recommended power tool
The pictogram shows which power tool the product can be used on.

Material colour coding

Material information
The bottom section of every label indicates the material or materials for which the product is suitable.

Information bar
Here you will find the product line, star rating, diameter, thickness, and arbor measurements.

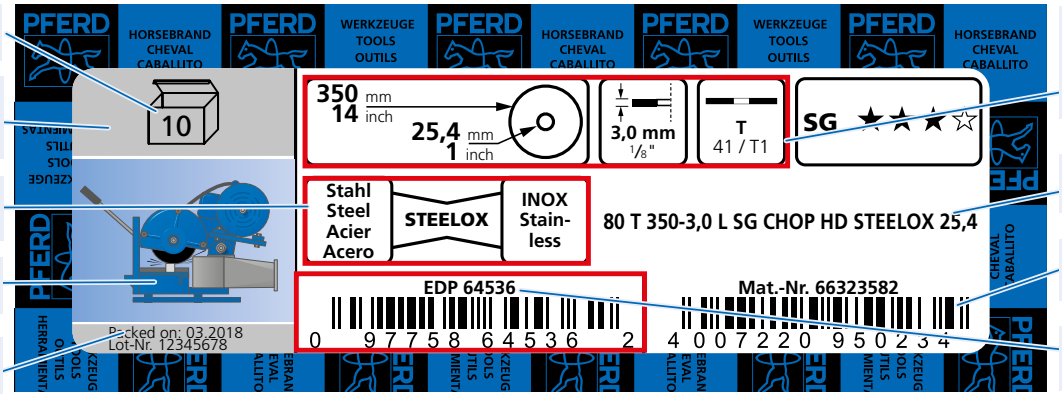
EDP number

Hardness grade
The hardness denotes the strength with which the abrasive grit is held by the bond within the grinding wheel. The hardness is indicated with a letter (see table below).

Hardness grade	Wheel properties
H, K	very soft
L, N	soft
O, P, Q	medium-hard
R, S	hard
T	very hard

Colour bar referencing product line

Packaging label



Box quantity

Product line (colour coding system)

Material information

Product type

Packing date and lot number

Language-neutral technical information

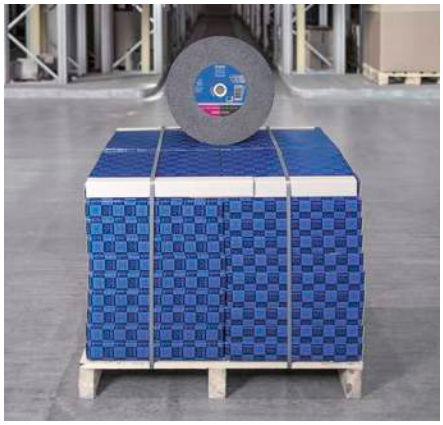
PFERD description

EAN (European Article Number)

EDP and UPC code

Packaging

The packaging of stationary cut-off wheels provides the wheels with optimum protection against dirt and damage. Three packaging types are available which is determined by the quantity, type and size of the wheel ordered.



Box

Crate

Pallet

Transport and storage

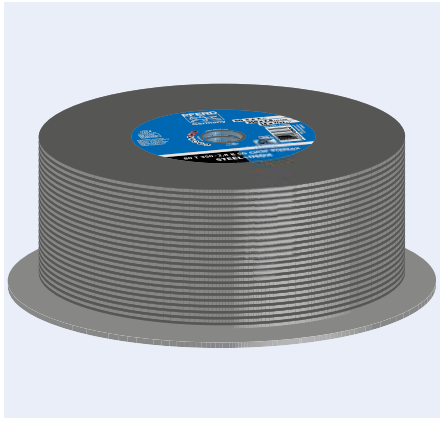
To avoid damage to cut-off wheels through improper transport or adverse environmental influences during storage, e.g. UV radiation, temperature or humidity, please observe the following:

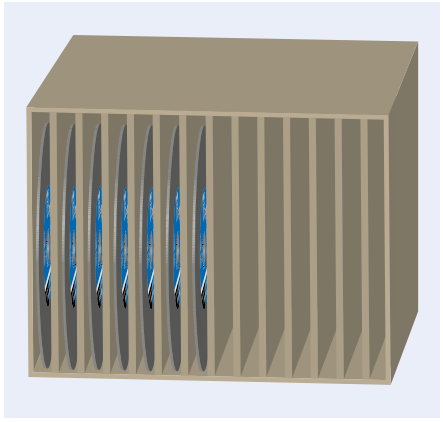
- Transport and store cut-off wheels in their original packaging lying on a flat surface, e.g. on a shelf or vertically in racks.
- Avoid bending the wheels.
- Ensure that the cut-off wheels are stored in dry, temperature controlled areas.
- Use supplies in the order received.

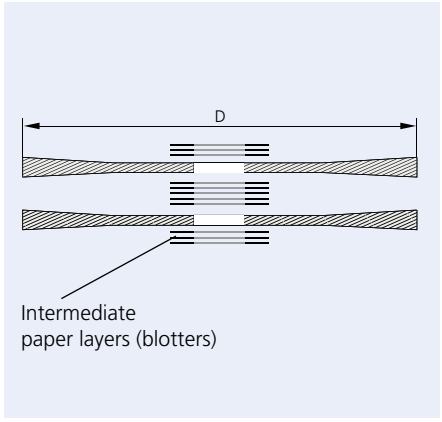
Recommendation:
Room temperature: 65–72°F
Relative humidity: 45–65%
No direct sunlight

Advice on the storage of conical wheels (CT)
Conical cut-off wheels must be stacked with intermediate paper layers (blotters), so that the tapered area is supported and bending of the cut-off wheels is avoided.

PFERD supplies conical cut-off wheels with intermediate paper layers (blotters) included.







Cut-off wheels for stationary applications
Quick product selection guide

Product lines and colour coding

Universal Line PSF ★★☆☆

Choose the Universal Line PSF for processing of the most common materials. Products achieve good results with increased economic efficiency.

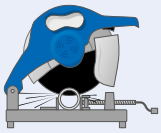
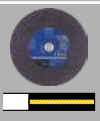
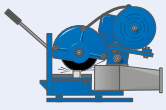
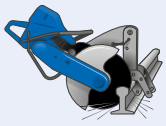
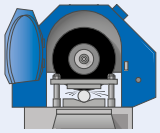
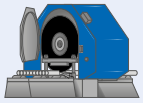
Performance Line SG ★★★☆

The wide range Performance Line SG offers high-performance solutions for every application and material. Products achieve optimum results with excellent economic efficiency.

Special Line SGP ★★★★

Special Line SGP includes products engineered for specific tasks and offers the user key advantages over conventional products. This quality line also includes products that, due to their particularly high performance, offer ultimate economic efficiency.

Product group selection

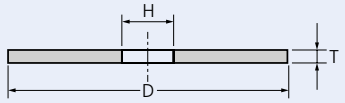
Power tool	Application	Product line	Steel (STEEL)	Stainless steel (INOX)	Cast material (CAST)
CHOPSAW < 5 horsepower 	Cutting of solid material, sections and pipes	**Universal Line PSF** ★★☆☆	 PSF CHOP STEEL Hardness K Page 9  PSF CHOP STEELOX Hardness K Page 9	 PSF CHOP STEELOX Hardness K Page 9	
		Performance Line SG ★★★☆	 SG CHOP STEEL Hardness K Page 10  SG CHOP STEELOX Hardness K Page 10  SG STUD STEEL Hardness K Page 11	 SG CHOP STEELOX Hardness K Page 10	
CHOPSAW HD 	Cutting of solid material, sections and pipes	**Performance Line SG** ★★★☆	 SG CHOP HD STEEL Hardness L Page 12		
RAIL 	Cutting of rails	**Performance Line SG** ★★★☆	 SG RAIL STEEL Hardness Q Page 13		
HEAVY DUTY 	Cutting of solid material, sections and pipes	**Special Line SGP** ★★★★	 SGP HD STEEL Hardness N, Q + S Page 14  ZIRKON SGP HD CAST + STEEL Hardness R Page 15		 ZIRKON SGP HD CAST + STEEL Hardness R Page 15
Products made to order up to 2,000 mm (80") dia. 	On request, we can produce stationary cut-off wheels in premium PFERD quality up to 2,000 mm (80") diameter, tailor-made to meet the requirements of your special application. Please review pages 16-20 of this section regarding our products made to order. Our experienced technical sales specialists will be pleased to assist you. Please contact **ldco@pferdusa.com** for more information.				

 With a middle reinforcement layer for aggressive cutting with minimized burr formation

 With two outer reinforcement layers for high lateral stability

Product type and dimensions

All cut-off wheels in this section use flat type T (shape 41). The diagram to the right shows the product dimension information for diameter (D), height (T), and bore size (H) of each cut-off wheel.



Cut-off wheel, flat type T (type 41)

PSF CHOP STEEL ★★☆☆

General purpose K hardness wheel with a middle reinforcement layer. Aggressive free cutting with minimal burr formation.

Advantages:
- High productivity due to good service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- General purpose cutting work.

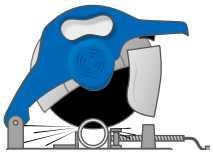
Workpiece materials:
steel

Applications:
cutting of solid material, sections and pipes

Abrasive:
Aluminum oxide A

Technical information:
A 36 K

Compatible with:
CHOPSAW up to 5 horsepower



Safety notes:
- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64491	5,100	20
14	3/32	1	64492	4,400	10
16	1/8	1	64493	3,800	10

PSF CHOP STEELOX ★★☆☆

General purpose K hardness wheel with a middle reinforcement layer. Aggressive free cutting of steel and stainless steel (INOX) with minimal burr formation.

Advantages:
- High productivity due to good service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- General purpose cutting work.

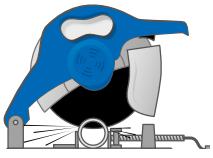
Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting of solid material, sections and pipes

Abrasive:
Aluminum oxide A

Technical information:
A 36 K

Compatible with:
CHOPSAW up to 5 horsepower



Safety notes:
- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64497	5,100	20
14	3/32	1	64498	4,400	10
16	1/8	1	64499	3,800	10

Cut-off wheels for stationary applications

Performance Line SG, CHOPSAW ★★★☆

SG CHOP STEEL ★★★☆

K hardness wheel with a middle reinforcement layer. Aggressive free cutting with minimal burr formation.

Advantages:
- Excellent productivity due to very long service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- Ideal for demanding cutting work.

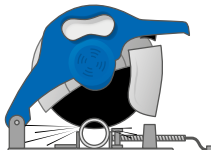
Workpiece materials:
steel

Applications:
cutting of solid material, sections and pipes

Abrasive:
Aluminum oxide A

Technical information:
A 36 K

Compatible with:
CHOPSAW up to 5 horsepower or less.



Safety notes:
- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64501	5,100	20
14	3/32	1	64502	4,400	10
16	1/8	1	64503	3,800	10

SG CHOP STEELOX ★★★☆

K hardness wheel with a middle reinforcement layer. Aggressive free cutting of steel and stainless steel (INOX) with minimal burr formation.

Advantages:
- Excellent productivity due to very long service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- Ideal for demanding cutting work.

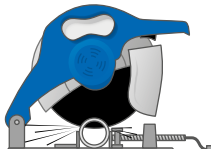
Workpiece materials:
steel, stainless steel (INOX)

Applications:
cutting of solid material, sections and pipes

Abrasive:
Aluminum oxide A

Technical information:
A 36 K

Compatible with:
CHOPSAW up to 5 horsepower or less.



Safety notes:
- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64510	5,100	20
14	3/32	1	64508	4,400	10
16	3/32	1	64509	3,800	10

SG STUD STEEL ★★★☆

K hardness wheel with two outer reinforcement layers. For cutting work that requires high stability.

Advantages:
- Maximum economic efficiency due to long service life.
- High lateral stability due to outer reinforcement layers.
- Ideal for cutting stacks and bundles of building studs.

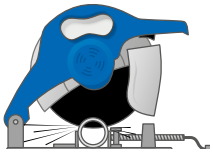
Workpiece materials:
steel

Applications:
cuts metal studs, thin rebar, sheet stock and light gauge metal

Abrasive:
Aluminum oxide A

Technical information:
A 36 K

Compatible with:
CHOPSAW up to 5 horsepower or less.



Safety notes:
- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64504	5,100	20
14	3/32	1	64505	4,400	10
16	1/8	1	64506	3,800	10

Cut-off wheels for stationary applications

Performance Line SG, CHOPSAW HD ★★★☆

SG CHOP HD STEEL ★★★☆

Heavy Duty L hardness wheel with two outer reinforcement layers. For cutting work that requires high stability.

Advantages:
- High lateral stability due to outer reinforcement layers.
- Excellent productivity due to very long service life.
- Ideal for demanding cutting work.

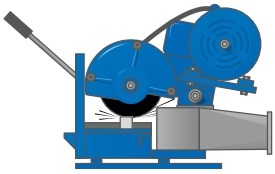
Workpiece materials:
steel

Applications:
cutting of solid material, sections and pipes

Abrasive:
Aluminum oxide A

Technical information:
A 30 L

Compatible with:
CHOPSAW HD



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	7/64	1	64530	5,100	20
14	7/64	1	64531	4,400	10
16	1/8	1	64532	3,800	10

SG RAIL STEEL ★★★☆

Q hardness wheel for fast and economic cutting of rails.

Advantages:
- Fast and safe cutting due to aggressive abrasive grain.
- Excellent productivity due to optimal service life.

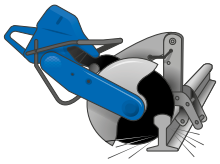
Workpiece materials:
steel

Applications:
cutting of rails

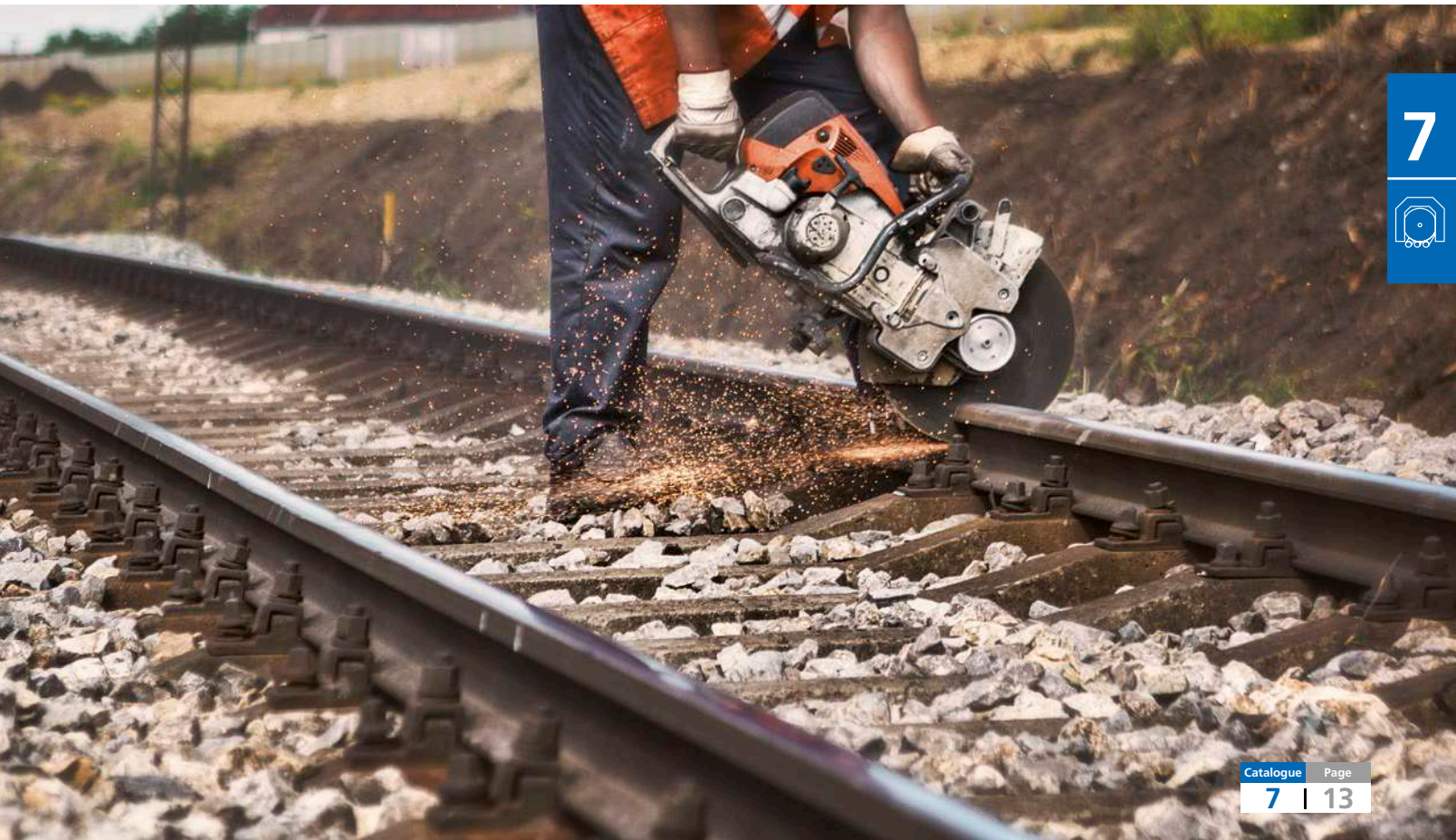
Abrasive:
Aluminum oxide A

Technical information:
A 24 Q

Compatible with:
RAIL cutting machine



D [Inches]	T [Inches]	H [Inches/mm]	EDP number	Max. RPM	
Maximum operating speed 100 m/s, flat type T (shape 41)					
12	1/8	1	64401	6,400	20
		20 mm	64395	6,400	20
14	1/8	1	64402	5,500	10
		20 mm	64396	5,500	10
16	1/8	1	64403	4,800	10
		20 mm	64397	4,800	10



Cut-off wheels for stationary applications

Special Line SGP, HEAVY DUTY ★★★★

SGP HD STEEL ★★★★

Wheel for the highest cutting work demands. Suitable for requirements of white cut and minimal burr formation.

Advantages:
- Maximum value due to extended service life.
- Increased productivity due to excellent cutting characteristics.

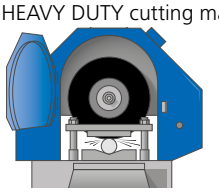
Workpiece materials:
steel

Applications:
cutting of solid material, sections and pipes

Abrasive:
Aluminum oxide A

Technical information:
A 24/36 N/Q/S

Compatible with:
HEAVY DUTY cutting machine



D [Inches]	T [Inches]	H [Inches]	Hardness grade and EDP number			Max. RPM	
			N (soft)	Q (medium-hard)	S (hard)		
Maximum operating speed 80 m/s, flat type T (shape 41)							
10	3/32	5/8	-	-	66113	6,100	20
		1	-	-	66114	6,100	20
12	1/8	1	-	66115	-	5,100	20
14	1/8	1	-	66116	-	4,400	10
16	1/8	1	-	66117	-	3,800	10
20	3/16	1	66005	-	-	3,100	5
		1	-	66123	-	3,100	5
26	1/4	1	66132	-	-	2,300	5
Maximum operating speed 100 m/s, flat type T (shape 41)							
10	1/8	5/8	-	66009	-	7,600	20
12	1/8	1	-	66011	-	6,400	20
14	1/8	1	-	66012	-	5,500	10
16	3/16	1	-	-	66013	4,800	10
18	3/16	1	66016	-	-	4,200	5
20	1/4	1	66019	-	-	3,800	5
24	1/4	1	66022	-	-	3,200	5

ZIRKON SGP HD CAST + STEEL ★★★★

R hardness wheel for the highest cutting work demands. Suitable for requirements of white cut and minimal burr formation.

Advantages:
- Maximum value due to extended service life.
- Increased productivity due to excellent cutting characteristics.

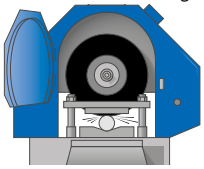
Workpiece materials:
cast iron, steel

Applications:
cutting of solid material, sections and pipes

Abrasive:
Zirconia alumina/aluminum oxide ZA

Technical information:
ZA 24 R

Compatible with:
HEAVY DUTY cutting machine



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 100 m/s, flat type T (shape 41)					
20	3/16	1	66045	3,800	5
24	1/4	2-3/8	66050	3,200	5

Accessories

Reducing rings

Reducing rings enable secure adjustment of the standard centre hole to a reduced centre hole dimension.

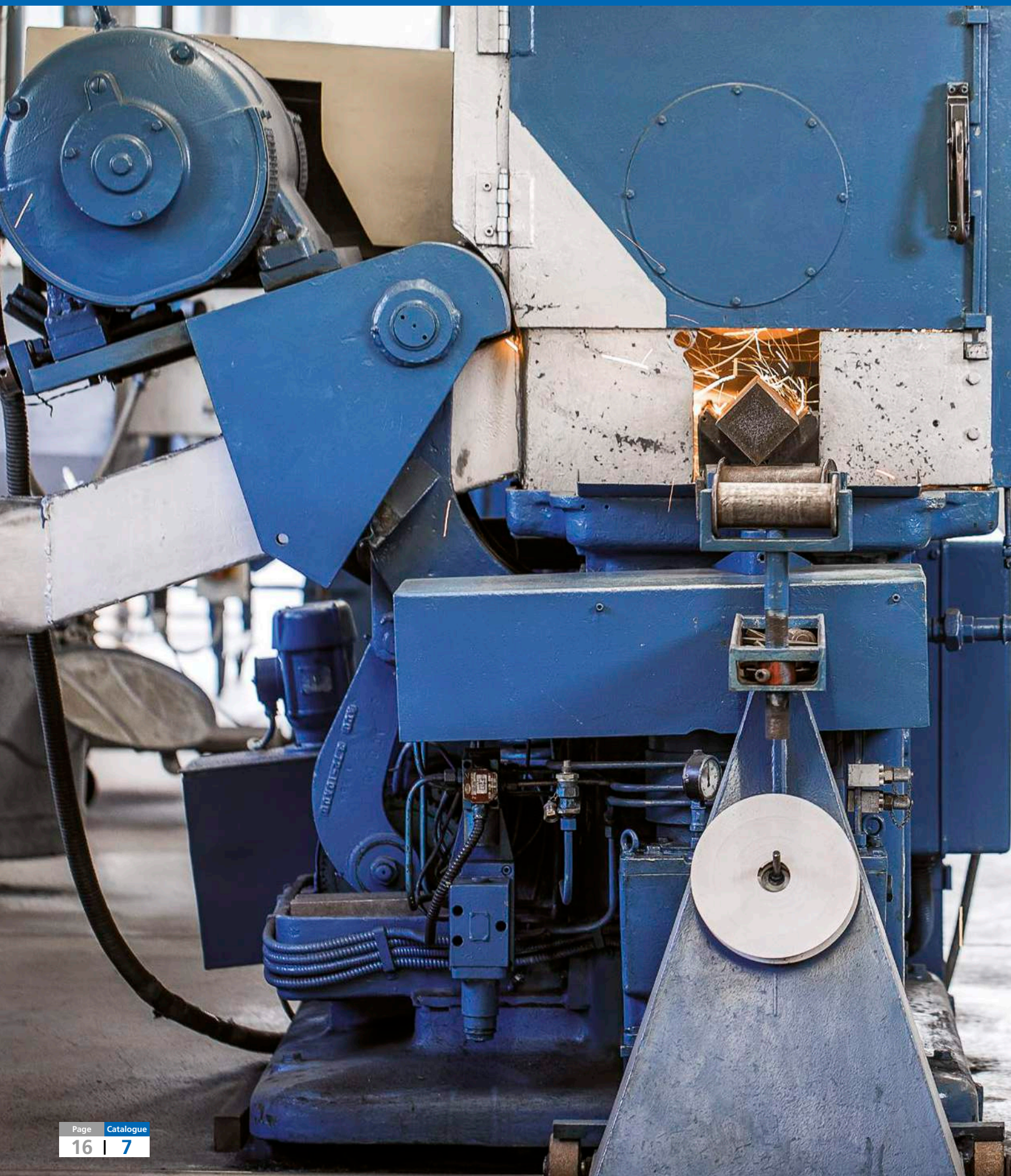
Advantages:
- Allows for correct mounting of the wheel on various drive systems.
- With stop collar, to prevent the ring from pushing through the centre hole of the cut-off wheel.

Safety notes:
- Ensure that the flanges on the drive system are backed off in order to mount the wheel securely.

Outer dia. [Inches]	Inside dia. [Inches/mm]	Width [Inches]	EDP number	
2-3/8	1	1/4	69020	1
	1-1/4	1/4	69021	1
	1-1/2	1/4	69022	1
	1-3/4	1/4	69023	1
1-1/2	1-1/4	3/16	69001	1
1-1/4	1	3/16	69007	1
1-1/8	1	1/8	69008	1
1	7/8	1/8	69003	1
	20 mm	1/8	69004	1
	5/8	1/8	69005	1
7/8	5/8	5/64	69006	1

Large diameter cut-off wheels made to order

PFERD



Large diameter cut-off wheels made to order
General information

Products made to order

For application solutions beyond our standard catalogue offering, PFERD is capable of producing premium-quality stationary cut-off wheels up to 2,000 mm (80") diameter, in a variety of specifications, bonds, and abrasive grains to meet the requirements of any large-scale cutting task.

To learn more about PFERD made to order solutions, contact us for more information at **ldco@pferdusa.com**.

Advantages of large diameter cut-off wheels

- Suitable for all steels and castings, non-ferrous metal alloys, special alloys such as nickel and titanium-based alloys, as well as materials on which sawing and flame cutting are difficult or impossible.
- No post-processing is required due to smooth cutting surfaces and blank cuts in cold cutting-off.
- Short cutting times regardless of material quality.
- Significantly lower burr formation with hot cutting-off than with hot sawing.
- Lower noise levels than with hot sawing, for example:
  Hot cutting-off: 85 to 95 dBA
  Hot sawing: 105 to 110 dBA
- Consistent cutting quality over the entire life of the cut-off wheel due to its continuous self-sharpening qualities.
- Effective cutting of already cooled, rolled or forged parts in hot cut lines.

Applications

Cut-off grinding is one of the most powerful and cost-effective cutting processes and is used in the following areas:

- Rolling mills
- Foundries
- Machine engineering
- Steel construction
- Maintenance of rails
- Forging plants and their finishing processes
- Metallurgical laboratories

Differentiation of cut-off grinding

A differentiation is made between cold, warm and hot cutting-off, depending on the material temperature of the workpiece.

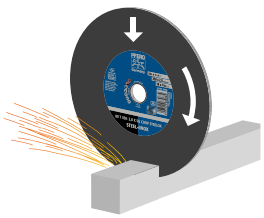
Operating conditions / Operating parameters	Cold cut-off	Warm cut-off	Hot cut-off
Material temperature T	up to 212°F	212 to 1,112°F	1,112 to above 1,832°F
Peripheral speed V_s*	80 to 100 m/s	80 to 100 m/s	80 to 100 m/s
Specific cutting performance Z	4 to 15 cm²/s	8 to 20 cm²/s	15 to 35 cm²/s

* Please adhere to the maximum operating speed of the cut-off wheel.

Cut-off processes

According to the material and the application, cut-off processes differ depending on the positioning and relative motion of the cut-off wheel and workpiece.

Chop stroke cut

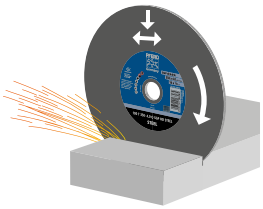


Application area:
- For cutting individual workpieces as well as small or slim material layers.
- Very common cut-off process.

Cutting process:
- Cut-off wheel cuts the workpiece in a radial movement over a joint mid-point.

Advantages:
- Low vibration.
- Short cutting times.
- Less load on cut-off wheels for smaller material dimensions.

Oscillation cut

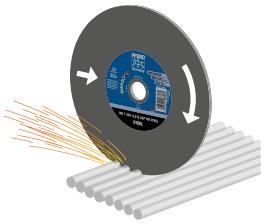


Application area:
- For cutting sprues and risers in foundries.
- Demanding tasks in wet cut-off grinding.

Cutting process:
- Cut-off wheel moves into the workpiece to be cut with additional forward and backward movements in the horizontal cut.

Advantages:
- Lower drive output required.
- Low workpiece temperature.
- Optimum removal of chips.

Horizontal cut

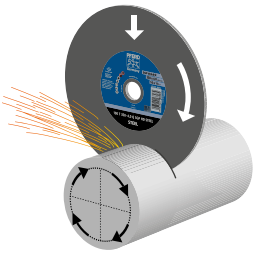


Application area:
- For cutting multiple adjacent work-pieces, as well as slabs, plates and sheets.
- Especially for the approach side of the rolling mill after the cooling bed.

Cutting process:
- Cut-off wheel cuts the entire layer width of different cross sections in one cycle.

Advantages:
- Short cutting times.
- Very high throughput capacity.

Index cut

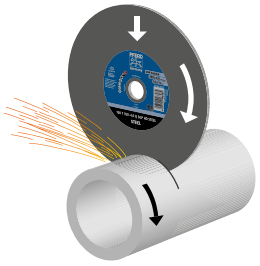


Application area:
- For cutting very large round solid material and blocks.
- Especially in steel works and foundries.

Cutting process:
- The workpiece is cut with several partial cuts. After each partial cut, the workpiece is rotated (2–4 partial cuts, 180–90° rotation, depending on the material dimensions).

Advantages:
- Working on very large material cross sections is possible with smaller wheel diameters.

Rotary cut

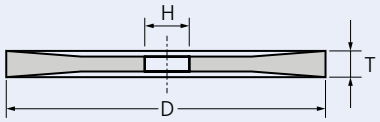


Application area:
- For cutting very large pipes as well as round solid materials.

Cutting process:
- The workpiece is continuously rotated during the cutting process.

Advantages:
- Use of small wheel diameters is possible.
- Lower drive output required.
- Low workpiece temperature.

Dimensions and designs to meet customer requirements

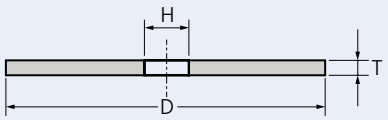


CT – Conical type

Application area:
- Particularly suitable for use in the steel industry.

Advantages:
- Less lateral friction.
- Particularly advantageous for deep cuts and traverse cutting.

Outer dia. D [mm/in.]	Centre hole dia. H [mm]
2,000 (80")	80/100/127/152.4/200.3/ 203/230/250/280
1,840 (73")	80/100/127/152.4/200.3/ 203/230/250/280
1,600 (63")	80/100/127/152.4/200.3/ 203/230/250/280
1,500 (60")	80/100/127/152.4/200.3/ 203/230/250/280
1,380 (55")	80/100/127/152.4/200.3/ 203/230/250/280
1,250 (50")	80/100/127/152.4/200.3/ 203/230/250/280
1,000 (40")	80/100/127/152.4/200.3/ 203/230/250/280
800 (32")	80/100/127/152.4/200.3/ 203/230/250/280

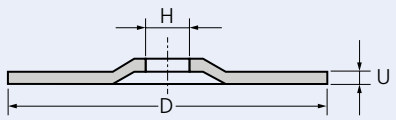


T – Flat type

Application area:
- Suitable for use in steel and plant construction, in the steel industry and in foundries.

Advantages:
- Suitable for universal use.

Outer dia. D [mm/in.]	Centre hole dia. H [mm]
800 (32")	80/100/127/152.4/200.3/ 203/230/250/280
700 (28")	80/100/127/152.4/200.3/ 203/230/250/280
660 (26")	40/60/76.2/80/100
600 (24")	25.4/40/60/76.2/80/100
500 (20")	25.4/40/60/76.2/80/100
450 (18")	25.4/32/40/60/80
400 (16")	25.4/32/40/60/80
350 (14")	25.4/32/40
300 (12")	25.4/32/40
250 (10")	25.4/30/32



PT – Depressed-centre type

Application area:
- Particularly suitable for use in foundries.

Advantages:
- Clamping flange does not protrude beyond the cut-off wheel.
- Flush cutting of risers from castings is possible.
- In general, no post-processing required.

Outer dia. D [mm]	Centre hole dia. H [mm]
800 (32")	80/100/127/152.4/200.3/ 203/230/250/280
700 (28")	80/100/127/152.4/200.3/ 203/230/250/280
600 (24")	25.4/40/60/76.2/80/100
500 (20")	25.4/40/60/76.2/80/100
400 (16")	25.4/32/40/60/80

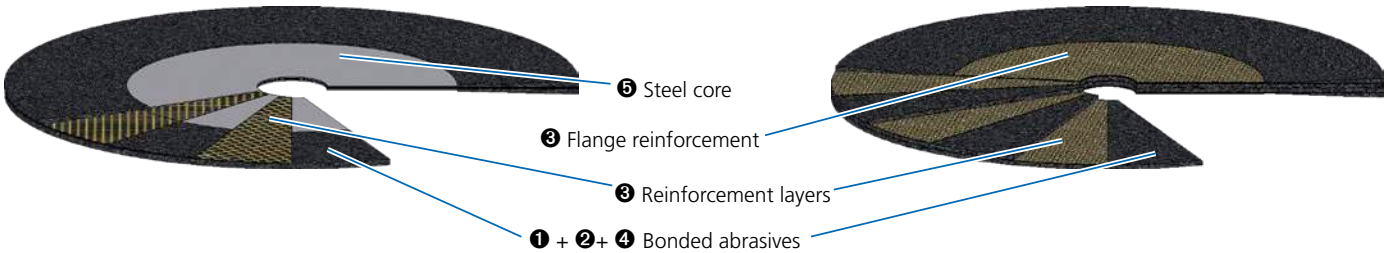
Other types and centre hole diameters are available on request. Please contact us for further information.

MADE IN GERMANY SINCE 1897

CUSTOMIZED
up to 2,000 mm (80") diameter

Large diameter cut-off wheels made to order

METALCORE cut-off wheel



METALCORE type

The PFERD developed and **patented** steel-core cut-off wheel is characterized by its solid steel body ❺ constructed in layers which do not contain any abrasive material.

The special wheel structure has the following advantages:

1. Reduced cutting costs due to the use of smaller clamping flanges:
- Larger usable abrasive contact area.
- Allows for cutting of larger cross sections due to the increased depth of cut.
- Easier wheel changes due to smaller diameter of consumed wheel.

2. Longer service life due to:
- More stable cut with less vibration.

3. Reduced cut-off wheel width for chop stroke cut due to increased lateral stability:
- Shorter cutting times and higher material throughput rate with low-power cutting machines.
- Less loss of cut material.
- Reduced chips.

4. Steel-cores can be recycled as scrap.

Conventional type

For stationary cut-off grinding, resinoid-bonded, fibre-reinforced cut-off wheels are used, which are composed of four components:

❶ Abrasives
❷ Bond, which holds the abrasive grit in the cut-off wheel
❸ Reinforcement layers/flange reinforcement, which ensure that the cut-off wheel is secure and stable
❹ Active grinding fillers

Solid steel body constructed in layers

Maximum utilization of abrasive surface

Power and maintenance brushes

PFERD

8

8

Power and maintenance brushes
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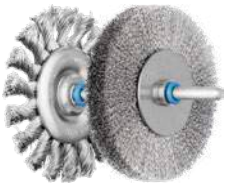
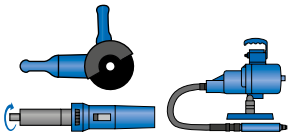
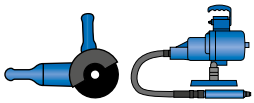
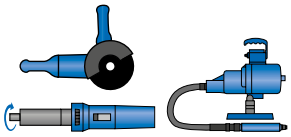
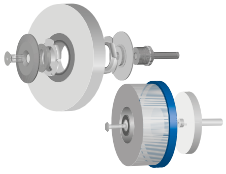
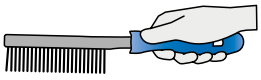



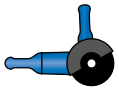



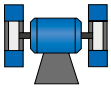



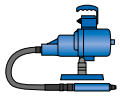


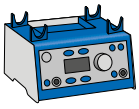


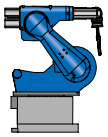




Right-angle grinder


Stationary machines

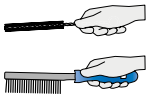

Flexible shaft drive


Micro motor


Robot


Power drill


Straight grinder


Manual application

PFERD INC. Milwaukee, Wisconsin, USA

PFERD offers a full and comprehensive range of high-grade products for cutting and machining materials to any desired condition, from coarse to mirror-polish. PFERD power brushes are used where exacting demands are placed on efficiency and outcome of cutting and surface conditioning operations.

Special products made to order

If you cannot find the solution for your particular application in our extensive catalogue range, we can produce brushes to meet your application requirements upon request.

Contact your local sales representatives who will be happy to assist you.

Technical customer support

Our sales consultants, customer service and technical support team will be glad to assist you by phone or on-site to optimize your brushing applications. Please contact us:

Canada Phone: **(905) 501-1555**
Toll-Free: **(866) 245-1555**

USA Phone: **(262) 255-3200**
Toll-Free: **(800) 342-9015**

You will find our worldwide contact information at **pferd.com**.

Filament composition and construction

Wire filament

- **Crimped brushes:** For work requiring high flexibility, such as brushing of highly contoured workpieces.
- **Knot brushes:** For work that requires aggressive brushing behaviour, such as work on weld seams.

Filament material	Temperature resistance	Advantages/properties
Carbon steel wire	up to 600°F	■ Proprietary PFERD wire with high tensile strength and bending fatigue strength. ■ Ensures long service life, excellent abrasion, and wear-resistance.
Stainless steel wire (INOX)	up to 850°F	■ Corrosion-resistant. ■ Works well with solvents; Excellent bend recovery. ■ PFERD brushes with INOX filament can be degreased upon request.
Stainless steel wire (INOX)/ Diamond (DIA)		■ Ideal for aggressive surface conditioning applications.
Further information about working with stainless steel (INOX) can be found on page 11.		
Brass wire	up to 350°F	■ Brass wire is softer than steel wire, and is more flexible. ■ It is low-sparking and produces fine surface finishes.

M-BRAD® nylon abrasive filament

- Abrasive grains are embedded in flexible plastic filaments, which means that the filament works on the sides as well as at the tip.
- **Round filament:** for applications that place particular demands on the flexibility of the brush.
- **Rectangular filament:** for applications that place particular demands on the aggressiveness of the brush.
- Recommendation for use: Use coolant for applications where a large amount of heat is produced.

Filament material (abrasive grain)	Temperature resistance	Advantages/properties
Silicon carbide (SiC)	up to 410°F	■ Ideal for deburring work and for improving surfaces.
Aluminum oxide (AO)		■ Recommended for use on wood and softer workpieces like brass and bronze. ■ Yields smoother matte finishes on softer material.
Ceramic oxide grain (CO)		■ Offers good toughness and excellent sharpness. ■ For high stock removal rates and aggressive brushing action.
Diamond (DIA)		■ Particularly suitable for aggressive surface conditioning applications. ■ Primarily used on extremely hard materials.

Nylon filament (non-abrasive)

Filament material	Temperature resistance	Advantages/properties
Nylon (non-abrasive)	up to 410°F	■ Particularly suited to working with materials that would otherwise be scratched or damaged, e.g. soft plastics.

Natural bristles

■ Primarily suitable for light cleaning and dust removal, as well as for polishing (in combination with polishing pastes).

Filament material	Temperature resistance	Advantages/properties
Tampico	up to 300°F	■ Natural fiber will not scratch. ■ Very good durability with excellent liquid retention in maintenance applications.
Natural bristle		■ Includes various animal hairs, which generally have excellent moisture-retention properties. ■ Bristle coarseness varies from coarse (China bristle) to fine (camel hair).

Selecting the filament material

Filament material	Workpiece materials						
	Carbon steel	Stainless steel (INOX)	Non-ferrous metals			Cast iron	Plastics
			Aluminum	Soft non-ferrous metals Brass, copper, zinc	Hard non-ferrous metals Titanium, bronze, nickel-based and cobalt-based alloys		
Carbon steel wire	●	-	-	-	-	●	❍
Stainless steel wire (INOX)	❍	●	●	❍	❍	-	-
Stainless steel wire (INOX) Diamond (DIA)	❍	●	●	-	●	●	●
Brass wire	-	-	-	●	-	-	-
Silicon carbide SiC	●	●	●	●	❍	●	●
Aluminum oxide A	❍	❍	●	-	-	❍	❍
Ceramic oxide grain CO	●	●	●	-	●	●	-
Diamond DIA	❍	-	-	-	●	-	-
Nylon (non-abrasive)	-	-	❍	❍	-	-	●
Natural bristle (with polishing paste)	●	●	●	●	●	●	●

● = highly recommended ❍ = recommended - = not recommended

Quick product selection guide

To help you find the optimum tool for your needs easily, we have summarized the appropriate brushes for the most important applications on pages 6 to 7.

❶ Select the filament material
The material that you are working with is key to determining the optimum filament material.

Carbon steel wire	–	**grey**
Stainless steel (INOX) wire	–	**blue**
M-BRAD® abrasive filament	–	**red**
Brass/bronze wire	–	**yellow**
Nylon/natural bristle	–	**brown**

❷ Select the filament type
The brushing effect you want determines which filament type to choose.

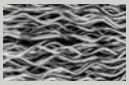
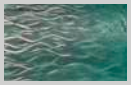
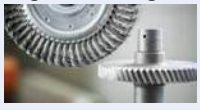
❸ Select the brush
The application and geometry of the workpiece indicate the optimum brush.

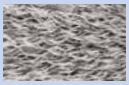
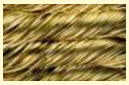
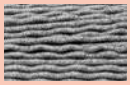
PFERD power brushes are mainly used for:
■ **Deburring**
- Removal of secondary burrs produced by milling, grinding, turning or drilling

■ **Cleaning**
- Rust removal, descaling
- Work on weld seams
- Cleaning, removal of paint

■ **Structuring surfaces**
- Matte finishing, satinizing
- Roughing

Power and maintenance brushes
Quick product selection guide

Workpiece materials	Steel, cast iron, plastics			Stainless steel (INOX), aluminum, other non-ferrous metals
Filament material	Carbon steel wire Colour code: grey			Stainless steel wire (INOX) colour code: blue
Filament construction	 knotted	 crimped	 ECAP® encapsulation	 knotted
Brushing effect	Aggressive brushing effect, less flexible	Light brushing effect, flexible	Very aggressive brushing effect, not flexible	Aggressive brushing effect, less flexible
Weld cleaning 	 p. 27–30, 37, 49	 p. 32  p. 43–44  p. 82–86	 p. 31  p. 50	 p. 27–30, 65  p. 37  p. 45–47  p. 49, 64
Structuring surfaces 	 p. 66	 p. 14–18  p. 19	 p. 44	 p. 66
Edge deburring 	 p. 21–23	 p. 14–18  p. 32  p. 36	 p. 31  p. 50	 p. 27–30  p. 37  p. 49
Surface deburring 	 p. 33–35  p. 37	 p. 32  p. 36  p. 43–44  p. 48	 p. 31  p. 50	 p. 33–35  p. 37
Interior deburring 	 p. 45–47  p. 49	 p. 43–44, 57  p. 48, 50, 52  p. 51, 53  p. 58–59	 p. 44	 p. 45–47  p. 49, 64
Surface cleaning 	 p. 33–35  p. 37	 p. 19  p. 32  p. 36  p. 48, 50  p. 51  p. 82–86	 p. 32  p. 44	 p. 33–35  p. 37
Interior cleaning 	 p. 45–46  p. 47	 p. 43–44  p. 48, 50  p. 52–55  p. 58–59	 p. 44	 p. 45–46  p. 47
Polishing 				

Stainless steel (INOX), aluminum, other non-ferrous metals	Brass, copper, other non-ferrous metals		Stainless steel (INOX), aluminum, non-ferrous metals, titanium, cast, plastics, wood	Stainless steel (INOX), non-ferrous metals, cast iron
Stainless steel wire (INOX) colour code: blue	**Brass wire Colour code: yellow**		**M-BRAD® abrasive filament colour code: red**	**Natural materials/nylon Colour code: brown**
 **crimped**	 **knotted**	 **crimped**	 **crimped**	 **crimped**
Light brushing effect, flexible	**Light Brushing and cleaning effect, less flexible**	**Light brushing effect, flexible**	**Grinding brushing effect, very flexible**	**Light brushing effect (use with polishing pastes)**
 p. 32  p. 43–44  p. 82–86	 p. 26  p. 45–46	 p. 15, 25  p. 48  p. 52, 54–55  p. 82, 85–86		
 p. 14–18  p. 19		 p. 15, 25  p. 48	 p. 14–15, 17, 19, 48  p. 38–39  p. 40–42  p. 44	
 p. 14–18  p. 32  p. 36	 p. 26  p. 45–46	 p. 15, 25  p. 48  p. 52, 54–55  p. 82, 85–86	 p. 14–15, 17, 19  p. 38–39  p. 40–41  p. 42  p. 44  p. 48  p. 52–55  p. 60–61	 p. 14–15 p. 52–54
p. 32 p. 36 p. 43–44 p. 48	p. 33	p. 48 p. 82, 85–86	p. 38–39 p. 40–41 p. 42 p. 44	p. 14–15
p. 43–44, 57 p. 48, 50–52 p. 58–59	p. 45–46	p. 48 p. 52, 54, 55 p. 58–59	p. 14–15 p. 44, 48 p. 52–55 p. 60–61	p. 14–15 p. 52–54 p. 63
p. 19 p. 32 p. 36 p. 48, 50–51 p. 82–86	p. 26 p. 33 p. 45–46	p. 15, 25 p. 48 p. 52, 54, 55 p. 82, 85–86	p. 14–15, 17, 19 p. 40–41 p. 42 p. 44 p. 48 p. 52–55	p. 14–15 p. 40 p. 52–54 p. 63 p. 85–86
p. 43–44 p. 48, 50 p. 52–55 p. 58–59	p. 45–46	p. 15, 25, 48 p. 52, 54, 55 p. 58–59 p. 82, 85–86	p. 44 p. 52–55 p. 60–61	p. 14–15 p. 52–54 p. 63 p. 85–86
				p. 52–54 p. 67

PFERD – committed to safety

PFERD power brushes are designed, tested, manufactured, and inspected to ensure quality with a particular concern for safety considerations. To promote safety, users must be aware of potential hazards and their responsibilities for safe and proper operation of power brushes.

Warnings, safety requirements, and product limitations and application suggestions are printed in this catalogue and in other literature, marked on brushes (when feasible), and/or supplied on or in the product container.

These warnings and requirements must be observed by all power brush operators. Failure to do so may endanger the brush operator and others in the area of the brushing operation.

Personal protection

In normal power brushing operations, the material being removed, such as burrs, scale, dirt, weld slag, or other residue, will fly off the brush with considerable force along with the brush filaments, which break off due to fatigue.

The potential for serious injury exists for both the brush operator and others in the work area (possibly 50 feet or more from the brush).

To protect against this hazard, operators and others in the area must wear SAFETY GOGGLES WITH SIDE SHIELDS or FULL FACE SHIELDS OVER SAFETY GLASSES WITH SIDE SHIELDS, along with PROTECTIVE CLOTHING such as GLOVES, MASKS, and PROPER FOOTWEAR.

Safety requirements summary

1. Protective goggles: Safety goggles or full face shields worn over safety glasses with side shields MUST BE WORN BY ALL OPERATORS AND OTHERS IN THE AREA OF POWER BRUSH OPERATIONS. Comply with the requirements of ANSI Z87.1 "Occupational Eye and Face Protection".

2. Guards: Keep all machine guards in place.

3. Speeds: Observe all speed restrictions indicated on the brushes, containers, labels, or printed in pertinent literature. "MSFS" means Maximum Safe Free Speed [RPM] – spinning free with no work applied. For reasons of safety, the "MSFS" should not be exceeded under any circumstances.

4. Safety standards: Comply with the safety standards of the American Brush Manufacturers' Association and the American National Standards Institute standard ANSI B165.1, "Safety Requirements – Power Brushes".

5. Protective equipment: Appropriate protective clothing and equipment must be used where a possibility of injury exists that can be prevented by such clothing or equipment.

6. Dust warning: Use of the products in this catalogue may create dust and other particles. To avoid any risk of adverse health effects, the operator must use appropriate protective measures, including a respirator, during and after operation. Refer to our Safety Data Sheet (SDS) for further information regarding the product to be used. Furthermore, additional health hazards may result from dust in the surrounding environment and from dust generated from the workpiece material. PROTECTIVE MEASURES FOR THE OPERATOR MUST ADDRESS DUST AND OTHER PARTICULATES ARISING FROM ALL SOURCES. Always use our products in a well-ventilated workspace.

7. California Proposition 65: PFERD brushes comply with all California Proposition 65 requirements.

Read all safety information and follow all instructions on packaging

You must follow all operator and safety instructions, as well as common safety practices which will reduce the likelihood or severity of physical injury.

Many brush manufacturers mark some safety warnings, recommendations, and usage restrictions directly on the product. It is not always practical to include even the most limited safety information on the brush itself. Therefore, the operator MUST READ and FOLLOW all instructions supplied in or on the product packaging as well as those marked on the product itself. The operator should also refer to the safety and operating information printed in the brush manufacturer's catalogue and other literature.

Prevent problems due to mechanical failure

Do not allow unsafe conditions to continue. Occasionally, due to worn bearings, a bent spindle, an unusual application, operator abuse or inappropriate use, a brush may fail. A brush which is not received in acceptable condition for trouble-free operation may also fail. Do not use or continue to use a failed brush, or one which is functioning improperly (i.e., throwing filaments, out-of-balance, etc.), as this increases the possibility for further brush failure and hazard of injury. The cause of the failure should be evaluated and corrected immediately.

Availability of ANSI standards

In this catalogue, reference is made to these ANSI standards: ANSI B-165.1, ANSI Z87.1. Copies of these standards are available at public libraries and from the American Brush Manufacturers' Association, 736 Main Ave., Suite 7, Durango, CO 81301, Tel: (720) 392-ABMA (2262), Fax: (866) 837-8450, email: info@ABMA.org; or American National Standards Institute, Inc. (ANSI), 1900 Arch Street, Philadelphia, PA 19103 (B165.1 only).

Safety recommendations

= Wear protective goggles!

= Wear dust respirator!

= Wear protective gloves!

= Observe safety recommendations!

= Read the Safety Data Sheets (SDS) before using any materials! (pferdusa.com).

Warning!

Failure to observe safety precautions may result in injury.

ANSI standard B165.1 arbor holes

ANSI standard B165.1-2013 dictates maximum face widths and minimum arbor hole sizes allowable. All brushes listed in this catalogue conform to all ANSI standards.
If you require a brush that does not conform to these standards, please contact your distributor for assistance.

Note:
The maximum face width listed in this table refers to shafts that are supported by one end only, such as angle and bench grinders. It does not apply to shafts that are supported by bearings at both ends.

Wheel diameter [Inches]	Minimum arbor hole [Inches]	Maximum face width [Inches]
2	1/4	3/4
3	1/4	3/4
4	3/8	1
6	1/2	1-1/4
8	5/8	1-1/4
10	3/4	2
12	1	3
14	1-1/4	3
15	2	3
16	2	3

PFERDVALUE® – Your added value with PFERD

Results from the PFERD test laboratories as well as from the product tests by independent testing institutes prove: PFERD tools offer measurable added value.

Discover **PFERD**ERGONOMICS® and **PFERD**EFFICIENCY®:

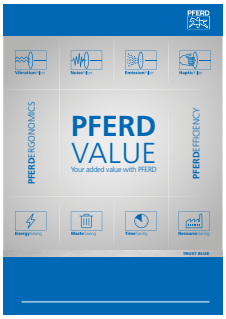
As part of **PFERD**ERGONOMICS®, PFERD offers ergonomically optimized products and power tools that contribute to greater safety and working comfort, and thus to health protection.

Vibration Filter **Noise** Filter **Emission** Filter **Haptic** Filter

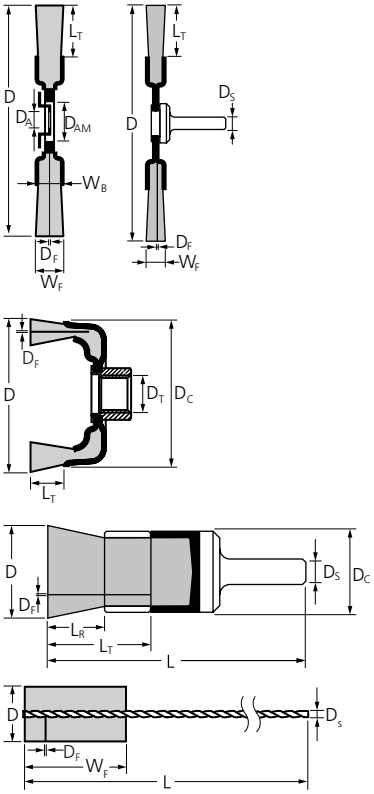
As part of **PFERD**EFFICIENCY®, PFERD offers innovative, high-performance product solutions and power tools with outstanding added value.

Energy Saving **Waste** Saving **Time** Saving **Resource** Saving

For more information on this topic, please refer to our brochure "**PFERD**VALUE® – Your added value with PFERD".



Explanation of dimensions



Abbreviation	Unit	Description
D	Inches	Nominal outer diameter/width of the brush, the working surface for end brushes
D_A	Inches	Arbor hole diameters with adapters
D_{AM}	Inches	Maximum brush arbor hole diameter without adapters
D_C	Inches	Cup diameter, for stem mounted end brushes
D_F	Inches	Nominal diameter/thickness of the filament material
D_S	Inches	Shank diameter
D_T	Inches	Thread size
L	Inches	Nominal total length for tube brushes, block length for maintenance brushes
L_S	Inches	Total length of the mounting shank
L_T	Inches	Trim length of the filament material, including bridled filament
L_R	Inches	Total exposed length of the filament material (free length without bridle)
W_A	Inches	Width of the main body at width of brush at arbor hole/thread
W_B	Inches	"Width on arbor", mounting width, widest point of the main body
W_F	Inches	"Face width", nominal dimensions of the working contact width

Conversion table [Inches – mm – gauge]

Brush diameter		Arbor hole diameter		Face width		Wire diameter		
D [Inches]	D [mm]	D_A [Inches]	D_A [mm]	W_F [Inches]	W_F [mm]	D_F [Inches]	D_F [mm]	D_F wire gauge
2-3/4	70	1/4	6.4	1/8	3	.004	0.10	50
3	75	3/8	9.5	1/4	6	.006	0.15	43
3-1/2	90	1/2	12.7	3/8	10	.008	0.20	38
4	100	5/8	15.9	1/2	12	.010	0.25	34
5	125	3/4	19.0	5/8	16	.012	0.30	33
6	150	7/8	22.2	3/4	19	.014	0.35	30
7	178	1	25.4	7/8	22	.016	0.40	28
8	200	1-1/8	28.6	1	25	.018	0.45	26
10	250	1-1/4	31.8	1-1/8	29	.020	0.50	25
12	300	1-1/2	38.1	1-1/4	32	.023	0.60	24
14	350	1-3/4	44.5	1-1/2	38	.026	0.65	23
15	380	2	50.8	2	50	.032	0.80	21
16	400	3	76.2	3	75	.035	0.90	20
						.040	1.01	19

Expertise in working with stainless steel (INOX)

The PFERD TOOL MANUAL provides a comprehensive range of solutions which meet the demands for work on stainless steel. We are happy to help find solutions to your application problems.

The PRAXIS brochure "PFERD tools for use on stainless steel (INOX)" contains much valuable information on material properties and application recommendations.

Due to its resistance against corrosion, good forming and welding qualities, and its attractive appearance, stainless steel (INOX) is becoming increasingly popular for various products. These properties also place special requirements and demands on the stainless steel (INOX) wire brush used.

PFERD brush wire qualities

In order to fulfill the requirements for brushing stainless steel (INOX), PFERD produces all stainless steel (INOX) brushes using 302 stainless steel wire. Practical experience gained from industrial use confirms that this wire quality achieves excellent corrosion resistance with optimum brush life.

Magnetism of stainless steel

The wire found in stainless steel (INOX) brushes tends to become magnetic after cold working. The reason for this is a change in the microstructure caused through deformation (e.g. in wire drawing process). This change in microstructure and the resulting magnetic qualities have no influence on the quality and corrosion resistance of the stainless steel (INOX) wire. It retains its corrosion resistant properties.

All PFERD brush products with stainless steel wire (INOX) are colour-coded blue in this catalogue. All of these brushes are recommended for use on all stainless steels (INOX), such as 316.

INOX-TOTAL brushes

For extremely difficult operating conditions, PFERD offers a range of "INOX-TOTAL" (IT) brushes. These are characterized by the fact that all parts of the brush are made of stainless steel in quality 302, which ensures optimum corrosion protection.

Detailed information and ordering data can be found on page 64.

Recommendations for avoiding corrosion

Cause of corrosion	Solution
Change in the microstructure due to too much heat build-up.	Avoid heat build-up through: ■ Lower rotational speed ■ Reduced contact pressure ■ Oscillated brushing action over the workpiece surface
Contact between the workpiece and the parts of the brush that are made of steel.	■ Use INOX-TOTAL type brushes. ■ Avoid contact between the face plates and workpiece. ■ Use end brushes with plastic protection.
Mixture of work on steel and stainless steel (INOX).	■ Do not use brushes that have already been used to work on steel, copper or other metals. ■ Do not work on steel in the vicinity of stainless steel (INOX) applications.
Wire particles are introduced into the surface (crevice corrosion).	■ Reduce contact pressure. ■ Use a low rotational speed.
Stock removal rate is too low.	Removal of deep structural changes by: ■ Extending the brushing time ■ Using grinding tools

Note

To avoid possible problems, it makes sense to run preliminary tests to check the corrosion resistance of the workpiece. General cleaning of the workpieces after brushing is recommended in order to prevent loose particles sticking to the workpiece.

For workpieces that are used in a heavily corrosive environment, processing with grinding tools and etching or passivation is recommended. This also applies when not only stainless steel (INOX) but also non-alloyed steels are processed and it cannot be completely ruled out that abrasion particles will land on the stainless steel.

For additional PFERD products designed for use on stainless steel workpieces please see catalogue sections 1, 2, 4 and 6.

Power and maintenance brushes
Peripheral speeds and recommendations for use

Determining the recommended speed

❶ Select brush type.
❷ Read recommended peripheral speed.
❸ Determine the speed using the brush diameter and peripheral speed.

❶ Brush type	Peripheral speed ❷
End brushes	2,500–4,000 SFPM
Cup brushes	8,000–10,000 SFPM
Wheel brushes / bevel cup brushes	see chart below

Key to the colour bars on the chart below:

Carbon steel wire	–	**grey**
Stainless steel wire (INOX)	–	**blue**
Brass/bronze wire	–	**yellow**
M-BRAD® abrasive filament	–	**red**

❸ Recommended peripheral speeds for brushing applications

Surface feet per minute [SFPM]												
Application	**1,250**	**2,000**	**2,750**	**3,500**	**4,250**	**5,000**	**5,750**	**6,500**	**7,250**	**8,000**	**8,750**	**9,500**
Burr removal/ edge blending				3,500–7,250 SFPM								
		2,000–5,750 SFPM										
		2,000–5,750 SFPM										
	1,250–5,400 SFPM											
Scale removal						5,000–9,500 SFPM						
				3,500–7,250 SFPM								
Surface conditioning	1,250–4,250 SFPM											
	1,250–3,500 SFPM											
	1,250–3,500 SFPM											
		2,000–5,750 SFPM										
Weld cleaning						5,000–9,500 SFPM						
				3,500–7,250 SFPM								

❸ Peripheral speeds in surface feet per minute [SFPM]

	Brush diameter [Inches]									
RPM	**2**	**3**	**4**	**5**	**6**	**8**	**10**	**12**	**14**	**15**
800	400	600	800	1,000	1,250	1,650	2,050	2,500	2,900	3,100
1,150	600	900	1,200	1,500	1,800	2,400	3,000	3,600	4,200	4,500
1,200	600	900	1,250	1,550	1,850	2,500	3,100	3,750	4,350	4,700
1,750	900	1,350	1,800	2,250	2,700	3,650	4,550	5,450	6,400	6,850
2,000	1,000	1,550	2,050	2,600	3,100	4,150	5,200	6,250	7,300	7,850
2,400	1,250	1,850	2,500	3,100	3,750	5,000	6,250	7,500	8,750	9,400
3,000	1,550	2,350	3,100	3,900	4,700	6,250	7,850	9,400	10,950	11,750
3,450	1,800	2,700	3,600	4,500	5,400	7,200	9,000	10,800	12,600	13,500
3,750	1,950	2,900	3,900	4,900	5,850	7,850	9,800	11,750		
4,000	2,050	3,100	4,150	5,200	6,250	8,350	10,450	12,550		
4,500	2,350	3,500	4,700	5,850	7,050	9,400	11,750	14,100		
5,000	2,600	3,900	5,200	6,500	7,850	10,450	13,050			
5,400	2,800	4,200	5,650	7,050	8,450	11,300				
6,000	3,100	4,700	6,250	7,850	9,400					
8,500	4,400	6,650	8,850	11,100						
9,000	4,700	7,050	9,400	11,750						
10,000	5,200	7,850	10,450	13,050						
12,000	6,250	9,400	12,550	15,700						
15,000	7,850	11,750	15,700	19,600						
18,000	9,400	14,100	18,800							
20,000	10,450	15,700	16,400							

Example:
Crimped wire wheel, 6" diameter
burr removal
Peripheral speed: 5,400 SFPM
Rotational speed: 3,450 RPM

$$\text{SFPM} = \frac{\pi \times \text{Diameter [Inches]} \times \text{RPM}}{12}$$

Recommendations for use

Brushing pressure and work position

incorrect (1) **correct (2)**

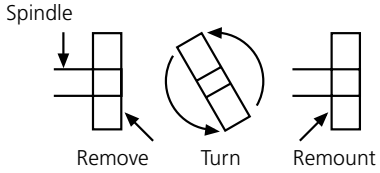
When working with wire brushes, only use the filament tips (Fig. 2).

Wire brushes work when the tips of the filament come into contact with the workpiece. The tips are the only sharp point on the filament. Avoid applying excessive pressure. Excessive pressure causes overbending of the filaments and heat build-up resulting in filament breakage, rapid dulling, and reduced brush life.

Apply work to brush, or vice versa, in such a way that as much of the brush face as possible is in full contact with the workpiece. Applying the work to the side or edge of the brush will result in wire breakage and reduce brush life.

Self-sharpening effect

The self-sharpening effect can be improved by changing the brush operating direction.



Solutions to common problems

Problem	Solution
Inadequate brushing action	■ Increase RPM or use larger brush diameter at same RPM. ■ Use a brush with shorter trim, or with thicker filaments.
Excessively strong brushing action	■ Reduce RPM or use a smaller brush diameter at same RPM. ■ Reduce contact pressure. ■ Use a brush with longer trim or thinner filaments.
Surface is too rough and irregular	■ Use a wider brush or a longer trim length. ■ Select a brush with thinner filaments. ■ Increase RPM.
Excessively fine finish/ surface appears too polished	■ Select a brush with thicker filaments. ■ Use a brush with shorter trim. ■ Reduce RPM.
Secondary burr formation	■ Change brush-to-workpiece operating angle. ■ Use a brush with shorter trim or thicker filaments.

Standard industrial packaging

All brushes ship in a robust blue PFERD standard box. Box label information incudes box quantity, physical product description, and maximum safe free speed guidelines.

The box also contains ABMA/ANSI safety information and, in many cases, vapor corrosion inhibitors.

Advantages:
- Robust packaging suited to the product. EDP number on the packaging label. Guidelines for safe use in each brush package.

Point-of-purchase packaging (POP range)

A selection of the most widely used industrial power brushes is available in singular sales promoting self-service packs. These products can be neatly displayed in our **PFERD**TOOL-CENTER for maximum impact and appeal at the point of sale.

The brush and its characteristics are easy to see through the clear plastic clamshell.
A multi-language safety sheet is enclosed with every brush and provides valuable advice on the use of PFERD power brushes.

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number. The minimum order quantity of POP items is printed in "**blue**" accordingly.

Advantages

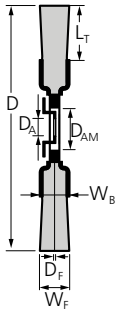
- Clear plastic clamshell.
- Easy identification of brush.
- Individually labelled clamshell packaging.
- Brush fully enclosed; keeps brush protected from contaminants.
- Handle without risk of wire cuts.
- Reusable storage container.
- Encourages safety on the job with easy reference.
- Includes safety inserts in English, French and Spanish.
- No need to purchase more than you want.
- Useful hanging hole for optimum product presentation on your sales wall.

For more information on our range of POP packaged brushes, refer to the POINT of PURCHASE BRUSHES brochure.

Packaging label

Advantages:
- Includes EDP and detailed product description
- Pictograms for clarification of the most important product features.
- Information regarding the safe and best use of brushes.

Unthreaded power brushes
Crimped wheels



Small diameter copper centre

Designed for individual use in confined areas, or mounted on a shaft. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

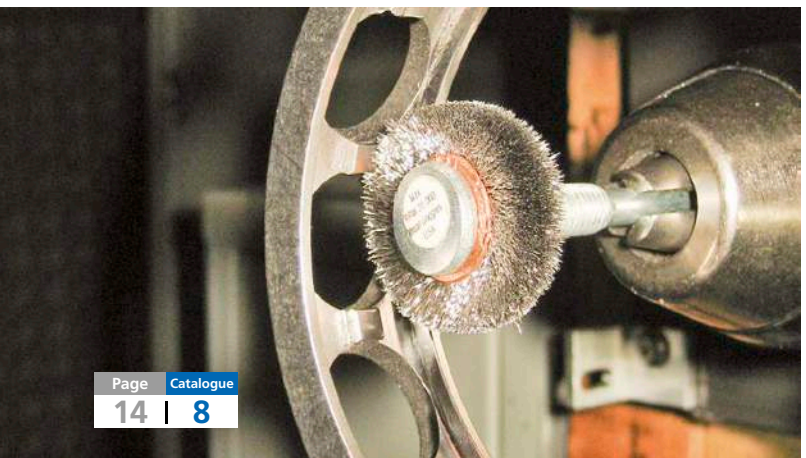
Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Can be gang-mounted for wide face use.

Ordering note:
- Please see page 78 for a complete listing of drive arbors and adapters.

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	Adapter style	
						.006	.008	.012	.014				
Carbon steel wire													
1-1/4	3/8	3/8	1/4	7/32	1/4	-	81504	-	-	10,000–15,000	20,000	F	10
1-1/2	3/8	7/16	1/4	7/32	-	-	81515	81517	-	10,000–15,000	20,000	F	10
2	1/2	1/2	3/8	7/32	3/8	-	81527	81529	81530	10,000–15,000	20,000	F	10
2-1/2	1/2	3/4	1/2	5/16	3/8	-	-	81534	81535	10,000–15,000	20,000	F	10
3	1/2	1	5/8	5/16	3/8	81542	81543	81545	81546	10,000–15,000	20,000	F	10
4	5/8	1-1/2	1/2	5/16	-	-	81553	-	-	5,000–7,5000	10,000	F	10
Stainless steel wire (INOX)													
2	1/2	1/2	3/8	7/32	3/8	81575	-	81578	-	8,000–13,000	20,000	F	10
3	1/2	1	5/8	5/16	3/8	81586	81587	81589	81590	8,000–13,000	20,000	F	10

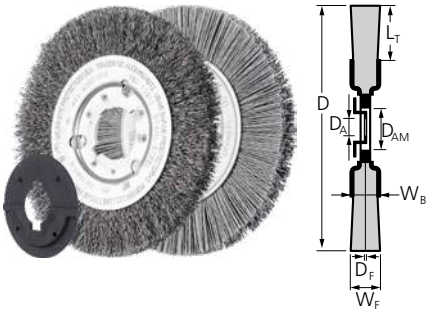
D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches]/Grit size and EDP number			Opt. RPM	Max. RPM	Adapter style	
						.022/320	.035/180	.040/120				
M-BRAD® nylon abrasive filament, silicon carbide SiC												
1-1/2	1/2	7/16	3/8	7/32	3/8	-	83782	-	4,000–6,000	10,000	F	10
2	1/2	1	5/8	7/32	3/8	83784	-	83785	4,000–6,000	10,000	F	10
2-1/2	5/8	11/16	5/8	5/16	-	-	-	83792	4,000–6,000	10,000	F	10
3	1/2	15/16	5/8	5/16	3/8	83793	83794	83795	4,000–6,000	10,000	F	10

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	Adapter style	
						.014 nylon	.016 nylon				
Nylon plastic filament											
2	1/2	1/2	3/8	7/32	-	84340	-	5,200–9,000	20,000	F	10
3	1/2	1	3/8	5/16	-	-	84343	5,200–9,000	20,000	F	10



Narrow face

Designed for individual use in confined areas, or in assemblies mounted on a shaft. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.



Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Can be used with all common stationary drive systems and bench grinders.
- Can be gang-mounted for wide face use.

Ordering note:
- Wheels with 1-1/4" arbor hole are provided with 1/4" x 1/8" keyways.
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.

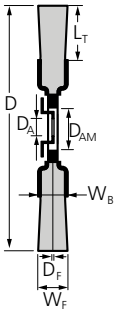
D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number					Opt. RPM	Max. RPM	Adapter style	
						.006	.008	.010	.012	.014				
Carbon steel wire														
3	1/2	3/4	9/16	7/16	3/8	-	-	-	-	80003	5,000–7,500	10,000	D	2
4	1/2	3/4	1/2	7/16	1/2, 3/8	-	81442	-	80017	80018	6,000–9,000	12,500	D	2
6	5/8	1-1/8	5/8	7/16	1/2	80038	80039P	80040	80041	80042P	4,000–6,000	8,000	D	10/5
8	5/8	1-1/2	5/8	5/8	-	80158	80159	-	80161	80162	3,000–4,500	6,000	-	2
	1-1/4	1-1/2	3/4	1/2	-	-	-	-	80167	81449	3,000–4,500	6,000	A	2
10	1-1/4	1-7/8	1	1/2	-	-	80225	-	-	80228	2,000–3,000	4,200	A	2
12	1-1/4	2-7/8	1-1/4	11/16	-	-	-	-	80283	80284	1,500–2,500	3,400	A	2
Stainless steel wire (INOX)														
4	5/8	3/4	1/2	7/16	1/2, 3/8	80344	-	-	80347	-	5,000–8,000	12,500	D	2
6	5/8	1-1/8	5/8	7/16	1/2	80368	80369	80370	80371	-	3,000–5,000	8,000	D	2
8	5/8	1-1/2	5/8	5/8	-	-	-	-	80491	-	2,000–4,000	6,000	-	2
		2-1/8	3/4	1/2	-	80518	-	-	-	-	2,000–4,000	6,000	-	2
	1-1/4	1-1/2	3/4	1/2	-	-	-	-	80497	-	2,000–4,000	6,000	A	2
10	1-1/4	1-7/8	1	1/2	-	-	-	-	80557	-	1,500–2,500	4,200	A	2
Brass wire														
6	5/8	1-1/8	5/8	7/16	1/2	-	80666	-	-	80667	3,000–5,000	8,000	D	2
8	1-1/4	1-1/2	3/4	1/2	-	-	80682	-	-	-	2,000–4,000	6,000	A	2

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches]/Grit size and EDP number					Opt. RPM	Max. RPM	Adapter style	
						.022/320	.035/180	.022/120	.040/120	.040/80				
M-BRAD® nylon abrasive filament, silicon carbide SiC														
4	5/8	3/4	3/4	3/4	1/2	83683	83682	-	83681	83680	3,000–5,000	12,500	D	2
M-BRAD® nylon abrasive filament, ceramic oxide CO														
4	5/8	3/4	3/4	3/4	1/2	-	-	84226	84227	84225	3,000–5,000	12,500	D	2

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	EDP number	Opt. RPM	Max. RPM	Adapter style	
Untreated tampico filament										
6	1-1/4	1-1/2	5/8	7/16	-	84324	1,500–2,500	6,000	A	1
8	1-1/4	1-1/2	5/8	5/8	-	84327	1,200–2,000	4,500	A	1
12	1-1/4	2-7/8	1	11/16	-	84332	900–1,500	3,600	A	1

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	Adapter style	
						.016 nylon				
Nylon plastic filament										
6	1-1/4	1-1/2	3/4	7/16	-	84344	1,500–2,500	6,000	A	2

Unthreaded power brushes
Crimped wheels



Medium face

Medium face brushes are designed for medium- to heavy-duty use, either individually or gang-mounted. As with all PFERD crimped wire wheel brushes, the metal components and adapters are designed for a flush fit when gang-mounting, ensuring a consistent surface finish. Maximum productivity with long service life.

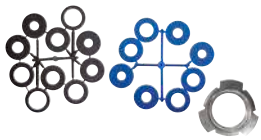
Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Can be used with all common stationary drive systems and bench grinders.
- Can be gang-mounted for wide face use.

Ordering note:
- All Medium face crimped wheel brushes are supplied with metal adapters that reduce the 2" AH to 1-1/4" AH. In addition a selection of plastic reducing adapters are also included in every box.
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- For additional arbor hole reduction options, use adapter style K, see page 79 for information.

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number						Opt. RPM	Max. RPM	Adapter style	
						.006	.008	.010	.012	.014	.020				
Carbon steel wire															
6	2	1-1/8	1-1/16	13/16	1-1/4	81112	81113	81114	81115	81116**P**	-	3,000–4,500	6,000	C, K	1/**5**
7	2	1-5/16	1	7/8	1-1/4	-	-	81120	81121	81122**P**	-	3,000–4,500	6,000	C, K	1/**5**
8	2	1-1/2	1	7/8	1-1/4	-	-	81126	81127	81128**P**	81129	2,300–3,400	4,500	C	1/**5**
10	2	1-7/8	1-1/4	15/16	1-1/4	-	-	-	81133	81134	81135	1,800–2,700	3,600	C	1
12	2	2-7/8	1-1/2	15/16	1-1/4	-	-	-	81138	81139	81140	1,500–2,500	3,000	C	1
Stainless steel wire (INOX)															
6	2	1-1/8	1-1/16	13/16	1-1/4	81157	-	81159	81160	-	-	2,400–3,900	6,000	C, K	1
8	2	1-1/2	1	7/8	1-1/4	81169	-	-	81172	81173	-	1,800–2,900	4,500	C	1
10	2	1-7/8	1-1/4	15/16	1-1/4	-	-	-	81178	-	-	1,400–2,300	3,600	C	1
12	2	2-7/8	1-3/4	1-5/16	1-1/4	-	-	-	-	81184	-	1,200–1,900	3,000	C	1

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

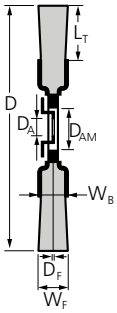
The box quantity of POP items is printed in "**blue**" accordingly.



Metric and imperial size adapters are available on pages 78-79 in styles C and K.

Wide face

Wide face brushes are designed for medium- to heavy-duty use whether individually or gang-mounted. As with all PFERD crimped wire wheel brushes, the metal components and adapters are designed for a flush fit when gang-mounting, ensuring a consistent surface finish. Maximum productivity with long service life.



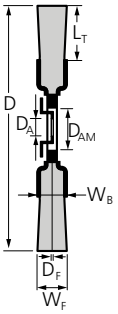
Advantages:
- Flexible, enabling optimal adjustment to the workpiece contours.
- Can be used with all common stationary drive systems and bench grinders.
- Can be gang-mounted for wide face use.

Ordering note:
- All Wide face crimped wheel brushes are supplied with metal adapters that reduce the 2" AH to 1-1/4" AH. In addition a selection of plastic reducing adapters are also included in every box.
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- For additional arbor hole reduction options, use adapter style K, see page 79 for information.

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number					Opt. RPM	Max. RPM	Adapter style	
						.006	.010	.012	.014	.020				
Carbon steel wire														
6	2	1-1/8	1-1/8	1-3/32	1-1/4	81232	-	81235	81236	-	3,000–4,500	6,000	C	1
8	2	1-1/2	1-3/8	1-1/4	1-1/4	81244	-	81247	81248	81249	2,300–3,400	4,500	C	1
10	2	1-7/8	2	1-3/8	1-1/4	-	81252	81253	81254	81255	1,800–2,700	3,600	C	1
12	2	2-7/8	2-1/4	1-3/8	1-1/4	-	-	81257	81258	81259	1,500–2,500	3,000	C	1
15	2	3-1/8	2-1/2	1-3/4	1-1/4	-	-	81261	-	-	1,000–1,800	2,400	C	1
Stainless steel wire (INOX)														
6	2	1-1/8	1-1/8	1-3/32	1-1/4	81276	-	-	81280	-	2,400–3,900	6,000	C	1
8	2	1-1/2	1-3/8	1-1/4	1-1/4	-	-	81291	-	-	1,800–2,900	4,500	C	1
10	2	1-7/8	2	1-3/8	1-1/4	-	-	81297	-	-	1,400–2,300	3,600	C	1

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches]/Grit size and EDP number					Opt. RPM	Max. RPM	Adapter style	
						.022/320	.022/120	.035/180	.040/120	.040/80				
M-BRAD® nylon abrasive filament, silicon carbide SiC														
6	2	1-1/8	7/8	13/16	1-1/4	83702	-	83701	83700	83699	1,500–2,500	6,000	C	1
8	2	1-1/2	1	7/8	1-1/4	83706	-	83705	83704	83703	1,200–2,000	4,500	C	1
M-BRAD® nylon abrasive filament, ceramic oxide CO														
4	5/8	7/8	3/4	13/16	1/2	-	84213	-	84211	84210	3,000–5,000	12,000	D	1

Unthreaded power brushes
Crimped wheels



EZmount® bench wheels

EZmount® crimped wire wheels eliminate mounting problems commonly found with other bench brushes. They are designed with a flat side profile that matches all mounting flanges on pedestal and bench grinders for a correct fit. Easy installation takes seconds. The telescoping bushing is self-sizing and makes full width contact to prevent the brush from falling into spindle threads.

Advantages:
- Flexible, enabling optimal adjustment to the workpiece contours.
- Can be used with all common stationary drive systems and bench grinders.
- Flat side profile ensures a correct fit with bench grinder flanges.

Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Supplied with style E telescoping adapter. Please see page 78 for a complete listing of drive arbors and adapters.

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	Adapter style	
						.014				
Carbon steel wire										
6	2	7/8	7/8	3/4	1, 3/4, 5/8, 1/2	81474**P**	3,000–4,500	6,000	E	1/**5**
8	2	7/8	7/8	3/4	1, 3/4, 5/8	81478**P**	2,000–3,000	4,500	E	1/**5**
10	2	2-1/4	7/8	3/4	1, 3/4	81480	1,500–2,500	3,600	E	1

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

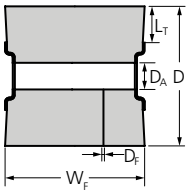
The box quantity of POP items is printed in "**blue**" accordingly.

Drum brushes

Excellent for surface structuring work on large surfaces. The high-density construction method used is designed for aggressive, heavy-duty brushing.

Advantages:
- Can be used on all common burnishing machines due to keyed arbor hole.

Ordering note
- For use with PFERD linear finishing machine, EDP 91217.



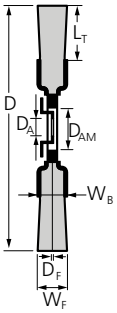
D [Inches]	D_A [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
				.008	.010			
Carbon steel wire, brass plated								
4	3/4	1	4	-	81330	3,000–4,500	6,000	1
Stainless steel wire (INOX)								
4	3/4	1	4	81331	-	2,400–3,900	6,000	1

D [Inches]	D_A [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches]/Grit size and EDP number	Opt. RPM	Max. RPM	
				.040/80			
M-BRAD® nylon abrasive filament, silicon carbide SiC							
4	3/4	1	4	81332	2,400–3,900	6,000	1

For detailed information and ordering data on other drum tools and roller sets, please refer to catalogue section 4.

For detailed information and ordering data on PFERD's linear finishing machine, please refer to catalogue section 9.

Unthreaded power brushes
Knot wheels



Standard twist, single row standard flag

This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.

Ordering note:
- All wheels with 1-1/4" arbor holes include 1/4"x 1/8" keyways. All wheels with 2" arbor hole include 1/2" x 1/4" keyways.
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.

D [Inches]	D_{AM} [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number					Opt. RPM	Max. RPM	Adapter style	
							.012	.014	.016	.020	.023				
Carbon steel wire															
3	1/2	18	5/8	1/2	7/16	3/8	81650	81651	-	81652	-	12,500–18,700	25,000	F	10
3-1/4	1/2	20	3/4	1/2	7/16	3/8	-	81654	-	-	-	12,500–18,700	25,000	F	10
4	1/2	22	3/4	5/8	7/16	3/8	81656	81657P	-	81658	-	10,000–15,000	20,000	F	10/5
	5/8	22	3/4	5/8	7/16	1/2	-	81660	-	-	-	10,000–15,000	20,000	F	10
6	5/8	32	1-1/8	5/8	9/16	1/2	81665	81666P	81667P	-	81668	4,500–6,500	9,000	F	10/5
7	5/8	32	1-5/8	5/8	9/16	-	-	81694	-	-	-	4,500–6,500	9,000	-	2
8	5/8	42	1-5/8	5/8	5/8	-	81702	81703	81704P	-	81706	3,500–5,000	7,000	-	2/5
	3/4	42	1-5/8	5/8	5/8	-	-	81698	-	-	-	3,500–5,000	7,000	-	2
	1-1/4	42	1-1/8	5/8	5/8	-	-	81708	-	-	81711	3,500–5,000	7,000	H	2
10	3/4	50	2-1/8	3/4	5/8	-	-	81723	-	-	-	2,500–4,000	5,400	-	2
	1-1/4	50	2-1/8	3/4	5/8	-	81727	81728	81729	-	-	2,500–4,000	5,400	H	2
12	2	60	2	3/4	5/8	-	-	-	-	-	81766	2,000–3,000	4,500	-	2
15	1-1/4	60	3-1/2	7/8	5/8	-	-	-	81773	-	-	1,500–2,500	3,600	-	2
Stainless steel wire (INOX)															
3	1/2	18	3/4	7/16	7/16	3/8	81800	81801	-	-	-	10,000–16,000	25,000	F	10
4	1/2	22	3/4	5/8	7/16	3/8	81806	81807P	-	81808	-	8,000–13,000	20,000	F	10/5
6	5/8	32	1-1/8	5/8	9/16	1/2	-	-	81816	-	-	3,500–5,500	9,000	F	10

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

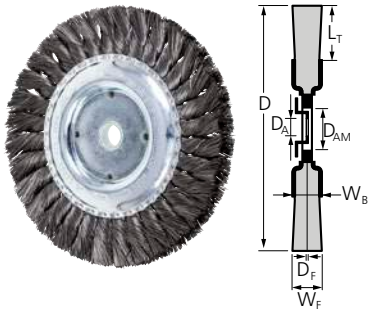
The box quantity of POP items is printed in "**blue**" accordingly.

Standard twist, single row, long flag

This brush features extended knot flag length, providing a better surface finish than conventional standard twist wheels on uneven surfaces.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.

Ordering note:
- All wheels with 1-1/4" arbor holes include 1/4"x 1/8" keyways.
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.



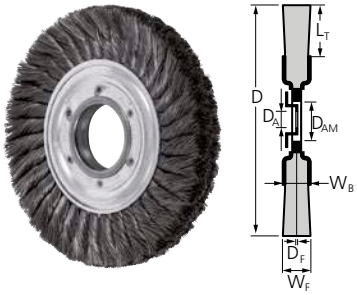
D [Inches]	D_{AM} [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	Adapter style	
							.014	.020				
Carbon steel wire												
6	5/8	32	1-1/8	5/8	9/16	1/2	81881	-	4,500–6,500	9,000	F	10
8	5/8	42	1-5/8	5/8	5/8	-	81889	-	3,500–5,000	7,000	-	2
12	1-1/4	60	2	3/4	5/8	-	-	81930	2,000–3,500	4,500	H	2

Standard twist, double row, long flag

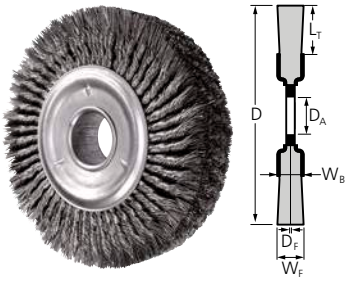
This brush features extended knot flag length, providing a better surface finish than conventional standard twist wheels on uneven surfaces.

Advantages:
- Double row for heavy deburring with large contact area.
- Good balance between aggressiveness and flexibility.

Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.



D [Inches]	D_{AM} [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	Adapter style	
							.012	.014	.016	.023				
Carbon steel wire														
4	5/8	44	3/4	1	1-1/8	1/2	-	82032	-	-	6,000–12,000	20,000	D	5
6	2	60	1-1/8	1	1-1/8	-	82033	-	82034	-	4,000–6,000	7,800	C	5
8	2	72	1-5/8	1-1/8	1-1/8	-	82035	-	82036	82037	3,000–4,500	6,000	C	1
10	2	100	2-1/8	1-1/4	1-1/4	-	82038	-	82039	82040	2,500–3,500	4,800	C	1
12	2	120	2	1-5/8	1-1/4	-	82041	-	82042	82043	2,000–3,000	4,000	C	1



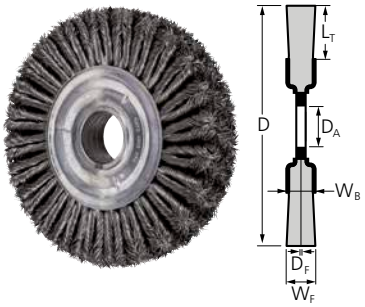
Pipe cleaning, standard twist

Long-lasting, aggressive multi-section wheel is easy to install. Ideal for cleaning drill pipe OD.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness, flexibility, and productivity.
- Long service life.

Ordering note:
- Available in single-section or multi-section versions.
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.

D [Inches]	D_A [Inches]	Knots [pcs.]	No. rows [pcs]	L_T [Inches]	W_F [Inches]	W_B [Inches]	Incl. keyway [Inches]	D_F [Inches] and EDP number .020	Opt. RPM	Max. RPM	Adapter style	
Carbon steel wire												
10	2	50	1	2-1/4	3/4	3/4	1/2 x 1/4	82083	2,500–4,000	5,400	C	1
		200	4	2-1/4	2-1/8	2	-	82084	2,500–3,500	4,800	C	1



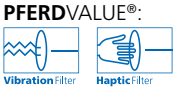
Pipe cleaning, multisection full cable COMBITWIST®

Long-lasting, aggressive multi-section wheel is easy to install. Ideal for cleaning drill pipe OD.

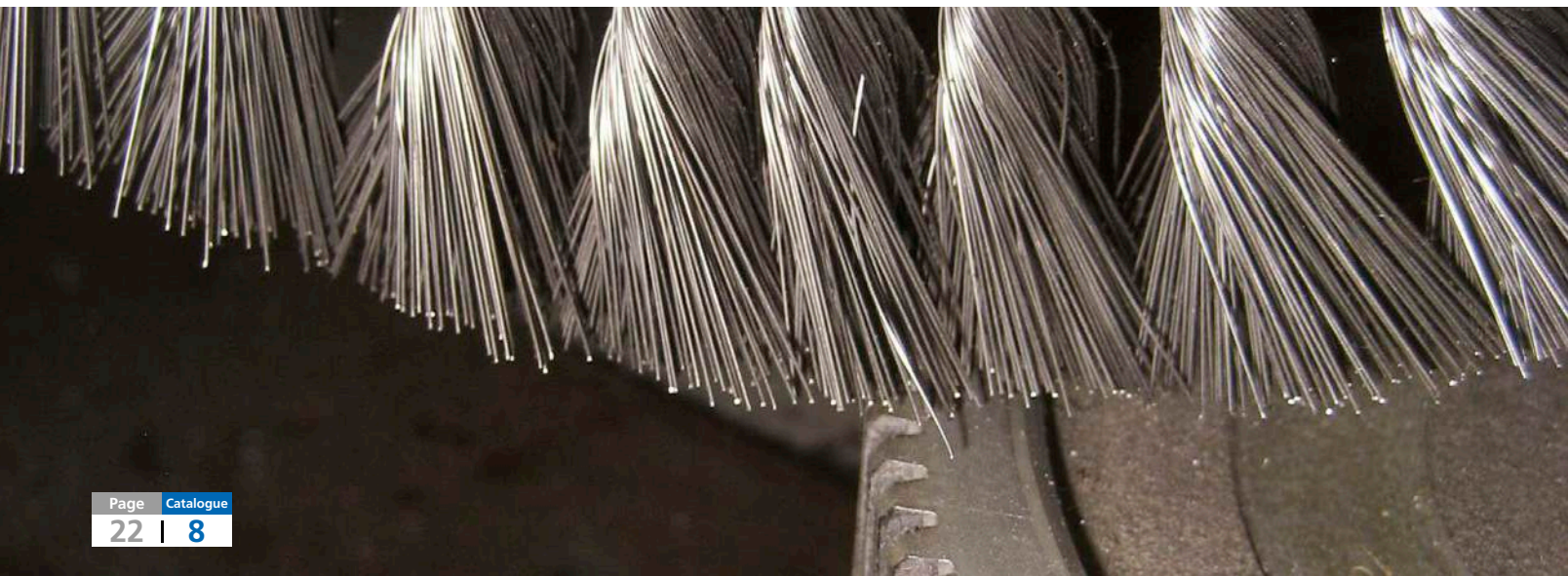
Advantages:
- Very aggressive brushing with good surface finish
- COMBITWIST® knot construction results in improved balance, reduced vibration, extended service life and increased aggressiveness.

Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.

PFERDVALUE®:



D [Inches]	D_A [Inches]	Knots [pcs.]	No. rows [pcs]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_F [Inches] and EDP number .020	Opt. RPM	Max. RPM	Adapter style	
Carbon steel wire											
10	2	200	4	2-1/4	2-1/8	2	82094	2,500–3,500	4,800	C	1



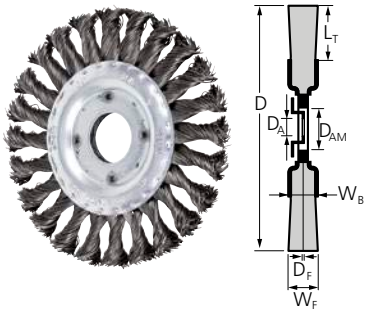
Full cable twist, single row

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.

Recommendations for use
- When mounting on bench grinders, use with adapter style F.

Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.



D [Inches]	D_{AM} [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	Adapter style	
							.020	.023				
Carbon steel wire												
4	1/2	22	3/4	3/8	7/16	3/8	82101	-	10,000–15,000	20,000	F	10
4-1/2	7/8	24	13/16	1/2	7/16	-	82452	-	6,000–9,000	12,500	F	10
6	5/8	30	1-1/4	1/2	9/16	1/2	-	82113	5,000–7,500	10,000	F	10
8	5/8	42	1-5/8	3/8	5/8	-	-	82118	3,500–5,000	7,000	-	2
10	3/4	36	2-5/8	3/8	5/8	-	-	82120	2,500–4,000	5,400	-	2

Full cable twist, single row COMBITWIST®

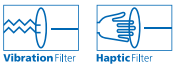
These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

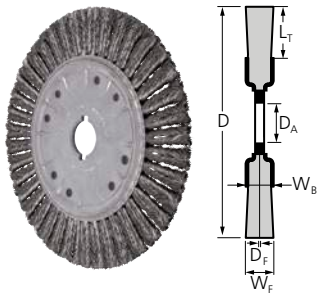
Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- COMBITWIST® knot construction results in improved balance, reduced vibration, extended service life and increased aggressiveness.

Recommendation for use:
- Designed for use on custom-built or industrial deburring/brushing machines.
- Ideal for gear deburring.

Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.

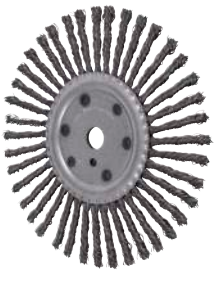
PFERDVALUE®:

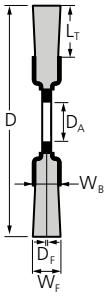




D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	W_B [Inches]	Incl. keyway [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	Adapter style	
							.020				
Carbon steel wire											
14	2	80	2-1/4	3/4	3/4	1/2 x 1/4	82019	700–3,000	3,600	C	1
15	2	80	2-5/8	3/4	3/4	1/2 x 1/4	82020	700–3,000	3,600	C	1

Unthreaded power brushes
Knot wheels





Expansion joint cleaning

Designed for removing expansion joint fillers, and cleaning expansion joints on concrete surfaces.

Advantages:
- Long and narrow face width for extended service life.
- Narrow face width for optimal penetration.

Recommendation for use:
- Designed to fit on popular hand-held concrete saws.

Ordering note:
- Features 3/8" drive pin hole.

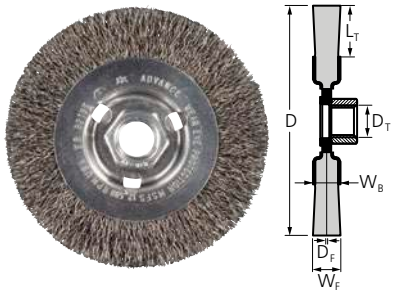
Safety note:
- Please ensure that maximum RPM of saw is lower than maximum RPM of the brush.

D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
						.028	.035			
Carbon steel wire										
12	1	40	3	3/8	1/2	82077	82078	2,000–3,000	6,000	2
	20 mm	40	3	3/8	1/2	82085	82086	2,000–3,000	6,000	2

Crimped wheel for angle grinders

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Designed for use on 4-1/2" and 5" right angle grinders.



D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.014			
Carbon steel wire							
4	5/8-11	11/16	1/2	82195**P**	6,000–12,500	12,500	5/**5**
4-1/2	5/8-11	15/16	1/2	80024	6,000–12,500	12,500	5
5	5/8-11	1-1/8	1/2	80036	6,000–12,500	12,500	5
Stainless steel wire (INOX)							
4	5/8-11	11/16	1/2	82316	6,000–12,500	12,500	5
4-1/2	5/8-11	15/16	1/2	80354	6,000–12,500	12,500	5
5	5/8-11	1-1/8	1/2	80366	6,000–12,500	12,500	5
Brass wire							
4	5/8-11	11/16	1/2	82367	6,000–12,500	12,500	5

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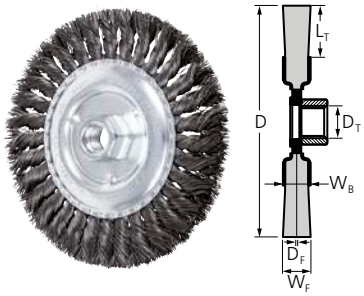
The box quantity of POP items is printed in "**blue**" accordingly.

Thread adapters to adapt 5/8-11 threaded wheels to other common grinder spindles are available, please see page 79 for information.



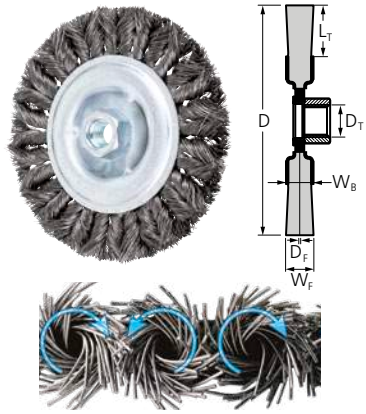
Standard twist

This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
					.014	.016	.020	.023			
Carbon steel wire											
4	5/8-11	22	7/8	5/8	82153**P**	-	82154	-	10,000–15,000	20,000	10/**5**
5	5/8-11	24	5/8	5/8	-	-	82470	-	7,500–15,000	15,000	10
6	5/8-11	32	1-1/8	5/8	82471	82472	-	82473	4,500–9,000	9,000	10
Stainless steel wire (INOX)											
4	5/8-11	22	7/8	5/8	82283**P**	-	82284	-	8,000–15,000	20,000	10/**5**
5	5/8-11	24	5/8	5/8	-	-	82596	-	6,000–15,000	15,000	10
6	5/8-11	32	1-1/8	5/8	-	82597	-	82598	3,500–9,000	9,000	10
Brass wire											
4	5/8-11	22	7/8	5/8	82366	-	-	-	8,000–15,000	20,000	10



Standard twist, COMBITWIST®

This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.
- COMBITWIST® knot construction results in improved balance, reduced vibration, and extended service life.

Recommendations for use:
- For use on right angle grinders.

PFERDVALUE®:

Vibration Filter Haptic Filter

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
					.014	.016	.020	.023			
Carbon steel wire											
4	5/8-11	22	7/8	5/8	82383	-	82384	-	10,000–15,000	20,000	10
5	5/8-11	24	5/8	5/8	-	-	82680	-	7,500–15,000	15,000	10
6	5/8-11	32	1-1/8	5/8	82681	82682	-	82683	4,500–9,000	9,000	10
Stainless steel wire (INOX)											
4	5/8-11	22	7/8	5/8	82412	-	82413	-	8,000–15,000	20,000	10
5	5/8-11	24	5/8	5/8	-	-	82749	-	6,000–15,000	15,000	10
6	5/8-11	32	1-1/8	5/8	-	82752	-	82753	3,500–9,000	9,000	10

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

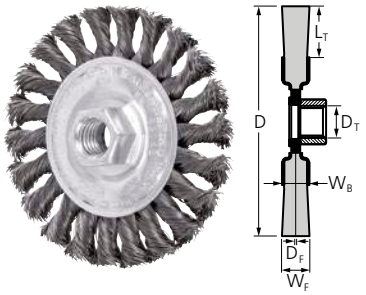
The box quantity of POP items is printed in "**blue**" accordingly.

Full cable twist

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.

Recommendations for use:
- For use on right angle grinders.



D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
					.014	.016	.020	.023			
Carbon steel wire											
4	5/8-11	22	3/4	1/2	82165P	-	82166P	-	10,000–15,000	20,000	10/5
	1/2-13	22	3/4	1/2	-	-	82168	-	10,000–15,000	20,000	10
	3/8-24	22	3/4	1/2	-	-	82170	-	10,000–15,000	20,000	10
5	5/8-11	24	3/4	1/2	-	-	-	82474P	7,500–1,5000	15,000	10/5
6	5/8-11	24	1-1/4	1/2	-	-	-	82477P	5,000–10,000	10,000	10/5
		30	1-1/4	1/2	-	82476P	-	82478P	5,000–10,000	10,000	10/5
Stainless steel wire (INOX)											
4	5/8-11	22	3/4	1/2	82295P	-	82296	-	8,000–15,000	20,000	10/5
5	5/8-11	24	3/4	1/2	-	-	-	82599	6,000–15,000	15,000	10
6	5/8-11	24	1-1/4	1/2	-	-	-	82602	4,000–10,000	10,000	10
		30	1-1/4	1/2	-	-	-	82603	4,000–10,000	10,000	10

Full cable twist, COMBITWIST®

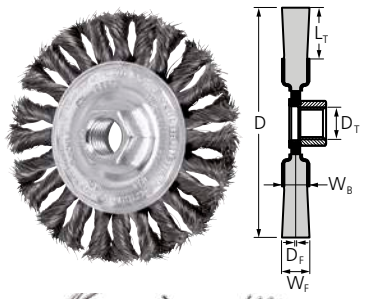
These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- COMBITWIST® knot construction results in improved balance, reduced vibration, extended service life and increased aggressiveness.

Recommendations for use:
- For use on right angle grinders.

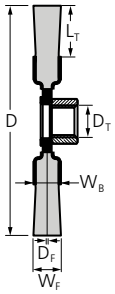
PFERDVALUE®:

Vibration Filter Haptic Filter



D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number			Opt. RPM	Max. RPM	
					.014	.020	.023			
Carbon steel wire										
4	5/8-11	22	3/4	1/2	82387	82388	-	10,000–15,000	20,000	10
5	5/8-11	24	3/4	1/2	-	-	82684	7,500–15,000	15,000	10
6	5/8-11	30	1-1/4	1/2	-	-	82688	5,000–10,000	10,000	10
Stainless steel wire (INOX)										
4	5/8-11	22	3/4	1/2	82416	82417	-	8,000–15,000	20,000	10

Threaded power brushes
Knot wheels



Stringer bead twist

Most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction.

Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.020			
Carbon steel wire								
4	5/8-11	32	3/4	3/16	82186**P**	10,000–15,000	20,000	10/**5**
	1/2-13	32	3/4	3/16	82187**P**	10,000–15,000	20,000	10/**5**
	3/8-24	32	3/4	3/16	82188	10,000–15,000	20,000	10
	M10x1.25	32	3/4	3/16	82190**P**	10,000–15,000	20,000	10/**5**
	1/2-3/8	32	3/4	3/16	82193	10,000–15,000	20,000	10
4-1/2	5/8-11	32	1	3/16	82194**P**	10,000–15,000	20,000	10/**5**
4-7/8	5/8-11	38	3/4	3/16	82479	7,500–15,000	15,000	10
		48	3/4	3/16	82483**P**	7,500–15,000	15,000	10/**5**
6	5/8-11	40	1-1/8	3/16	82486	6,000–12,500	12,500	10
		48	1-1/8	3/16	82487**P**	6,000–12,500	12,500	10/**5**
		56	1-1/8	3/16	82488**P**	6,000–12,500	12,500	10/**5**
		64	1-1/8	1/8	82489	6,000–12,500	12,500	10
6-7/8	5/8-11	56	1-1/8	3/16	82494	4,500–9,000	9,000	10
		76	1-1/8	3/16	82495	4,500–9,000	9,000	10
Stainless steel wire (INOX)								
4	5/8-11	32	3/4	3/16	82307**P**	8,000–15,000	20,000	10/**5**
	3/8-24	32	3/4	3/16	82309	8,000–15,000	20,000	10
4-1/2	5/8-11	32	1	3/16	82315	8,000–15,000	20,000	10
4-7/8	5/8-11	38	3/4	3/16	82604	6,000–15,000	15,000	10
		48	3/4	3/16	82608**P**	6,000–15,000	15,000	10/**5**
6	5/8-11	40	1-1/8	3/16	82611	5,000–12,500	12,500	10
		48	1-1/8	3/16	82612**P**	5,000–12,500	12,500	10/**5**
		56	1-1/8	3/16	82613	5,000–12,500	12,500	10
6-7/8	5/8-11	56	1-1/8	3/16	82619	3,500–9,000	9,000	10
		76	1-1/8	3/16	82728	3,500–9,000	9,000	10

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For products specially suited to pipeline construction, see the brochure "PFERD tools for pipeline construction".

Stringer bead twist, COMBITWIST®

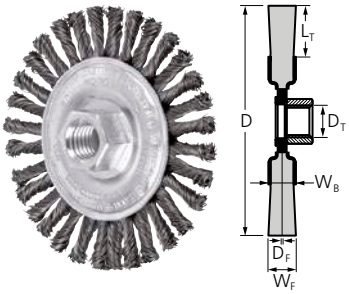
Most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction.

Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.
- COMBITWIST® knot construction results in improved balance, reduced vibration, extended service life and increased aggressiveness.

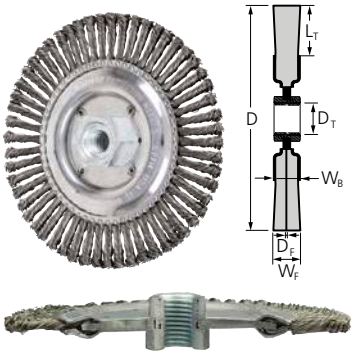
Recommendations for use:
- For use on right angle grinders.

PFERDVALUE®:

Vibration Filter Haptic Filter



D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.020			
Carbon steel wire								
4	5/8-11	32	3/4	3/16	82391	10,000–15,000	20,000	10
4-1/2	5/8-11	32	1	3/16	82392**P**	10,000–15,000	20,000	10/**5**
4-7/8	5/8-11	48	3/4	3/16	82689	7,500–15,000	15,000	10
6	5/8-11	48	1-1/8	3/16	82693	6,000–12,500	12,500	10
		56	1-1/8	3/16	82694	6,000–12,500	12,500	10
6-7/8	5/8-11	56	1-1/8	3/16	82700	4,500–9,000	9,000	10
		76	1-1/8	3/16	82701	4,500–9,000	9,000	10
Stainless steel wire (INOX)								
4	5/8-11	32	3/4	3/16	82420	8,000–15,000	20,000	10
4-1/2	5/8-11	32	1	3/16	82421	8,000–15,000	20,000	10
4-7/8	5/8-11	48	3/4	3/16	82759	7,000–15,000	15,000	10
6	5/8-11	48	1-1/8	3/16	82763	5,000–12,500	12,500	10
		56	1-1/8	3/16	82764	5,000–12,500	12,500	10



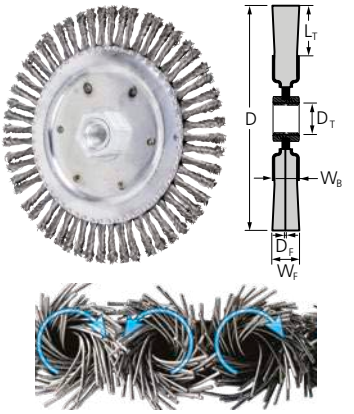
TWIN-NUT, stringer bead twist

Most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction. Patented nut design (US patent no. 8425282) prevents brush from interfering with guard.

Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.
- TWIN-NUT reversible mounting greatly extends performance and service life.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.020			
Carbon steel wire								
6	5/8-11	48	1-1/8	3/16	88028	6,000–12,500	12,500	5
		56	1-1/8	3/16	88029	6,000–12,500	12,500	5
6-7/8	5/8-11	56	1-1/8	3/16	88032	4,500–9,000	9,000	5
Stainless steel wire (INOX)								
All TWIN-NUT INOX brushes are degreased								
6	5/8-11	48	1-1/8	3/16	88041	5,000–12,500	12,500	5
6-7/8	5/8-11	56	1-1/8	3/16	88044	3,500–9,000	9,000	5



TWIN-NUT, stringer bead twist COMBITWIST®

Most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction. Patented nut design prevents brush from interfering with guard.

Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.
- TWIN-NUT reversible mounting greatly extends performance and service life.
- COMBITWIST® knot construction results in improved balance, reduced vibration, and extended service life.

Recommendations for use:
- For use on right angle grinders.

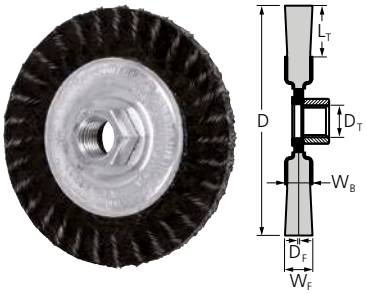
PFERDVALUE®:

Vibration Filter Haptic Filter

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.020			
Carbon steel wire								
4-7/8	5/8-11	48	3/4	3/16	88049	5,000–12,500	12,500	5
6	5/8-11	56	1-1/8	3/16	88050	6,000–12,500	12,500	5
6-7/8	5/8-11	56	1-1/8	3/16	88052	4,500–9,000	9,000	5
Stainless steel wire (INOX)								
All TWIN-NUT INOX brushes are degreased								
6	5/8-11	56	1-1/8	3/16	88042	5,000–12,500	12,500	5

Stringer bead twist, ECAP® encapsulated

Extremely aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction.



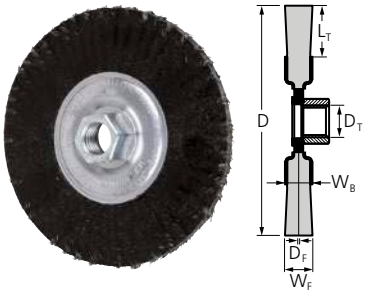
Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.
- ECAP® elastomer eliminates flare for precision control of brush contact area.
- Extremely aggressive brushing.
- Encapsulation prevents long wire breakage, contributing to workplace safety.

Recommendations for use:
- For use on right angle grinders.
- E4 is good for higher pressure applications. Black colour.
- E5 is for super-aggressive, tough cleaning, for most severe applications. Blue colour.

D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	ECAP® grade	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
					.014	.020			
Carbon steel wire (crimped)									
6	5/8-11	1-1/16	3/16	E4	83507	-	4,500–9,000	9,000	10
7	5/8-11	1-9/16	3/16	E4	83509	-	4,500–9,000	9,000	10
				E5	83517	-	4,500–9,000	9,000	10
Carbon steel wire (knot)									
4	5/8-11	7/8	3/16	E4	-	83511	10,000–15,000	20,000	10
6-7/8	5/8-11	1-9/16	3/16	E4	-	83513	4,500–9,000	9,000	10

J-BEVEL, stringer bead twist, ECAP® encapsulated

Extremely aggressive brushing action, designed for heavy-duty brushing on welds created by automatic welding equipment.



Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.
- ECAP® elastomer eliminates flare for precision control of brush contact area.
- Extremely aggressive brushing.
- Encapsulation prevents long wire breakage, contributing to workplace safety.

Recommendations for use:
- For use on right angle grinders.
- E4 is good for higher pressure applications. Black colour.

D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	ECAP® grade	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.014			
Carbon steel wire								
5	5/8-11	1-1/4	3/16	E4	83515	7,500–15,000	15,000	5

Thread adapters to adapt 5/8-11 threaded wheels to other common grinder spindles are available, please see page 79 for information.

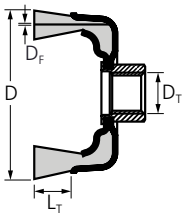
For products specially suited to pipeline construction, see the brochure "PFERD tools for pipeline construction".

Wire is bonded in a synthetic elastomer material which firmly supports the wire filaments, providing precisely controlled brush face, longer brush life and very aggressive removal rates. Limited flexibility. ECAP® brushes are available in three hardness grades:

E3 is aggressive enough for most applications. Best grade for general use.
Green colour.

E4 is good for higher pressure applications.
Black colour.

E5 is for super-aggressive, tough cleaning, for most severe applications.
Blue colour.



External nut

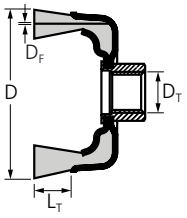
Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
			.014	.020			
Carbon steel wire							
2-3/4	5/8-11	7/8	82243P	-	7,000–14,000	14,000	5/5
	M10x1.50	7/8	82246P	-	7,000–14,000	14,000	5
	M10x1.25	7/8	82247P	-	7,000–14,000	14,000	5
3-1/2	5/8-11	7/8	82249	82255P	6,000–12,500	12,500	1/5
4	5/8-11	1-1/4	82510P	82511P	4,500–9,000	9,000	1/2
5	5/8-11	1-1/4	82514	82515P	4,000–8,000	8,000	1/2
6	5/8-11	1-3/8	82516P	82517P	3,000–6,000	6,000	1/2
Stainless steel wire (INOX)							
2-3/4	5/8-11	7/8	82353P	-	5,500–14,000	14,000	5/5
3-1/2	5/8-11	7/8	82359	82365	5,000–12,500	12,500	1
4	5/8-11	1-1/4	-	82635	3,500–9,000	9,000	1
6	5/8-11	1-3/8	-	82638	2,000–6,000	6,000	1

D [Inches]	D_T [Inches]	L_T [Inches]	D_F [Inches]/Grit size and EDP number		Opt. RPM	Max. RPM	
			.040/120	.040/80			
M-BRAD® nylon abrasive filament, silicon carbide SiC							
3-1/2	5/8-11	7/8	83810	-	3,000–5,000	12,000	1
4	5/8-11	1	83814	83813	1,500–2,500	6,000	1
6	5/8-11	1-1/4	83822	83821	1,500–2,000	5,000	1



External nut, ECAP® encapsulated

Extremely aggressive brushing action, best suited for brushing large surfaces. Ideal for removing weld slag and scale in pipeline applications.

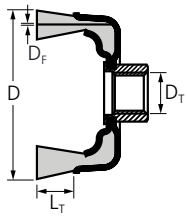
Advantages:
- ECAP® elastomer eliminates flare for precision control of brush contact area.
- Extremely aggressive brushing.
- Encapsulation prevents long wire breakage, contributing to workplace safety.

Recommendations for use:
- For use on right angle grinders.
- E4 is good for higher pressure applications. Black colour.

D [Inches]	D_T [Inches]	L_T [Inches]	ECAP® grade	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.020			
Carbon steel wire							
4	5/8-11	1-1/8	E4	83570	3,500–7,000	7,000	1
6	5/8-11	1-1/4	E4	83571	3,000–6,000	6,000	1

External nut, single row, standard twist

This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, cleaning, deburring, and flash removal.



Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
				.014	.020	.023	.035			
Carbon steel wire										
2-3/4	5/8-11	18	7/8	82219**P**	82220**P**	-	-	7,000–14,000	14,000	5/**5**
	3/8-24	18	7/8	82223	82224	-	-	7,000–14,000	14,000	5
	M10x1.50	18	7/8	-	**82226P**	-	-	7,000–14,000	14,000	**5**
	M10x1.25	18	7/8	-	82228**P**	-	-	7,000–14,000	14,000	5/**5**
3-1/2	5/8-11	20	7/8	82231**P**	82232**P**	-	-	6,000–12,500	12,500	1/**2**
	3/8-24	20	7/8	-	82236	-	-	6,000–12,500	12,500	1
4	5/8-11	24	1-1/4	82522**P**	-	82523**P**	82524	4,500–9,000	9,000	1/**2**
5	5/8-11	30	1-3/8	-	-	82529	-	3,500–7,000	7,000	1
6	5/8-11	36	1-1/2	82530	-	82531	82532	3,000–6,000	6,000	1
Stainless steel wire (INOX)										
2-3/4	5/8-11	18	7/8	82329**P**	82330**P**	-	-	5,500–14,000	14,000	5/**5**
	3/8-24	18	7/8	-	82334	-	-	5,500–14,000	14,000	5
3-1/2	5/8-11	20	7/8	-	82342**P**	-	-	5,000–12,500	12,500	1/**2**
4	5/8-11	24	1-1/4	82647	-	82648	-	3,500–9,000	9,000	1
6	5/8-11	36	1-1/2	82653	-	82654	-	2,000–6,000	6,000	1
Brass wire										
3-1/2	5/8-11	20	7/8	-	82368	-	-	5,000–12,500	12,500	1

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Threaded power brushes
Knot cup brushes

External nut, standard twist COMBITWIST®

This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.
- COMBITWIST® knot construction results in improved balance, reduced vibration, and extended service life.

Recommendations for use
- Choose double-row for the most severe applications.
- For use on right angle grinders.

PFERDVALUE®:

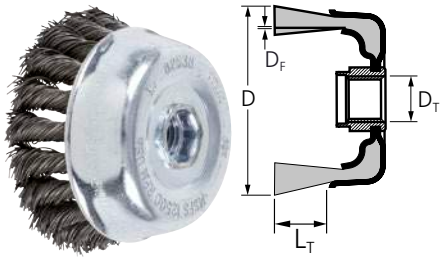
Vibration Filter | Haptic Filter

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
				.014	.020	.023	.035			
Carbon steel wire, single row										
2-3/4	5/8-11	18	7/8	82750**P**	82751**P**	-		7,000–14,000	14,000	5/**5**
3-1/2	5/8-11	20	7/8	82401	82402	-		6,000–12,500	12,500	1
4	5/8-11	24	1-1/4	82716	-	82717		4,500–9,000	9,000	1
5	5/8-11	30	1-3/8	-	-	82723		3,500–7,000	7,000	1
6	5/8-11	36	1-1/2	-	-	82725		3,000–6,000	6,000	1
Carbon steel wire, double row										
4	5/8-11	48	1-3/8	-	-	82553		3,500–7,000	7,000	1
6	5/8-11	66	1-1/2	-	-	82557	82558	3,000–6,000	6,000	1
Stainless steel wire (INOX), single row										
2-3/4	5/8-11	18	7/8	82855	82856	-		5,500–14,000	14,000	5
3-1/2	5/8-11	20	7/8	-	82431	-		4,000–9,000	12,500	5
4	5/8-11	24	1-1/4	82789	-	82790		3,500–9,000	9,000	5
Stainless steel wire (INOX), double row										
4	5/8-11	48	1-3/8	-	82657	-		2,500–7,000	7,000	1

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

The box quantity of POP items is printed in "**blue**" accordingly.

Internal nut, single row, standard twist



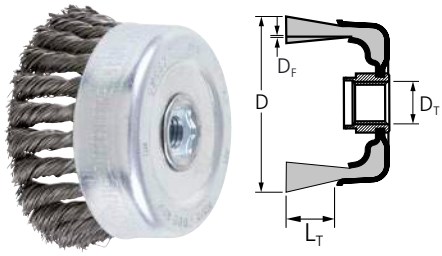
This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.
- Internal nut results in reduced operator fatigue and improved control.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] and EDP number			Opt. RPM	Max. RPM	
				.014	.020	.023			
Carbon steel wire									
3-1/2	5/8–11	20	7/8	-	82538	-	6,000–12,500	12,500	1
4	5/8-11	24	1-1/2	82539	-	82540	3,500–7,000	7,000	1
6	5/8-11	36	1-5/8	82545P	-	82546P	3,000–6,000	6,000	1/2

Internal nut, single row, full cable twist



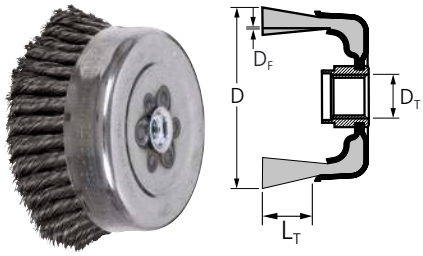
These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Internal nut results in reduced operator fatigue and improved control.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
				.020	.023			
Carbon steel wire								
4	5/8-11	24	1-3/8	82567	-	3,500–7,000	7,000	1
6	5/8-11	36	1-1/2	-	82571	3,000–6,000	6,000	1

Internal nut, double row, full cable twist

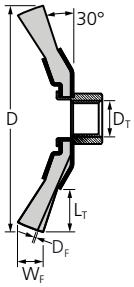


These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Internal nut results in reduced operator fatigue and improved control.

Recommendations for use:
- For use on right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.023			
Carbon steel wire							
6	5/8-11	66	1-1/2	82574	3,000–6,000	6,000	1



Crimped wire

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Ideal for cleaning narrow or hard-to-reach areas such as grooves, fillets, and inside edges.

Recommendations for use
- Designed for use on right angle grinders.

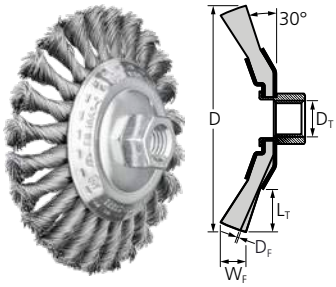
D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.014			
Carbon steel wire							
4	5/8-11	3/4	1/2	82213	6,000–12,500	12,500	5
4-1/2	5/8-11	1-1/8	1/2	82256	6,000–12,500	12,500	5
5	5/8-11	7/8	3/8	82257	6,000–11,000	11,000	5
Stainless steel wire (INOX)							
4	5/8-11	3/4	1/2	82370	5,000–12,500	12,500	5
4-1/2	5/8-11	1-1/8	1/2	82371	5,000–12,500	12,500	5
5	5/8-11	7/8	3/8	82372	5,000–11,000	11,000	5

Knot wire, full cable twist

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Ideal for cleaning narrow or hard-to-reach areas such as grooves, fillets, and inside edges.

Recommendations for use
- Designed for use on right angle grinders.



D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
					.014	.020			
Carbon steel wire									
4	5/8-11	22	3/4	1/2	82201	82202 **P**	10,000–15,000	20,000	5/**5**
4-1/2	5/8-11	24	1	1/2	82500	82501	7,500–15,000	15,000	1
5	5/8-11	28	3/4	1/2	-	82505	7,500–15,000	15,000	1
7	5/8-11	28	1-1/8	1/2	-	82509	5,000–9,000	9,000	1
Stainless steel wire (INOX)									
4	5/8-11	22	3/4	1/2	82317	-	8,000–15,000	20,000	5
4-1/2	5/8-11	24	1	1/2	82625	-	6,000–15,000	15,000	1
5	5/8-11	28	3/4	1/2	82629	-	6,000–15,000	15,000	1

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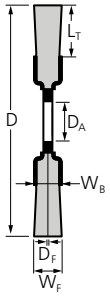
The box quantity of POP items is printed in "**blue**" accordingly.

Thread adapters to adapt 5/8-11 threaded wheels to other common grinder spindles are available, please see page 79 for information.

Composite brushes from PFERD have been specifically developed for industrial, automated use. They are suitable for a variety of applications and their variable mounting 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 repeatable results are achieved with short cycle times.

The trim length on standard composite brushes makes them ideal for aggressive deburring and surface conditioning applications. For work pieces with contours or uneven surfaces, the FLEX style of composite brushes are recommended. The FLEX composite brush style is characterized by longer trim length and in many cases narrower face width.

The application parameters for using composite brushes is influenced by many factors. Type of workpiece material, available machine, and required results all affect the application parameters. PFERD offers a wide range of products for various applications. Our sales and technical advisers will be happy to assist or even visit your facility to determine proper application parameters for your requirements. Please visit our website at **www.pferd.com**, or call our customer service department for more information at 1-800-342-9015.



Composite wheels

M-BRAD® nylon abrasive filament makes this product ideal for aggressive deburring and other surface conditioning applications. Developed specially for industrial use on stationary machines.

Advantages:
- Long tool life and aggressive brushing effect due to a very high filament density.
- Even distribution of fill material results in perfect balance, eliminating vibration.

Recommendations for use
- Use ceramic oxide CO filament for fast, aggressive deburring.
- Use rectangular .045" x .090" filament for removal of larger burs.
- For better surface finish, the use of coolant is recommended.

Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.

PFERDVALUE®:

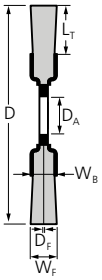
Vibration Filter

Time Saving

D [Inches]	D_A [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	Incl. keyway [Inches]	D_F [Inches]/Grit size and EDP number					Opt. RPM	Max. RPM	Adapter style	
						round crimped				rectangular				
						.022/320	.022/120	.040/120	.040/80	.045x.090/80				
M-BRAD® nylon abrasive filament, silicon carbide SiC														
6	2	1-1/4	1	1	-	83723	-	83722	83720	83721	900–1,500	3,600	C	1
8	2	1-1/4	1	1	-	83729	-	83728	83726	83727	900–1,500	3,600	C	1
10	2	1-1/2	1	1	-	83741	83742	83740	83738	83739	900–1,500	3,600	C	1
12	4-1/4	1-1/2	1	1	-	83753	-	83752	83750	83751	500–800	1,800	G	1
14	5-1/4	1-1/2	1	1	-	83765	-	83764	83762	83763	500–800	1,800	G	1
M-BRAD® nylon abrasive filament, ceramic oxide CO														
6	2	1-1/4	1	1	-	-	-	-	84165	-	900–1,500	3,600	C	1
8	2	1-1/4	1/2	1/2	1/2 x 1/4	-	-	84132	84127	-	900–1,500	3,600	C	1
			1	1	-	-	-	-	84169	-	900–1,500	3,600	C	1
10	2	1-1/2	1	1	-	-	-	-	84173	-	500–800	3,600	C	1
12	4-1/4	1-1/2	1	1	-	-	-	-	84177	-	500–800	1,800	G	1
14	5-1/4	1-1/2	1	1	-	-	-	-	84181	-	500–800	1,800	G	1

Composite wheels, FLEX type

Long-trim M-BRAD® nylon abrasive filament makes this product particularly suitable for deburring complex geometries such as camshafts and gears. Developed specially for industrial use on stationary machines.



Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Long tool life and aggressive brushing action due to a very high filament density.
- Even distribution of fill material results in perfect balance, eliminating vibration.

Recommendations for use
- Use ceramic oxide CO filament for fast, aggressive deburring.
- Use rectangular .045" x .090" filament for removal of larger burs.
- For better surface finish, the use of coolant is recommended.

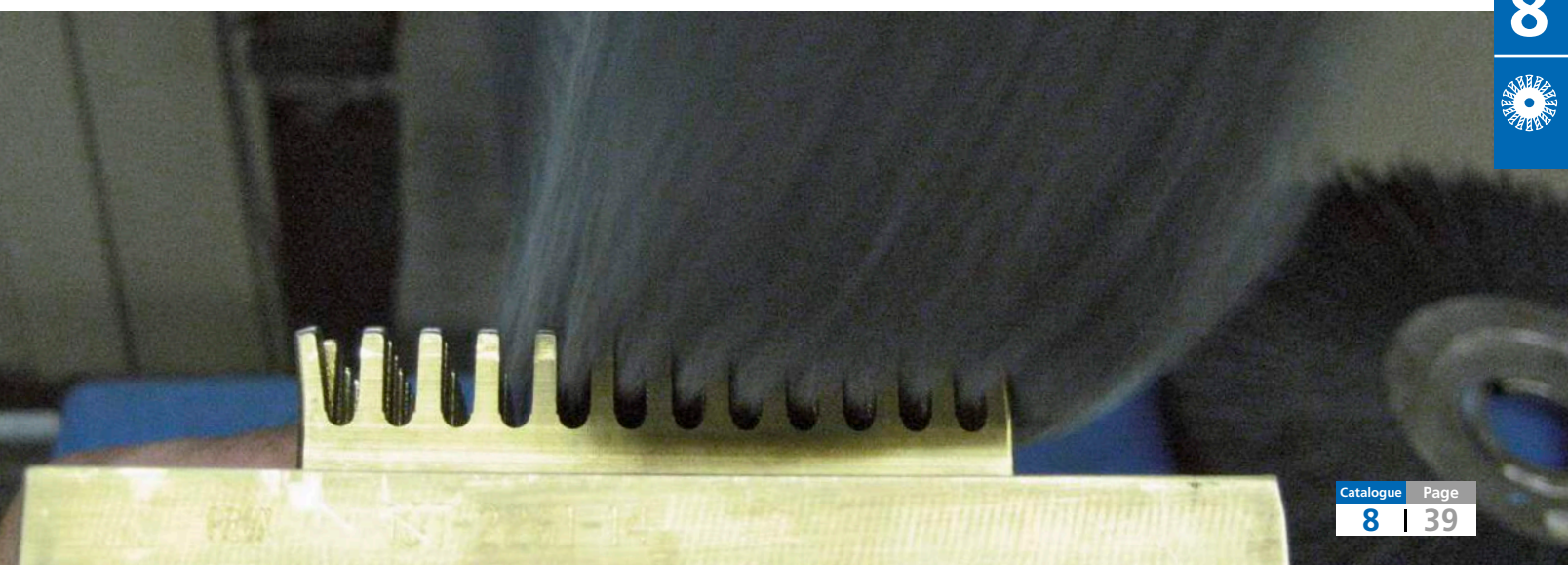
Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.

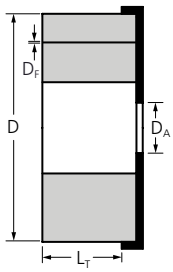
PFERDVALUE®:

Vibration Filter

Time Saving

D [Inches]	D_A [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	Incl. keyway [Inches]	D_F [Inches]/Grit size and EDP number						Opt. RPM	Max. RPM	Adapter style	
						round crimped					rectangular				
						.022/320	.022/120	.035/180	.040/120	.040/80	.045x.090/80				
M-BRAD® nylon abrasive filament, silicon carbide SiC															
8	2	2-1/4	1	1	-	83735	-	-	83734	83732	83733	900–1,500	3,600	C	1
10	2	2-3/4	1	1	-	83747	-	-	83746	83744	83745	900–1,500	3,600	C	1
					1/2 x 1/4	-	-	83657	-	-	-	900–1,500	3,600	C	1
12	2	2-3/8	1	1	1/2 x 1/4	84150	-	83661	83660	83659	-	500–800	1,800	C	1
	4-1/2	3	1	1	-	83759	-	-	83758	83756	83757	500–800	1,800	G	1
14	2	3-1/2	1	1	1/2 x 1/4	-	-	83665	-	83663	-	500–800	1,800	C	1
	5-1/4	3-1/2	1	1	-	83771	-	-	83770	83768	83769	500–800	1,800	G	1
M-BRAD® nylon abrasive filament, ceramic oxide CO															
6	2	1-1/4	1/2	1/2	-	-	-	-	84119	84118	-	900–1,500	3,600	C	1
8	2	2-1/4	1/2	1/2	-	-	-	-	84126	84124	-	900–1,500	3,600	C	1
10	2	2-3/4	1/2	1/2	1/2 x 1/4	-	84138	-	84139	84133	-	900–1,500	3,600	C	1
12	2	2-3/8	1/2	1/2	1/2 x 1/4	-	-	-	84145	84144	-	500–800	1,800	C	1
			1	1	1/2 x 1/4	-	-	-	84190	84189	-	500–800	1,800	C	1
14	2	3-1/2	1/2	1/2	1/2 x 1/4	-	-	-	84152	84151	-	500–800	1,800	C	1
			1	1	1/2 x 1/4	-	-	-	84194	84193	-	500–800	1,800	C	1





High density, bridled

M-BRAD® nylon abrasive filament makes this product particularly suitable for aggressive deburring. Developed specially for industrial use on stationary machines.

Advantages:
- Long tool life and aggressive brushing effect due to a very high filament density.
- Even distribution of fill material results in perfect balance, eliminating vibration.
- Removable bridle reduces filament flare for consistently aggressive deburring action.

Ordering note:
- For better surface finish, the use of coolant is recommended.
- Angled trim version for use in tight corners.

Recommendations for use
- Use ceramic oxide CO filament for fast, aggressive deburring.
- Use rectangular .045" x .090" filament for removal of larger burs.

Ordering note:
- See page 81 for information on drive arbors.

PFERDVALUE®:

Vibration Filter

Time Saving

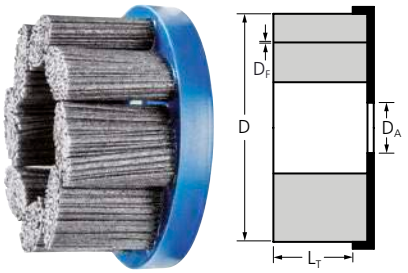
D [Inches]	D_A [Inches]	L_T [Inches]	D_F [Inches]/Grit size and EDP number					Opt. RPM	Max. RPM	
			round crimped				rectangular			
			.022/320	.022/120	.040/120	.040/80	.045x.090/80			
M-BRAD® nylon abrasive filament, silicon carbide SiC										
3	7/8	1-1/2	84125	84123	84122	84120	84121	2,400–3,900	4,500	1
4	7/8	1-1/2	84131	-	84130	84128	84129	1,400–2,300	3,500	1
5	7/8	1-1/2	84137	-	84136	84134	84135	1,200–2,000	3,000	1
6	7/8	1-1/2	84143	-	84142	84140	84141	1,000–1,600	2,500	1
8	7/8	1-1/2	84149	-	84148	84146	84147	500–800	1,800	1
M-BRAD® nylon abrasive filament, ceramic oxide CO										
3	7/8	1-1/2	-	-	84232	84231	-	2,400–3,900	4,500	1
4	7/8	1-1/2	-	84238	84237	84236	-	1,400–2,300	3,500	1
5	7/8	1-1/2	-	-	-	84241	-	1,200–2,000	3,000	1
6	7/8	1-1/2	-	-	-	84246	-	1,000–1,600	2,500	1

D [Inches]	D_A [Inches]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.016			
Nylon filament						
4	7/8	1-1/2	84268	1,400–2,300	3,500	1
Nylon filament, angled trim						
6	7/8	1-1/2	84269	1,000–1,600	2,500	1

See page 81 for information on drive arbors.

Standard density, FLEX type

The M-BRAD nylon abrasive filament makes this product suitable for deburring multiple maternal types and alloys. The density profile insures deburring action even on complex part geometries. Developed specially for industrial use on stationary machines with magnetic conveyor belts.



Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Long tool life and aggressive brushing effect due to a very high filament density.
- Even distribution of fill material results in perfect balance, eliminating vibration.
- Lighter fill density allows for better coolant flow.

Recommendations for use
- Use rectangular .045" x .090" filament for removal of larger burs.
- For better surface finish, the use of coolant is recommended.

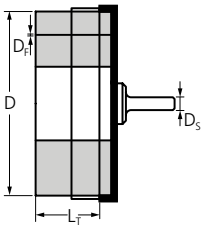
Ordering note:
- See page 81 for information on drive arbors.

PFERDVALUE®:

Vibration Filter

Time Saving

D [Inches]	D_A [Inches]	L_T [Inches]	D_F [Inches]/Grit size and EDP number					Opt. RPM	Max. RPM	
			round crimped				rectangular			
			.022/320	.035/180	.040/120	.040/80	.045x.090/180			
M-BRAD® nylon abrasive filament, silicon carbide SiC										
3	7/8	1-1/2	83944	83943	83942	83941	83966	2,400–3,900	4,500	1
4	7/8	1-1/2	83948	83947	83946	83945	83968	1,400–2,300	3,500	1
6	7/8	1-1/2	83952	83951	83950	83949	83970	1,000–1,600	2,500	1
8	7/8	1-1/2	83956	83955	83954	83953	83972	500–800	1,800	1
10	7/8	1-1/2	83960	83959	83958	83957	83974	350–600	1,340	1



Shank-mounted, bridled

M-BRAD® nylon abrasive filament makes this product particularly suitable for aggressive deburring. Developed for deburring and surface conditioning applications with limited access.

Advantages:
- Long tool life and aggressive brushing effect due to a very high filament density.
- Even distribution of fill material results in perfect balance, eliminating vibration.

Recommendations for use
- Use ceramic oxide CO filament for fast, aggressive deburring.
- Use rectangular .045" x .090" filament for removal of larger burs.
- Removable bridle reduces filament flare for consistently aggressive deburring action.
- For better surface finish, the use of coolant is recommended.

PFERDVALUE®:

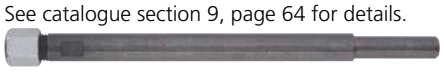
Vibration Filter

Time Saving

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches]/Grit size and EDP number							Opt. RPM	Max. RPM	
			round crimped					rectangular	rectangular crimped			
			.022/320	.022/120	.035/180	.040/120	.040/80	.045x.090/80	.045x.090/80			
M-BRAD® nylon abrasive filament, silicon carbide SiC												
2	1/4	1-1/2	84254	-	84253	84252	84251	84250	-	1,500–3,500	5,000	1
2-1/2	1/4	1-1/2	84259	-	-	84257	84256	84255	-	1,500–3,500	5,000	1
3	1/4	1-1/2	84264	-	-	84262	84261	84260	-	1,500–3,500	5,000	1
M-BRAD® nylon abrasive filament, ceramic oxide CO												
1	1/4	1	-	84244	-	84243	84242	-	84240	1,500–3,500	5,000	1
2	1/4	1-1/2	-	-	-	84271	84270	-	84245	1,500–3,500	5,000	1
2-1/2	1/4	1-1/2	-	-	84279	-	84275	-	-	1,500–3,500	5,000	1
3	1/4	1-1/2	-	-	-	84281	84280	-	-	1,500–3,500	5,000	1

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.016			
Nylon filament						
2	1/4	1-1/2	84267	1,500–3,500	5,000	1

Use spindle extension, EDP 95826, for longer reach.
See catalogue section 9, page 64 for details.

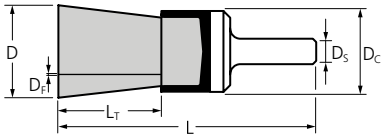


Crimped wire

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Coated cup style end brushes minimize workpiece contamination risk.

Recommendations for use:
- Designed for use on straight grinders.

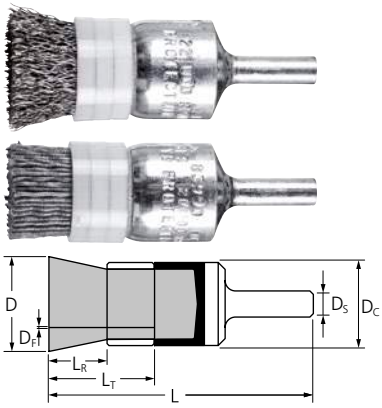


D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
				.006	.010	.014	.020			
Carbon steel wire										
1/2	3/4	1/4	1	82962	82964	82965	82966**P**	12,500–18,700	25,000	10/**5**
3/4	1	1/4	1	82967	82969	82970	82971**P**	11,000–16,500	22,000	10/**5**
1	1-1/4	1/4	1	82972**P**	82974**P**	82975	82976**P**	10,000–15,000	20,000	10/**5**
Stainless steel wire (INOX) All INOX end brushes are degreased										
1/2	3/4	1/4	1	82981	82983	82984	82985	10,000–16,000	25,000	10
3/4	1	1/4	1	82986**P**	82988	82989	82990	8,500–14,000	22,000	10/**5**
1	1-1/4	1/4	1	82991**P**	82993**P**	82994	-	8,000–13,000	20,000	10/**5**
Stainless steel wire (INOX) – coated cup All INOX end brushes are degreased										
1/2	3/4	1/4	1	83050	83052	-	-	10,000–16,000	25,000	10
3/4	1	1/4	1	83053	83055	-	-	8,500–14,000	22,000	10
1	1-1/4	1/4	1	83056	83058	-	-	8,000–13,000	20,000	10

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

The box quantity of POP items is printed in "**blue**" accordingly.

Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.



Crimped, bridled

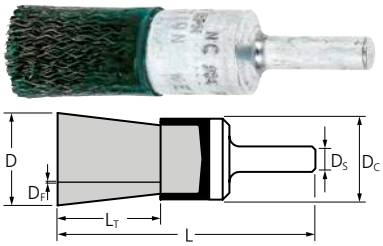
Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Removable bridles provide controlled trim length.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	L_R [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
					.006	.008	.010	.014			
Carbon steel wire											
1/2	5/8	1/4	1	1/2	83005	-	83007	-	7,500–11,200	15,000	10
3/4	7/8	1/4	1	1/2	83010	-	83012	-	7,500–11,200	15,000	10
1	1-1/8	1/4	1	1/2	83015	83016	83017	83018	7,500–11,200	15,000	10
Stainless steel wire (INOX)											
All INOX end brushes are degreased											
1/2	5/8	1/4	1	1/2	83024	-	83026	-	6,000–10,000	15,000	10
3/4	7/8	1/4	1	1/2	83027	-	83029	-	6,000–10,000	15,000	10
1	1-1/8	1/4	1	1/2	83030	-	83032	-	6,000–10,000	15,000	10

D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	L_R [Inches]	D_F [Inches]/Grit size and EDP number					Opt. RPM	Max. RPM	
					.022/320	.022/120	.035/180	.040/120	.040/80			
M-BRAD® nylon abrasive filament, silicon carbide SiC												
1/2	5/8	1/4	1	1/2	83988	-	-	83996	-	5,200–9,000	20,000	10
3/4	7/8	1/4	1	1/2	83991	-	83990	84000	-	5,200–9,000	20,000	10
1	1-1/8	1/4	1	1/2	83994	-	84005	84004	-	5,200–9,000	20,000	10
M-BRAD® nylon abrasive filament, ceramic oxide CO												
1	1-1/8	1/4	1	1/2	-	84313	-	84311	84310	5,200–9,000	20,000	10



Crimped, ECAP® encapsulated

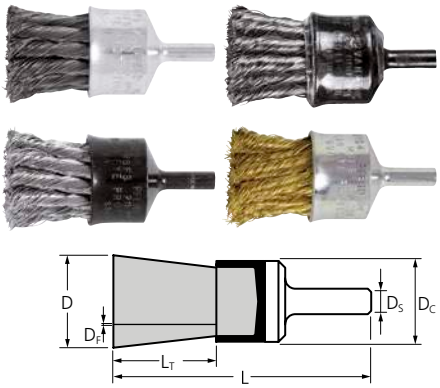
Extremely aggressive brushing action, perfect for heavy-duty brushing.

Advantages:
- ECAP® elastomer eliminates flare for precision control of brush contact area.
- Extremely aggressive brushing.

Recommendations for use:
- Designed for use on straight grinders.
- E3 is aggressive enough for most applications. Best grade for general use. Green colour.
- E4 is good for higher pressure applications. Black colour.

D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	ECAP® grade	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.010			
Carbon steel wire								
1/2	5/8	1/4	7/8	E3	83580	9,000–13,500	18,000	10
3/4	7/8	1/4	7/8	E3	83583	7,500–11,200	15,000	10
1	1-1/8	1/4	7/8	E4	83596	6,500–10,000	13,000	10

Knot, flared cup



These brushes feature tightly twisted knots for low flex, high impact brushing action. Ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Easily-controlled flare of knots makes this brush ideal for cleaning pipe and tube internal diameters.

Recommendations for use:
- Designed for use on straight grinders.

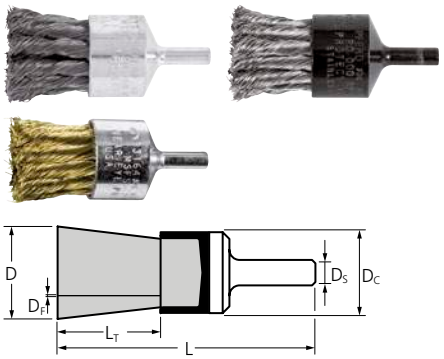
D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	No. knots [pcs]	D_F [Inches] and EDP number .006	.010	.014	.020	Opt. RPM	Max. RPM	
Carbon steel wire											
1/2	5/8	1/4	1	6	83063	83064	83065	-	10,000–15,000	20,000	10
3/4	7/8	1/4	1	8	83070	83071	83072**P**	83073	10,000–15,000	20,000	10/**5**
1	1-1/8	1/4	1	12	-	83078	83079**P**	83080**P**	10,000–15,000	20,000	10/**5**
			1-3/8	12	-	80187	-	-	8,000–12,000	15,000	10
Stainless steel wire (INOX) All INOX end brushes are degreased											
1/2	5/8	1/4	1	6	-	-	83087	-	8,000–13,000	20,000	10
3/4	7/8	1/4	1	8	83090	83091	83092	83093	8,000–13,000	20,000	10
1	1-1/8	1/4	1	12	83096	83097	83098**P**	83099	8,000–13,000	20,000	10/**5**
Stainless steel wire (INOX), coated cup All INOX end brushes are degreased											
3/4	7/8	1/4	1	8	83178	-	-	-	8,000–13,000	20,000	10
1	1-1/8	1/4	1	12	-	83183	83184	-	8,000–13,000	20,000	10
Brass wire											
1	1-1/8	1/4	1	12	-	-	83104	-	8,000–13,000	20,000	10

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

The box quantity of POP items is printed in "**blue**" accordingly.

Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.

Stem mounted brushes
End brushes



Knot, straight cup

These brushes feature tightly twisted knots for low flex, high impact brushing action. Ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

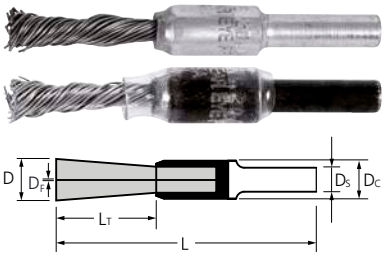
Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Reduced flare for more precise surface contact.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	No. knots [pcs]	D_F [Inches] and EDP number			Opt. RPM	Max. RPM	
					.010	.014	.020			
Carbon steel wire										
1/2	5/8	1/4	1-1/8	6	83124	83125	-	10,000–15,000	20,000	10
3/4	7/8	1/4	1-1/8	8	83131	83132	83133	10,000–15,000	20,000	10
1	1-1/8	1/4	1-1/8	12	83138P	831 39	83140	10,000–15,000	20,000	10/5
Stainless steel wire (INOX) All INOX end brushes are degreased										
1/2	5/8	1/4	1-1/8	6	-	83147	-	8,000–13,000	20,000	10
3/4	7/8	1/4	1-1/8	8	83151	83152	83153	8,000–13,000	20,000	10
1	1-1/8	1/4	1-1/8	12	83157	83158	83159	8,000–13,000	20,000	10
Brass wire										
1	1-1/8	1/4	1	12	-	83164	-	8,000–13,000	20,000	10

Knot, SINGLETWIST®

SINGLETWIST® end brushes are produced with a single, twisted wire knot, designed specially for brushing confined areas such as inside corners and edges.

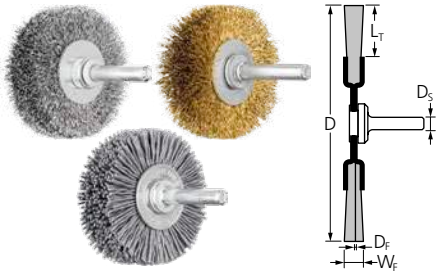


Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Direction of knot twist prevents unraveling.
- Coated cup style end brushes minimize workpiece contamination risk.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_C [Inches]	D_S [Inches]	L_T [Inches]	No. knots [pcs]	D_F [Inches] and EDP number			Opt. RPM		Max. RPM	
					.006	.014	.020	open areas	confined areas		
Carbon steel wire											
1/4	3/8	1/4	1-1/8	1	83107	83108	83109	2,500–8,000	3,500–10,000	20,000	10
Stainless steel wire (INOX) – coated cup All INOX end brushes are degreased											
1/4	3/8	1/4	1-1/8	1	83283	83284	83285	2,500–8,000	3,500–10,000	20,000	10

Stem mounted brushes
Wheel brushes



Crimped

Designed for individual use in confined areas. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.

Recommendations for use:
- Designed for use on straight grinders.

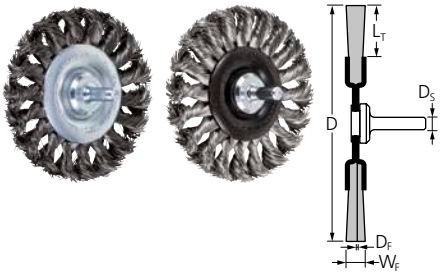
D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number					Opt. RPM	Max. RPM	
				.006	.008	.012	.014	.020			
Carbon steel wire											
1-1/2	1/4	7/16	1/4	82890	-	82892	-	82889	10,000–15,000	20,000	10
2	1/4	1/2	3/8	-	82893	82894	-	-	10,000–15,000	20,000	10
	1/4	1/2	5/8	-	82902	-	-	-	8,000–11,000	15,000	10
2-1/2	1/4	3/4	1/2	-	-	-	82896	-	10,000–15,000	20,000	10
3	1/4	3/4	5/8	-	-	82903	-	-	6,000–9,000	12,000	10
	1/4	1	5/8	82897	82898	82899	82900	82901	8,000–11,000	15,000	10
Stainless steel wire (INOX)											
1-1/2	1/4	7/16	1/4	82905	-	82906	-	-	8,000–13,000	20,000	10
2	1/4	1/2	3/8	-	82907	82908	-	-	8,000–13,000	20,000	10
	1/4	1/2	5/8	-	82951	-	-	-	8,000–13,000	20,000	10
2-1/2	1/4	3/4	1/2	-	82909	82910	-	-	8,000–13,000	20,000	10
3	1/4	3/4	5/8	-	-	82952	-	-	6,000–9,000	12,000	10
	1/4	1	5/8	82911	82912	-	82913	-	6,000–9,000	12,000	10
Brass wire											
2	1/4	1/2	5/8	-	82953	-	-	-	8,000–11,000	15,000	10
3	1/4	3/4	5/8	-	-	82954	-	-	6,000–9,000	12,000	10
	1/4	1	5/8	-	-	-	82914	-	6,000–9,000	12,000	10

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches]/Grit size and EDP number			Opt. RPM	Max. RPM	
				.022/120	.040/120	.040/80			
M-BRAD® nylon abrasive filament, ceramic oxide CO									
2	1/4	1/2	1/4	84203	-	-	6,000–9,800	15,000	10
			5/8	84200	84201	84202	6,000–9,800	15,000	10
3	1/4	3/4	1/4	-	-	84208	4,800–7,800	12,000	10
			5/8	84205	84206	84207	4,800–7,800	12,000	10

Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.

Knot, standard twist

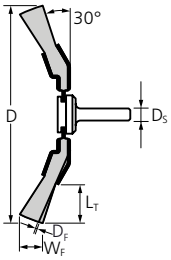
This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.



Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_S [Inches]	No. knots [pcs]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number			Opt. RPM	Max. RPM	
					.012	.014	.020			
Carbon steel wire										
3	1/4	18	3/4	7/16	82915	82916	82917	12,500–18,700	25,000	10
3-1/4	1/4	20	3/4	1/2	-	82946	82947	12,500–18,700	25,000	10
4	1/4	22	3/4	5/8	-	82919	82920	12,500–18,700	25,000	10
Stainless steel wire (INOX)										
3	1/4	18	3/4	7/16	-	82921	-	10,000–16,000	25,000	10
3-1/4	1/4	20	3/4	1/2	-	82948	-	10,000–16,000	25,000	10
4	1/4	22	3/4	5/8	-	82922	-	10,000–16,000	25,000	10



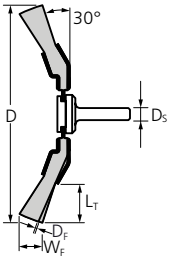
Crimped

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Ideal for cleaning narrow or hard-to-reach areas such as grooves, fillets, and inside edges.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number					Opt. RPM	Max. RPM	
				.006	.008	.012	.014	.020			
Carbon steel wire											
1-1/2	1/4	5/16	1/8		-	82852P	-	-	10,000–15,000	20,000	10/5
2	1/4	7/16	3/8	-	82854	-	82878P	82879	10,000–15,000	20,000	10/5
2-1/2	1/4	11/16	3/8	82857	-	-	82859	-	10,000–15,000	20,000	10
3	1/4	7/8	3/8	82861	82862	-	82863P	82864	10,000–15,000	20,000	10/5
4	1/4	1-3/8	1/2	-	82866	-	82867	-	10,000–15,000	20,000	10
Stainless steel wire (INOX)											
1-1/2	1/4	5/16	1/8	82870	-	-	-	-	8,000–13,000	20,000	10
2-1/2	1/4	11/16	3/8	-	-	-	82875	-	8,000–13,000	20,000	10
3	1/4	7/8	3/8	82876	-	-	82877	-	8,000–13,000	20,000	10



ECAP® encapsulated

Extremely aggressive brushing action, perfect for heavy-duty brushing.

Advantages:
- Ideal for cleaning narrow or hard-to-reach areas such as grooves, fillets, and inside edges.
- ECAP® elastomer eliminates flare for precision control of brush contact area.
- Extremely aggressive brushing.
- E3 is aggressive enough for most applications. Best grade for general use. Green colour.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	ECAP® grade	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.010			
Carbon steel wire								
2	1/4	7/16	1/4	E3	83602	8,500–12,700	17,000	10

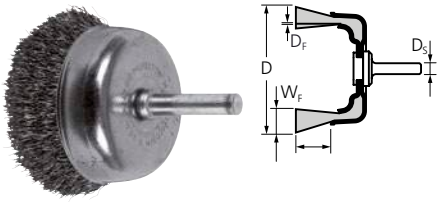
Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.

Crimped

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.

Recommendations for use:
- Designed for use on straight grinders.

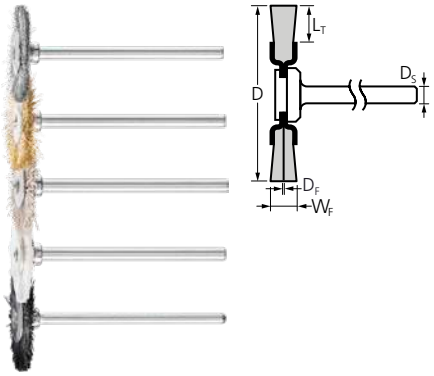


D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number						Opt. RPM	Max. RPM	
				.006	.008	.010	.012	.014	.020			
Carbon steel wire												
1-1/4	1/4	1	1-3/8	-	-	-	-	82820	82821	6,500–10,000	13,000	10
1-3/4	1/4	11/16	1/2	82822	-	-	82823**P**	-	-	6,500–10,000	13,000	10/**5**
2	1/4	7/8	1/2	-	82824	-	82826**P**	-	-	6,500–10,000	13,000	10/**5**
2-1/2	1/4	7/8	3/8	-	82828	-	82830**P**	-	-	6,500–10,000	13,000	10/**5**
Stainless steel wire (INOX)												
1-3/4	1/4	11/16	1/2	-	-	-	82836	-	-	5,000–8,500	13,000	10
2	1/4	7/8	1/2	-	-	82838	-	-	-	5,000–8,500	13,000	10

Brushes available in POP packaging are marked with a "**P**" in this catalogue. To order brushes in POP versions, please add a "**P**" to the end of the EDP number.

The box quantity of POP items is printed in "**blue**" accordingly.

Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.



Crimped, stem mounted

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Great for precision work in hard-to-reach areas.

Recommendations for use
- Natural filaments can be used with polishing paste to achieve the optimum surface finish. Information on polishing pastes can be found in catalogue section 4.

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.005			
Carbon steel wire							
3/4	1/8	3/16	1/16	83202	5,000–15,000	25,000	36
1	1/8	1/4	1/16	83204	5,000–15,000	25,000	36
1-1/4	1/8	3/8	1/16	83205	5,000–15,000	25,000	36
1-1/2	1/8	1/2	1/16	83206	5,000–15,000	25,000	36
Stainless steel wire (INOX)							
5/8	1/8	1/8	1/16	83209	4,500–12,500	25,000	36
3/4	1/8	3/16	1/16	83210	4,500–12,500	25,000	36
1	1/8	1/4	1/16	83212	4,500–12,500	25,000	36
1-1/2	1/8	1/2	1/16	83213	4,500–12,500	25,000	36
Brass wire							
1	1/8	1/4	1/16	83218	3,000–10,000	25,000	36

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	Grit size and EDP number	Opt. RPM	Max. RPM	
				600			
M-BRAD® nylon abrasive filament, aluminum oxide A							
3/4	1/8	3/16	1/16	83221	1,200–4,000	6,000	36
1	1/8	1/4	1/16	83223	1,200–4,000	6,000	36
1-1/4	1/8	3/8	1/16	83225	1,200–4,000	6,000	36
1-1/2	1/8	1/2	1/16	83227	1,200–4,000	6,000	36

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	Bristle type and EDP number		Opt. RPM	Max. RPM	
				stiff	soft			
Natural bristle								
3/4	1/8	3/16	1/16	83231	83232	5,000–10,000	25,000	36

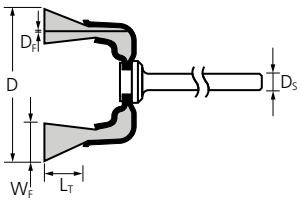
Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.

Crimped, stem mounted

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Suitable for brushing on small surfaces.

Recommendations for use
- Natural filaments can be used with polishing paste to achieve the optimum surface finish. Information on polishing pastes can be found in catalogue section 4.



D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.005			
Carbon steel wire							
9/16	1/8	1/4	1/8	83236	5,000–15,000	25,000	36
Stainless steel wire (INOX)							
9/16	1/8	1/4	1/8	83240	4,500–12,500	25,000	36

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	Grit size and EDP number	Opt. RPM	Max. RPM	
				600			
M-BRAD® nylon abrasive filament, aluminum oxide A							
9/16	1/8	1/4	1/8	83247	1,200–4,000	6,000	36

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	Bristle type and EDP number		Opt. RPM	Max. RPM	
				stiff	soft			
Natural bristle								
9/16	1/8	1/4	1/8	83250	83252	5,000–10,000	25,000	36

Crimped, stem mounted

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

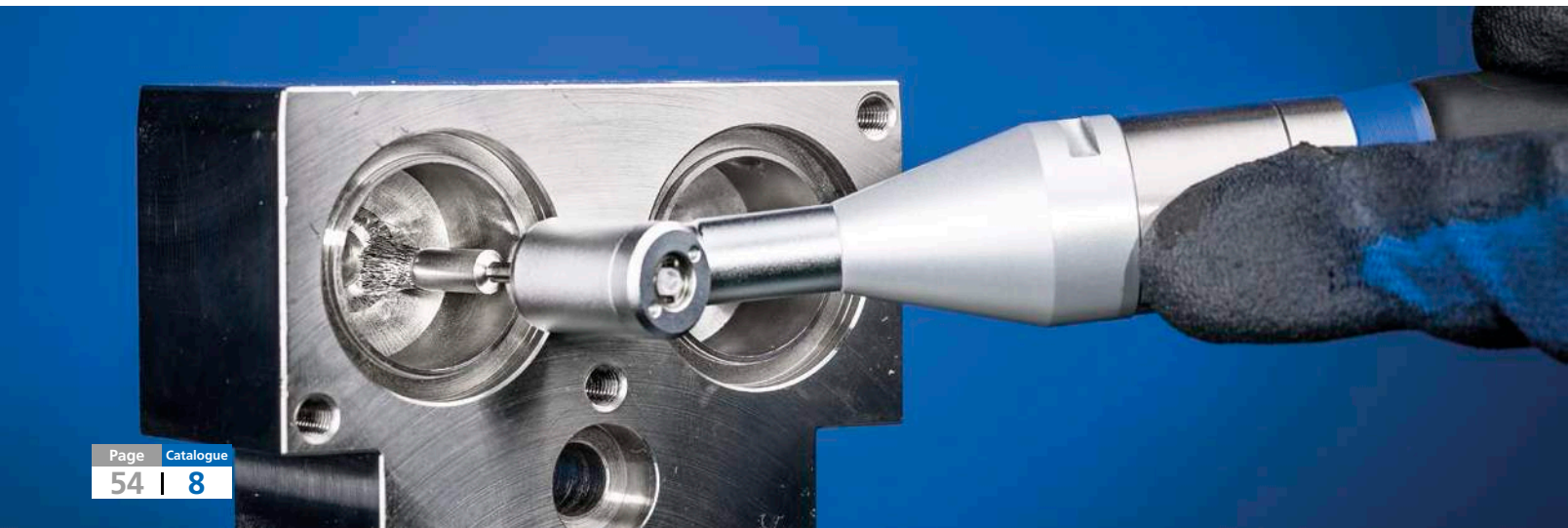
Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Great for precision work in hard-to-reach areas and internal diameters.

Recommendations for use
- Natural filaments can be used with polishing paste to achieve the optimum surface finish. Information on polishing pastes can be found in catalogue section 4.

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.005			
Carbon steel wire						
1/4	1/8	7/16	83257	5,000–15,000	25,000	36
5/16	1/8	1/2	83258	5,000–15,000	25,000	36
Stainless steel wire (INOX)						
1/4	1/8	7/16	83262	4,500–12,500	25,000	36
5/16	1/8	1/2	83263	4,500–12,500	25,000	36
Brass wire						
1/4	1/8	7/16	83267	3,000–10,000	25,000	36

D [Inches]	D_S [Inches]	L_T [Inches]	Grit size and EDP number	Opt. RPM	Max. RPM	
			600			
M-BRAD® nylon abrasive filament, aluminum oxide A						
1/4	1/8	7/16	83272	1,200–5,000	6,000	36
3/16	1/8	5/16	83270	1,200–5,000	6,000	36
5/16	1/8	7/16	83274	1,200–5,000	6,000	36

D [Inches]	D_S [Inches]	L_T [Inches]	Bristle type and EDP number		Opt. RPM	Max. RPM	
			stiff	soft			
Natural bristle							
3/16	1/8	5/16	83278	83281	5,000–10,000	25,000	36
1/4	1/8	7/16	83279	-	5,000–10,000	25,000	36



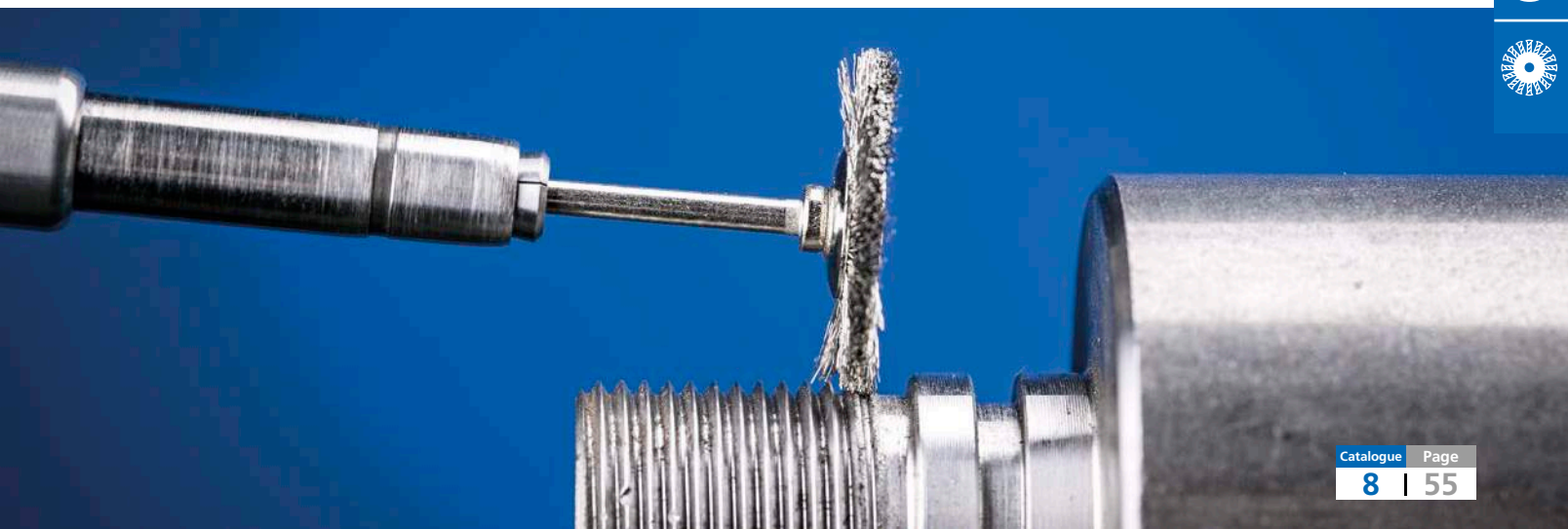
Miniature brush set

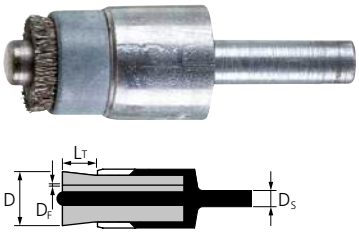
PFERD stem mounted miniature brushes are perfect for precision applications required in many industries including jewelry, electronics, medical and aerospace.

A wide selection of filaments includes: carbon steel wire, stainless steel wire (INOX) and brass wire, M-BRAD® aluminum oxide impregnated nylon filament, and a variety of natural bristles.

All brushes are mounted on 1/8″ stems, and are recommended for use with flexible shaft tools and straight grinders.

Shape	D [Inches]		Filament type and EDP number				
			individual brush EDP's in Set				
			carbon steel	stainless steel (INOX)	M-BRAD®	natural bristle	
wheel	3/4″	82955	83202	-	83221	83231	1
wheel	1″		-	83212	83223	-	
wheel	1-1/2″		-	83213	-	-	
end	1/4″		83257	-	83272	83279	
end	5/16″		-	83263	83273	-	
cup	9/16″		83236	83240	83247	83250	



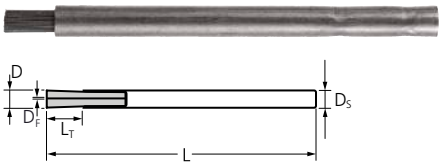


Pilot bonding brushes

Essential for cleaning rivet holes in aircraft and aerospace industries.

Advantages:
- Pilot ensures precise brushing action.
- Designed to fit standard rivet hole diameters in aerospace industry.

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches]	Pilot hole dia. [Inches] and EDP number		Opt. RPM	Max. RPM	
				1/8	1/4			
Stainless steel wire (INOX)								
1/2	1/4	1/8	.005	83188	83191	10,000–15,000	20,000	10

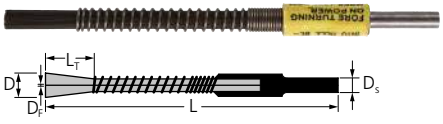


Pencil end brushes

Designed for cleaning blind holes and small crevices. Ideal for maintenance.

Advantages:
- The metal tube can be cut back to expose desired filament length to control brush flare.
- Additional filament can be easily exposed for longer service life.

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
			.010	.012			
Carbon steel wire							
3/16	1/4	3/8	82941	-	4,000–6,000	8,000	10
Stainless steel (INOX-TOTAL)							
3/16	1/4	3/8	-	82942	3,000–5,000	8,000	10



Coil spring brushes

Flexible heavy internal cleaning action. Ideal for cleaning deep cavities, tubing, and more.

Advantages:
- Designed for cleaning cavities accessible only by small holes.
- Long trim length ensures long reach into workpiece.

Safety notes:
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.
- Maximum RPM of 1,800 must not be exceeded.

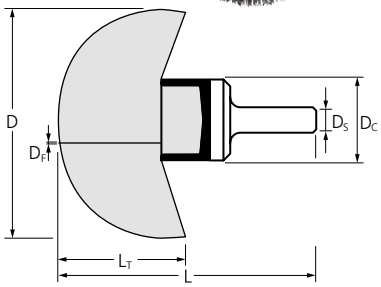
D [Inches]	D_S [Inches]	L_T [Inches]	L [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.014			
Carbon steel wire							
3/8	1/4	1	6-1/4	82943	700–1,000	1,800	10
1/2	1/4	1	6-1/4	82944	700–1,000	1,800	10

Circular end brushes

Ideal for brushing contoured surfaces. Used for light to medium duty brushing action such as removal of coatings, adhesives, and sealants.

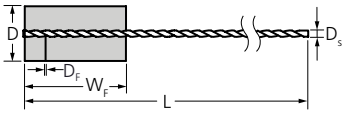
Advantages:
- Conforms to the contours of the workpiece.

Recommendations for use:
- Designed for use on straight grinders.



D [Inches]	D_S [Inches]	D_F [Inches] and EDP number				Opt. RPM	Max. RPM	
		.008	.010	.014	.020			
Carbon steel wire								
1-1/4	1/4	82926	-	-	-	10,000–15,000	20,000	10
1-1/2	1/4	82927	-	-	82928	7,000–10,500	14,000	10
2	1/4	-	82929	82930	-	7,000–10,500	14,000	10
3	1/4	82932	-	82933	82934	7,000–10,500	14,000	10
Stainless steel wire (INOX) All INOX end brushes are degreased.								
1-1/2	1/4	82935	-	-	-	5,500–9,000	14,000	10
2	1/4	-	82936	-	-	5,500–9,000	14,000	10
3	1/4	82938	-	-	-	5,500–9,000	14,000	10

Note: Please do not insert the entire stem of a brush into the chuck. Per ANSI B165.1-2013, 6.7: The shank shall be inserted into the chuck or collet as far as possible on the uniform diameter of the shank, with minimum possible overhang of the brush.



Single stem, single spiral

Standard-duty power tube brushes for general-purpose internal cleaning and deburring. Particularly suitable for use on pipes, threads, couplings sleeves, and cylinders.

Advantages:
- Looped end construction allows for deeper cleaning.

Safety note:
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.

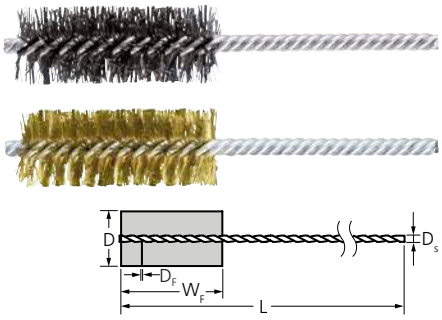
D [Inches]	D_S [Inches]	W_F [Inches]	L [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
				.005	.008			
Carbon steel wire								
1/4	1/8	1	3-1/2	83351	-	500–1,500	2,500	36
5/16	1/8	1	3-1/2	83352	-	500–1,500	2,500	36
3/8	5/32	1	3-1/2	83354	83356	500–1,500	2,500	36
1/2	5/32	1	3-1/2	83358	-	500–1,500	2,500	36
9/16	5/32	1	3-1/2	83359	-	500–1,500	2,500	36
5/8	5/32	1	3-1/2	83360	83361	500–1,500	2,500	36
3/4	1/4	1	3-1/2	83363	-	500–1,500	2,500	36
13/16	1/4	1	3-1/2	83366	-	500–1,500	2,500	36
7/8	1/4	1	3-1/2	83367	-	500–1,500	2,500	36
1	1/4	1	3-1/2	83371	83372	500–1,500	2,500	36
1-1/8	1/4	1	3-1/2	83373	83374	500–1,500	2,500	36
1-1/4	1/4	1	3-1/2	83375	83376	500–1,500	2,500	36
1-1/2	1/4	1	3-1/2	-	83377	500–1,500	2,500	36
2-1/4	1/4	1	3-1/2	-	83379	500–1,500	2,500	36
Stainless steel wire (INOX)								
1/4	1/8	1	3-1/2	83387	-	500–1,500	2,500	36
3/8	5/32	1	3-1/2	83389	-	500–1,500	2,500	36
7/16	1/8	1	3-1/2	83391	-	500–1,500	2,500	36
1/2	5/32	1	3-1/2	83392	-	500–1,500	2,500	36
9/16	5/32	1	3-1/2	83393	-	500–1,500	2,500	36
5/8	5/32	1	3-1/2	83395	-	500–1,500	2,500	36
11/16	5/32	1	3-1/2	83396	-	500–1,500	2,500	36
3/4	1/4	1	3-1/2	83397	-	500–1,500	2,500	36
13/16	1/4	1	3-1/2	83399	-	500–1,500	2,500	36
7/8	1/4	1	3-1/2	83400	-	500–1,500	2,500	36
1	1/4	1	3-1/2	83402	83403	500–1,500	2,500	36
1-1/4	1/4	1	3-1/2	83406	83407	500–1,500	2,500	36
Brass wire								
1/4	1/8	1	3-1/2	83411	-	500–1,500	2,500	36
3/8	5/32	1	3-1/2	83412	-	500–1,500	2,500	36
1/2	5/32	1	3-1/2	83413	-	500–1,500	2,500	36
1	1/4	1	3-1/2	-	83417	500–1,500	2,500	36

Double stem, double spiral

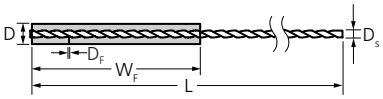
Heavy-duty power tube brush, ideal for deburring cross holes and removal of contaminants, coatings, and adhesive from threads.

Advantages:
- High fill density ensures optimum service life.

Safety notes
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.



D [Inches]	D_S [Inches]	W_F [Inches]	L [Inches]	D_F [Inches] and EDP number			Opt. RPM	Max. RPM	
				.004	.006	.010			
Carbon steel wire									
1/4	5/32	2	6	-	83420	-	500–1,500	2,500	10
3/8	5/32	2	6	-	83422	-	500–1,500	2,500	10
1/2	5/32	2	6	83423	83424	83425	500–1,500	2,500	10
5/8	5/32	2	6	-	83427	83428	500–1,500	2,500	10
3/4	1/4	2-1/2	5-1/2	-	83430	83432	500–1,500	2,500	10
7/8	1/4	2-1/2	5-1/2	-	83434	83435	500–1,500	2,500	10
1	1/4	2-1/2	5-1/2	-	83436	83437	500–1,500	2,500	10
1-1/4	1/4	2-1/2	5-1/2	-	83438	83439	500–1,500	2,500	10
Stainless steel wire (INOX)									
1/2	5/32	2	6	83440	83441	-	500–1,500	2,500	10
5/8	5/32	2	6	-	-	83443	500–1,500	2,500	10
3/4	1/4	2-1/2	5-1/2	-	83445	83446	500–1,500	2,500	10
7/8	1/4	2-1/2	5-1/2	-	83447	83448	500–1,500	2,500	10
1	1/4	2-1/2	5-1/2	-	83449	83450	500–1,500	2,500	10
Brass wire									
5/8	5/32	2	6	-	83460	-	500–1,500	2,500	10
3/4	1/4	2-1/2	5-1/2	-	83461	-	500–1,500	2,500	10
7/8	1/4	2-1/2	5-1/2	-	83462	-	500–1,500	2,500	10
1	1/4	2-1/2	5-1/2	-	83463	-	500–1,500	2,500	10



Double stem, single spiral

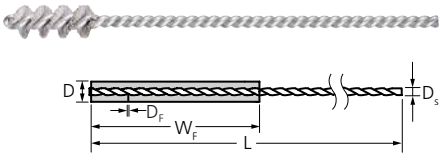
Heavy-duty power tube brush with M-BRAD® nylon abrasive filament, excellent for conditioning internal bore holes as well as cleaning threads and burrs at cross-holes.

Advantages:
- Side action removes sharp edges and corners.
- Cutting action will not alter bore hole geometry.

Safety notes
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.

D [Inches]	D_S [Inches]	W_F [Inches]	L [Inches]	D_F [Inches]/Grit size and EDP number			
				.022/320	.040/120	.040/80	
M-BRAD® nylon abrasive filament, silicon carbide SiC							
1/4	5/32	2	5	84011	-	-	10
5/16	5/32	2	5	84012	-	-	10
3/8	5/32	2	5	84013	-	-	10
7/16	5/32	2	5	84014	-	-	10
1/2	3/16	2	5	84018	-	-	10
5/8	7/32	2	5	84022	-	-	10
3/4	1/4	2-1/2	5-1/2	84027	84025	84024	10
1	1/4	2-1/2	5-1/2	84043	84041	84040	10
1-1/4	1/4	2-1/2	5-1/2	-	84050	-	10
1-1/2	1/4	2-1/2	5-1/2	84057	84055	-	10
1-3/4	1/4	2-1/2	5-1/2	84062	84060	84059	10
2	1/4	2-1/2	5-1/2	84066	84064	-	10

Microabrasive tube brushes

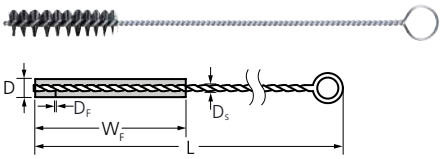


M-BRAD® abrasive filament with fine grit for surface conditioning and light deburring applications.

Advantages:
- Will not alter critical dimensions or hole geometry.
- Ideal for work on high-tolerance parts.

Safety notes
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.

D [Inches]	D_S [Inches]	W_F [Inches]	L [Inches]	For hole diameter			D_F [Inches] and EDP number	
				[Inches (fraction)]	[Inches (decimal)]	[mm]	.006	
M-BRAD® nylon abrasive filament, aluminum silicate, 2,000 grit								
.030	.015	1/2	4	1/32	0.029	0.787	84071	10
.050	.022	1/2	4	3/64	0.047	1.191	84072	10
.075	.033	3/4	4	1/16	0.063	1.588	84073	10
.090	.041	3/4	4	5/64	0.078	1.984	84074	10
.105	.041	1	4	3/32	0.094	2.381	84075	10
.125	.064	1	4	7/64	0.109	2.778	84076	10
.135	.075	1	4	1/8	0.125	3.175	84077	10
M-BRAD® nylon abrasive filament, aluminum oxide A, 600 grit								
.165	.087	1	5	5/32	0.156	3.962	84078	10
.190	.087	1	5	3/16	0.188	4.763	84079	10
.260	.115	1	5	1/4	0.250	6.350	84080	10
.325	.115	1	5	5/16	0.313	7.938	84081	10
.385	.147	1	5	3/8	0.375	9.525	84082	10
.515	.168	1	5	1/2	0.500	12.700	84083	10
.640	.168	1	5	5/8	0.625	15.870	84084	10



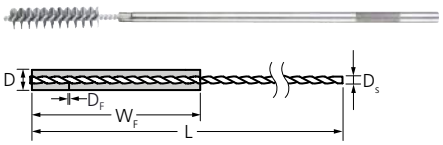
Loop handle tube brushes

For light cleaning and deburring work on threaded holes or recesses, such as keyways.

Advantages:
- Single-stem, single-spiral brushes offer high flexibility, conforming to threads and contours.
- Loop handle enables manual use, and can be cut off for use in power tools.
- Versatile use on drills, drill presses, and other collet-equipped power tools.

Safety notes
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.

D [Inches]	D_S [Inches]	W_F [Inches]	L [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.006			
Carbon steel wire							
1/4	.12	1-1/2	7	89564	500–2,500	2,500	12
3/8	.12	2	8	89565	500–2,500	2,500	12
1/2	.17	2	8	89566	500–2,500	2,500	12
Stainless steel wire (INOX)							
3/16	.09	1-1/2	7	89568	500–2,500	2,500	12
1/4	.12	1-1/2	8	89569	500–2,500	2,500	12
3/8	.12	2	8	89570	500–2,500	2,500	12
1/2	.17	2	8	89571	500–2,500	2,500	12



Valve guide brushes

Very stiff brushes designed for aggressive cleaning action in deep holes.

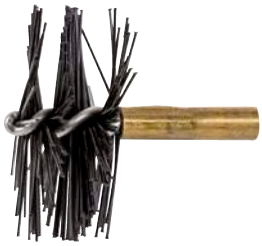
Advantages:
- Metal sleeve construction ensures stable operation without bending.
- Includes knurled handle for manual use.

Safety notes
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.

D [Inches]	D_S [Inches]	W_F [Inches]	L [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.006			
Carbon steel wire							
1/4	1/4	2	10	83465	500–2,500	2,500	10
5/16	1/4	2	10	83466	500–2,500	2,500	10
11/32	1/4	2	10	83467	500–2,500	2,500	10
3/8	1/4	2	10	83468	500–2,500	2,500	10
7/16	1/4	2	10	83469	500–2,500	2,500	10
1/2	1/4	2	10	83470	500–2,500	2,500	10

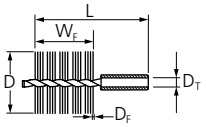
Threaded tube brushes for flexibe shafts

Designed for cleaning inside surfaces of tubes, pipes, and pipe bends.



Advantages:
- Designed with 100% non-ferrous components, ideal for contaminant-free work in the pharmaceutical and food service industries.
- Nylon filament will not scratch the ID of the workpiece.

Safety notes
- For safe operation, ensure that brush face is inserted into the workpiece prior to operation.



D [Inches]	D [mm]	W_F [Inches]	L [Inches]	D_T [Inches]	For pipe I.D. [Inches]	D_F [Inches] and EDP number .018	Opt. RPM	Use with flexible shaft [EDP]	Use with threaded adapter [EDP]	
Nylon filament										
1	25	1/2	1-5/16	8-32	3/4	84430	750–2,000	94264, 94274	95810, 95811	10
1-1/4	32	1/2	1-5/16	8-32	1	84432	750–2,000	94264, 94274	95810, 95811	10
1-3/4	44	1/2	1-5/16	8-32	1-1/2	84434	750–2,000	94264, 94274	95810, 95811	10
2-1/4	57	1/2	1-5/16	8-32	2	84436	750–2,000	94264, 94274	95810, 95811	10
2-3/4	69	1/2	1-5/16	8-32	2-1/2	84438	750–2,000	94264, 94274	95810, 95811	10
3-1/4	82	1/2	1-5/16	8-32	3	84440	750–2,000	94264, 94274	95810, 95811	10

Threaded adapters are necessary to mount the tube brush to the female-threaded end of the special flexible shaft. Please see catalogue section 9, page 56 for additional product information.

In addition to brushes with a stainless steel filament, PFERD also offers brushes of the INOX-TOTAL type for work on stainless steel (INOX). It is particularly well suited to use in critical environments.

Further information about working with stainless steel (INOX) and PFERD INOX-TOTAL brushes can be found on page 11.

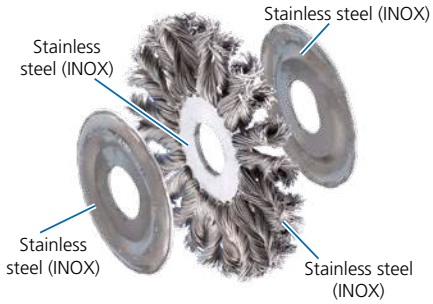
Advantages:

- Optimum protection against corrosion as all components are produced from stainless steel (INOX) in quality 302.

Industries:

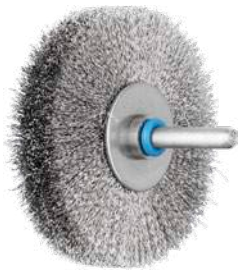
- Pharmaceutical and medical industries
- Foodstuff industry
- Nuclear industry

Structure of a wheel brush with arbor hole INOX-TOTAL



More PFERD products and many valuable recommendations for working with stainless steel (INOX) can be found in our PRAXIS brochure "PFERD tools for use on stainless steel (INOX)". Please contact us for further details.

Stem mounted wheel brushes



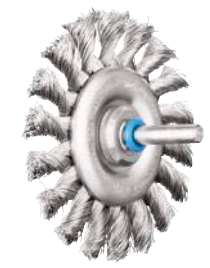
Crimped

Designed for use in confined areas. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.

Recommendations for use:
- Designed for use on straight grinders.

D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.008			
Stainless steel wire (INOX)							
All INOX-TOTAL brushes are degreased.							
2	1/4	3/4	5/8	82744	6,000–9,000	12,000	10



Knot, standard twist

This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal.

Advantages:
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.

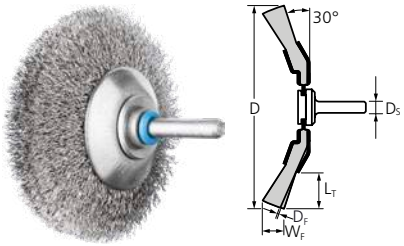
Safety notes:
- Please note: Brush stem diameter is 6 mm. Not for use in 1/4" collets.

D [Inches]	D_S [mm]	No. knots [pcs]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.012			
Stainless steel wire (INOX)								
All INOX-TOTAL brushes are degreased.								
3	6	18	5/8	1/4	82743	10,000–16,000	25,000	10

Crimped

Designed for use in confined areas. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion, and light burs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.



D [Inches]	D_S [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.010			
Stainless steel wire (INOX) All INOX-TOTAL brushes are degreased.							
2-3/4	1/4	5/8	3/8	82745	6,000–9,000	12,000	10

Unthreaded wheel brushes

COMBITWIST® knot

These brushes feature tightly twisted knots for low flex, high impact brushing action.

Full cable twist is ideal for tough brushing applications.

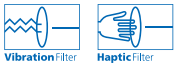
Stringer bead twist features most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction.

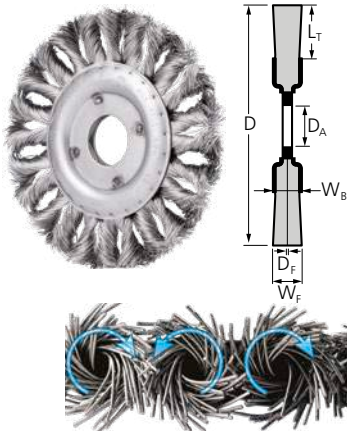
For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- COMBITWIST® knot construction results in improved balance, reduced vibration, extended service life and increased aggressiveness.

Recommendations for use
- For best results, use on high-power angle grinders.

PFERDVALUE®:





D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
					.014	.020			
Stainless steel wire (INOX) – full cable twist All INOX-TOTAL brushes are degreased.									
4-1/2	7/8	24	7/8	1/2	82741	-	5,000–12,500	12,500	1
Stainless steel wire (INOX) – stringer bead twist All INOX-TOTAL brushes are degreased.									
4-1/2	7/8	36	7/8	1/4	-	82742	5,000–12,500	12,500	1

Diamond brushes
Diamond coated wire

Industrial grade diamond grit is electroplated onto knotted stainless steel wire strands. Designed for scale and surface contaminant removal on localized and hard-to-reach areas.

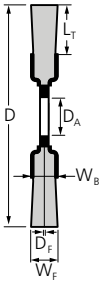
Advantages:

- Stainless steel (INOX) wire will not contaminate workpiece.
- All diamond coated wire brushes are degreased for contaminant-free use.

Applications:

- Heavy duty surface conditioning applications.
- Removing mill scale.
- Blending machining marks.
- Generating distinct scratch patterns.

Knot wire wheel brushes



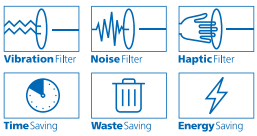
Standard twist

This brush features extended knot flag length, providing flexibility on uneven surfaces and complex geometries.

Advantages:

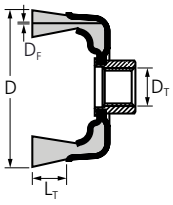
- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.
- Designed for use on common bench grinders and stationary machines.

PFERDVALUE®:



D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] .020, grit size and EDP number		Opt. RPM	Max. RPM	
				270 (coarse)	400 (fine)			
Stainless steel wire (INOX), Diamond (DIA)								
7-1/2	1-1/4	24	2	84354	84355	1,000–2,000	8,000	1

Knot cup brushes



Standard twist

This brush features extended knot flag length, providing flexibility on uneven surfaces and complex geometries.

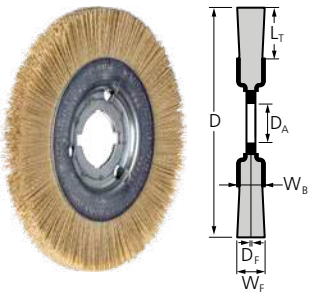
Advantages:

- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.
- Designed for use on variable speed right angle grinders.

D [Inches]	D_T [Inches]	Knots [pcs.]	L_T [Inches]	D_F [Inches] .020, grit size and EDP number		Opt. RPM	Max. RPM	
				270 (coarse)	400 (fine)			
Stainless steel wire (INOX), Diamond (DIA)								
2-3/4	5/8-11	18	1-5/8	84352	84353	1,000–2,800	11,000	1
4	5/8-11	24	1-1/2	84348	84349	1,000–2,400	9,000	1

Crimped wheel

The polycrystalline diamond M-BRAD® brush line is designed for honing and surface conditioning applications on hard materials. Honing of cutting tools made of cemented carbide as well as Cermets (Ceramic+Metal composites) are the most popular applications for diamond M-BRAD® brushes.



Advantages:
- Precise, consistent and repeatable honing geometry control.
- Honing and surface conditioning results without the use of diamond paste/slurry.
- Diamond M-BRAD® brushes can be conveniently mounted on standard shop tools.

Recommendations for use
- Designed for use on stationary machines.

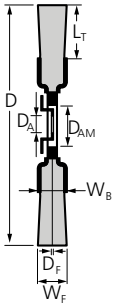
PFERDVALUE®:

Time Saving Waste Saving

D [Inches]	D_A [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	Incl. keyway [Inches]	D_F [Inches]/Grit size and EDP number	Opt. RPM	Max. RPM	Adapter style	
						.010/600				
M-BRAD® nylon abrasive filament, Diamond grain DIA										
4	5/8	3/4	1/2	1/2	-	84325	2,000–5,000	12,000	D	1
6	1-1/4	1-1/8	1/2	1/2	1/4 x 1/8	84323	1,000–3,500	6,000	A	1
8	2	1-1/2	1/2	1/2	1/2 x 1/4	84322	900–1,500	4,500	-	1

Universal line brushes
Unthreaded wheel brushes

PFERD's Universal line contains a selection of the most popular brush sizes and styles used by tradesmen. The offering includes abrasive filament as well as crimped and knot style radial, cup, end and scratch brushes.
The design of these brushes is tailored for power tools that are frequently found on contractor jobsites such as drills, angle grinders, die grinders and bench grinders.



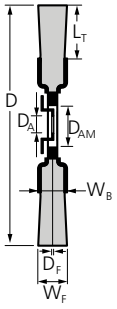
Crimped wire

Designed for individual use in confined areas, or mounted on a shaft. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Can be gang-mounted for wide face use.

Ordering note:
- All Medium face crimped wheel brushes are supplied with metal adapters that reduce the 2" AH to 1-1/4" AH. In addition a selection of plastic reducing adapters are also included in every box.

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number .014	Opt. RPM	Max. RPM	
Carbon steel wire, narrow face									
6	5/8	1-1/4	5/8	5/8	1/2	764206	4,000–6,000	6,000	5
Carbon steel wire, medium face									
6	2	1-1/4	1-1/4	1-1/4	1-1/4	764190	3,000–4,500	6,000	5
8	2	1-1/4	1-1/4	1-1/4	1-1/4	764213	2,300–3,400	4,500	5



Knot wire, full cable twist

This brush features tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.

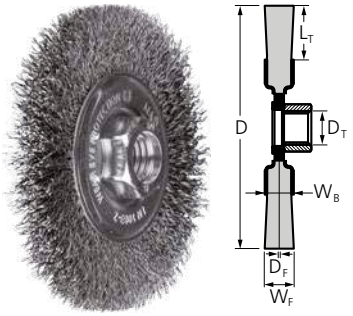
Ordering note:
- Please refer to page 9 for ANSI recommended arbor hole mounting requirements.
- Please see page 78 for a complete listing of drive arbors and adapters.

D [Inches]	D_{AM} [Inches]	L_T [Inches]	W_F [Inches]	W_B [Inches]	D_A [Inches]	D_F [Inches] and EDP number .014	Opt. RPM	Max. RPM	
Carbon steel wire									
6	5/8	1-1/4	3/8	1/2	1/2	763988	4,500–6,500	9,000	5

Crimped wire

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Designed for use on 4-1/2" and 5" right angle grinders.

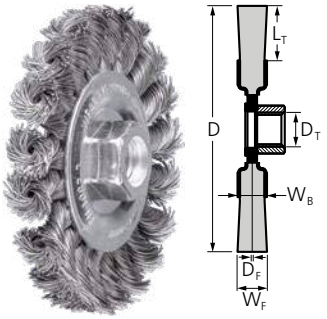


D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.014			
Carbon steel wire							
4	5/8-11	7/8	5/8	764145	6,000–12,500	12,500	5

Knot wire, full cable twist

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

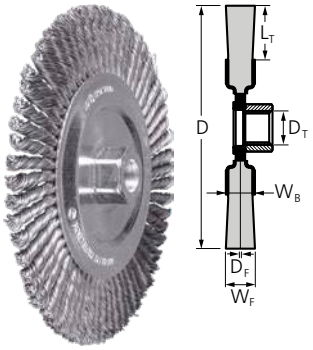
Advantages:
- Tightly-twisted knots result in very aggressive brushing action.



D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.020			
Carbon steel wire							
4	5/8-11	3/4	5/8	763926	10,000–15,000	20,000	5
6	5/8-11	1	1/2	764008	4,500–9,000	9,000	5

The box quantity and EDP of POP items are printed in "**blue**".

Universal line brushes
Threaded wheel brushes



Knot wire, stringer bead twist

Most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction.

Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.

Ordering note:
- Box quantity of 10 indicates bulk-packed items without individual POP packaging.
- Universal line brushes with box quantity less than 10 pieces are shipped in individual clamshell packaging as shown.

D [Inches]	D_T [Inches]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
				.020			
Carbon steel wire							
4	5/8-11	3/4	1/4	**763940**	10,000–15,000	20,000	**5**
				143438	10,000–15,000	20,000	10
6	5/8-11	1-1/4	1/4	**764015**	4,500–9,000	9,000	**5**
				144404	4,500–9,000	9,000	10
6-7/8	5/8-11	1-3/8	1/4	**764039**	4,500–9,000	9,000	**5**
Stainless steel wire (INOX)							
4	5/8-11	3/4	1/4	**763957**	10,000–15,000	20,000	**5**
				145401	10,000–15,000	20,000	10
6	5/8-11	1-1/4	1/4	**764022**	4,500–9,000	9,000	**5**

The box quantity and EDP of POP items are printed in "**blue**".

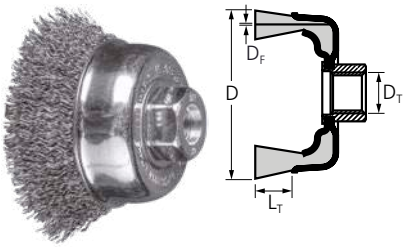
Thread adapters to adapt 5/8-11 threaded wheels to other common grinder spindles are available, please see page 79 for information.

For tools specially suited to pipeline construction, see the brochure "PFERD tools for pipeline construction".

Crimped wire

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Designed for use on right angle grinders.



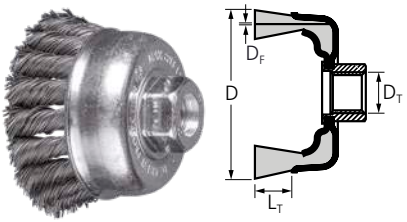
D [Inches]	D_T [Inches]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
			.014	.020			
Carbon steel wire							
2-3/4	5/8-11	7/8	763889	-	7,000–12,500	12,500	5
3-1/2	5/8-11	7/8	764091	764107	6,000–12,000	12,000	5

Knot wire, full cable twist

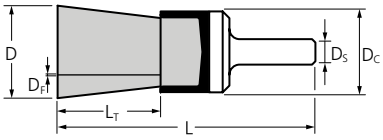
These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.

Ordering notes:
- Box quantity of 10 indicates bulk-packed items without individual POP packaging.
- Universal line brushes with box quantity less than 10 pieces are shipped in individual clamshell packaging as shown.



D [Inches]	D_T [Inches]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
			.014	.020			
Carbon steel wire							
2-3/4	5/8-11	3/4	764237	764251	7,000–12,500	12,500	5
			-	145463	7,000–12,500	12,500	10
3-1/2	5/8-11	3/4	-	763865	5,500–11,000	11,000	5
4	5/8-11	1	763896	-	4,500–9,000	9,000	2
5	5/8-11	1-1/8	763971	-	3,500–7,000	7,000	2
Stainless steel wire (INOX)							
2-3/4	5/8-11	3/4	764244	764268	7,000–12,500	12,500	5
			-	145586	7,000–12,500	12,500	10



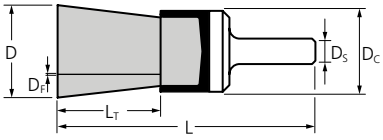
Crimped wire

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Designed for use on straight grinders

Ordering notes:
- Box quantity of 10 indicates bulk-packed items without individual POP packaging.
- Universal line brushes with box quantity less than 10 pieces are shipped in individual clamshell packaging as shown.

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
			.014	.020			
Carbon steel wire							
3/4	1/4	1	764411	-	10,000–15,000	20,000	5
1	1/4	1	764442	764459	10,000–15,000	20,000	5
			-	145920	8,000–11,000	20,000	10
Stainless steel wire (INOX)							
3/4	1/4	1	764435	-	10,000–15,000	20,000	5
1	1/4	1	-	764466	10,000–15,000	20,000	5



Knot wire

These brushes feature tightly twisted knots for low flex, high impact brushing action. Ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Easily-controlled flare of knots makes this brush ideal for cleaning pipe and tube internal diameters.

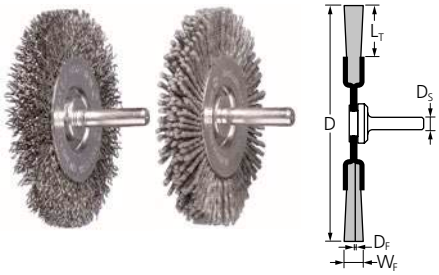
Ordering notes:
- Box quantity of 10 indicates bulk-packed items without individual POP packaging.
- Universal line brushes with box quantity less than 10 pieces are shipped in individual clamshell packaging as shown.

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
			.014	.020			
Carbon steel wire							
3/4	1/4	1	764350	-	10,000–15,000	20,000	5
1	1/4	1	764398	764374	10,000–15,000	20,000	5
			-	145623	8,000–11,000	20,000	10
Stainless steel wire (INOX)							
3/4	1/4	1	764367	-	10,000–15,000	20,000	5
1	1/4	1	764404	764381	10,000–15,000	20,000	5
			145876	-	8,000–11,000	20,000	10

Crimped wheel

Designed for use in confined areas. They are best suited for brushing uneven surfaces and areas inaccessible to wider brushes. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.



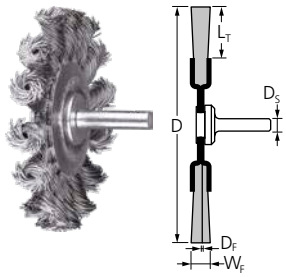
D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.012			
Carbon steel wire						
2	1/4	1/2	763872	10,000–15,000	20,000	5
3	1/4	3/8	764084	10,000–15,000	20,000	5

D [Inches]	D_A [Inches]	L_T [Inches]	D_F [Inches]/Grit size and EDP number	Opt. RPM	Max. RPM	
			.040/120			
M-BRAD® nylon abrasive filament, silicon carbide SiC						
3	1/4	3/4	763841	1,500–4,500	4,500	5

Knot wire, full cable twist

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

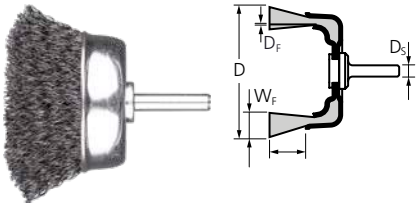
Advantages:
- Tightly-twisted knots result in very aggressive brushing action.



D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.014			
Carbon steel wire						
3	1/4	3/4	764275	12,500–18,700	25,000	5
4	1/4	7/8	763933	10,000–15,000	20,000	5

The box quantity and EDP of POP items are printed in "**blue**".

Universal line brushes
Stem mounted brushes



Crimped cup

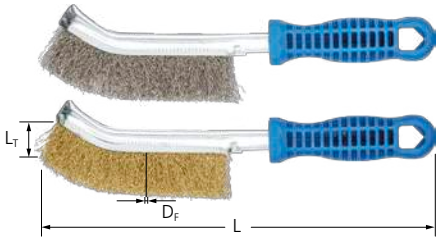
Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.014			
Carbon steel wire						
2	1/4	3/4	763858	6,500–10,000	13,000	5

D [Inches]	D_S [Inches]	L_T [Inches]	D_F [Inches]/Grit size and EDP number	Opt. RPM	Max. RPM	
			.040/120			
M-BRAD® nylon abrasive filament, silicon carbide SiC						
3	1/4	3/4	763834	1,500–4,500	4,500	5

Scratch brushes



Metal scratch brushes, plastic grip handle

Quality scratch brushes for maintenance applications. For removal of rust, paint, scale, and debris.

Advantages:
- Ergonomic plastic-grip handle for improved comfort.

Ordering notes:
- All metal scratch brushes are shipped in individual clamshell packaging as shown.

Wire rows	L_T [Inches]	L [Inches]	D_F [Inches] and EDP number	
Carbon steel wire				
1	5	10	764077	10
Stainless steel wire (INOX)				
1	5	10	764282	10
Brass wire				
1	5	10	764060	10

The box quantity and EDP of POP items are printed in "**blue**".

With the BOSCH X-LOCK system for angle grinders, you can change brushes quickly and comfortably. Instead of a round centre hole, the X-LOCK system features an X-shaped contour, which allows the brush to be fixed on the angle grinder in a form-fitting manner. This guarantees that different brushes 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.

XLOCK Technology by BOSCH

Advantages:

- Quick and comfortable brush changes.
- Brushes are fixed securely since they audibly click into place.
- X-LOCK products, with the exception of cup brushes, can be used on conventional angle grinders with 7/8" flange.

Recommendations for use:

- Place the brush on the X-LOCK quick-change system of your angle grinder and secure it by lightly pressing it down. The brush will audibly click into place.

How it works:

Place the brush on the X-LOCK holder in a form-fitting manner.

Lightly press the brush down until it audibly clicks into place.

Release the brush by using the lever.

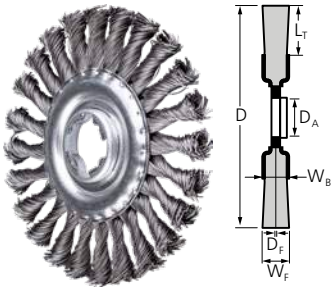
Knot wheel brushes

Standard twist

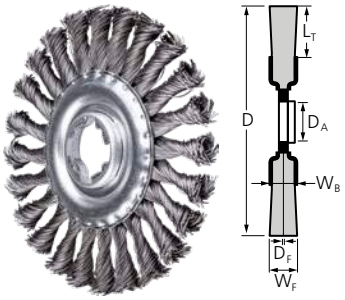
This brush features knots that are twisted approximately 75% of the trim length. The loosely-twisted knots cover a larger surface area and are ideal for heavy-duty cleaning and surface conditioning on uneven surfaces. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:

- Loosely-twisted knots cover a large surface area.
- Good balance between aggressiveness and flexibility.



D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.014			
Carbon steel wire								
4	X-LOCK (7/8)	22	7/8	5/8	80705	10,000–15,000	20,000	1
Stainless steel wire (INOX)								
All X-LOCK INOX brushes are degreased.								
4	X-LOCK (7/8)	22	7/8	5/8	80422	8,000–15,000	20,000	1

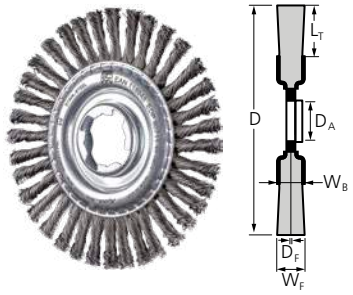


Full cable twist

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.

D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
					.014	.020			
Carbon steel wire									
4	X-LOCK (7/8)	22	3/4	1/2	80706	80707	10,000–15,000	20,000	1
4-1/2	X-LOCK (7/8)	24	7/8	1/2	-	80708	6,300–12,500	12,500	1
4-7/8	X-LOCK (7/8)	24	1-1/16	1/2		80709	6,300–12,500	12,500	1
Stainless steel wire (INOX)									
All X-LOCK INOX brushes are degreased.									
4-1/2	X-LOCK (7/8)	24	7/8	1/2	-	80423	5.000–12,500	12,500	1
4-7/8	X-LOCK (7/8)	24	1-1/6	1/2	-	80424	5,000–12,500	12,500	1



Stringer bead twist

Most aggressive brushing action, perfect for heavy-duty brushing in pipeline and container construction.

Advantages:
- Narrow face width enables optimal access to hard-to-reach areas such as root weld seams.

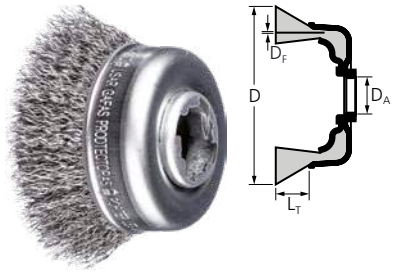
D [Inches]	D_A [Inches]	Knots [pcs.]	L_T [Inches]	W_F [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
					.020			
Carbon steel wire								
4	X-LOCK (7/8)	32	3/4	3/16	80710	10,000–15,000	20,000	1
4-1/2	X-LOCK (7/8)	32	1	3/16	80711	6,300–12,500	12,500	1
4-7/8	X-LOCK (7/8)	38	3/4	3/16	80412	6,300–12,500	12,500	1
Stainless steel wire (INOX)								
All X-LOCK INOX brushes are degreased.								
4	X-LOCK (7/8)	32	3/4	3/16	80425	8,000–15,000	20,000	1

The box quantity and EDP of POP items are printed in "**blue**".

Crimped Cup

Ideal for brushing uneven surfaces. Used for light to medium duty brushing action such as removal of light scale, dirt, rust, corrosion and light burrs.

Advantages:
- Highly flexible, enabling optimal adjustment to workpiece contours.
- Designed for use on right angle grinders.



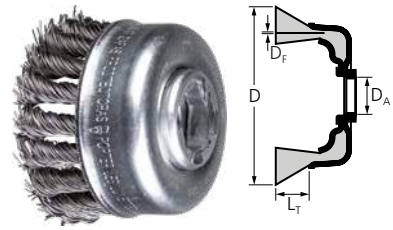
D [Inches]	D_A	L_T [Inches]	D_F [Inches] and EDP number	Opt. RPM	Max. RPM	
			.012			
Carbon steel wire						
3	X-LOCK	7/8	80715	6,300–9,400	12,500	1
Stainless steel wire (INOX) All X-LOCK INOX brushes are degreased.						
3	X-LOCK	7/8	80427	5,000–8,100	12,500	1

Knot cup brushes

Single row, full cable twist

These brushes feature tightly twisted knots for low flex, high impact brushing action. Full cable twist is ideal for tough brushing applications. For weld cleaning, weld spatter removal, scale removal, cleaning, deburring, and flash removal.

Advantages:
- Tightly-twisted knots result in very aggressive brushing action.
- Internal nut results in reduced operator fatigue and improved control.



D [Inches]	D_A	Knots [pcs.]	L_T [Inches]	D_F [Inches] and EDP number		Opt. RPM	Max. RPM	
				.014	.020			
Carbon steel wire								
2-3/4	X-LOCK	18	3/4	80716	80717	6,300–12,500	12,500	1
3	X-LOCK	20	3/4	-	80718	5,000–10,000	11,500	1
Stainless steel wire (INOX) All X-LOCK INOX brushes are degreased.								
2-3/4	X-LOCK	18	3/4	80428	80429	5,000–12,500	12,500	1
3	X-LOCK	20	3/4	-	80430	4,000–10,000	11,500	1

Arbor hole adapters

Various sizes and shapes for reducing arbor hole size of wheel brushes.

Advantages:

- Allows brushes to be adapted to most machines.

Fits brush arbor hole [Inches]	Brush keyways	Adapter tI.D. [Inches]	Keyways in adapter [Inches]	EDP number	
Style A					
1-1/4	1/4 x 1/8 (2)	1/2	1/8 x 3/32 (2)	84605	1 pair
		5/8	3/16 x 1/8 (2)	84606	1 pair
		3/4	3/16 x 1/8 (2)	84607	1 pair
		7/8	3/16 x 1/8 (2)	84608	1 pair
		1	1/4 x 5/32 (2)	84609	1 pair
Style C					
2	None	1/2	None	84628	1 pair
		5/8	None	84629	1 pair
		3/4	None	84630	1 pair
		7/8	None	84631	1 pair
		1	None	84632	1 pair
		1-1/4	None	84633	1 pair
		1-1/2	None	84634	1 pair
Style D					
3/8	None	1/4	None	84600	10 pcs.
1/2	None	1/4	None	84601	10 pcs.
		3/8	None	84602	10 pcs.
5/8	None	1/2	None	84603	10 pcs.
Style E					
2	None	1, 3/4, 5/8, 1/2	None	84615	1 pc.
Style F					
5/8	None	1/2	None	84636	10 pcs.
		3/8	None	84637	10 pcs.
		1/4	None	84638	10 pcs.
1/2	None	3/8	None	84639	10 pcs.
		1/4	None	84640	10 pcs.
3/8	None	1/4	None	84641	10 pcs.
Style G					
4-1/4	None	2	1/2 x 1/4 (2)	84670	1 pair
5-1/4	None	2	1/2 x 1/4 (2)	84671	1 pair

Fits brush arbor hole [Inches]	Brush keyways	Adapter tI.D. [Inches]	Keyways in adapter [Inches]	EDP number	
Style H					
1-1/4	1/4 x 1/8 (2)	3/4	3/16 x 1/8 (2)	84612	1 pr.
		7/8	3/16 x 1/8 (2)	84613	1 pr.
		1	3/16 x 1/8 (2)	84614	1 pr.
Style K					
2	None	1-1/4, 1, 7/8, 3/4, 5/8, 1/2	None	84665	1 pcs.
		1-1/4, 20 mm, 18 mm, 14 mm, 12 mm	None	84666	1 pcs.

Thread adapters

Machined metal components for accurate fit.

Advantages:
- Allows threaded brushes to be adapted to common thread sizes.

Fits brush thread [UNC]	Fits tool spindle thread [UNC]	EDP number	
5/8-11	M10x1.25	84645P	5/5
	M10x1.50	84646P	5/5
	3/8-24	84647P	5/5

Power brush accessories
Drive arbors and adapters

Drive arbors for wheel brushes

Used to mount brushes with arbor hole on collet-equipped machines.

Chuck type
Countersunk head tightening-screw fits into a recessed flange washer for locking power. Allows brushes to reach edges without interference from arbor overhang. Change brush without removing arbor from collet. Unthreaded shoulder.

Flat head type
Brush mounts between a single washer and the flat head. Locked in place with a reverse-threaded nut. Allows the brush to be close to the workpiece. Threaded shoulder.

Nut type
Nut can be removed to replace worn brush while arbor stem remains in chuck.

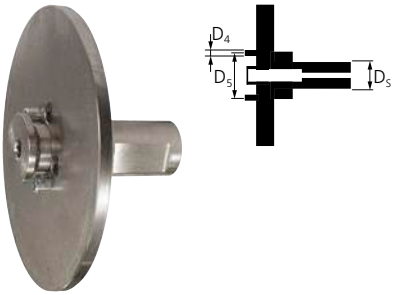
Fits brush ID [Inches]	Clamping width [Inches]	Shank dia. D_s [Inches]	Head/flange dia. [Inches]	Overall length [Inches]	EDP number	
Chuck type						
1/4	3/16 to 3/8	1/4	9/16	2-1/8	84650	5
3/8	3/16 to 3/8	1/4	11/16	2-1/8	84651	5
1/2	3/16 to 3/8	1/4	3/4	2-1/8	84652	5
Flat head type						
3/8	0 to 1/2	1/4	3/4	1-5/8	84654	5
1/2	0 to 1/2	1/4	15/16	1-7/8	84655	5
1/2, 5/8	1/8 to 1/2	1/4	15/16	1-7/8	84656	5
Nut type						
1/4	Up to 7/8	1/4	5/8	2-1/2	84657	5
3/8	Up to 7/8	1/4	3/4	2-1/2	84658	5
1/2	Up to 1/4	1/4	7/8	1-3/4	84659	5

Use spindle extensions, EDP 95826, for longer reach. See catalogue section 9, page 64 for details.

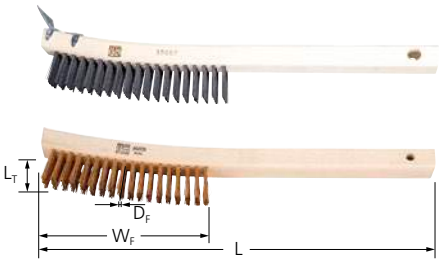
Drive arbors for M-BRAD® disc brushes

For mounting composite disc brushes on automated deburring equipment.

Advantages:
- Supplied with through-spindle coolant channel.
- Included drive pins provide positive drive and reversability.



Recommended for brush diameter [Inches]	Shank diameter D_s [Inches]	No. of drive pins	Drive pin dia. D_4 [Inches]	Bolt circle dia. D_5 [Inches]	EDP number	
Shank dia. (D_s) 3/4 "						
3-4	3/4	2	1/4	1-1/4	83982	1
5-6	3/4	2	1/4	1-1/4	83983	1
7-8	3/4	3	1/4	3	83984	1
9-10	3/4	3	1/4	3	83985	1
Shank dia. (D_s) 1"						
3-4	1	2	1/4	1-1/4	83978	1
5-6	1	2	1/4	1-1/4	83979	1
7-8	1	3	1/4	3	83980	1
9-10	1	3	1/4	3	83981	1

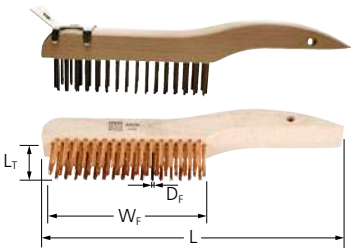


Curved handle, hardwood

Quality scratch brushes for maintenance applications. For removal of rust, paint, scale, and debris.

Advantages:
- Kiln-dried hardwood block keeps tufts firmly in place.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number			
				.012 carbon steel	.012 stainless steel	.010 bronze	
Without scraper							
3 x 19	6-1/4	13-3/4 x 7/8	1-3/16	85002	85004	85005	12
4 x 19	6-1/4	13-3/4 x 1-1/8	1-3/16	85006	85008	85009	12
With scraper							
3 x 19	6-1/4	13-3/4 x 7/8	1-3/16	85003	-	-	12
4 x 19	6-1/4	13-3/4 x 1-1/8	1-3/16	85007	-	-	12



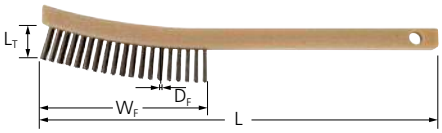
Shoe handle, hardwood

Quality scratch brushes for maintenance applications. For removal of rust, paint, scale, and debris.

Advantages:
- Kiln-dried hardwood block keeps tufts firmly in place.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number			
				.012 carbon steel	.012 stainless steel	.010 bronze	
Without scraper							
2 x 17	5	10 x 5/8	1-3/16	85030	85031	-	12
4 x 16	5	10-1/4 x 1-1/8	1-3/16	85033	85035	85036	12
With scraper							
4 x 16	5	10-1/4 x 1-1/8	1-3/16	85034	-	-	12

Curved handle, synthetic



Quality scratch brushes for maintenance applications. For removal of rust, paint, scale, and debris.

Advantages:
- Synthetic block will not splinter, crack, or rot.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number		
				.012 carbon steel	.012 stainless steel	
3 x 19	6-1/4	11 x 1-5/8	1-1/2	85012	85014	12
4 x 19	6-1/4	13-3/4 x 1-1/8	1-3/16	85016	85018	12

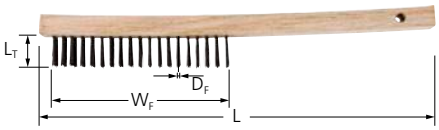
Shoe handle, synthetic

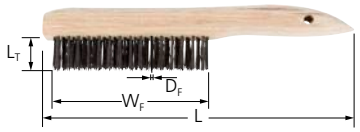
Quality scratch brushes for maintenance applications. For removal of rust, paint, scale, and debris.

Advantages:
- Synthetic block will not splinter, crack, or rot.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number		
				.012 carbon steel	.012 stainless steel	
4 x 16	5	10-1/4 x 1-1/8	1-3/16	85037	85039	12

Economy line



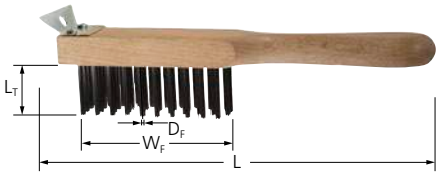


Economy scratch brushes for maintenance applications. For removal of rust, paint, scale, and debris.

Advantages:
- Value-priced brushes.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number		
				.012 carbon steel	.012 stainless steel	
Curved handle						
3 x 19	6	13-3/4 x 7/8	1-3/16	85045	85047	12
4 x 18	6	13-3/4 x 1	1-3/16	85048	85050	12
Shoe handle						
4 x 16	5	10 x 1	1-3/16	85051	85053	12

Maintenance brushes
Scratch brushes



Straight handle with scraper

Heavy-duty scratch brush with scraper attachment.

Advantages:
- Scraper attachment for loosening especially difficult material.

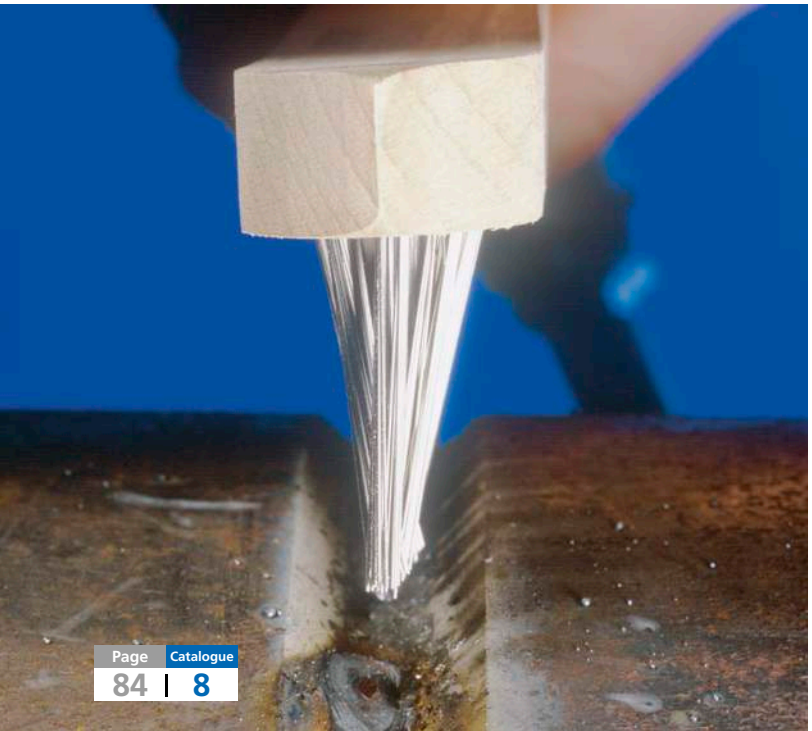
Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number	
				.012 carbon steel	
With scraper					
4 x 11	4-1/2	11 x 1-5/8	1-1/2	85071	12

V-Groove

Pointed brush face designed for full brushing contact in tight areas such as grooves and corners.

Advantages:
- Kiln-dried hardwood block keeps tufts firmly in place
- Ideal for cleaning fillet welds due to specially-angled wire filament.

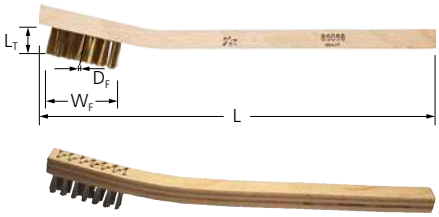
Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number	
				.012 carbon steel	.012 stainless steel
Curved handle					
3 x 14	5-1/4	13-3/4 x 1-1/8	1-1/2	85010	85011



Welder's toothbrush, wooden handle

Fine wire scratch brush with wooden block.

Advantages:
- Excellent for spot-cleaning small welds.
- Kiln-dried hardwood block keeps tufts firmly in place.



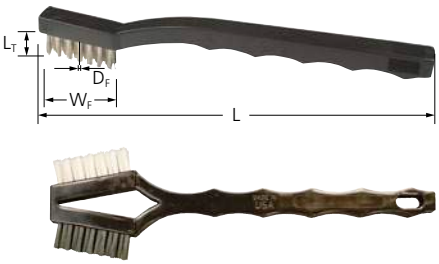
Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number			
				.006 carbon steel	.006 stainless steel	.006 brass	
Staple set							
3 x 7	1-1/2	7-1/2 x 1/2	1/2	85054	85055	85056	36
Laced back							
3 x 7	1-1/2	7-1/2 x 1/2	1/2	85058	85059	-	36

Welder's toothbrush, plastic handle

Fine wire scratch brush with synthetic handle.

Advantages:
- Excellent for spot-cleaning small welds and molds.
- Synthetic block will not splinter, crack, or rot.

Ordering notes:
- Double-headed version contains one side with nylon filament, and one with wire filament.



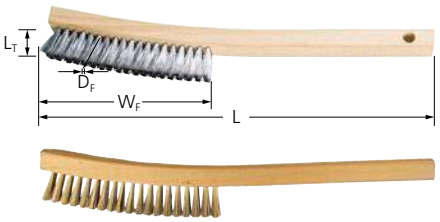
Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number			
				.006 stainless steel	.006 brass	.012 nylon	
Single-headed							
3 x 7	1-1/2	7-1/2 x 1/2	1/2	85060	85061	85062	36
Double-headed							
3 x 7	1-1/2	7-1/2 x 1/2	1/2	85063	85064	-	36

Small cleaning, curved handle

Small, wooden handle scratch brush with narrow face width.

Advantages:
- Good for small area cleaning on welds and fillets.
- Kiln-dried hardwood block keeps tufts firmly in place.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number		
				.006 stainless steel	.008 brass	
Curved head						
2 x 9	2-1/2	8-5/8 x 1/2	1/2	85065	85067	36

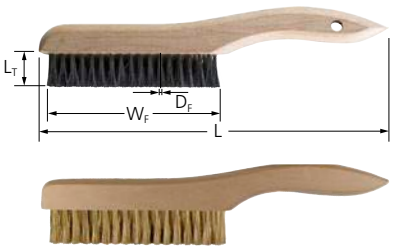


Curved handle

Fine filament, curved handle brushes designed for gentle brushing action.

Advantages:
- Light brushing action, removes excess coating in plating applications without altering surface finish.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number				
				.006 carbon steel	.006 stainless steel	.005 brass	white tampico	
Curved handle								
3	5-1/2	13 x 7/8	1	89542	89546	89544	-	12
4	5-1/2	13 x 1	1	89543	89547	89545	-	12
		13 x 1-1/4	1	-	-	-	89540	12

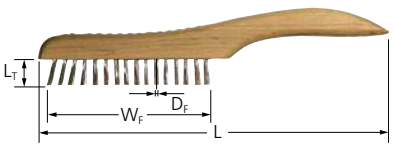


Shoe handle

Fine filament, shoe handle brushes designed for gentle brushing action.

Advantages:
- Light brushing action, removes excess coating in plating applications without altering surface finish.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number					
				.006 carbon steel	.006 stainless steel	.005 brass	grey tampico	.012 nylon	
Shoe handle									
3	5	10 x 13/16	1	89550	-	89552	-	-	12
4	5	10 x 1-1/16	1	89551	89539	89553	89548	89549	12



Shoe handle, narrow face

Fine filament, shoe handle brushes designed for gentle brushing action.

Advantages:
- Light brushing action, removes excess coating in plating applications without altering surface finish.
- Ideal for cleaning narrow grooves and channels.

Wire rows	W_F [Inches]	Block size L x W [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number		
				.006 carbon steel	.006 stainless steel	
Shoe handle, narrow face						
1	4-3/4	10 x 3/8	3/4	89555	89556	12

Standard

Sturdy wooden block brushes for heavy cleaning applications.

Advantages:
- Excellent for cleaning concrete forms.
- Heavy-gauge wire for aggressive removal.
- Curved back version provides ergonomic grip for improved comfort.

Wire rows	W_F [Inches]	L [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number		
				.012 carbon steel	.012 stainless steel	
Straight back						
5 x 10	4-1/2	1-1/2	1-3/16	85081	-	12
6 x 19	7-1/4	2-1/4	1-3/4	85082	85083	12
Curved back						
9 x 21	7-3/8	2-7/8	1-3/16	85084	-	12

Flat wire

Sturdy wooden block brushes for extremely heavy cleaning applications.

Advantages:
- Ideal for cleaning concrete forms.
- Flat wire ensures extremely aggressive removal.

Wire rows	W_F [Inches]	L [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number	
				.105 x .017 carbon steel	
Straight back					
5 x 10	7-3/4	2-5/8	1-1/4	85092	12

Flat wire, jumbo

Sturdy wooden block brushes for extremely heavy cleaning applications.

Advantages:
- Ideal for cleaning concrete forms.
- Flat wire ensures extremely aggressive removal.
- Included handle for ergonomic grip and improved comfort.

Wire rows	W_F [Inches]	L [Inches]	L_T [Inches]	D_F [Inches], filament material, and EDP number	
				.105 x .017 carbon steel	
Straight back					
8 x 12	9-1/4	3-3/4	1-1/4	85094	12

Maintenance brushes
Chip brushes

File cleaning card and brush

Designed for easy removal of chips from clogged files. Rugged wooden handle with wear-resistant steel wire.

See catalogue section 1, “Files”, for detailed information.

Pipeline dauber brush

Oval-head tampico brushes for hand-applying pipe coatings.

Advantages:
- High retention improves productivity.

Brush length x width [Inches]	L [Inches]	L_T [Inches]	Filament material and EDP number	
			tampico filament	
Wooden block				
3-1/2 x 5	17	2-1/4	85100	12

Chip brushes

High volume, cost-effective brushes feature natural fiber for painting, gluing, and other coating applications.

Advantages:
- White filament clearly visible on dark coatings for easy inspection.

D [Inches]	W_F [Inches]	L_T [Inches]	Filament material and EDP number	
			white bristle	
Standard thickness				
1/2	1/4	1-1/2	89695	36
1	5/16	1-1/2	89696	36
1-1/2	5/16	1-1/2	89697	36
2	3/8	1-1/2	89698	24
2-1/2	3/8	1-1/2	89699	24
3	3/8	1-1/2	89700	24
4	3/8	1-1/2	89701	12
Double thick				
4	11/16	2	89702	12

Metal made chip brushes

Small, stiff wire brushes for brushing metal chips.

Advantages:
- 100% metal construction will not burn or melt in high-temperature environments.

L [Inches]	W_F [Inches]	L_T [Inches]	Filament material and EDP number		
			carbon steel	stainless steel	
Loop handle					
5-1/2	1-1/4	1-5/8	85124	85138	12

Acid brushes

Small, high-quality brushes for applying flux film and other coatings.

Advantages:
- Natural horsehair fibers minimize contamination in brazing and soldering applications.

L [Inches]	W_F [Inches]	L_T [Inches]	Filament material and EDP number	
			black horsehair	
Tin handle				
6	1/4	3/4	89601	144
	3/8	7/8	89602	144
	1/2	7/8	89603	144
	9/16	1	89622	144
	3/4	1	89604	144

Wire duster

Staple-set round carbon steel wire for cleaning chips and shavings.

Advantages:
- Ideal for cleaning chips from hard-to-reach places.

Wire rows	L [Inches]	W_F [Inches]	L_T [Inches]	Filament material and EDP number	
				carbon steel	
Wooden handle					
4 x 8	5-3/4	2-3/4	2-3/8	89559	12

Wide selection of filaments

Stiffness, liquid retention, durability and cost are just a few of the characteristics that make certain fibers better for certain jobs. We offer many varieties of both natural and synthetic filaments in our maintenance brushes and floor sweeps.

"Flagged" filament

Many brushes have "flagged" (also known as "feathered") filaments. Flagged filaments contain split ends which decrease stiffness and add liquid and dust retention properties. This soft, synthetic fiber is ideal for dusting, fine sweeping of smooth surfaces and washing vehicles without scratching.

Broom handle key

- Uses tapered handle
- Uses threaded handle
- Uses strip broom handle
- Uses contractor handle
- Compatible with FlexSweep handle

For additional information on broom handles and other accessories, please see page 99.

Floor sweeps

FlexSweep

Special mounting system for push brooms provides added flexibility in high-impact sweeping applications.

Advantages:
- Handles flex on impact to absorb repetitive shock, making broom handles virtually unbreakable.
- Eliminates need for handle braces, improving accessibility in tight spaces.

Description	L [Inches]	L_T [Inches]	EDP number	
Brown plastic fill				
Sanded hardwood. Durable stiff synthetic fibre with flared end, will outlast most natural fibers.	16	5-1/4	85348	1
Stiff palmyra fill				
Lacquered hardwood. Two threaded holes. Stiff palmyra fibre for wet or dry sweeping on rough concrete or wood floors.	18	4	85320	1
Black synthetic fill				
Lacquered hardwood. Two threaded holes. Excellent for shop and store use. Oil-resistant, washable black synthetic fill with crimped centre stock and straight casing.	24	3	85236	1
Brown plastic fill, flagged casing				
Lacquered hardwood. Two threaded holes. Brown plastic centre rows sweep coarse dirt while flagged-top plastic casing sweeps fine dust and grit. For smooth or rough floors with heavy dirt accumulation.	24	3	85241	1

Fine sweeping

Fine sweeping brooms for light-duty sweeping on smooth surfaces.

Advantages:
- Fine, dense fill ensures a cleaner surface.

Description	L [Inches]	L_T [Inches]	EDP number	
100% black horsehair fill				
Lacquered hardwood. Two threaded holes. 100% black horsehair bristles, for fine sweeping of smooth floors such as tile, linoleum, polished hardwood, etc.	24	3	89211	12
	36	3	89213	12
Horsehair/nylon mix				
Lacquered hardwood. High-quality sweep for best cleaning of fine dirt on smooth floors. Horsehair-nylon mix stapled into lacquered hardwood block with two threaded handle holes.	18	3	89214	12
	24	3	89215	12
	36	3	89217	12
Silver flagged-tip plastic				
Lacquered hardwood. Flagged bristles for sweeping smooth, highly-polished floors and smooth concrete. Sweeps even the finest dust or grit. Two threaded holes.	18	3	89222	12
	24	3	89223*	12
	30	3	89224*	12
	36	3	89225	12
	24	3	89231	12

* pre-drilled for compatibility with FlexSweep handle

For information on broom handles and accessories, please see page 99.

Medium sweeping

Medium sweeping brooms for general-purpose sweeping.

Advantages:

- Good for sweeping both heavy debris and fine dirt such as sawdust and shop waste.

Description	L [Inches]	L_T [Inches]	EDP number	
Black synthetic fill				
Lacquered hardwood. Two threaded holes. Excellent for shop and store use. Oil-resistant, washable black synthetic fill with crimped centre stock and straight casing.	18	3	89234	12
	24	3	89236*	12
	36	3	89239	12
Brown plastic fill, flagged plastic casing				
Lacquered hardwood. Two threaded holes. Centre rows sweep coarse dirt while flagged-top plastic casing sweeps fine dust and grit. Good for floors with heavy dirt accumulation.	24	3	89241*	12
	36	3	89243	12
Black tampico fill				
Lacquered hardwood. Two threaded holes. Flagged bristles for sweeping smooth, highly-polished floors and smooth concrete. Sweeps even the finest dust or grit.	18	2-5/8	89249	12
	18	3	89250	12
	24	2-5/8	89252*	12
	24	3	89253	12
	30	3	89255	12
Black tampico fill, horsehair casing				
Lacquered hardwood handle. Black tampico center framed by soft horsehair fiber.	18	3	89260	12
	24	3	89261	12
	36	3	89263	12
Black synthetic fill, foam block				
Foam plastic with threads. Black plastic bristles staple-set in foam plastic block. For wet or dry sweeping of rough or semi-smooth surfaces.	18	3	89273	12
	24	3	89274	12
Yellow synthetic fill				
Foam plastic with threads. Densely set yellow plastic bristles. For wet or dry sweeping. Excellent versatility, can handle fine dust or coarse debris.	24	3	89278	12

* pre-drilled for compatibility with FlexSweep handle

For information on broom handles and accessories, please see page 99.

Heavy sweeping

Heavy sweeping brooms for sweeping of concrete and rough surfaces.

Advantages:

- Coarser filament with longer trim length ideal for sweeping debris such as gravel and chips.
- Excellent for contractor use.

Description	L [Inches]	L_T [Inches]	EDP number	
Brown/red plastic fill				
Lacquered hardwood. Two threaded holes. Non-absorbent brown plastic filament may be used for wet or dry sweeping. Oil-resistant and easy to wash.	18	3	89285	12
	24	3	89287*	12
	36	3	89289	12
Stiff palmyra fill				
Lacquered hardwood. Two threaded holes. Stiff palmyra fibre for wet or dry sweeping on rough concrete or wood floors.	18	4	89320*	12
	24	4	89322*	12
	36	4	89325	12
Stiff black polypropylene				
Lacquered hardwood. Stiff black polypropylene fill is not affected by grease, water, or oil. For wet or dry sweeping of rough concrete or asphalt.	18	4	89326	12

* pre-drilled for compatibility with FlexSweep handle

Maintenance brushes
Floor sweeps

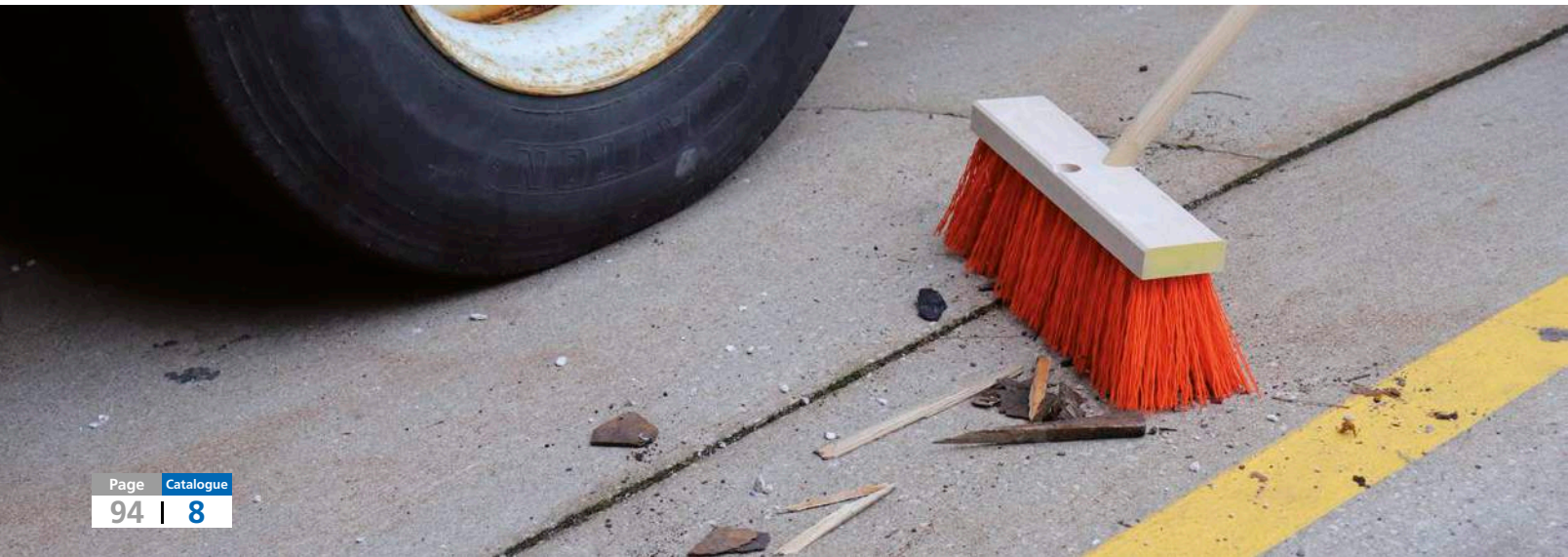
Street brooms

For most demanding sweeping applications.

Advantages:
- Stiff filament with long trim for sweeping very rough surfaces and debris.
- Can be used for texturing concrete.

Description	L [Inches]	L_T [Inches]	EDP number	
Bass/palmyra mix				
Heavy-duty street broom. Sanded hardwood. Bass/palmyra mix for wet or dry sweeping of barns, streets, highway work, etc.	16	6-1/4	89345	12
	16	7-1/4	89346	12
Brown polypropylene fill				
Heavy-duty street broom. Sanded hardwood. Durable stiff synthetic fibre with flared end, will outlast most natural fibers.	16	5-1/4	89348*	12
	18	5-1/4	89349	12
	24	5-1/4	89350	12
Red dyed palmyra fill				
Heavy-duty street broom. Sanded hardwood. Dyed palmyra stalk with wide flared ends for sweeping close to curbs.	16	6-1/4	89351	12
Safety orange polypropylene fill				
Heavy-duty street broom. Sanded hardwood. Heavy-gauge orange plastic will not absorb mold, mildew, or water. Safety orange colour perfect for high visibility use.	16	5	89353	6
	18	5	89354	6
	24	5	89355	6

* pre-drilled for compatibility with FlexSweep handle



Strip brooms

Value-priced metal frame brooms for fine sweeping.

Advantages:
- High-quality synthetic bristles for long service life.

Description	L [Inches]	L_T [Inches]	EDP number	
Medium synthetic fill				
Medium sweeps with tubular steel frames and high-quality tough synthetic bristles for general industrial use.	24	3-1/4	89315	12

Wire brooms

Carbon steel wire set in hardwood block, for use in foundries and other industrial environments.

Advantages:
- Steel filament will not melt when sweeping debris in high-temperature environments such as foundries.

Description	L [Inches]	L_T [Inches]	EDP number	
Round steel wire, black tampico border				
Lacquered hardwood block. Steel wire centre with shorter trim than surrounding tampico fibre fill. Added pressure engages wire with the brushing surface to penetrate heavy dirt and grease.	18	2-7/8	89362	12
	24	2-7/8	89363	12
Tempered carbon steel wire, flat				
Sanded hardwood. Flat wire broom features .017 x .059 tempered carbon steel wire. Especially effective for work on uneven, rough surfaces, as in road repair and steel millwork.	14	5	89370	12
	16	5	89381	12

For information on broom handles and accessories, please see page 99.

Contractor brooms

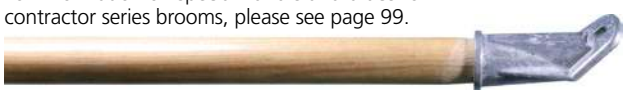
Special block and handle assembly eliminates handle stress.

Advantages:

- Wide range of brooms for fine to coarse sweeping.

	Description	L [Inches]	L_T [Inches]	EDP number	
	**Silver flagged-tip plastic fill**				
	Lacquered hardwood. Fine sweep for smooth, highly polished floors and smooth concrete. Will sweep finest dust or grit.	24	3	89295	1
	**Coarse brown plastic with silver flagged-tip border**				
	Lacquered hardwood. Coarse plastic centre with fine flagged border rows. For dry sweeping of smooth or rough floors with heavy dirt buildup.	24	3	89301	1
		30	3	89302	1
	**Brown palmyra fill**				
	Lacquered hardwood. Coarse sweep with tough palmyra fill for wet or dry sweeping of rough or smooth concrete, driveways, and floors.	24	4	89304	1
	**Coarse brown plastic fill**				
	Heavy-duty street broom. Sanded hardwood. Coarse sweep for wet or dry sweeping of concrete and asphalt. Also ideal for industrial settings.	24	3	89308	1

For information on special handle and brace for contractor series brooms, please see page 99.



Upright brooms

Traditional-style brooms used for general cleaning.

Advantages:
- Available in a variety of natural fibers.

Description	Handle type	L [Inches]	W_F [Inches]	EDP number	
Bass fibre, chisel end					
Handle with chiseled end. Track brooms feature a narrow face for aggressive sweeping. This broom has a steel chisel handle end for tough-to-remove debris such as chewing gum. One reinforcing wire band.	1-1/8″ dia. x 39″	55	10	89374	6
Selected corn					
Selected corn filament for light sweeping on smooth floors. Compact broom with three twine sews and one wire band for long life. Three stitched rows.	7/8″ dia. x 37″	56	10	89376	1
	1-1/8″ dia. x 37″	56	11	89377	1

Whisk brooms

Traditional-style brooms used for general cleaning.

Advantages:
- Available in a variety of natural fibers and handle types.

Description	Handle type	L [Inches]	W_F [Inches]	EDP number	
Selected corn fill					
Metal cap with ring. Use on dust, lint and fine dirt in office, factory or home. Topped by convenient hanging ring. Three stitched rows.	metal cap with ring	10	4-1/2	89378	12
Palmyra fill					
Wire loop handle. Economical whisk for multi-purpose dusting. Twisted-in wire construction, loop handle. One reinforcing wire band.	wire loop handle	10	4-1/2	89379	12
Stiff natural fill					
Wooden handle. For heavy duty cleaning. Has a wood handle grip. One reinforcing wire band.	wood grip handle	9-3/4	4-1/2	89380	12

Floor squeegees, standard duty

For pushing debris and liquids from flat surfaces.

Advantages:
- Red gum blade features good flexibility.
- Ideal for college campuses and institutional use.

L [Inches]	L_T x W_F [Inches]	Frame plating	Blade material	EDP number	
Standard duty					
18	2 x 3/16	steel	red gum	89471	12
24	2 x 3/16	steel	red gum	89472	12

Floor squeegees, heavy duty

Heavy blade for industrial use.

Advantages:
- Neoprene blade can be used for chemical and petroleum cleaning.

L [Inches]	L_T x W_F [Inches]	Frame plating	Blade material	EDP number	
Heavy duty					
18	2 x 1/4	cadmium steel	neoprene	89473	12
24	2 x 1/4	cadmium steel	neoprene	89474	12
30	2 x 1/4	cadmium steel	neoprene	89475	12
36	2 x 1/4	cadmium steel	neoprene	89476	12
Heavy duty, curved end					
24	2 x 1/4	cadmium steel	neoprene	89478	6
30	2 x 1/4	cadmium steel	neoprene	89479	6
36	2 x 1/4	cadmium steel	neoprene	89480	6

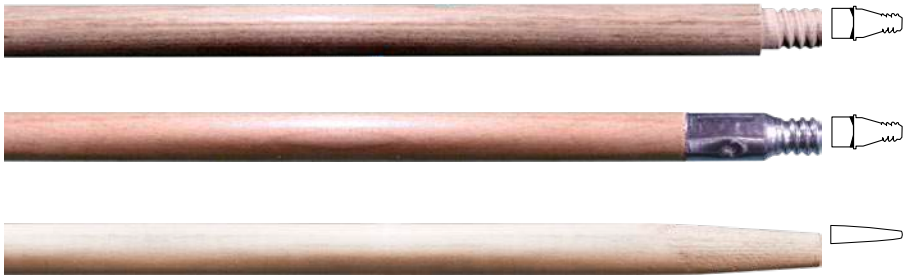
For information on handles and braces, please see page 99.

Wood handles

Wooden handles made of smooth, lacquered hardwood. Threaded handles feature 3/4" standard acme threaded tips.

Advantages:
- Easily attach to push brooms.

L [ft]	D [Inches]	EDP number	
Wood threads			
5	15/16	89883	12
6	1-1/8	89887	12
Metal threads			
5	15/16	89889	12
	1-1/8	89891	12
Tapered end			
4-1/2	1-1/8	89897	12
5	1-1/8	89899	12



Flexible handles

Special mounting system for push brooms provides added flexibility in high-impact sweeping applications.

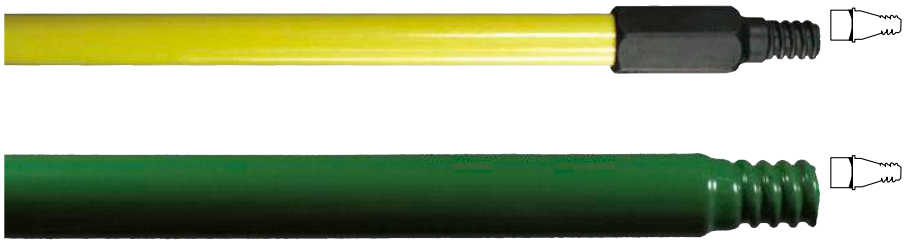
Advantages:
- Handles flex on impact to absorb repetitive shock, making broom handles virtually unbreakable.
- Eliminates need for handle braces, improving accessibility in tight spaces.
- Includes necessary mounting hardware.

L [ft]	D [Inches]	EDP number	
FlexSweep handle			
5-1/2	1-1/8	89930	3

Fiberglass handles

Fibreglass handles with standard plastic threaded tip.

Advantages:
- Lightweight handles with long service life.
- Will not splinter or rot.



	L [ft]	D [Inches]	EDP number	
Fibreglass handle				
	5	15/16	89915	12
"Flo-Thru" handle				
	5	7-8	89919	12

Special-purpose handles

Feature attachment systems for special-purpose floor sweeps.

Advantages:
- Quick and easy attachment to special connection systems on floor sweeps.

	L [ft]	D [Inches]	EDP number	
Contractor handle				
	5	1-1/8	89901	12
Strip broom handle				
	5	1-1/8	89903	12

Handle tip

Converts tapered poles to 3/4" acme threaded poles.

Advantages:
- Supplied with clamping screw for easy attachment.

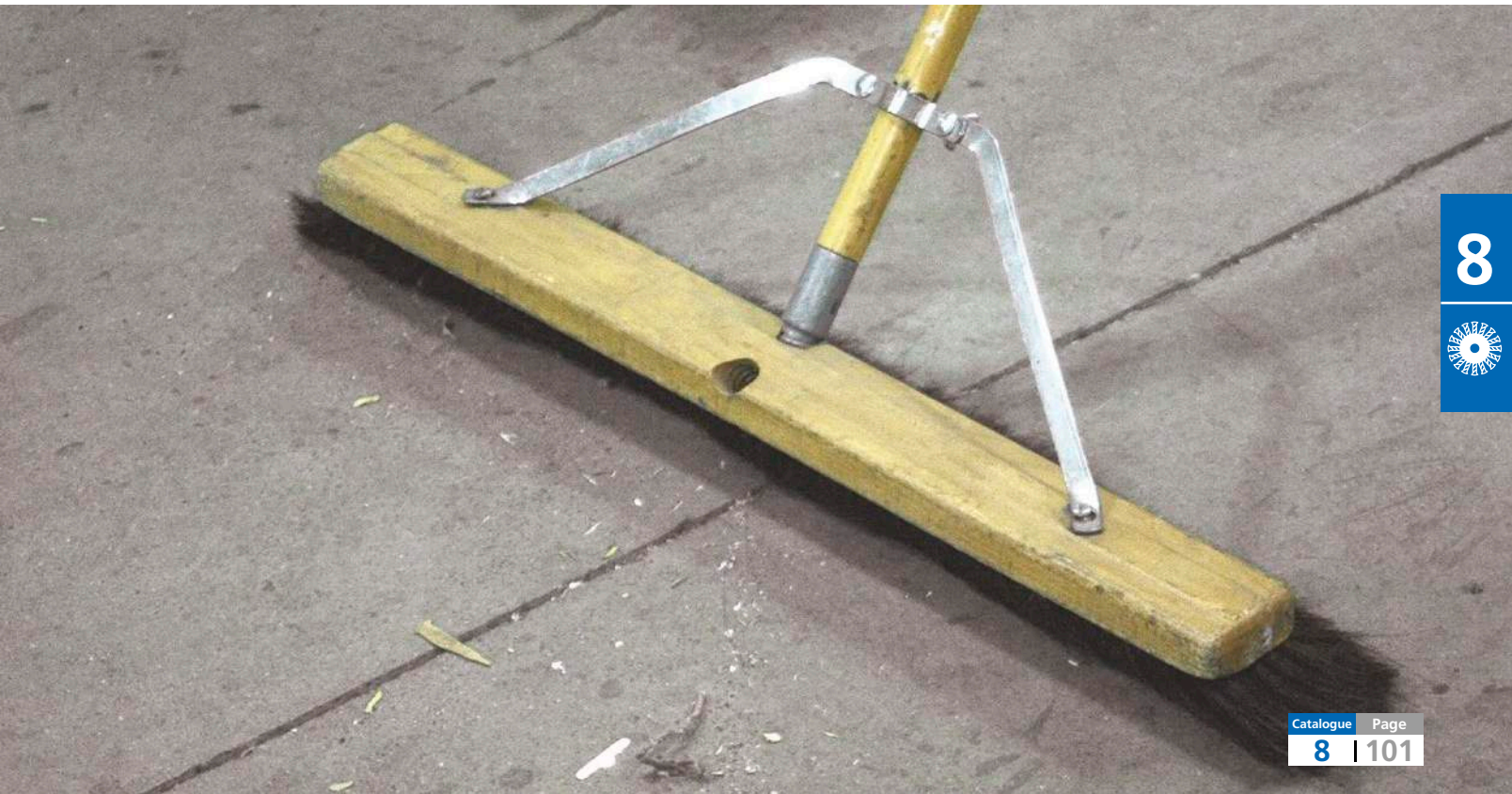
D [Inches]	EDP number	
Metal threads		
15/16	89925	1

Handle braces

Reusable galvanized steel braces for use on push brooms.

Advantages:
- Reinforcement provides added strength and control.

	EDP number	
Standard		
	89921	1
Heavy-duty		
	89922	1



Maintenance brushes
Dust pans and utility brushes

Dust pans

Durable metal dust pan, 20 gauge steel with enamel finish.

Advantages:
- Black enamel finish for long service life.

	L (edge) [Inches]	EDP number	
Metal hand dust pan			
	12	89876	12
	16	89877	12

Utility brushes

Counter dusters

Natural fibers set in kiln-dried hardwood block. Convenient light cleaning and sweeping of surfaces such as counters, table tops and work surfaces.

Advantages:
- Fine, dense natural fibers ensure a cleaner surface.

L [Inches]	L_T [Inches]	Block type	Filament material	EDP number	
Premium line					
8	2-1/2	wood	black horsehair	89390	12
	2-3/4	wood	black horsehair and nylon	89393	12
9	2-1/4	wood	black horsehair	89394	12
	2-1/2	wood	black horsehair and nylon	89395	12
Heavy-duty line					
8	2-1/2	plastic	black tampico	89400	12
	2-1/2	wood	black tampico	89402	12

Wash brushes

Fine filament set in plastic block for washing of vehicles, windows, and other surfaces.

Advantages:
- Soft, flagged synthetic filament will not scratch surfaces.

L [Inches]	L_T [Inches]	Block type	Filament material	EDP number	
Window brush, round					
4-1/2	2-1/2	plastic	soft grey flagged synthetic fill	89449	6
Car/truck wash brush, rectangular					
10	2-1/4	plastic	black and white flagged synthetic	89456	6

For information on Flo-Thru handle or wash brushes, please see page 100.

Hand bottle brushes

For deep cleaning of bottles and narrow, hard-to-reach interior spaces.

Advantages:
- Thorough side and bottom cleaning in hard-to-reach places.

L [Inches]	W_F [Inches]	L_T [Inches]	Filament material	EDP number	
Wood handle					
15	5	3	nylon	89432	12
Twisted-in-wire handle					
18	6-1/2	2-3/4	horsehair	89434	12
	6-1/4	3	horsehair	89435	12

Can swabbing brush

Wood handle, spiral-wound tampico brush designed for cleaning multi-gallon cans and other containers.

Advantages:
- Long wooden handle for deep, efficient cleaning.

L [Inches]	W_F [Inches]	L_T [Inches]	Filament material	EDP number	
Wood handle					
25	7	3-3/8	grey tampico	89438	1

Deck brushes

Coarse filament set in hardwood block. For scrubbing floors made of wood, composite material, and concrete.

Advantages:
- Short trim for aggressive cleaning.

Ordering note:
- See page 99 for information on handles and accessories.

L [Inches]	W_F [Inches]	L_T [Inches]	Filament material	EDP number	
Regular fill, 6 x 18 rows					
10	2-3/4	2	palmyra	89514	12
12	2-3/4	1-7/8	palmyra	89515	12
Heavy fill, 6 x 18 rows					
10	2-3/4	2	tampico	89516	12
	2-3/4	2	polypropylene	89517	12

Hand scrub brushes

Wooden block scrub brush for general purpose scrubbing and cleaning.

Advantages:
- Plastic filament for long service life.

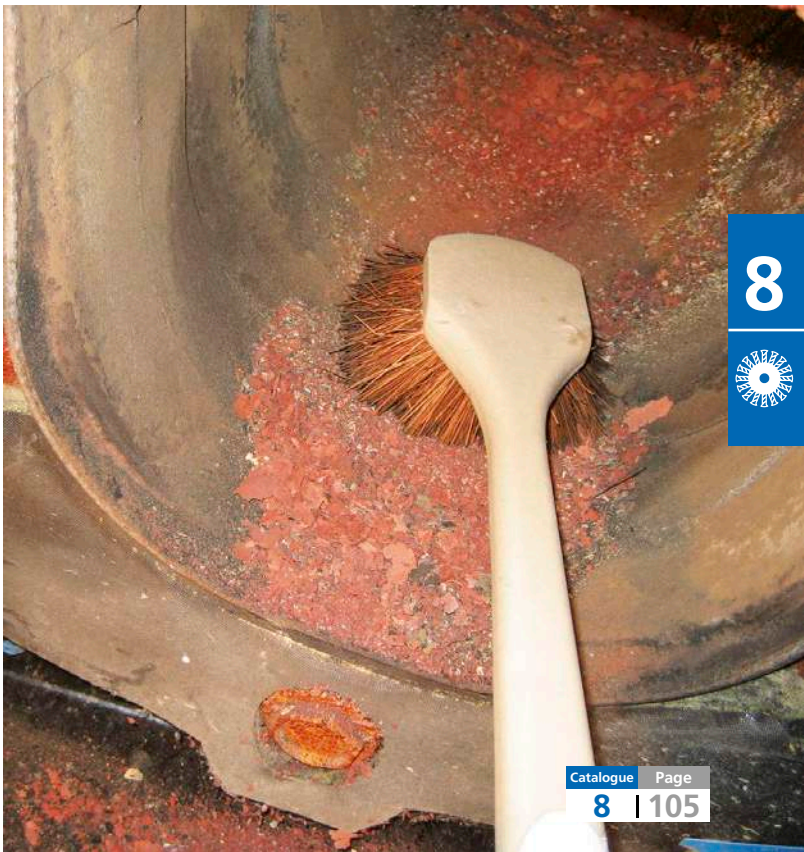
L x W [Inches]	L_T [Inches]	W_F [Inches]	Block type	Filament material	EDP number	
Hand and nail cleaning						
5 x 1-1/2	3/4	1-1/2	hardwood	plastic	89532	12

Fender brushes

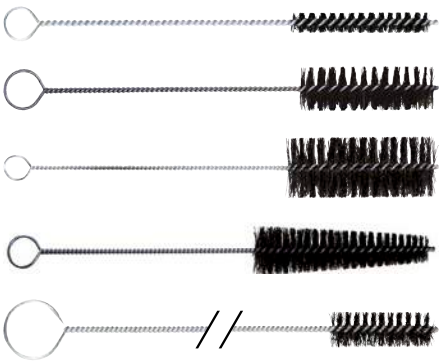
Comfort-grip handle brushes set in plastic block. For general purpose scrubbing and cleaning.

Advantages:
- Ergonomic handle for improved comfort.

L_T [Inches]	W_F [Inches]	Block type	Filament material	EDP number	
Long handle					
21-1/2	2	plastic	synthetic	89439	12
			white tampico	89443	12
Short handle					
10	2	plastic	synthetic	89444	12
			white tampico	89447	12



Maintenance brushes
Loop handle hand tube brushes



Tube brushes

Non-wire filament tube brushes for a variety of manual internal cleaning applications.

Advantages:

- Extended overall length ideal for cleaning long hoses, tubes, and other internal surfaces.

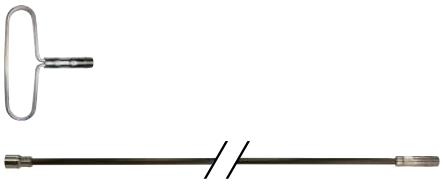
D [Inches]	W_F [Inches]	L [Inches]	Face type	EDP number	
Black horsehair fill					
1	4	12	straight	89576	12
1-1/4 to 3/4	5	12	tapered	89586	12
5/8	4-1/2	42	straight	89594	1
3/4	4-1/2	42	straight	89595	1
1-1/4	4-1/2	40-1/2	straight	89597	1
2-1/4	7	30	straight	89437	1
Nylon fill					
1/4	2	6-1/8	straight	89578	12
1/2	3	8-1/2	straight	89580	12
3/4	3	8-1/2	straight	89581	12
1	4	12	straight	89582	12
1-1/4	4	13	straight	89583	12
2	5	15	straight	89585	12

Galvanized wire handles

Lightweight fibreglass handle for use with threaded flue brushes.

Advantages:
- Lightweight, long-reach handle.
- Multiple handles can be threaded together for extended reach.

Description	EDP number	
Galvanized wire handles		
60" handle	89648	1
T-handle, 1/4" NPT thread	89650	1



Condenser tube brushes

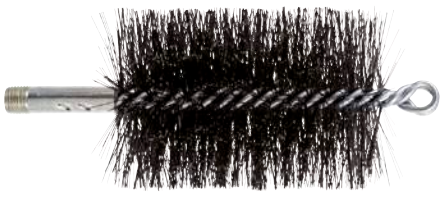
Double stem, double spiral brushes with internal threaded end for handle attachment.

Advantages:
- Loop end for easy use.

Ordering note:
- Features 1/8" NPT with 5/16-18 internal thread.

W_F [Inches]	D [Inches]	D_F [Inches], filament material, and EDP number	
		.010 carbon steel	
4-1/2	1/2	89643	1
	5/8	89644	1
	3/4	89645	1
	7/8	89646	1
	1	89647	1

Flue brushes



Double stem, double spiral brushes with threaded end for handle attachment.

Advantages:
- Loop end for easy use.

Ordering note:
- Features 1/4" x 2-1/2" NPT on one end.

W_F [Inches]	Flue size [Inches]	D [Inches]	D_F [Inches], filament material, and EDP number	
			.010 carbon steel	
4-1/2	1	3/4	89649	1
	1-1/4	1	89651	1
	1-1/2	1-1/4	89652	1
	1-3/4	1-1/2	89653	1
	2	1-3/4	89654	1
	2-1/4	2	89655	1
	2-1/2	2-1/4	89656	1
	2-3/4	2-1/2	89657	1
	3	2-3/4	89658	1
	3-1/4	3	89659	1
	3-1/2	3-1/4	89660	1
	3-3/4	3-1/2	89661	1
	4	3-3/4	89662	1

Internal tube fitting brushes

For internal cleaning and preparation of metal tubes and joints.

Advantages:
- Equipped with ergonomic handle for comfortable brushing.

Nominal tubing [Inches]	D [Inches]	Filament material and EDP number	
		carbon steel	
1/8	17/64	89625	12
1/4	25/64	89626	12
3/8	33/64	89627	12
1/2	21/32	89628	12
5/8	25/32	89629	12
3/4	29/32	89630	12
7/8	1-1/32	89631	12
1	1-5/32	89632	12
1-1/4	1-7/16	89633	12
1-1/2	1-11/16	89634	12
2	2-3/16	89635	12

External tube fitting brushes

For external cleaning and preparation of metal tubes and joints.

Advantages:
- Plastic casing protects user's hands from sharp wire tips and pipe edges.

Nominal tubing [Inches]	D [Inches]	Filament material and EDP number	
		carbon steel	
1/4	3/8	89636	6
3/8	1/2	89637	6
1/2	5/8	89638	6
5/8	3/4	89639	6
3/4	7/8	89640	6
7/8	1	89641	6

Parts cleaning brushes

Pointed-end brushes for removing dust and debris. Synthetic tapered handle.

Advantages:
- Easy reach into confined areas.
- Tampico filament provides high solvent absorption with gentle cleaning action.
- Stiff polypropylene filament provides aggressive cleaning action.

D [Inches]	W_F [Inches]	Filament material and EDP number		
		tampico	polypropylene	
Pointed end				
1-1/4	3	89610	-	12
1	2-3/4	-	89612	12
1-1/16	3	-	89613	12
Flat end				
1	2-3/4	-	89614	12

Dome trim brushes

Filament brushes with special trim shape. Ideal for cleaning motors, fans, and other small parts.

Advantages:
- Easy reach into confined areas.
- Tampico filament provides high solvent absorption with gentle cleaning action.
- Stiff polypropylene filament provides aggressive cleaning action.

D [Inches]	W_F [Inches]	EDP number	
Black bristle filament			
1	2-1/2	89615	12
Nylon filament			
1-1/4	2-3/4	89616	12

Sidewall brushes

Crimped brass wire fill. For cleaning tire sidewalls.

Advantages:
- Smooth hardwood handle provides comfortable grip.

Brush part L x W [Inches]	Block size L x W [Inches]	L_T [Inches]	EDP number	
Brass wire				
3 x 2-1/2	8-3/4 x 2-1/2	5/8	89620	12

Wall brushes, natural bristle

Natural bristle brushes ideal for use with oil-based paints and coatings.

Advantages:
Natural bristle brushes for best performance, durability, and versatility.

W [Inches]	W_F [Inches]	L_T [Inches]	EDP number	
"Good" quality				
1/2	1/4	1-3/4	89711	20
1-1/4	3/8	1-3/4	89712	20
2	3/8	1-3/4	89714	20
2-1/2	3/8	2	89715	12
3	1/2	1-3/4	89716	10
4	1/2	2-1/4	89717	10
"Better" quality				
1-1/4	3/8	2	89718	20
2	1/2	2-1/4	89719	20
3	1/2	2-1/2	89720	10
4	5/8	2-3/4	89721	10
"Best" quality				
2	3/4	3	89724	10
3	7/8	3-1/4	89725	5
4	7/8	3-1/2	89726	5

Wall brushes, synthetic bristle

Polyester bristle wall brushes for use with synthetic paints and coatings such as latex paint.

Advantages:
Synthetic bristles provide long, durable service life and easy cleaning.
"Best" quality brushes feature wood handle for comfortable grip and ease of use.

W [Inches]	W_F [Inches]	L_T [Inches]	EDP number	
"Good" quality				
1/2	1/4	1-3/4	89734	20
1-1/4	3/8	1-3/4	89735	20
2	3/8	2	89737	20
3	1/2	2	89739	10
4	1/2	2-1/4	89740	10
"Better" quality				
1-1/4	3/8	2	89741	20
2	1/2	2-1/4	89742	20
3	1/2	2-1/2	89743	10
4	5/8	2-3/4	89744	10
"Best" quality				
1-1/4	1/2	2-1/4	89745	20
2	5/8	2-1/2	89746	20
3	3/4	3	89747	10
4	7/8	3-1/4	89748	10

Angular wall brushes, synthetic bristle

Angled trim designed for "cutting in" when painting corners and edges.

Advantages:
- Synthetic bristles provide long, durable service life and easy cleaning.

W [Inches]	W_F [Inches]	L_T [Inches]	EDP number	
Polyester/nylon mix filament				
1-1/2	1/2	2-1/8	89729	10
2	5/8	2-5/8	89730	10

Fitch marking brushes

Natural camel hair bristle brush set in seamless metal ferrule.

Advantages:
- Versatile, value-priced brushes for use in painting, marking, and dusting.

W [Inches]	Brush size	L_T [Inches]	EDP number	
Camel hair filament				
9/64	#1	5/8	89839	6
5/32	#2	3/4	89840	6
3/16	#3	7/8	89841	6
1/4	#5	1-1/16	89843	6
9/32	#6	1-1/8	89844	6

Stencil brushes

Flat trim brushes for applying paint evenly through a stencil.

Advantages:
- Dense fill and short, stiff trim prevents paint from bleeding under stencil edges.

D [Inches]	Brush size	L_T [Inches]	EDP number	
Black China bristle				
1	#6	1-1/8	89860	12
1-1/4	#8	1-1/2	89861	12
1-1/2	#10	1-5/8	89862	12
2	#12	1-3/4	89863	12

Sash brushes

Natural bristle brushes for painting, cleaning, and application of coatings.

Advantages:
- Versatile, value-priced brushes.

D [Inches]	Brush size	L_T [Inches]	EDP number	
Round				
7/8	#6	2-1/8	89665	12
1	#8	2-1/8	89666	12
1-1/8	#10	2-1/2	89667	12
Oval				
1/2	#2	1-13/16	89674	12
13/16	#4	2	89675	12
1	#6	2-1/16	89677	12
1-1/8	#8	2-1/4	89678	12
1-1/4	#10	2-1/4	89679	12

Masonry brushes

White tampico fill set in hardwood block. For painting and applying coatings to masonry and concrete.

Advantages:
- Coarse, heavy fill ideal for painting on rough surfaces.

Block L x W [Inches]	No. rows [pcs.]	L_T [Inches]	EDP number	
Tampico filament				
6-1/2 x 2	5	4	89814	12
6-1/2 x 1-3/4	5	3-1/2	89809	12

Whitewash brushes

White tampico fill staple-set in hardwood block.

Advantages:
- Tapered hole for easy attachment of handle.

Ordering note:
- See page 99 for information on handles and accessories.

Block L x W [Inches]	No. rows [pcs.]	L_T [Inches]	EDP number	
Tampico filament				
8 x 1	2	2-1/2	89818	12

Economy roller refills

Economy-priced roller refills with PVC core.

Advantages:
- Lowest cost roller refills.

L [Inches]	L_T [Inches]	EDP number	
Polyester/knit fabric			
9	3/8	89753	30

General-purpose roller refills

Knitted roller refills available in a wide range of pile heights.

Advantages:
- Provide great coverage with a good surface finish.
- Versatile rollers for a wide range of surface roughnesses.

L [Inches]	L_T [Inches]	EDP number	
Polyester/knit fabric			
3	1/4	89768	20
4	3/8	89770	20
9	1/4	89755	30
	3/8	89756	25
	1/2	89757	20
	3/4	89758	16

Lint-free roller refills

For use with semi-gloss and high-gloss paints on smooth surfaces.

Advantages:
- Shed-resistant roller will not contaminate surface finish on smooth surfaces.

L [Inches]	L_T [Inches]	EDP number	
Polyester/nylon mix			
9	1/4	89796	25

"Time-Trimmer" roller refills

Woven fabric rollers for painting in tight spots. Ideal for quick painting jobs on most surfaces.

Advantages:
- Small diameter gets into tight spots and corners.
- Great surface finish.

Ordering note:
- See page 99 for information on handles and accessories.

L [Inches]	L_T [Inches]	EDP number	
Woven fabric			
4	7/16	89779	100
6	7/16	89780	100

Economy roller cage

For use with economy roller refills.

Advantages:
- Value-priced roller cage.

Ordering note:
- See page 99 for information on handles and accessories.

L [Inches]	D [Inches]	EDP number	
9	1-1/2	89772	10

Trim roller cage

For use with general-purpose trim rollers (3"-4").

Advantages:
- Handle features internal thread for use with handle extension pole.

Ordering note:
- See page 99 for information on handles and accessories.

L [Inches]	D [Inches]	EDP number	
3	1-1/2	89774	24
4	1-1/2	89775	24

"Time-trimmer" roller frame

For use with "Time-Trimmer" roller refills.

Advantages:
- Threaded handle accommodates standard threaded poles.

Ordering note:
- See page 99 for information on handles and accessories.

Frame length [Inches]	For roller size [Inches]	EDP number	
12	4-6	89782	20

Metal tray

2 qt. capacity tray, for use with all rollers 9“ or less.

Advantages:
- Galvanized metal for long service life.

Capacity	L x W x H [Inches]	EDP number	
2 qt.	15-3/4 x 11-3/4 x 3	89776	10

“Time-Trimmer“ tray

6“ width tray to fit “Time Trimmer“ rollers. 1 quart capacity.

Advantages:
- Solvent resistant material.

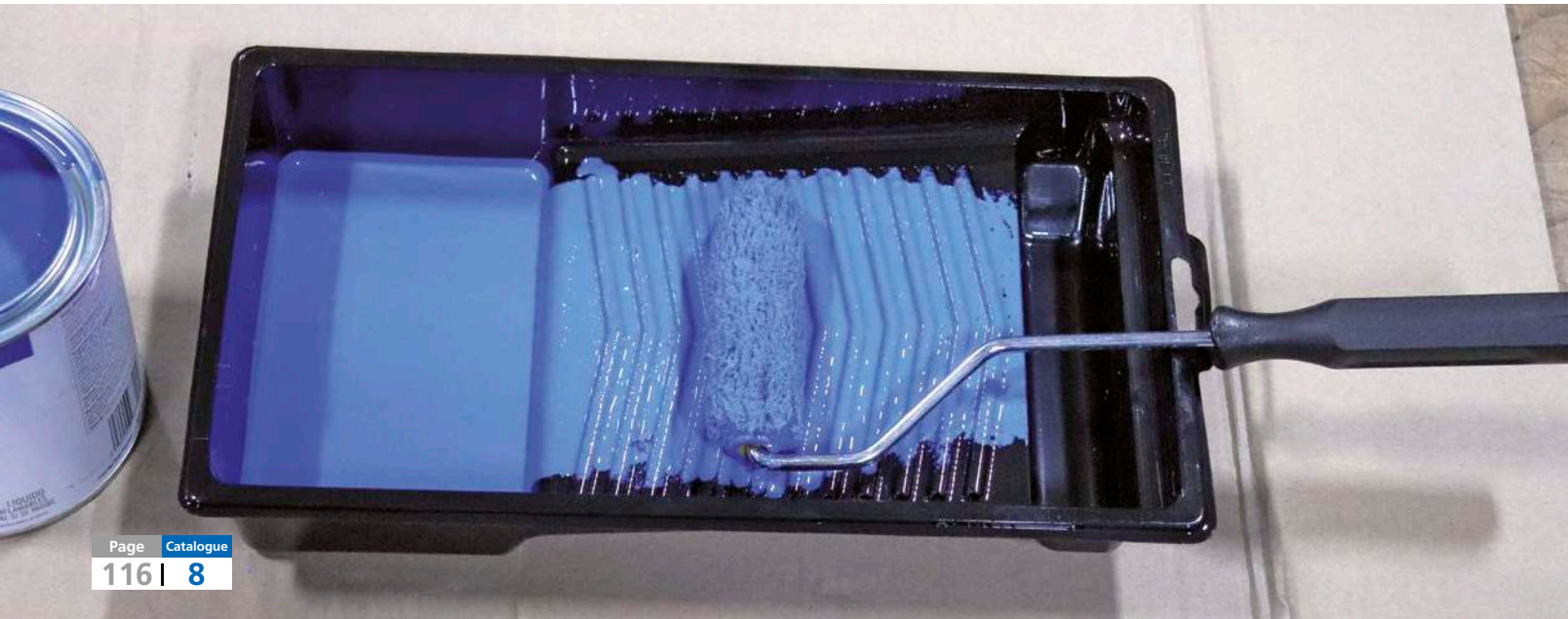
Capacity	L x W x H [Inches]	EDP number	
1 qt.	12-3/4 x 6-7/8 x 2-1/4	89784	20

Super tray

Professional-grade tray with 4 quart capacity.

Advantages:
- Solvent resistant material.
- Impact resistant.
- Disposable liners save cleanup time and mess.

Capacity	L x W x H [Inches]	EDP number	
Super tray			
1 gal.	15 x 11-1/2 x 3-3/4	89777	10
Super tray liners			
1 gal.	15 x 11-1/2 x 3-3/4	89778	25

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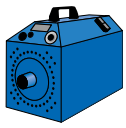
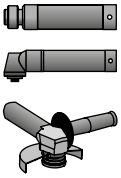
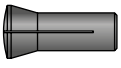
Flexible shaft drives

Power tool accessories





Please visit our website for more information on our products:
pferd.com

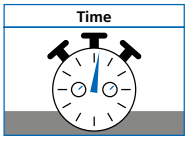
Power tools
General information

The PFERD range includes power tools for grinding, milling, brushing, cutting and polishing in manual applications as well as in robotic and semi-stationary applications. PFERD is one of only a small number of manufacturers that can offer a wide range of products for work on surfaces and cutting of materials, as well as power tools designed specifically for these tools, all from a single source.

The wide product range includes air-powered machines, electric machines and flexible shaft drives and thus offers the best solution for almost any working environment.

PFERD power tools are characterized by their performance and durability. They are less prone to faults and comply with the latest technological standards.

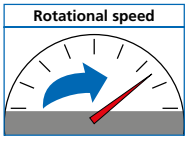
Economic value



Time is money. The cost-effectiveness of a process is determined by the performance of the tool and the time required. The faster the grinding process, the greater its cost-effectiveness. The best results are achieved by tools that have a consistently high aggressiveness throughout the processing time, in combination with PFERD quality power tools. These are powerful, durable and less susceptible to faults.

$$t = \$$$

Rotational speed n

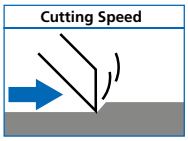


The rotational speed n is given in revolutions per minute [RPM]. The required rotational speed is determined from the peripheral speed V in surface feet per minute [SFPM] and the diameter of the tool d x π (3.14).

Note:
The rotational speed data for the tools relates to their use under load.

$$n = \frac{V}{d \times \pi}$$

Peripheral speed V



The peripheral speed is the speed at which a tool bit moves through the material to be worked in the direction of the cut and removes a chip. The peripheral speed V is given surface feet per minute [SFPM]. It depends on the rotational speed of the drive n in revolutions per minute [RPM] and the diameter of the tool d x π (3.14).

$$V = n \times d \times \pi$$

Dust warning

Use of the tools in this catalogue may create dust and other particles. To avoid any risk of adverse health effects, the operator must use appropriate protective measures, including a respirator, during and after tool operation.

Refer to the Safety Data Sheet (SDS) for further information regarding the product to be used.

Furthermore, additional health hazards may result from dust in the surrounding environment and from dust generated from the workpiece material.

PROTECTIVE MEASURES FOR THE OPERATOR MUST ADDRESS DUST AND OTHER PARTICULATES ARISING FROM ALL SOURCES. Always use our products in a well-ventilated workspace.

Safety regulations

= Wear eye protection!

= Wear a respirator!

= Follow the safety instructions! (Please always observe the respective valid safety regulations!)

= Read the Safety Data Sheets (SDS) before using any materials!

In accordance with legal requirements, all power tools are accompanied by operating manuals, a CE declaration of conformity and safety notes.

Air grinders	Electric grinders	Flexible shaft drives
		
Applications and economic value		
Single workstation, stationary use	Single workstation, flexible use for mobile operation	Single workstation, stationary with a variety of speeds and applications, very easy to handle at high power output
High power output, low wear, long service life, economical air consumption, robust, hard-wearing slide vane and turbine motors	High power output, low wear, long service life	Very robust, low wear, long service life
Power tool type		
-	Micro motors	-
Straight grinders	Straight grinders	Straight grinders
Angle grinders	Angle grinders	Angle grinders
-	Linear finishing tools	Linear finishing tools
Belt grinders	Belt grinders	Belt grinders
Specialty tools	Specialty tools	Specialty tools
-	Fillet weld grinders	-
Power tool characteristics		
No risk of damaging the drive from excessive pressure; can be safely loaded up to stall point	Overload protection, can briefly withstand up to four times the nominal output	Overload protection, can briefly withstand up to six times the nominal output
Optimum rotational speed and power ratios	Optimal tuning possible for product application	Optimal tuning possible for product application
Good size to power output ratio	Higher rotational speed/power output ratio compared to air grinders	High motor power output, compact handpieces, high power transmission to the product
High rotational speeds	Maintains constant rotational speed even under load	Cover large rotational speed ranges
Ergonomics/Handling		
Drive size and shape suitable for many applications	Ergonomic drive shapes, easy to handle	Light arbors that are easy to handle for low-fatigue work
Rotational speed range [RPM]		
4,000 to 100,000	850 to 80,000	100 to 24,000
Rotational speed control		
Fixed speed	Stepless, electronic	Stepless electronic or gear-driven
Energy		
Compressed air (91 psi)	1-phase alternating current, safety extra-low voltage	1-phase alternating current, 3-phase alternating current
Power output range [HP]		
0.1 to 1.2 (75–900 watts)	0.4 to 1.2 (260–900 watts)	0.4 to 2.0 HP (300–1,500 watts)
Safety		
Safe energy form, no sparking	Safeguard to prevent unintentional re-starting	Safeguard to prevent unintentional re-starting (most models)
Maintenance (drawings and spare parts available online)		
Simple replacement of worn parts	Simple replacement of carbon brushes	Maintenance can be performed by qualified technicians. Drawings and spare parts available online.

Power tools
Selecting the optimal power tool

The most important prerequisite for cost effective working methods is the selection of the optimal PFERD product. After this, the choice of a suitable power tool can be made.

The following points have to be taken into consideration:
- Design, shape and size
- Speed
- Power output
- Adapters and drive arbors

The selection is also influenced through:
- Accessibility of the workpiece
- Mobility
- Availability of air or electrical power supply

The table below provides you with a general overview of suitable power tools for the PFERD products shown in the catalogues.

For help with any specific application problems, contact a PFERD sales representative or applications specialist today!

Power tool		Page(s)	Tool	Catalogue section 2	Catalogue section 3	Catalogue section 4	Catalogue section 6	Catalogue section 8
								
Air-powered machines	Straight grinders	16-22		●	●	●	●	●
	Angle grinders	23-25		●	●	●	-	●
	Belt grinder	26		-	-	●	-	-
Electric machines	Micromotor	31-34		●	●	●	-	●
	Straight grinders	35-36		●	●	●	●	●
	Angle grinder	37		-	-	●	-	-
	Linear finishing tool	38		-	-	●	-	●
	Belt grinder	39		-	-	●	-	-
	Fillet weld grinder	40		-	-	●	-	●
Flexible shaft drives	Flexible shafts with	51-56						
	- Straight handpieces	51-55		●	●	●	●	●
	- Angle handpieces	51-55		●	●	●	●	●

Principle:

Optimal consumable product + **Optimal power tool** → **Optimized efficient use**

PFERD catalogue sections 2–8 provide a multitude of possibilities, allowing you to choose the best product for your application. In order to apply these products with optimum efficiency, you need a power tool perfectly matching the chosen product.

The power tools are especially designed for grinding, milling, brushing, cutting and polishing. They cover all relevant speed and power output performance ranges in accordance with the latest requirements in ergonomics and safety.

They are also reliable and have long service lives. In order to find the most cost effective solution to your application problem, always choose the machine matching the most suitable product.

PFERDPRAXIS

Our **PFERD**PRAXIS brochures contain a wealth of useful information on material properties as well as tips and tricks for using PFERD products on specific materials or for specific applications.

Packaging

PFERD provides power tools in standard industrial packaging.

Advantages:
- Robust packaging protecting the tools from dirt and damage.
- The packaging labels feature easy identification of product features and part number.

PFERD packaging label

In addition to the description and the part number, the most important technical information is shown with the help of pictograms.

Advantages:
- Easy comparison of product features due to clear pictograms.
- The label contains information on other accessories.

Explanation of the pictograms used

General

80.000 RPM	Rotational speed
5 - 11 m/s	Belt speed
500 W / 0.7 HP	Power output
13/32" / 3/16" / 25 mm / 4 mm	Matching keys

Tool mounting

1/4" / 5/8"	Collets/ threaded spindles
7/8"	Centre hole
4"	Recommended for disc diameter
3/4" x 4"	Recommended for drum grinder fitting
20-1/2 24 x 1/8-3/8"4"	Belt dimensions

Air grinders

3 Oil/min / Oil	Note on use Can be used with/ without oil
91 psi	Air pressure
15/32"	Air supply hose diameter

Electric grinders and flexible shaft drives

120 V 1~ / 240 V 1~	Voltage/phases
60 Hz	Frequency
	Double insulated
	Protective grounding
	Safety extra-low voltage

Flexible shafts

DIN 10	Drive-side shaft connection
G22	Handpiece-side sliding coupling
6 mm	Core diameter
1.683 mm	Flexible shaft/core length

PFERDTOOL-CENTER

The **PFERD**TOOL-CENTER is a premium display system that can be custom-designed to meet your specific product and presentation requirements.
For more information from a PFERD expert, contact us today at pferd.com.

Power tools
Service and repair

A powerful PFERD power tool is an investment that pays off. This is because we offer numerous services with all our power tools that optimally support you in the training, operation and maintenance of your machine.

Our website offers in-depth product and application information regarding cutting and work on surfaces. Discover the many ways that the PFERD brand adds value and supports users of PFERD products in the best possible way.

Warranty

Our PFERD guarantee for defects on air and electric grinders and on flexible shaft drives as well as on the accessories is exercised in such a manner that all parts which have material defects will either be repaired or replaced free of charge at our discretion. We shall honour these material defect claims for a maximum of 12 months. This provision shall be invalid if longer periods are prescribed by law.

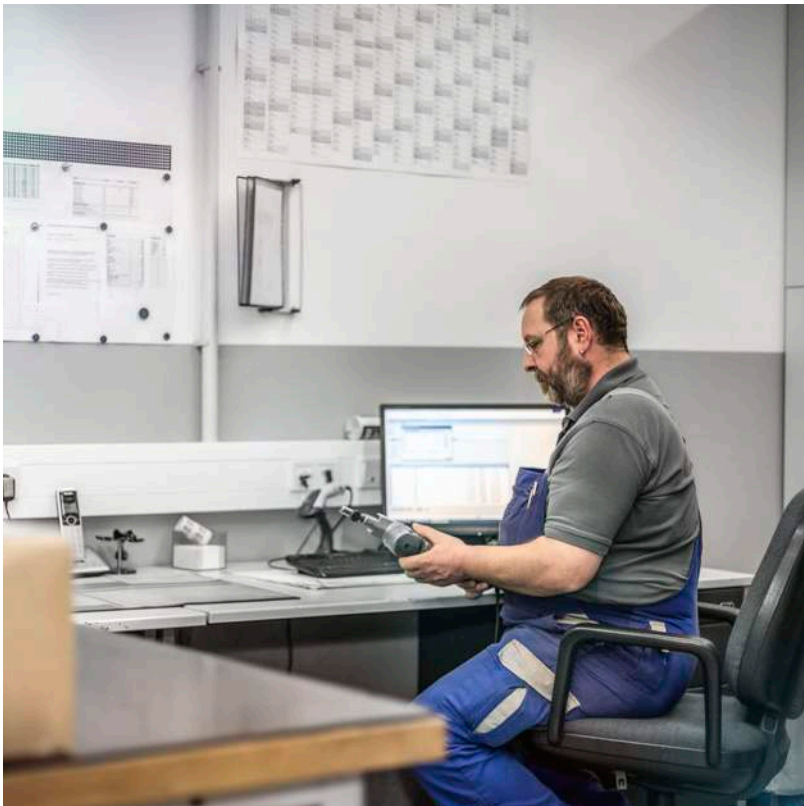
The warranty shall not cover damage caused by improper handling, the use of spare parts other than our own, or by repairs carried out in unauthorized workshops.

Advice and products made to order

PFERD offers you individual targeted support to solve your application problems. PFERD's experienced sales representatives and technical specialists are happy to help you select your power tool – also by visiting you on-site. Please contact us for further details:

Canada Phone: **(905) 501-1555** **USA Phone:** **(262) 255-3200**
Toll-Free: **(866) 245-1555** **Toll-Free:** **(800) 342-9015**

If you cannot find the solution for your particular application in our extensive catalogue range, we can develop and produce power tools in premium PFERD quality on request, tailor-made to meet the requirements of your job.



Performance test bench

PFERD has modern performance test benches for quality control, drive optimization and verification of safety guidelines. On request, you will receive a detailed PFERD performance certificate for your professional power tool.

For each machine type, we perform safety checks and test reporting according to highest technical standards.

Technical modifications

Technical developments and ergonomic improvements are continuously incorporated into our design and manufacture. We therefore reserve the right to make technical changes to our products. In the event of changes to the design, we still ensure the availability of spare parts for four years.

Maintenance and repair service

PFERD provides a maintenance and repair service, which includes basic cleaning, repair and final safety checks. Our qualified specialists will be happy to quickly create a detailed quotation without obligation.

If the repair costs exceed the replacement value, you will also receive a quotation for a new power tool. Only original PFERD spare parts will be used to repair power tools. After the repair, you will receive your power tool in as-new condition.

An experienced team ensures quick repairs processing at PFERD's North American repair facility. Please send any queries to: **powertools@pferdusa.com**

Repair training

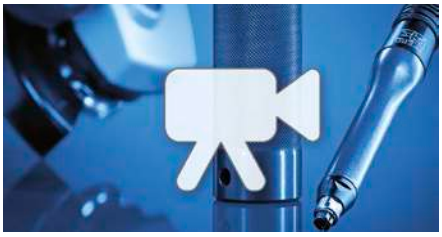
Worldwide, PFERD offers hands-on training on the safe handling of professional power tools and expert maintenance. The knowledge provided enables fast on-site repairs and thus reduces downtime. The expert maintenance also extends the service life of the power tools.

On request, the training can also be held on-site at your company. Please contact us for further details.

Assembly and application videos

Alongside the detailed information and safety notes in our operating manuals, we also provide clear and easy-to-understand assembly and application videos. If you still have any questions, our sales team will be happy to offer you personal support together with our experts from the technical advice team.

You can find all available videos for PFERD tools and power tools on our website at **pferd.com**.



Spare parts catalogue

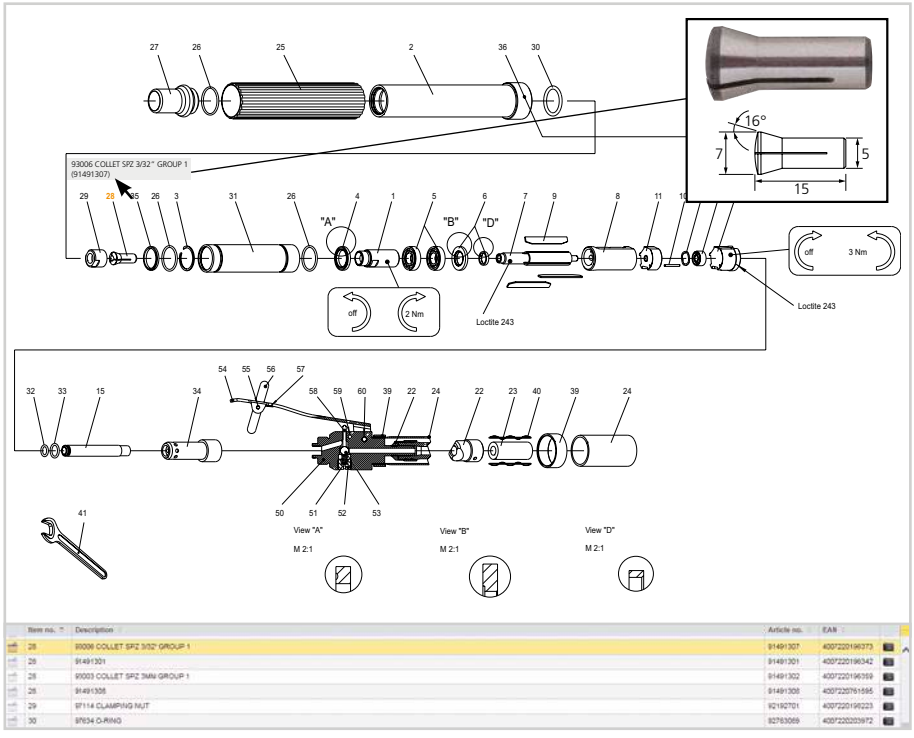
In our online spare parts catalogue, we have compiled all the information about every PFERD drive. Here you will find exploded drawings and other sketches as well as photos and ordering data for each individual spare part for our power tools. With just a few clicks, you can select the required spare parts or spare parts kits, add them to your shopping cart and order them online directly from PFERD.

If you ever misplace the operating instructions, you can find them in our spare parts catalogue for download along with other documents such as CE declarations of conformity and illustrated DIY instructions for small repairs.

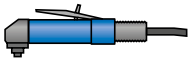
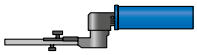
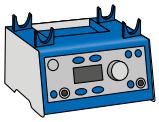
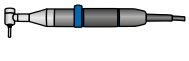
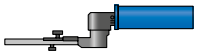
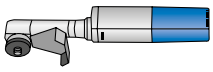
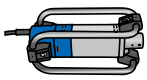
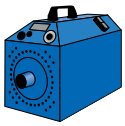
You can find our clearly structured online spare parts catalogue at **spareparts.pferd.com**, or order them from a PFERD repair facility!

In the information area you can see which documents are available for download.

Example: Compressed-air straight grinder PGAS 2/800 E-HV



Move your mouse over the different spare parts for your PFERD power tool to get the exact product specifications. Clicking on the respective code displays more information and a product photo. In the lower part of the image, you have the option of adding the selected spare parts directly to the shopping cart and ordering them.

	Description				Power (HP) / Rotational speed	Type
Air powered machines						
	**P** Pneumatic	**G** straight	**T** turbine grinder	**A** rear exhaust hose	**1 / 1000** Power / Rotational speed (HP x 10) (RPM x 0.01)	**V** extended model
	**P** Pneumatic	**G** straight grinder	**A** rear exhaust hose	**S** collet		**E** elastic suspended spindle
	**P** Pneumatic	**W** angle grinder	**S** silencer	**A** rear exhaust hose		**HV** safety lever throttle
	**P** Pneumatic	**B** belt grinder	**S** collet			**oVA** without belt attachment arm
	**MST** Marking pen	**31** strokes per minute				
Electric machines						
	**MIM** Micro motor	**STG** control unit				
	**MIM** Micro motor	**HAS** straight handpiece				**SI** double insulated
	**MIM** Micro motor	**WZS** angle handpiece				**120 V** Voltage unit
	**U** Electric	**G** straight grinder	**ER** electronic speed regulation		**3 / 800** Power / Rotational speed (HP x 10) (RPM x 0.01)	
	**U** Electric	**W** angle grinder	**ER** electronic speed regulation			
	**U** Electric	**W** angle grinder	**ER** electronic speed regulation			**D19** for grinding and finishing drums with 3/4"
	**U** Electric	**BS** belt grinder				**oVA** without belt attachment arm
	**KN** Fillet weld grinder		**ER** electronic speed regulation			
Flexible shaft drives						
	**RU** Universal electric motor		**ER** electronic speed regulation		**15 / 30** Power / Rotational speed (HP x 10) (RPM x 0.01)	
	**ME** Mammoth electronic	**W** alternating current (AC)				**240 V** Voltage unit

Example: Power HP / RPM (in watts 10th unit) (in 100th unit)

$$100 \text{ w} \times 1.36 = \frac{136}{1000} = 0.1 \text{ HP}$$

PFERDVALUE®

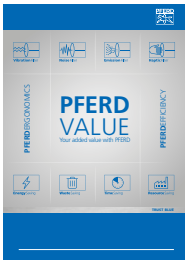
Results from the PFERD test laboratories as well as from independent testing institutes prove: PFERD products offer measurable added value.

The optimization of work processes through the use of powerful premium power tools has a positive effect on the cost-effectiveness of your operations.

In the long term, to be cost-effective is to be sustainable.

Experience the added value with PFERD. Discover **PFERD**ERGONOMICS® and **PFERD**EFFICIENCY®, both part of the **PFERD**VALUE® program.

For more information on this topic, please refer to our brochure "**PFERD**VALUE® – Your added value with PFERD".



Please visit **pferdusa.com/pferdvalue** to request a free copy or to download a PDF version.

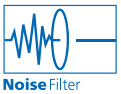
PFERDERGONOMICS®

Ergonomics is an important aspect of occupational health. The aim is to organize working conditions in such a way as to increase the users' comfort and not to impair their health – even under tough working conditions and if they have to carry out a certain job for a long time.

As a manufacturer of hand-held tools, we feel especially obliged to tool users to contribute to more safety, working comfort and health. That is why people are at the focus of all the processes that a hand-held tool passes through during its creation – from research and development right through to mass production.

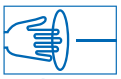
As part of **PFERD**ERGONOMICS®, PFERD offers ergonomically optimized power tools that contribute to greater safety and working comfort, and thus to health protection. Use the chart beside to understand the ergonomic properties of PFERD power tools.

Less vibration
- Elastically mounted spindles.
- Anti-vibration handle.
- Autobalancer.
- EU Occupational Health Directive.



Reduced noise
- Quieter than 72 dB(A).
- EU Occupational Health Directive 2003/10/EC.

Minimized emissions
- Oil-free power tools.



Optimized feel
- Light.
- Easy to handle.
- Slim.
- Ergonomic (shape).

PFERDEFFICIENCY®

Efficiency is the focus of all work processes. It is motivated by cost savings on the one hand and productivity increases on the other.

With efficiency as the goal, users are challenged daily with completing their tasks quickly, effectively, and with the best results.

As part of **PFERD**EFFICIENCY®, PFERD offers innovative, high-performance power tools with outstanding added value. They achieve excellent results in the shortest possible time, save energy and/or generate less costly waste.

Use the chart beside to understand the efficiency assessments of PFERD power tools.

Less energy consumption
- Air tools with centrifugal governors reduced air consumption.
- Electric tools with stepless speed variation.
- Flexible shaft tools with frequency regulation.

Less waste created
- Power tools with elastic-suspended spindles (reduced wear of tools and improved life-time of power tools).
- Long service life in tools with 3-phase motor.

Shorter processing times
- Air tools with elastic-suspended spindles.
- Electric tools with stepless speed variation.
- Flexible shaft tools with quick-change handpieces.
- Higher than average motor: handpiece ratios.

Less overall resources consumed
- **Energy**Saving.
- **Time**Saving.
- **Waste**Saving.
- Ergonomically optimized (minimum one of the **PFERD**ERGONOMICS® pictograms).


PFERD MST 31
PFERD-Werkzeuge
51709 Marienheide
PFERD
Oil
PFERD
PFERD
3409838005/14

Air grinders
General information

Air grinders are the "top speed" machines among the power tools. They achieve higher rotational speeds in comparison to electric grinders or flexible shaft drives, and have an excellent power-to-size ratio. The robust and resistant slide vane and turbine motors have a long service life and are very easy to service.

Areas of application

Air grinders are very versatile. They are used economically and reliably in series production and assembly lines, especially in medium and large-sized facilities that have a compressed air network.

PFERD range

PFERD offers straight, angle and belt grinders, as well as special power tools. PFERD air grinders are technically up to date and incorporate the latest ergonomic findings and requirements. They have been specially developed for the economic application of grinding and milling tools and cover a wide rotational speed range (100,000–4,000 RPM) and power output (900–75 watts / 1.2 -0.1 HP).

Advantages

- Compact, ergonomic design.
- Low weight.
- High power.
- Versatile use.
- Fixed rotational speeds.
- No risk of overloading, can be loaded up to machine standstill.
- Housing insulated against cold and vibration.
- Low-maintenance.
- Easy to service.
- Economical.

Criteria for selecting the optimum air grinder

The most important prerequisite for cost-effective work is the selection of the optimum tool. The appropriate drive is selected taking the following criteria into consideration:

1. Rotational speed
The drive should always be selected according to the rotational speed and peripheral speed recommendations for the tool. Please refer to catalogue sections 2–8 for these recommendations.

2. Power output
The drive's power output is the decisive factor for maintaining the rotational speed under load. The load is determined by the material to be machined, the cutting characteristics of the tool and the contact pressure.

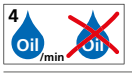
3. Design, shape and size
Every type of application places specific demands on the shape and size of the power tool. The different designs can be used for various applications, so the ideal drive should be selected for the task at hand, depending on the dimensions, accessibility, type and frequency of the application.

4. Tool mounting
Depending on the PFERD tool selected, different mounting options are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to pages 62–63 for an overview of collets and spindle extensions. If you have any further questions, your personal PFERD sales representative will be happy to help you.

Operates with or without oil

Turbine and air grinders are marked with the following symbols:

Use only without oil.



Can be used with or without oil.

Use only with oil.

Advantages of oil-free compressed air
- Protects both people's health, the environment and the workplace.
- Reduces operating costs, because oil and fittings can be dispensed with.
- Avoids oily deposits on the workpiece.

Recommendations and prerequisites for the cost-effective use of air grinders

1. Air pressure
The drive should be operated at an air pressure of 91 psi. A sufficient flow rate must always be ensured. Over-pressure leads to premature and higher levels of wear.

2. Air consumption
All data in this catalogue refers to air consumption in cubic feet per minute [cfm]. This is the volume of the air when expanded to atmospheric pressure. Unless otherwise indicated, the air consumption figures stated are always for a pressure of 90–92 psi and the maximum consumption of the drive in question. Non-regulated air grinders have the highest consumption at idling speed. Centrifugal governors air grinders have their highest air consumption under full load.

3. Rotational speed
Rotational speed data is stated in revolutions per minute [RPM] and refers to the idling speed at a pressure of 91 psi. In the case of non-regulated power tools, the rotational speed under full load is approximately 50% of the idling speed. In the case of centrifugal-force-controlled power tools, the speed under full load is approximately 80 to 90% of the idling speed.

4. Oil mist lubrication
Adequate oil mist lubrication, when relevant, is of crucial importance for optimum machine operation (oil viscosity at 104°F (40°C) 0,03–0,05 in²/s (22–32 mm²/s) (cSt)).

5. Power tools for oil-free compressed-air operation
Power tools designated "oil-free" can be used without oil mist lubrication. Power tools which can operate with or without oil have a minimal reduction in rotational speed and power output when used without oil.

6. In-line fine filter
To ensure trouble-free machine operation, particularly with frequent connection and disconnection, we recommend using the appropriate in-line fine filter, filter size 5 µm.

7. Air supply hose
The air supply hose must have an inner diameter that at least corresponds to those stated for the power tools and if possible be up to 16 ft long.

8. Fittings
Always use additional fittings such as hose nozzles, self-closing valve couplings etc. with the largest possible inner diameter. It is not advisable to use more than one valve coupling in order to prevent pressure losses.

9. Noise level
Air tool operators must always wear hearing protection as the process noise emission exceeds 85 dB(A) in many applications, even though the idling noise of the air grinders is low.

10. Vibrations
PFERD air grinders meet the requirements of the EC Machinery Directive regarding vibrations from hand-held or hand-guided machines. This is achieved through:
- Precise concentricity.
- Vibration-damping intermediate layers.
- Vibration-insulated housings.

11. Maintenance and safety
We recommend maintenance of the power tools at regular intervals.

PGT 1/1000

100,000 RPM / 0.1 HP / 75 watts

Tool benefits:
- For fine milling, grinding and engraving work.
- Spindle bearing ensures high concentricity.
- Light, easy to handle.
- Holds like a pen.
- Front exhaust deflects chips.

Accessories included:
6.6′ air supply hose (with 1/4″ male threaded connection), 1/8″ collet EDP 93007 (collet group 1), 2 keys.

PFERDVALUE®:
EmissionFilter

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90002	PGT 1/1000	12.36	6.00	front	ring	62	13/64	0.53

Collets

Group 1	For shank diameter		
	3/32 inch	1/8 inch	3 mm
EDP number	93006	93007	93003

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
7 mm	2	93327

Replacement hose

Description	EDP number
Loose replacement hose with special coupling threads.	97028

In-line fine filter

Description	EDP number
SF 24 T8-IG 1/4	95512

See page 28.

Recommended PFERD products

Catalogue section 2	Catalogue section 3
Tungsten carbide burs up to 1/8″ diameter with 1/8″ shank diameter	**Mounted points** up to 1/4″ diameter with 1/8″ shank diameter

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

Comply with ANSI B7.1-2000 standards and OSHA regulations.

Tool benefits:
- Elastic suspended spindle for reduced vibration.
- Dead man's switch using safety lever valve.
- For fine milling, grinding and engraving work.
- Holds like a pen.
- Rear exhaust prevents oil and debris from blowing onto workpiece.

Accessories included:
1.1′ exhaust hose, 6.5′ air supply hose (without nozzle), 1/8″ collet EDP 93007 (collet group 1), 2 keys.

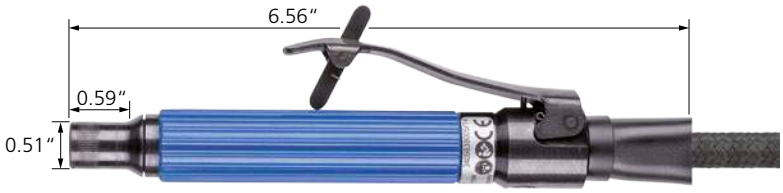
PFERDVALUE®:

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

1 Oil /min

PGAS 2/800 E-HV

80,000 RPM / 0.2 HP / 110 watts



EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90008	PGAS 2/800 E-HV	10.95	8.83	rear	lever	70	13/64	0.547

Collets

Group 1	For shank diameter		
	3/32 inch	1/8 inch	3 mm
EDP number	93006	93007	93003

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
8 mm	2	93328

In-line fine filter

Description	EDP number
SF 24 T8-T5	95513

See page 28.

Recommended PFERD products

Catalogue section 2	Catalogue section 3*
Tungsten carbide burs up to 1/8″ diameter with 1/8″ shank diameter	**Mounted points** up to 1/4″ diameter with 1/8″ shank diameter

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2″ shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Air grinders
Straight grinders

PGAS 3/440 HV

44,000 RPM / 0.3 HP / 250 watts

2 Oil /min

Tool benefits:
- Smallest and lightest straight grinder in this performance class.
- Slim and rugged design.
- Rear exhaust directs air and debris away from work.
- Ergonomic grip for optimum control, particularly in axial direction.

Accessories included:
2.5′ exhaust hose, 6.6′ air supply hose (without nozzle), 1/4″ collet EDP 93074 (collet group 6), 2 keys.

PFERDVALUE®:

HapticFilter

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90014	PGAS 3/440 HV	19.42	12.36	rear	lever	72	5/16	0.75

Collets

Group 6	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93067	93072	93074	93057	93062	93064

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
11 mm	1	93335
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Recommended PFERD products

Catalogue section 2	Catalogue section 4*	
Tungsten carbide burs up to 3/16″ diameter	**Mounted flap wheels** 3/8″ diameter	**Abrasive spiral bands** up to 1/2″ diameter
Catalogue section 3*	**Poliflex® finishing points** **Rubber bond** up to 1/4″ diameter	**POLICAP® abrasive caps** 3/16″ diameter
Mounted points up to 3/4″ diameter	**Leather bond** up to 3/8″ diameter	

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2″ shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Tool benefits:
- Compact design, convenient in use.
- Easy to handle, and to guide.
- Low vibration, protecting people, tools and machine.

Accessories included:
6,6' air supply hose (without nozzle), 1/4" collet EDP 93074 (collet group 6), 2 keys.

PFERDVALUE®:

HapticFilter

2 Oil /min

PG 3/380 HV

38,000 RPM / 0.3 HP / 220 watts

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90018	PG 3/380 HV	19.42	12.36	front	lever	78	5/16	0.68

Collets

Group 6	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93067	93072	93074	93057	93062	93064

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
11 mm	1	93335
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Recommended PFERD products

Catalogue section 2	Catalogue section 4*	
Tungsten carbide burs 3/16" to 1/4" diameter	**Abrasive spiral bands** 3/8" to 5/8" diameter	**Poliflex® finishing points** **Rubber bond** 1/4" diameter
Catalogue section 3*	**POLICAP® abrasive caps** 1/4", 9/32" diameter	**Leather bond** 1/2" diameter
Mounted points 1/2" to 1" diameter	**Mounted flap wheels** 3/8" diameter 1/8" shank diameter	

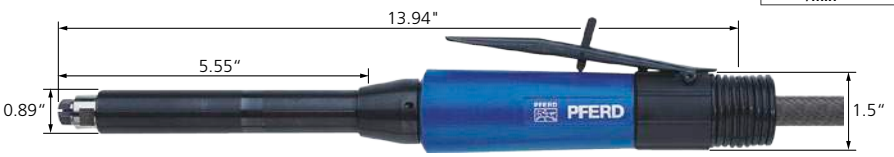
Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

PGAS 5/230 VE-HV

with oil: 23,000 RPM / 0.5 HP / 370 watts
without oil: 18,000 RPM / 0.5 HP / 340 watts



Tool benefits

- Ideal for fine grinding and polishing products.
- Extended shaft for reaching into tight spaces and long interiors.
- Can operate without oil; avoids oil contamination of workpiece and other surfaces, and reduces workplace emissions.
- Elastic suspended spindle results in comfortable grinding and extended product life.

Accessories included

2.5′ exhaust hose, 6.6′ air supply hose (without nozzle), 1/4″ collet EDP 93074 (collet group 6), 2 keys.

PFERDVALUE®:

Vibration Filter | Emission Filter | Waste Saving | Time Saving

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90035	PGAS 5/230 VE-HV	30.02	25.25	rear	lever	80	5/16	1.85

Collets

Group 6	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93067	93072	93074	93057	93062	93064

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
11 mm	1	93335
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Recommended PFERD products

Catalogue section 2

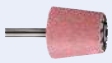
Tungsten carbide burs
1/4″ to 1/2″ diameter

Catalogue section 3*

Mounted points
1/2″to 1-5/8″ diameter

Catalogue section 4*

Abrasive spiral bands
up to 7/8″ diameter



Catalogue section 4*

POLICAP® abrasive caps
3/8″ diameter

Mounted flap wheels
5/8″ diameter
1/8″ shank diameter

Poliflex® finishing points
Rubber bond
3/8″ diameter

Leather bond
3/4″ to 5/8″ diameter

Catalogue section 4*

Felt polishing points
5/16″ to 1/4″ diameter

Catalogue section 6

Type 1 die grinder cut-off wheels
2″ diameter

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2″ shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Tool benefits:
- For fine milling and grinding work with good performance.
- Light and easy to handle, even using just one hand.
- High speed stability and power output.
- Low vibration protects user and workpiece.
- With guide sleeve, this is the optimal power tool for grinding with **EDGE cut TC burs!**

Accessories included:
6.6' air supply hose (without nozzle), 1/4" collet EDP 93074 (collet group 6), 2 keys.

For information on **EDGE cut burs** see catalogue "Carbide burs and bi-metal hole saws" (catalog section 2).

PFERDVALUE®:

HapticFilter

3 Oil /min

PG 3/210 HV

21,000 RPM / 0.3 HP / 220 watts

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90036	PG 3/210 HV	23.66	16.95	front	lever	81	5/16	0.95

Collets

Group 6	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93067	93072	93074	93057	93062	93064

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
11 mm	1	93335
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Guide plate and sleeve

Item no.	Plate outer diameter	Sleeve tip diameter	EDP number
1	2-3/8" / 60 mm	-	95295
2	-	1" / 25 mm	95294

Recommended PFERD products

Catalogue section 2

Tungsten carbide burs
1/4" to 5/8" diameter

EDGE cut

Catalogue section 3*

Mounted points
1" to 1-1/2" diameter

Catalogue section 4*

Abrasive spiral bands
7/8" to 1-1/8" diameter

Catalogue section 4*

POLICAP® abrasive caps
3/8" diameter

Mounted flap wheels
5/8" diameter
1/8" shank diameter

Poliflex® finishing points
Rubber bond
3/8" diameter

Leather bond
3/4" to 5/8" diameter

Felt polishing points
5/16" to 3/8" diameter

Catalogue section 6

Type 1 die grinder cut-off wheels
2" diameter

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

PGAS 5/40 V-HV

with oil: 4,000 RPM / 0.5 HP / 370 watts
without oil: 3,500 RPM / 0.5 HP / 340 watts

Tool benefits:
- High power output geared to lower speed.
- No oil residues on the workpiece.
- Ideal for fine grinding and polishing products.
- Safety lever throttle (HV) protects against inadvertent start-up.
- Rear exhaust with silencer.

Accessories included:
2.5′ exhaust hose and 6.6′ air supply hose (without nozzle), 1/4″ collet EDP 93074 (collet group 6), 2 keys.

PFERDVALUE®:
EmissionFilter

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90082	PGAS 5/40 V-HV	30.02	22.5	rear	lever	79	5/16	1.99

Collets

Group 6	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93067	93072	93074	93057	93062	93064

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
11 mm	1	93335
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Recommended PFERD products

Catalogue section 4*	Catalogue section 8
Coated & non-woven mounted flap wheels 3″ diameter	**Tube brushes**
POLICLEAN -PLUS® mounted wheels 2″ to 3″ diameter	**SINGLETWIST® end brushes**
Felt wheels 1-1/4″ to 1-3/4″ diameter	**M-BRAD® copper centre wheels** up to 3″ diameter
Felt polishing points 1″ to 1-1/4″ diameter	**Pencil end brushes**
	Circular end brush

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2″ shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Tool benefits:
- Smallest, high speed angle grinder in this performance class for industrial applications.
- Durable design, without angular gears.
- Adjustable side exhaust.

Accessories included:
- 0.98' exhaust hose, 6.6' air supply hose (without nozzle), 1/8" collet EDP 93012 (collet group 2), 2 keys.

1 Oil /min

PWSA 1/800

80,000 RPM / 0.1 HP / 75 watts

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90503	PWSA 1/800	8.83	6.36	rear	ring	78	13/64	0.28

Collets

Group 2	For shank diameter		
	3/32 inch	1/8 inch	3 mm
EDP number	93013	93012	93011

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
6 mm	1	93326
8 mm	1	93328

In-line fine filter

Description	EDP number
SF 24 T8 T5	95513

See page 28.

Recommended PFERD products

Catalogue section 2	Catalogue section 3*
Tungsten carbide burs up to 1/8" diameter with 1/8" shank diameter	**Mounted points** up to 1/4" diameter with 1/8" shank diameter

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

PWSA 3/220 HV

22,000 RPM / 0.3 HP / 250 watts

2 Oil /min

Tool benefits:
- Slim angle head for work in narrow workpieces.
- Long-life angle transmission.
- High spindle concentricity.
- Easy to handle, compact shape.

Accessories included:
2.5′ exhaust hose and 6.6′ air supply hose without nozzle, 1/4" collet EDP 93074 (collet group 6), 2 keys.

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90512	PWSA 3/220 HV	21.19	16.24	rear	lever	75	5/16	0.84

Collets

Group 6	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93067	93072	93074	93057	93062	93064

For dimensions see pages 62–63.

Keys

Width	Qty	EDP number
11 mm	1	93335
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

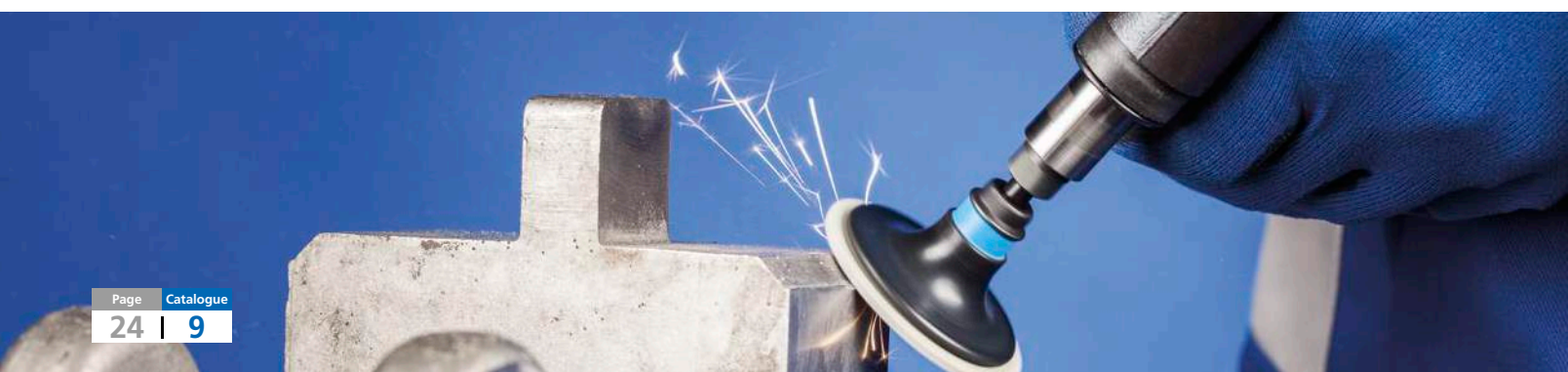
Recommended PFERD products

Catalogue section 2	Catalogue section 4*	
Tungsten carbide burs 1/4″ to 3/8″ diameter	**POLICAP® abrasive caps** 3/8″ diameter	**Felt polishing points** 5/16″ to 3/8″ diameter
Catalogue section 3*	**Mounted flap wheels** 3/4″ to 1″ diameter	**COMBIDISC® abrasive discs** 1-1/2″ to 2″ diameter
Mounted points 3/4″to 1-5/8″ diameter	**Poliflex® finishing points**	
Catalogue section 4*	**Rubber bond** up to 1/2″ diameter	
Abrasive spiral bands up to 1″ diameter	**Leather bond** up to 1″ diameter	

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2″ shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.



Tool benefits:
- Special 1/4-20 UNC spindle for mounting any COMBIDISC® product (use backing pad without shank).
- Flat angle head facilitates work in hard-to-reach areas.
- High torque.
- Easy to handle, compact shape.

Accessories included:
- 6.6′ air supply hose without nozzle, 1 key.

PFERDVALUE®:

HapticFilter

2 Oil /min

PW 3/120 HV

12,000 RPM / 0.3 HP / 220 watts

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Spindle thread	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90521	PW 3/120 HV	19.42	12.36	front	lever	1/4-20 UNC	79	5/16	0.86

Keys

Width	Qty	EDP number
11 mm	1	93335

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Extension for drive spindles

Description	EDP number	Use for
SPV 20 CD 1/4-20 UNC	95808	COMBIDISC® abrasive disc holder without threaded shank

Recommended PFERD products

Catalogue section 4

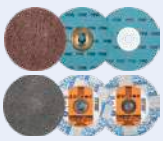
COMBIDISC® Mini-POLIFAN® discs
2″ to 3″ diameter

COMBIDISC® abrasive discs
1-1/2″ to 2″ diameter

COMBIDISC® diamond discs
1″ to 1-1/2″ diameter

COMBIDISC® non-woven discs
1-1/2″ diameter

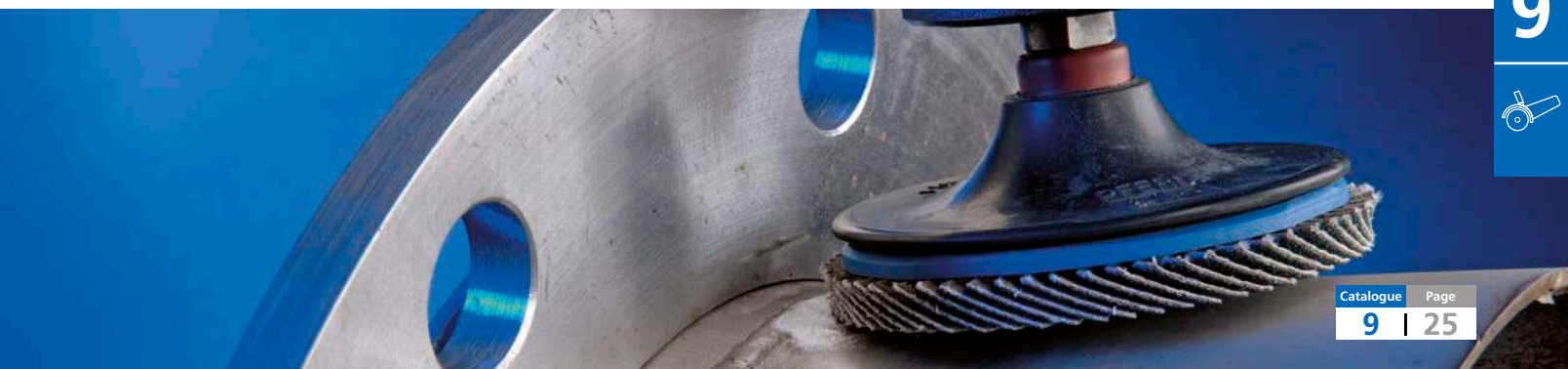
COMBIDISC® unitized discs
3″ diameter



Note: Product recommendations are based on general peripheral and rotational speeds.

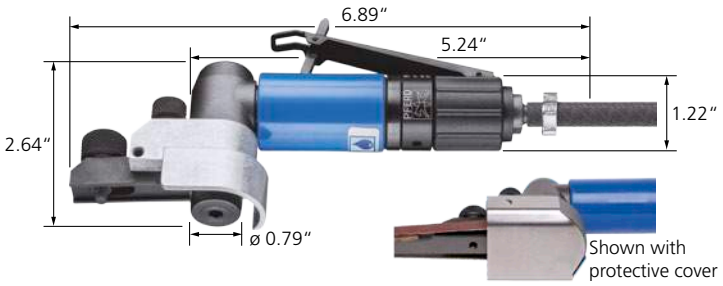
Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

Comply with ANSI B7.1-2000 standards and OSHA regulations.



PBS 3/200 HV oVA

20,000 RPM / 0.3 HP / 220 watts
Belt length 12" x width: 1/8"–3/8"



2 Oil /min

Tool benefits:
- Light, ergonomic one-handed belt grinder.
- Thin attachment arms allow work in cut outs, recesses and fillet welds, even on particularly small workpieces.
- Long-life angled transmission.
- Please order belt attachment arms separately.

Accessories included:
6.6' air supply hose (without nozzle), protective cover (EDP 95001), 3 keys.

PFERDVALUE®:
HapticFilter

EDP number	Description	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Belt speed [SFPM]	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90711	PBS 3/200 HV oVA	19.42	12.36	front	lever	4,134	79	5/16	1.10

Keys

Width	Qty	EDP number
3 mm	1	93302
5 mm	1	93304
14 mm	1	93340

In-line fine filter

Description	EDP number
SF 24 T8-T8	95514

See page 28.

Protective cover

Description	EDP number
SDVH-K	95001

Belt grinder attachment arms

- Durable, quality steel design.
- Use of the full roller width possible.
- Extremely slim fixtures on the roller.
- Asymmetrical arms for flush grinding.
- Belt arm can be rotated 360°.
- Belt tracking can be adjusted.
- BSVA 9/25-1 with conical guide roller (angle flat width 0.04").
- Belt length 12".

EDP number	Description	Width x roll dia. [Inches]	Width x roll dia. [mm]	Suitable belt width [Inches]	Use for	Photo
95006	BSVAK 9/25 x 305	0.35 x 0.98	8.8 x 25	1/8, 1/4, 3/8, 1/2	Finishing jobs, deburring, matting, fine grinding and seamless blending of inner radii/channels, especially on pipe couplings	
95005	BSVAK 9/25-1 x 305	0.35 x 0.98	8.8 x 25	1/8, 1/4, 3/8, 1/2	Finishing jobs in narrow inner radii/ channels, especially on pipe couplings made of stainless steel (INOX) with very small welded seams (TIG welding)	
95009	BSVAK 4/16 x 305	0.15 x 0.63	3.8 x 16	1/8, 1/4, 3/8	Leveling, deburring, matting, fine grinding, cleaning and seamless blending of stainless steel in narrow, small areas	
95008	BSVAK 9/9 x 305	0.35 x 0.35	8.8 x 9	3/8, 1/2	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on small areas	
95007	BSVAK 9/16 x 305	0.35 x 0.63	8.8 x 16	3/8, 1/2	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on small areas	

For further information and ordering data on abrasive and non-woven short belts, please refer to catalogue section 4.

Tool benefits:
- For engraving markings in metal, glass, plastics and even heat-treated tool steel (with fine needle).
- Patented pneumatic engraving pen working at about three times the frequency of competitive products.
- Frequency: 500–600 strokes/sec.
- Does not transmit harmful vibrations to the hand.

1 Oil /5min

Marking pen MST 31

Frequency: 30,000–36,000 strokes/min

Accessories included:
6.5′ air supply hose (with 1/4″ NPT female threaded connection), tungsten carbide engraving needle.

EDP number	Description	Needle gauge	Air consumption at idling speed [cfm]	Air consumption under load [cfm]	Exhaust direction	Throttle type	Sound level [dB(A)]	Air supply hose inner dia. [Inches]	Weight [lb]
90700	MST 31 F	fine	1.06	0.71	front	ring	62	5/32	0.33
90701	MST 31 M	medium	1.06	0.71	front	ring	62	5/32	0.33
90702	MST 31 G	coarse	1.06	0.71	front	ring	62	5/32	0.33

Replacement hose

Description	EDP number
Loose replacement hose with special coupling nipples, length: 6.6 feet	95200

In-line fine filter

Description	EDP number
SF 24 T8-IG 1/4	95512

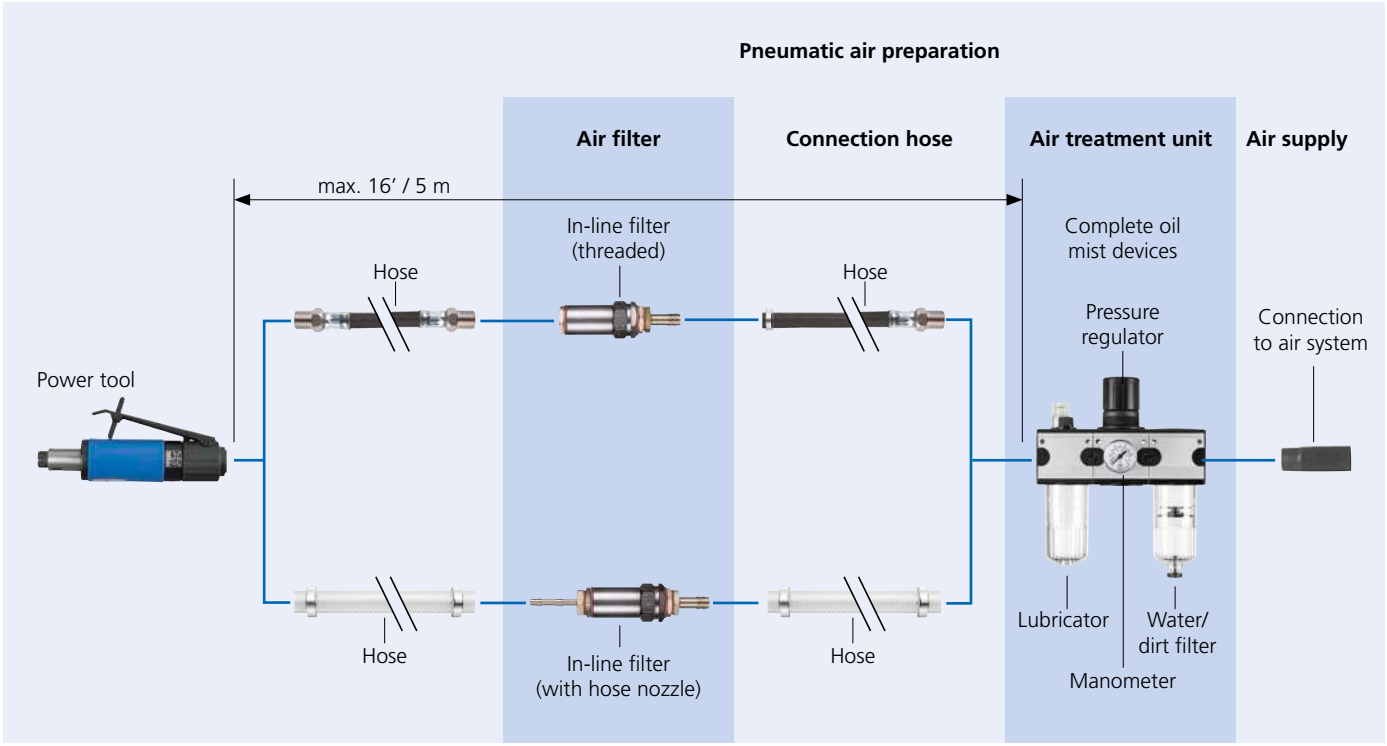
See page 28.

Replacement TC engraving needles for marking pens

Please order tungsten carbide replacement needles separately.
The fine needle is for engraving hardened surfaces such as heat-treated tool steels.
The coarse needle is for softer surfaces such as plastics and aluminum.

EDP number	Description	Needle gauge	Net weight [lb]
95500	Replacement needle, fine gauge	F (fine)	0.007
95501	Replacement needle, medium gauge	M (medium)	0.007
95502	Replacement needle, coarse gauge	G (coarse)	0.007

Optimal air supply system attachment



In-line filters

Use of an in-line fine filter combined with the recommended oiling frequency will extend your air tool maintenance cycles.

The filter reduces the amount of dirt particles in the supply air. The filter should be dismantled and cleaned on a regular basis.

EDP number	Description	Power tool side	Air supply hose dia.		Connection hose dia.		Pore size [µm]
			[Inches]	[mm]	[Inches]	[mm]	
95512	SF 24 T8-IG 1/4	1/4" threaded (female)	5/16	8	5/16	8	5
95513	SF 24 T8-T5	5 mm	13/64	5	5/16	8	5
95514	SF 24 T8-T8	8 mm	5/16	8	5/16	8	5
95515	SF 24 T9-T9	9 mm	23/64	9	23/64	9	5

PFERD

Electric grinders

9

Electric grinders
General information

Electric grinders are universal all-rounders. They offer a high power output in relation to their size and weight. They are particularly suitable for use with grinding tools that require a constant rotational speed.

Areas of application

Electric grinders can be used for nearly every application. They are used in many industries in different processes. The stepless electronic rotational speed control allows the use of various types of tools on one single tool drive. Electric grinders are not suitable for use in boiler construction and in very dusty conditions (especially work on aluminum).

The PFERD product range

PFERD provides a wide range of electric grinders: Micro motors, straight grinders, angle grinders, drum grinders, belt grinders as well as fillet weld grinders. PFERD electric grinders meet the highest technical standards and incorporate the latest ergonomic findings and requirements. They were specially developed for the economic application of grinding, milling, brushing, cut-off and polishing tools, and cover a wide rotational speed range (80,000–850 RPM) and power range (900–260 watts / 1.2–0.4 HP). PFERD electric grinders have an electronic speed control for constant rotational speed values.

Advantages

- Compact, ergonomic design.
- Low weight.
- Sophisticated.
- High-performance.
- Suitable for universal use.
- Simple power supply.
- Low-maintenance.
- Easy to service.
- Economical.

Equipment/special features

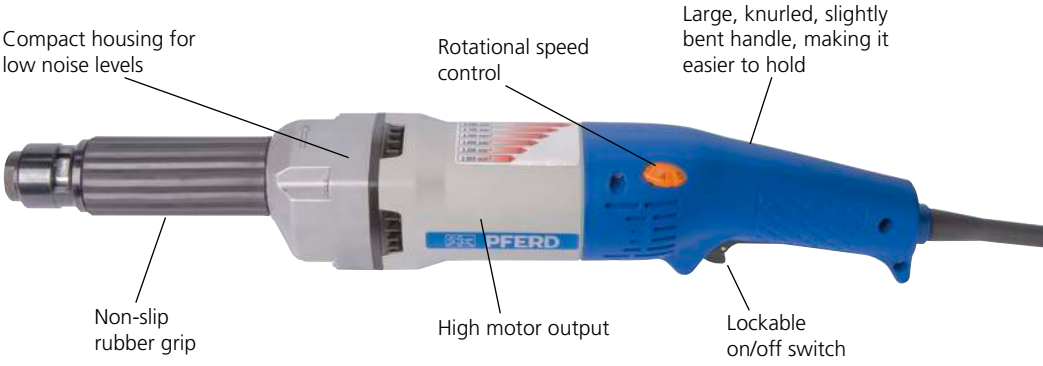
- **Smooth start-up:**
  The electronically regulated smooth start-up ensures a jolt-free start-up of the grinder.
- **Undervoltage protection/restart protection:**
  Should the power supply fail, PFERD electric grinders do not start up again inadvertently. The grinder will only restart after it has been switched off and on again.
- **Current limiting/blocking protection:**
  At double the nominal current input, the grinders switch off for approximately 0.2 seconds. By removing the load, the grinder is able to take up the initial rotational speed again.
- **Temperature overload protection:**
  When a critical temperature is reached, the safety electronic system switches to cooling mode. The grinder cannot be placed under loads when in cooling mode. The grinder will only start at the set operating speed after it has been switched off and on again.

Standards, safety, general guidelines

PFERD electric grinders:
- Bear the CE mark
- Are insulated and comply with protection class II
- Have safety extra-low voltage
- Are Protective grounding in accordance with protection class I

PFERD electric grinders comply with:
- EC Machinery Directive
- EC Low-Voltage Directive
- Electromagnetic Compatibility

National regulations must be observed.



Criteria for selecting the optimum electric grinder

The most important prerequisite for cost-effective work is the selection of the optimum tool. The appropriate tool drive is selected taking the following criteria into consideration:

1. Design, shape and size
Each type of application places specific demands on the shape and size of the tool drive. The different designs can be used for various applications: The ideal tool drive should be selected for the task at hand depending on the dimensions, accessibility, type and frequency of the application.

2. Rotational speed
The tool drive should always be selected according to the rotational speed and peripheral speed recommendations for the tool.
Please refer to catalogue sections 2–8 for these recommendations.

3. Power output
The drive's power output is the decisive factor for maintaining the rotational speed under load. The load is determined by the material to be machined, the cutting characteristics of the tool and the contact pressure.

4. Tool mounting
Depending on the PFERD tool selected, different tool mountings are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to pages 62–63 for an overview of collets and spindle extensions.
If you have any further questions, your personal PFERD sales representative will be happy to help you.

MIM STG3S 3/800

80,000–1,000 RPM / 0.5 HP / 350 watts

Tool benefits:

- Control device for stepless rotational speed control of micro motor handpieces.
- Rotational speed can be controlled by hand or foot switch.
- Max. 80,000 RPM clockwise rotation.
- Max. 30,000 RPM anti-clockwise rotation.
- 2 switchable connection sockets for micro motor handpieces.
- Programmable speed ranges with automatic handpiece recognition
- Protective grounding.
- Safety extra-low voltage.

Assembly according to application requirement.

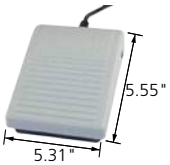
Accessories included:
6.6′ power cable, 2 handpiece supports.

PFERDVALUE®:

Noise Filter | Energy Saving

Vario foot switch* MIM FU-R

On/off foot switch MIM FU-E/A



Extension cable MIM VLK HAS/WZS 9.8′

EDP number	Description	For micro motor handpieces [RPM]	Voltage [volts] 50–60 Hz	Output voltage [volts]	Net weight [lb]
91531	MIM STG3S 3/800 115 V	80,000–1,000	115 V	50	6.570
91532	MIM FU-R	-	5 V	-	1.863
91533	MIM FU-E/A	-	5 V	-	0.683
91557	MIM VLK HAS/WZS 9.8′	-	-	-	0.335

*Vario = stepless rotational speed control

MIM HAS 3/800 SP1/8”

80,000–1,000 RPM / 0.5 HP / 350 watts

MIM HAS 2/600 SP1/8”

60,000–1,000 RPM / 0.4 HP / 260 watts

MIM HAS 3/600 SP1/8”

MIM HAS 1/500 SP1/8”

50,000–1,000 RPM / 0.4 HP / 260 watts

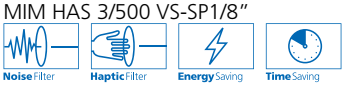
MIM HAS 3/500 VS-SP1/8”

Tool benefits:
- Start/stop switch on handpiece.
- Automatic speed limitation.
- Brushless motor.
- Start interlock without clamped tools.
- Very high concentricity speed.
- Extremely energy-efficient and quiet in comparison to air grinders.
- Safety extra-low voltage.
- SP = keyless fast clamping system. VS = with extended spindle.

Accessories included:
5.91’ handpiece cable length, 1/8" collet EDP 93257 (collet group 17), 2 keys.

PFERDVALUE®:
MIM HAS 3/800 SP1/8”

MIM HAS 2/600 SP1/8”,
MIM HAS 3/600 SP1/8”,
MIM HAS 1/500 SP1/8”,
MIM HAS 3/500 VS-SP1/8”



EDP number	Description	Rotational speed [RPM]	Low voltage [volts]	Power consumption [watts]	Power output [watts]	Collet group	Keys no.	Sound level [dB(A)]	Net weight [lb]
91540	MIM HAS 3/800 SP1/8”	80,000–1,000	50	350	approx. 180	17	4, 5	63	0.728
91535	MIM HAS 2/600 SP1/8”	60,000–1,000	36/50	260	150	17	4	60	0.573
91536	MIM HAS 3/600 SP1/8”	60,000–1,000	36/50	260	150	17	4, 5	60	0.694
91534	MIM HAS 1/500 SP1/8”	50,000–1,000	36/50	260	120	17	3, 4	60	0.595
91537	MIM HAS 3/500 VS-SP1/8”	50,000–1,000	36/50	260	150	17	4, 5	60	0.717

Keys

(3)
(4)
(5)

Item no.	Description	EDP number
3	SKS SW 1,5MM	93387
4	MIM SPS DK D7	93388
5	MIM ARS HA D23,5	93389

Collets

Group	For shank diameter and EDP number				
	1/8 inch	1/4 inch	2.35 mm	3 mm	6 mm
17	93257	-	93256	93255	-

For dimensions see pages 62–63.

Tool benefits:
- Start/stop switch on handpiece.
- Automatic speed limitation.
- Brushless motor.
- Very high concentricity speed.
- Extremely energy-efficient and quiet in comparison to air grinders.
- Safety extra-low voltage.
- S = changing tools with 2 keys.

Accessories included:
5.91′ handpiece cable length, 1/8″ collet EDP 93267 (collet group 18), EDP 93277 (collet group 19 or 1/4″ collet EDP 93279 (collet group 19), 2 keys.

PFERDVALUE®:

NoiseFilter HapticFilter EnergySaving

MIM HAS 3/600 S1/8″

60,000–1,000 RPM / 0.4 HP / 260 watts

MIM HAS 3/600 S1/4″

MIM WZS 3/300 90° S1/8″

30,000–1,000 RPM / 0.4 HP / 260 watts

MIM WZS 3/300 45° S1/8″

EDP number	Description	Rotational speed [RPM]	Low voltage [volts]	Power consumption [watts]	Power output [watts]	Collet group	Keys no.	Sound level [dB(A)]	Net weight [lb]
91538	MIM HAS 3/600 S1/8″	60,000–1,000	36/50	260	150	19	2, 7	60	0.866
91539	MIM HAS 3/600 S1/4″	60,000–1,000	36/50	260	150	19	2, 7	60	0.893
91541	MIM WZS 3/300 90° S1/8″	30,000–1,000	36/50	260	120	18	1, 6	61	0.525
91542	MIM WZS 3/300 45° S1/8″	30,000–1,000	36/50	260	120	18	1, 6	61	0.408

Keys

(1) (2) (6) (7)

Item no.	Description	EDP number
1	MIM ARH	93385
2	DM SW 10/10MM	93386
6	DM SW 4/4MM	93390
7	MIM-DSTS SW11XD2,4MM	93391

Collets

Group	For shank diameter and EDP number				
	1/8 inch	1/4 inch	2.35 mm	3 mm	6 mm
18	93267	-	93266	93265	-
19	93277	93279	93278	93276	93275

For dimensions see pages 62–63.

Electric grinders
Micro motor system

Tool mounting	Rot. speed	Power tools	Catalogue section 2	Catalogue section 3*	Catalogue section 4*		Catalogue section 8
Rot. speed range			**13,000–80,000 RPM**	**25,000–80,000 RPM**	**2,000–80,000 RPM**		**1,200–15,000 RPM**
Diameter 1/8"	**1,000–80,000 RPM**	**MIM HA 3/800 SP1/8"**	**Tungsten carbide burs Double, diamond, ALU, INOX, MICRO** Diameter up to 1/8" Shank diameter 1/8"	**Mounted points** Shank diameter 1/8": Diameter up to 3/16" Diameter 3/16" to 1/4" Width ≤ 1/2" Diameter 1/4" to 3/8" Width ≤ 3/8"	**Poliflex® finishing points** Shank diameter 1/8" Bonds: **Rubber bond** Diameter up to 5/32" **Leather bond** Diameter up to 1/4"		**Miniature stem mounted end brushes** Diameter 3/16" **Miniature stem mounted wheel brushes** Diameter 5/8" to 1" **Miniature stem mounted cup brushes** Diameter 9/16"
Rot. speed range			**13,000–60,000 RPM**	**25,000–60,000 RPM**	**2,000–60,000 RPM**		**1,200–15,000 RPM**
Diameter 1/8"	**1,000–60,000 RPM**	**MIM HAS 2/600 SP1/8" MIM HAS 3/600 SP1/8" MIM HAS 3/600 S1/8"**	**Tungsten carbide burs Double, diamond, ALU, INOX, MICRO** Diameter up to 1/4" Shank diameter 1/8"	**Mounted points** Shank diameter 1/8": Diameter 1/8" to 3/8" Width ≤ 5/8" Diameter 7/16" to 1" Width ≤ 1/4"	**POLICAP®** Diameter up to 1/2" Shank diameter 1/8" **Felt points** Diameter up to 3/4" Shank diameter 1/8"	**Mounted flap wheels** Diameter up to 1" Shank diameter 1/8" **Poliflex® finishing points** Diameter up to 3/8" Shank diameter 1/8"	**Miniature stem mounted end brushes** Diameter 3/16" **Miniature stem mounted wheel brushes** Diameter 5/8" to 1" **Miniature stem mounted cup brushes** Diameter 9/16"
	1,000–50,000 RPM	**MIM HAS 1/500 SP1/8" MIM HAS 3/500 VS-SP1/8"**					
	1,000–30,000 RPM	**MIM WZS 3/300 90° S1/8" MIM WZS 3/300 45° S1/8"**					
Rot. speed range			**13,000–60,000 RPM**	**25,000–60,000 RPM**	**2,000–60,000 RPM**		**7,000–15,000 RPM**
Diameter 1/4"	**1,000–60,000 RPM**	**MIM HAS 3/600 S1/4"**	**Tungsten carbide burs Double, diamond, ALU, INOX, STEEL, CAST, MICRO** Diameter up to 1/4"	**Mounted points** Shank diameter 1/4": Diameter 1/8" to 5/8" Width ≤ 1-37/64"	**POLICAP®** Diameter up to 5/8" **Felt points** Diameter up to 1" **Felt wheels** Diameter up to 1-3/4" **Abrasive spiral bands and rubber drum holders** Diameter up to 1-1/8"	**Mounted flap wheels** Diameter up to 1" **POLINOX® cross buffs** Diameter up to 1-1/2" **Mounted felt flap wheels** Diameter up to 1" **Poliflex® finishing points** Diameter up to 5/8"	**Stem mounted end brushes** crimped Diameter 1/2" to 3/4" knotted Diameter 1/2" to 3/4" **Stem mounted wheel brushes** crimped Diameter 1/2"

If no shank diameter is given, the shank diameter of 1/4" 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 peripheral speeds and the max. permitted rotational speeds in catalogue sections 2–8. Do not exceed max RPM of the tool.

Tool benefits:
- Powerful, easy to handle.
- Digital electronic speed control ensures constant RPM even under load.
- Soft start feature protects people, tools and machine.
- Restart protection on power failure.
- Electronic shutdown device deactivates motor in case of extreme overload.
- Side switch for maximum ease of use.
- Sturdy, maintenance friendly design.

Accessories included:
10' power cable, 1/4" collet EDP 93182 (collet group 11), 2 keys.

PFERDVALUE®:

Haptic Filter | Energy Saving

UGER 5/250 SI 120 V ⊡

25,000–11,000 RPM / 0.4 HP / 300 watts

EDP number	Description	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Sound level [dB(A)]	Weight [lb]
91005	UGER 5/250 SI 120 V	25,000–11,000	120	500	300	4.6	73	2.98

Collets

Group 11	For shank diameter					
	3/32 inch	1/8 inch	1/4 inch	3 mm	6 mm	8 mm
EDP number	93174	93179	93182	93157	93163	93166

For dimensions see table see pages 62–63.

Keys

Width	Qty	EDP number
14 mm	1	93340
18 mm	1	93370

Recommended PFERD products

Catalogue section 2	Catalogue section 4*	Catalogue section 8
Tungsten carbide burs 1/4" to 3/4" diameter	**Felt polishing points** 5/16" to 9/16" diameter	**Copper centre wheels** up to 3" diameter
Catalogue section 3*	**Abrasive spiral bands** 5/8" to 2" diameter	**Stem mounted crimped wheel brushes** up to 3" diameter
Mounted points 3/4" to 2" diameter	**Catalogue section 6**	**Stem mounted crimped end brushes** up to 1/2" diameter
Catalogue section 4*	**Type 1 die grinder cut-off wheels**	**Miniature brushes**
POLICAP® abrasive caps 3/8" to 5/8" diameter		**Pilot bonding brushes**
Mounted flap wheels 5/8" to 1-3/8" diameter		
Poliflex® finishing points 5/16" to 1" diameter		

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Electric grinders
Straight grinders

UGER 15/60 SI 120 V ☐

5,900–2,800 RPM / 1.2 HP / 900 watts

Tool benefits:
- For heavy milling and grinding work.
- Stepless RPM adjustment.
- High torque.
- Digital electronic for a constant RPM.
- Smooth start-up for the protection of people, tools and machine.
- Restart protection on power failure.
- Electronic shutdown device deactivates motor in case of extreme overload.

Accessories included:
10' power cable, 1/2" collet EDP 93218 (collet group 12), 2 keys.

PFERDVALUE®:

Energy Saving

EDP number	Description	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Sound level [dB(A)]	Weight [lb]
91016	UGER 15/60 SI 120 V	5,900–2,800	120	1,340	900	12	86	6.72

Collets

Group 12	For shank diameter						
	1/4 inch	3/8 inch	1/2 inch	6 mm	8 mm	10 mm	12 mm
EDP number	93211	93215	93218	93196	93199	93201	93203

For dimensions see table see pages 62–63.

Keys

Width	Qty	EDP number
22 mm	2	93380

Recommended PFERD products

Catalogue section 4*		Catalogue section 8
POLIROLL cartridge rolls 1" diameter	**POLICLEAN PLUS® mounted wheels** 3" to 6" diameter	**SINGLETWIST® end brushes**
Mounted flap wheels 2-1/2" to 3" diameter	**Felt polishing points** 9/16" to 1-1/4" diameter	**M-BRAD® copper centre wheels** up to 3" diameter
Unmounted flap wheels 4" to 8" diameter	**Felt wheels** 1-1/4" to 2-1/4" diameter	**Composite mounted disc brushes**
POLINOX® mounted flap wheels 2" to 4" diameter	**Cloth rings** 3" to 4" diameter	**Pencil end brushes**
POLINOX® unitized wheels 3" to 6" diameter		

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Tool benefits:
- For grinding and finishing work using COMBIDISC® products (use backing pad without shank).
- High output, convenient to use.
- Spindle with 1/4"-20 UNC thread.
- Digital electronic speed control ensures constant RPM even under load.
- Restart protection on power failure.

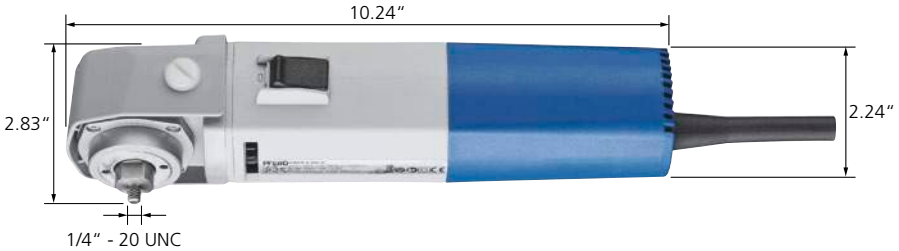
Accessories included:
10' power cable,1 key.

PFERDVALUE®:

Haptic Filter | Energy Saving

UWER 5/200 SI 120 V ⊡

20,000–9,000 RPM / 0.4 HP / 300 watts



EDP number	Description	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Spindle thread	Max. amps	Sound level [dB(A)]	Weight [lb]
91200	UWER 5/200 SI 120 V	20,000–9,000	120	500	300	1/4-20 UNC	4.6	83	2.98

Keys

Width	Qty	EDP number
14 mm	1	93340

Extension for drive spindles

EDP number	Description	Use for
95808	SPV 20 CD 1/4-20 UNC	COMBIDISC® abrasive disc holder without threaded shank

Recommended PFERD products

Catalogue section 4

COMBIDISC® Mini-POLIFAN® discs
2" to 3" diameter

COMBIDISC® abrasive discs
1" to 2" diameter

COMBIDISC® diamond discs
1" to 1-1/2" diameter

COMBIDISC® non-woven discs
surface conditioning, hard type
1-1/2" diameter

COMBIDISC® unitized discs
2" to 3" diameter

Note: Product recommendations are based on general peripheral and rotational speeds.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

Comply with ANSI B7.1-2000 standards and OSHA regulations.

Electric grinders
Linear finishing tool

UWER 15/35 SI D19 120 V ⧈

3,500–850 RPM / 1.2 HP / 900 watts

Tool benefits:
- Low speed burnisher with stepless RPM adjustment.
- Ideal for creating linear scratch patterns on large surfaces.
- Drive spindle includes 5/8-11 thread and spindle extension with two keyways for increased force transmission; Easy mounting of drums with either threaded or keyed arbor holes.
- Electronic speed regulation for constant RPM even under load.
- Smooth start-up for the protection of people, tools and machine.
- Restart protection on power failure.
- Electronic shutdown device deactivates motor in case of extreme overload.
- Spindle lock for easy tool change.

Accessories included:
10' power cable, quick mounting screw, hand guard, lateral handle, removable drive spindle, 1 key.

PFERDVALUE®:

Energy Saving

EDP number	Description	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. Amps	Sound level [dB(A)]	Max. drum diameter [Inches]	Max. drum width x arbor hole [Inches]	Drive spindle [Inches]	Weight [lb]
91217	UWER 15/35 SI D19 120 V	3,800–850	120	1,340	900	12	86	5	4 x 3/4	3/4 x 3.9	6.61

Keys

Width	Qty	EDP number
17 mm	1	93350

5/8-11 direct attachment

Direct mounting of threaded drum tools possible.
3/4" x 3.9" spindle attachment
Spindle 5/8" (EDP 97969)
Keyway (EDP 97705)

Linear finishing kit
UWER 15/35 SI TK 120 V
For further product and ordering information for this kit (EDP 49999), please see catalogue section 4.

Recommended PFERD products

Catalogue section 4		Catalogue section 8
POLINOX® finishing drums 5/8-11 hub and keyed arbor hole 	**Pneumatic drum for belts** with threaded spindle extension 5/8-11 	**Drum brushes** keyed arbor hole 
Flap drums keyed arbor hole 	**Coated and non-woven belts** with pneumatic drum for belts 	
	Buffing drums keyed arbor hole 	

Note: Product recommendations are based on general peripheral and rotational speeds.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

Comply with ANSI B7.1-2000 standards and OSHA regulations.

Tool benefits:
- Stepless speed variation.
- Digital electronic speed control ensures constant RPM even under load.
- Soft start feature protects mechanical and electronic components.
- Restart protection on power failure.
- Electronic overload shut-off feature.
- Belt grinder attachment is pivotable on the machine and allows flexible adjustment to individual working situations.
- Sturdy, easy maintenance machine.

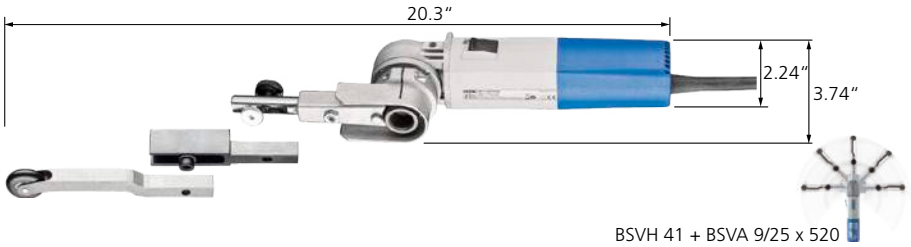
Accessories included:
10' power cable, 1 key.

PFERDVALUE®:

Energy Saving

UBS 5/100 SI oVA 120 V

10,000–4,000 RPM / 0.4 HP / 300 watts
Belt lengths: 520 (610*) mm x width: 3–20 mm



BSVH 41 + BSVA 9/25 x 520

For further information and ordering data on abrasive and non-woven belts, please refer to our catalogue section 4.

EDP number	Description	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Sound level [dB(A)]	Weight [lb]
91410	UBS 5/100 oVA SI 120 V	10,000–4,000	120	500	300	4.6	77	3.97

Keys

Width	Qty	EDP number
4 mm	1	93303

Protective cover

Description	EDP number
SDVH-G	95017

Adapter

Description	EDP number
BSAD 41/36 x 610	95016

Belt grinder attachment arms

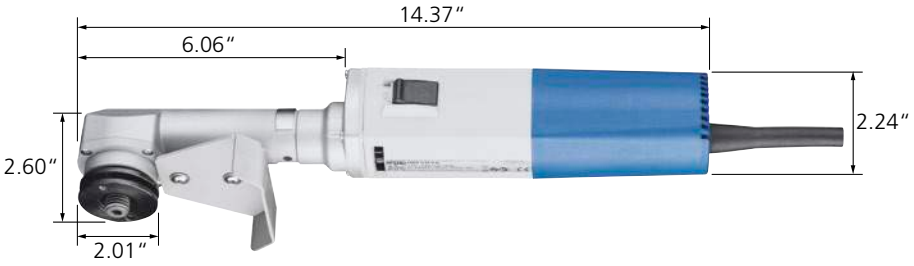
- Durable, quality steel design.
- Use of the full roller width possible.
- Extremely slim fixtures on the roller.
- Asymmetrical arms for flush grinding.
- Belt arm can be rotated 360°.
- Belt tracking can be adjusted.
- BSVA 9/25-1 with conical guide roller (angle flat width 0.04").
- Belt length 20-1/2" (24" with BSAD adapter).

EDP number	Description	Width x roll dia. [Inches]	Width x roll dia. [mm]	Suitable belt width [Inches]	Use for	Photo
95020	BSVA 9/25 x 520	0.35 x 0.98	9 x 25	1/8, 1/4, 3/8, 1/2, 5/8	Finishing jobs, deburring, matting, fine grinding and seamless blending of inner radii/channels, especially on pipe couplings	
95021	BSVA 9/25-1 x 520	0.35 x 0.98	9 x 25	1/8, 1/4, 3/8, 1/2	Finishing jobs in narrow inner radii/ channels, especially on pipe couplings made of stainless steel (INOX) with very small welded seams (TIG welding)	
95018	BSVA 4/16 x 520	0.15 x 0.63	4 x 16	1/4	Leveling, deburring, matting, fine grinding, cleaning, blending of stain-less steel in narrow, small areas	
95019	BSVA 9/16 x 520	0.35 x 0.63	9 x 16	1/2	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on small areas	
95022	BSVA 12/19 x 520	0.45 x 0.75	12 x 19	1/2, 5/8	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on wide areas	
95023	BSVA 18/23 x 520	0.71 x 0.91	18 x 23	3/4	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on wide convex surfaces	

Electric grinders
Fillet weld grinder

KNER 5/34 V-SI

3,400–1,500 RPM / 0.4 HP / 300 watts



Tool benefits:
- Designed for use with products up to 6″ in diameter for fine grinding and finishing of fillet welds.
- Great for work with radial products in corners and narrow spaces.
- Stepless rotational speed adjustment.
- Digital regulation for constant rotational speed.
- Overload protection.
- Restart protection in case of power failure.
- Light, very easy to handle, good power output.

Accessories included:
10′ power cable, mounting flanges, hand guard, 3 keys.

PFERDVALUE®:

HapticFilter EnergySaving

EDP number	Description	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Spindle thread	Fits arbor hole [Inches]	Sound level [dB(A)]	Weight [lb]
91235	KNER 5/34 V-SI 120 V	3,400–1,500	120	500	300	4.6	5/8-11 UNC	7/8″, 1″	77	3.53

Clamping flanges

Description	EDP number
Backing flange WSPF 5/8″	97974
Clamping nut SPM 5/8″	97975

Keys

Width	Qty	EDP number
5 mm	1	93304
5 mm	1	93395
4 mm	1	93312

Recommended PFERD products

Catalogue section 4*	
POLINOX® unitized wheels 6″ diameter	**Felt flap discs** 4-1/2″–5″ diameter
POLIVLIES® flap discs 5″ diameter with 7/8″ arbor hole	**POLINOX® unmounted flap wheels with thread** 4″–5″ diameter

Note: Product recommendations are based on general peripheral and rotational speeds.
Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

PFERD

Flexible shaft drives

9

Flexible shaft drives
General information

Flexible shaft drives are multi-speed machines. They cover a wide rotational speed range and can be steplessly adjusted electronically to match individual tool requirements. Flexible shaft drives have very high drive outputs. They can also be used with compact handpieces or extensions to work in difficult-to-reach areas.

Areas of application

Flexible shaft drives can be used for almost all jobs. They are used successfully in many industrial sectors for different processes. The rotational speed control allows the use of various tools on one single drive.

The PFERD product range

PFERD offers various types of flexible shaft drives, as well as a comprehensive range of matching flexible shafts, handpieces, angle drives, drum drives and special drives.

PFERD flexible shaft drives and their accessories are extremely robust, technically up to date and incorporate the latest ergonomic findings and requirements. This product range was developed especially for the economic use of grinding, milling, brushing, cut-off and polishing tools and covers a wide rotational speed range (24,000–100 RPM) and power range 0.4 to 2.0 HP (1,500–300 watts).

Advantages:

- Very compact and ergonomic handpieces.
- Very low weight of the handpieces.
- Drives that are very robust and designed for continuous use (Mammoth drives).
- Sophisticated.
- Very high performance.
- Highly versatile.
- Simple power supply.
- Low-maintenance.
- Easy to service.
- Economical.

Standards, safety, general guidelines

Electrical safety
PFERD flexible shaft drives comply with the standard "Safety for Hand-Guided Motor-Driven Electric Tools".

1. Grounded electric drives (protection class I)
This design is indicated by the protective grounding ⏚ sign:
- MEW 18/240 (EDP 92013) (page 47)

2. Insulated electric grinders (protection class II)
This design is indicated by the insulation sign ⧈ and the supplement "SI":
- RUER 5/250 SI 120 V (EDP 92201) (page 44)
- RUER 10/250 SI 120 V (EDP 92205) (page 45)
- RUER 15/30 SI 120 V (EDP 92210) (page 46)

Criteria for selecting the optimum flexible shaft drive

The most important prerequisite for cost-effective work is the selection of the optimum tool. The appropriate tool drive is selected taking the following criteria into consideration:

1. Design, shape and size
Each type of application places specific demands on the shape and size of the tool drive. The different designs can be used for various applications. The ideal tool drive should be selected for the task at hand depending on the dimensions, accessibility, type and frequency of the application.

2. Rotational speed
The tool drive should always be selected according to the rotational speed and peripheral speed recommendation for the tool. Please refer to catalogue sections 2–8 for this recommendation.

3. Power output
The drive's power output is the decisive factor for maintaining the rotational speed under load. The load is determined by the stock removal properties of the material to be machined, the cutting characteristics of the tool, the tool diameter, the contact surface and the contact pressure.

4. Tool mounting
Depending on the PFERD tool selected, different tool mountings are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to pages 62–63 for an overview of the collets and drive spindle extensions.

If you have any further questions, your personal PFERD sales representative will be happy to help you.

Flexible shafts (BW)

Flexible shafts consist of three components which can be combined in different ways:

Flexible core (SE)
The flexible core consists of 4 to 10 layers of wire, conforming to DIN 2076, and is specially designed for high-speed clockwise rotation. The coupling is securely press-fitted to the core. After approximately 100 operating hours, the core of the flexible shaft must be re-lubricated. The core and casing must be degreased and new special shaft grease must be applied to the core.

Flexible casing (SCH)
The flexible casing consists of oil-resistant rubber; the interior being a flat steel spiral and the outside being solid rubber. The connection couplings are pressed on firmly and encased in a rubber sheath as reinforcement.

Handpiece (HA)
The handpieces are light and easy to handle in relation to their power output transmission, and cover a wide rotational speed range. Because of low noise emission, continuous operation with little fatigue is possible. Replaceable collets allow various tools to be mounted. The sliding coupling allows quick handpiece changes.

Repair
It is not possible to repair cores and flexible casings. We recommend replacement with pre-assembled new parts.

Radius of curvature
When using flexible shafts, please ensure that the shafts are not bent beyond the specified radius of curvature. The smallest possible radius of curvature is given for each flexible shaft.

Flexible shaft drives
Portable variable speed machines

RUER 5/250 SI 120 V ☐

25,000–11,000 RPM / 0.4 HP / 300 watts

Tool benefits:
- High output for fine milling, grinding and polishing tasks. Lightweight, slim handpieces allow comfortable use.
- Stepless speed variation.
- Digital electronic speed control ensures constant RPM even under load.
- Protected by tube frame in any position.
- Soft start feature protects mechanical and electronic components.
- Restart protection on power failure.
- Electronic overload shut-off.

Accessories included:
10' power cable, 2 keys (EDP 93312).

Supplied without flexible shaft, please order separately (see below for information).

PFERDVALUE®:

Energy Saving | Time Saving

❶ Flexible shaft drive + ❷ flexible shaft + ❸ handpiece

❶ Flexible shaft drive

EDP number	Description	Dimensions L x W x H [Inches]	Flexible shaft connection [DIN]	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Sound level [dB(A)]	Weight [lb]
92201	RUER 5/250 SI 120 V	11.22 x 2.24 x 4.02	10	25,000–11,000	120	500	300	4.6	73	4.72

❷ Flexible shafts

EDP number	Description	Suitability rating	Speed range [RPM]	Maximum power output* [watts]	Tool connection [DIN]	Handpiece connection	Included handpiece	Catalogue detail page
94001	BW 4 ZG DIN 10	high	24,000–40,000	500–300	10	G16	94301	51
94005	BW 6 ZG DIN 10	high	10,000–25,000	1,500–750	10	G16	94301	51
94015	BW 7 ZGU DIN 10	medium	12,000–25,000	1,760–880	10	G22	94315	53

*Please refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety.

❸ Handpieces

EDP number	Description		Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94301	HA 4 ZGB G16	straight handpiece	40,000	G16	1/4"	60	
94351	WZ 4 A G16	angle handpiece (90°)	20,000	G16	1/8"	60	
94315	HA 7 ZGA G22	straight handpiece	25,000	G22	1/4"	60	
94375	WZ 7 45° G22	angle handpiece (45°)	17,100	G22	1/4"	60	
94355	WZ 7 B G22	angle handpiece (90°)	17,100	G22	1/4"	60	
94385	WT 7 E M 14 G22	angle grinder drive	25,000	G22	M14 thread	60	

RUER 10/250 SI 120 V ⊡

25,000–11,000 RPM / 0.9 HP / 660 watts

Tool benefits:
- Designed for use in tool, die and mold making, precision mechanics and DIY applications.
- Stepless speed variation.
- Digital electronic speed control ensures constant RPM even under load.
- Protected by tube frame in any position.
- Soft start feature protects mechanical and electronic components.
- Electronic overload shut-off.

Accessories included:
- 10' power cable, 2 keys (EDP 93312).

Supplied without flexible shaft, please order separately (see below for information).

PFERDVALUE®:

Energy Saving Time Saving

❶ Flexible shaft drive + ❷ flexible shaft + ❸ handpiece

❶ Flexible shaft drive

EDP number	Description	Dimensions L x W x H [Inches]	Flexible shaft connection [DIN]	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Sound level [dB(A)]	Weight [lb]
92205	RUER 10/250 SI 120 V	11.81 x 2.95 x 5.51	10	25,000–11,000	120	1,050	660	9.5	84	6.86

❷ Flexible shafts

EDP number	Description	Suitability rating	Speed range [RPM]	Maximum power output* [watts]	Tool connection [DIN]	Handpiece connection	Included handpiece	Catalogue detail page
94001	BW 4 ZG DIN 10	medium	24,000–40,000	500–300	10	G16	94301	51
94005	BW 6 ZG DIN 10	medium	10,000–25,000	1,500–750	10	G16	94301	51
94015	BW 7 ZGU DIN 10	high	12,000–25,000	1,760–880	10	G22	94315	53
94020	BW 10 ZG DIN 10	medium	750–18,000	2,450–140	10	G28	94320	55

*Please refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety.

❸ Handpieces

EDP number	Description		Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94301	HA 4 ZGB G16	straight handpiece	40,000	G16	1/4"	60	
94351	WZ 4 A G16	angle handpiece (90°)	20,000	G16	1/8"	60	
94315	HA 7 ZGA G22	straight handpiece	25,000	G22	1/4"	60	
94375	WZ 7 45° G22	angle handpiece (45°)	17,100	G22	1/4"	60	
94355	WZ 7 B G22	angle handpiece (90°)	17,100	G22	1/4"	60	
94385	WT 7 E M 14 G22	angle grinder drive	25,000	G22	M14 thread	60	
94320	HA 10 ZGE G28	straight handpiece	18,000	G28	1/4"	60	
94380	WZ 10 45° G28	angle handpiece (45°)	17,100	G28	1/4"	60	
94360	WZ 10 B G28	angle handpiece (90°)	17,100	G28	1/4"	60	

Flexible shaft drives
Portable variable speed machines

RUER 15/30 SI 120 V ⊡

3,000–1,400 RPM / 1.2 HP / 900 watts

Tool benefits:
- High torque, low speed machine for heavy milling and grinding.
- Stepless speed variation.
- Digital electronic speed control ensures constant RPM even under load.
- Protected by tube frame in any position.
- Soft start feature protects mechanical and electronic components.
- Restart protection on power failure.
- Electronic overload shut-off.

Accessories included:
10' power cable, 2 keys (EDP 93312).

Supplied without flexible shaft, please order separately (see below for information).

PFERDVALUE®:

Energy Saving

❶ Flexible shaft drive + ❷ flexible shaft + ❸ handpiece

❶ Flexible shaft drive

EDP number	Description	Dimensions L x W x H [Inches]	Flexible shaft connection [DIN]	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. amps	Sound level [dB(A)]	Weight [lb]
92210	RUER 15/30 SI 120 V	15.35 x 2.95 x 5.51	10	3,000–1,400	120	1,340	900	12	86	8.27

❷ Flexible shafts

EDP number	Description	Suitability rating	Speed range [RPM]	Maximum power output*[1] [watts]	Tool connection [DIN]	Handpiece connection	Included handpiece	Catalogue detail page
94264	BW 4 PST-T DIN 10/M4	high	7,650– 1,500	special*[2]	10	-	-	56
94274	BW 7 PST-T DIN 10/M5	high	4,250– 1,500	special*[2]	10	-	-	56
94020	BW 10 ZG DIN 10	high	18,000– 750	2,450–140	10	G28	94320	55

*[1] Please refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety.
*[2] Only for use with POLISTAR-TUBE abrasive stars, POLINOX® cross buffs, and threaded nylon tube brushes.

❸ Handpieces

EDP number	Description		Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94320	HA 10 ZGE G28	straight handpiece	18,000	G28	1/4"	60	
94380	WZ 10 45° G28	angle handpiece (45°)	17,100	G28	1/4"	60	
94360	WZ 10 B G28	angle handpiece (90°)	17,100	G28	1/4"	60	
94330	HA 12 ZGA G28	straight handpiece	18,000	G28	1/2"	60	
94418	FSH G28	rigid extension (can be bent up to 40°)	12,000	G28	1/4"	60	

Mammoth Electronic MEW 18/240

24,000-100 RPM / 2.0 HP / 1,500 watts

Tool benefits:
- With max. rotational speed 24,000 RPM.
- Most powerful and stable torque.
- Stepless rotational speed control.
- Overload protection.
- Smooth start-up to protect people, tools and the drive.
- Restart protection in case of power failure.
- Very low noise generation.
- Removable operating console with possibility of extension, e.g. hanging design for work in boilers.
- High torque, even within low rotational speed ranges.
- Easy to service, easy-to-remove housing with four main modules.

Accessories included:
13.12' power cable with plug, 2 keys (EDP 93312).
The drive is supplied without flexible shaft, please order separately (see below for information).

PFERDVALUE:
Energy Saving | Waste Saving | Time Saving

EDP number	Description	Dimensions L x W x H [Inches]	Flexible shaft connection [DIN]	Rotational speed [RPM]	Voltage 50–60 Hz	Power consumption [watts]	Power output [watts]	Weight [lb]
92013	MEW 18/240 240V	17.52 x 7.87 x 12.60	10	24,000–100	200–240	2,000	1,500	54.013

Flexible shafts

EDP number	Description	Suitability rating			Max. power output*1 [watts]	Tool connection [DIN]	Handpiece connection	Included handpiece	Catalogue detail page
		≤ 3,200 RPM	4,800–9,600 RPM	≥ 12,000 RPM					
94264	BW 4 PST-T DIN 10/M4	high	-	-	special*2	10	-	-	56
94001	BW 4 ZG DIN 10	-	-	high	500–300	10	G16	94301	51
94005	BW 6 ZG DIN 10	-	medium	high	1,500–750	10	G16	94301	51
94015	BW 7 ZGU DIN 10	-	medium	high	1,760–880	10	G22	94315	53
94274	BW 7 PST-T DIN 10/M5	high	medium	-	special*2	10	-	-	56
94020	BW 10 ZG DIN 10	high	high	medium	2,450–140	10	G28	94320	55

*1 Please refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety.
*2 Only for use with POLISTAR-TUBE abrasive stars, POLINOX® cross buffs, and threaded nylon tube brushes.

Handpieces

EDP number	Description		Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94301	HA 4 ZGB G16	straight handpiece	40,000	G16	1/4"	60	
94351	WZ 4 A G16	angle handpiece (90°)	20,000	G16	1/8"	60	
94315	HA 7 ZGA G22	straight handpiece	25,000	G22	1/4"	60	
94375	WZ 7 45° G22	angle handpiece (45°)	17,100	G22	1/4"	60	
94355	WZ 7 B G22	angle handpiece (90°)	17,100	G22	1/4"	60	
94385	WT 7 E M 14 G22	angle grinder drive	25,000	G22	M14 thread	60	
94320	HA 10 ZGE G28	straight handpiece	18,000	G28	1/4"	60	
94380	WZ 10 45° G28	angle handpiece (45°)	17,100	G28	1/4"	60	
94360	WZ 10 B G28	angle handpiece (90°)	17,100	G28	1/4"	60	
94330	HA 12 ZGA G28	straight handpiece	18,000	G28	1/2"	60	
94418	FSH G28	rigid extension (can be bent up to 40°)	12,000	G28	1/4"	60	

Flexible shaft drives
General information

How to find the matching flexible shaft to your drive

On the following page, you will find a flexible shaft selection for the individual drives in accordance with the following explanation.

Flexible shafts and handpieces/attachments must always be selected according to the required rotational speed and power output. Maximum cost-effectiveness is achieved through the combination of a high-performance tool and an optimal drive.

❶ Drive
Alternative drive with DIN 10 connection. (Exceptions DIN 15).

❷ Flexible shaft (BW)
Possible flexible shafts.

❸ Catalogue page
Reference to the catalogue page on which the appropriate flexible shaft and handpieces are shown.

❹ Rotational speed [RPM]/ power output [watts]
Rotational speed and power output ranges for which the flexible shaft is suitable.
Power output and rotational speed range of the drive system.

❺ Rotational speed and power output of the flexible shafts and handpieces

❻ Connection
Drive-side connection DIN 10 / DIN 15 and handpiece side connections (G16 to G35 and DPF, SRF).

❼ Suitable flexible shaft
● highly recommended
❍ recommended
- not suitable

❽ Handpieces/attachments
Please select your shape and design.

				see page ❸ ▶		44	45	46	47
				EDP number ▶		92201	92205	92210	92013
				Drive motor ❶ ▶		RUER 5/250 SI	RUER 10/250 SI	RUER 15/30 SI	MEW 18/240
				Phase ▶		1	1	1	1
				Power output [watts] ❹ ▶		300	660	900	1,500
				Power output [HP] ❹ ▶		0.4	0.9	1.2	2.01
				Rot. speed range [RPM] ❹ ▶		25,000–11,000	25,000–11,000	3,000–1,400	24,000–100
EDP number ▼	Flexible shafts and accessories ▼	Connection drive side / handpiece side ❻ ▼	see page ❸ ▼	Power output [watts] ❺ ▼	Drive [RPM] ❺ ▼				
Flexible shafts ❷									
94001	BW 4 ZG	DIN 10 / G16	51	500–300	40,000–15,000	●	●	–	❍
94264	BW 4 PST-T	DIN 10	56	450–100	7,650– 1,500	–	–	❍	❍
94005	BW 6 ZG	DIN 10 / G16	51	1,460–660	25,000–11,000	●	●	–	●
94015	BW 7 ZGU 2M	DIN 10 / G22	53	1,760–800	25,000–11,000	–	●	–	●
94274	BW 7 PST-T	DIN 10	56	1,000–370	4,250– 1,500	–		●	❍
94020	BW 10 ZG	DIN 10 / G28	55	2,450–140	18,000–750	–	❍	❍	●
94025	BW 10 ZG 2M	DIN 10 / G28	55	2,450–140	18,000–750	–	❍	❍	●
BW – handpieces ❽									
Straight handpieces									
94301	HA 4 ZGB	G16	60		40,000	●	●	–	❍
94315	HA 7 ZGA	G22	60		25,000		●	–	●
94320	HA 10 ZGE	G28	60		18,000		❍	❍	●
Angle handpieces									
94351	WZ 4 A	G16	60	500–300	20,000	●*	●*	–	●*
94355	WZ 7 B	G22	60	1,760–800	17,100	–	●*	–	●*
94375	WZ 7 45°	G22	60	1,760–800	17,100	–	●*	–	●*
94360	WZ 10 B	G28	60	2,450–140	17,100	–	❍	–	●
94380	WZ 10 45°	G28	60	2,450–140	17,100	–	❍	–	●
Special flexible handpieces									
94418	FSH	G28	60	2,450–140	12,000	–	–	–	●*
Angle grinder drive									
94385	WT 7 E M14	G22	60	1,760–800	25,000	–	●	–	●
Belt grinder attachment holders									
95015	BSVH 41	G22	61	1,760–800	1,6 m/s	–	●	–	●

❼ ● = highly recommended ❍ = recommended – = not suitable * = not with max. shaft rotational speed

Flexible shaft drives
Recommended products for flexible shafts 4 ZG/6 ZG

Recommended PFERD products

The following products can be found in catalogue sections 2–8 of the TOOL MANUAL, and are recommended for use with flexible shafts 4 ZG and 6 ZG on the following page.

RPM Output	Catalogue section 2	Catalogue section 3*	Catalogue section 4*		Catalogue section 6	Catalogue section 8
24,000 RPM	**Tungsten carbide burs** 3/16" to 1/2" diameter	**Mounted points** 1/2" to 1-1/4" diameter	**Abrasive spiral bands** 3/8" to 3/4" diameter **POLICAP® abrasive caps** 9/32" diameter **Mounted flap wheels** 5/8" diameter	**Poliflex® finishing points** **Rubber bond** up to 1/4" diameter **Leather bond** up to 1/2" diameter **Felt polishing points** 1/4" diameter	**Die grinder wheels** 2" diameter	
20,400 RPM RUER 5/250 SI 120 V, RUER 10/250 SI 120 V	**Tungsten carbide burs** 1/4" to 3/8" diameter	**Mounted points** 3/4" to 1-5/8" diameter	**Abrasive spiral bands** 3/4", 7/8", 1" diameter **POLIROLL** 1/4", 5/16" diameter **POLICAP® abrasive caps** 3/8", 7/16" diameter **Mounted flap wheels** 5/8" to 1" diameter **POLISTAR coated abrasive stars** 3/4" diameter	**Poliflex® finishing points** **Rubber bond** 3/8" diameter **Leather bond** 3/4" to 5/8" diameter **Felt polishing points** 1/4" to 3/8" diameter	**Die grinder wheels** 2" diameter	
18,000 RPM RUER 5/250 SI 120 V, RUER 10/250 SI 120 V	**Tungsten carbide burs** 5/16" to 5/8" diameter	**Mounted points** 3/4" to 2" diameter	**COMBIDISC® abrasive discs** 1" diameter **Abrasive spiral bands** 7/8", 1", 1-1/8" diameter **POLIROLL cartridge rolls** 3/8", 5/16" diameter **POLICAP® abrasive caps** 1/2" diameter **Mounted flap wheels** 3/4" to 1" diameter **POLISTAR coated abrasive stars** 3/4" diameter	**POLINOX® cross buffs** 1", 1-1/2" diameter **Poliflex® finishing points** **Rubber bond** up to 1/2" diameter **Leather bond** up to 3/4" diameter **Felt polishing points** 1/4" to 3/8" diameter	**Die grinder wheels** 2" diameter	**Knot wire wheels** 3" to 3-1/4" diameter
14,400 RPM RUER 5/250 SI 120 V, RUER 10/250 SI 120 V	**Tungsten carbide burs** 3/8" to 5/8" diameter	**Mounted points** 3/4" to 2" diameter	**COMBIDISC® abrasive discs** 1-1/2", 2" diameter **Abrasive spiral bands** 1-1/8", 1-1/2" diameter **POLIROLL cartridge rolls** 1/2" diameter **POLICAP® abrasive caps** 5/8" diameter **Mounted flap wheels** 3/4" to 1-1/2"diameter	**POLISTAR coated abrasive stars** 3/4" diameter **POLINOX® cross buffs** 1-1/2" diameter **Poliflex® finishing points** **Rubber bond** 5/8" diameter **Leather bond** 1" diameter **Felt polishing points** 5/16" to 1/2" diameter		**Crimped wire wheels** up to 3" diameter **Knot wheels** 3" to 4" diameter **Stem mounted end brushes** 1/2" up to 1" diameter **Mounted cup and bevel brushes** up to 3" diameter **Pilot bonding brushes** **Circular end brushes**

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Flexible shaft 4 ZG
- For power output requirements of less than 300 watts (0.4 HP), the rotational speed range can be safely underrun.
- Do not bend the shaft to a radius of less than 4".

Flexible shaft 6 ZG
- For power output requirements of less than 660 watts (0.9 HP), the rotational speed range can be safely underrun.
- Do not bend the shaft to a radius of less than 5-1/2".

Please note:
Observe listed rotational speed and power output ranges unless otherwise noted. Refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety. Special shaft lengths are available on request.

BW 4 ZG DIN 10
BW 6 ZG DIN 10

40,000–24,000 RPM / 0.7 HP / 500 watts
25,000–11,000 RPM / 2.0 HP / 1,460 watts

BW 4 ZG
BW 6 ZG

SE 4 ZG
SE 6 ZG

SCH 4 ZG
SCH 6 ZG

EDP number	Description	Drive-side coupling			Handpiece-side coupling			Diameter x length		Weight [lb]
		Connection	Diameter [Inches]	Diameter [mm]	Connection	Diameter [Inches]	Diameter [mm]	nominal [Inches]	metric [mm]	
Flexible shaft (includes handpiece 94301)										
94001	BW 4 ZG DIN 10	DIN 10*	1.18	30	G16	0.63	16	1/2 x 55	13 x 1,390	1.32
94005	BW 6 ZG DIN 10	DIN 10	1.18	30	G16	0.63	16	5/8 x 65	16 x 1,643	2.54
Replacement core										
94801	SE 4 ZG DIN 10/G16	DIN 10*	M10		G16	0.14/0.10	3.5/2.45	3/16 x 52	4 x 1,329	0.26
94805	SE 6 ZG DIN 10/G16	DIN 10	M10		G16	0.14/0.10	3.5/2.45	1/4 x 62	6 x 1,583	0.60
Replacement casing										
94501	SCH 4 ZG DIN 10/G16	DIN 10*	1.18	30	G16	0.63	16	1/2 x 51	13 x 1,300	0.73
94505	SCH 6 ZG DIN 10/G16	DIN 10	1.18	30	G16	0.63	16	5/8 x 61	16 x 1,553	1.63

*Cores and hoses with double-sided sliding coupling available by special order.

Handpieces

EDP number	Description		Diameter x length nominal [Inches]	Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94301	HA 4 ZGB G16	straight handpiece	3/4 x 4	40,000	G16	1/4"	60	
94351	WZ 4 A G16	angle handpiece (90°)	1-3/4 x 4	20,000*	G16	1/8"	60	

*max. 15,000 RPM when used with a 1/4"collet

Collets

Group	For shank diameter and EDP number				
	3/32"	1/8"	1/4"	3 mm	6 mm
9	93120	93125	93127	93108	93114
10	–	93146	93148	93134	93140

For all available collets, see pages 62–63.

Maintenance sets for the maintenance of flexible shafts see page 58.

Recommended PFERD products

The following products can be found in catalogue sections 2–8 of the TOOL MANUAL, and are recommended for use with flexible shafts 7 ZGU on the following page.

RPM Output	Catalogue section 2	Catalogue section 3*	Catalogue section 4*		Catalogue section 6	Catalogue section 8
24,000 RPM RUER 5/250 SI 120 V, RUER 10/250 SI 120 V	**Tungsten carbide burs** 1/4" to 1/2" diameter	**Mounted points** 1/2" to 1-3/8" diameter	**Abrasive spiral bands** up to 7/8" diameter **POLICAP® abrasive caps** 9/32", 3/8" diameter **Mounted flap wheels** 5/8" diameter	**Poliflex® finishing points** **Rubber bond** up to 3/8" diameter **Leather bond** up to 5/8" diameter **Felt polishing points** 1/4", 5/16" diameter	**Die grinder wheels** 2" diameter	
20,400 RPM RUER 5/250 SI 120 V, RUER 10/250 SI 120 V	**Tungsten carbide burs** 1/4" to 3/8" diameter	**Mounted points** 1/2" to 1-5/8" diameter	**Abrasive spiral bands** 3/4", 7/8", 1" diameter **POLIROLL** 1/4", 5/16" diameter **POLICAP® abrasive caps** 3/8" diameter **Mounted flap wheels** 5/8" to 1" diameter **POLISTAR coated abrasive stars** 3/4" diameter	**Poliflex® finishing points** **Rubber bond** 3/8" diameter **Leather bond** 3/4" to 5/8" diameter **Felt polishing points** 1/4" to 3/8" diameter	**Die grinder wheels** 2" diameter	
14,400 RPM RUER 5/250 SI 120 V, RUER 10/250 SI 120 V	**Tungsten carbide burs** 3/8" to 1/2" diameter	**Mounted points** 3/4" to 2" diameter	**COMBIDISC® abrasive discs** 1-1/2", 2" diameter **Abrasive spiral bands** 1-1/8", 1-1/2" diameter **POLIROLL cartridge rolls** 1/2" diameter **POLICAP® abrasive caps** 5/8" diameter **Mounted flap wheels** 3/4" to 1"diameter	**POLINOX® cross buffs** 1-1/2" diameter **Poliflex® finishing points** **Rubber bond** 5/8" diameter **Leather bond** 1" diameter **Felt polishing points** 5/16" to 1/2" diameter		**Crimped wire wheels** up to 3" diameter **Knot wheels** 3" to 4" diameter **Stem mounted end brushes** 1/2" up to 1" diameter **Mounted cup and bevel brushes** up to 3" diameter **Pilot bonding brushes** **Circular end brushes**
11,400 RPM RUER 10/250 SI 120 V	**Tungsten carbide burs** 3/8" to 5/8" diameter	**Mounted points** 1-1/2" to 2" diameter	**COMBIDISC® Mini-POLIFAN® discs** 3" diameter **COMBIDISC® abrasive discs** 2", 3" diameter **COMBIDISC® non-woven discs** 1-1/2", 2" diameter **COMBIDISC® TX discs** 2", 3" diameter **COMBIDISC® POLICLEAN® discs** 2" diameter			**Crimped wire wheels** up to 3" diameter **Knot wheels** 3" to 4" diameter **Stem mounted end brushes** 1/2" up to 1" diameter **Cup and bevel brushes** up to 4" diameter **Pilot bonding brushes** **Circular end brushes**

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4".

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

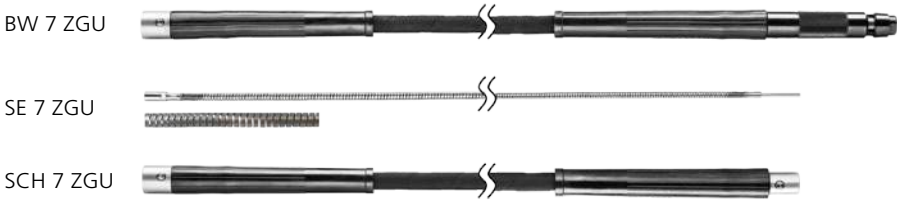
*Shank mounted product recommendations are based on 1/2" shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Flexible Shaft 7 ZGU
- For power output requirements of less than 800 watts (1.1 HP), the rotational speed range can be safely underrun.
- Do not bend the shaft to a radius of less than 5-1/2".
- The coil added to the core of this flexible shaft provides a very smooth running action, particularly at the higher end of the stated rotational speed range.

Please note:
Observe listed rotational speed and power output ranges unless otherwise noted. Refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety. Special shaft lengths are available on request.

BW 7 ZGU DIN 10

25,000–11,000 RPM / 2.4 HP / 1,760 watts



EDP number	Description	Drive-side coupling			Handpiece-side coupling			Diameter x length		Weight [lb]
		Connection	Diameter [Inches]	Diameter [mm]	Connection	Diameter [Inches]	Diameter [mm]	nominal [Inches]	metric [mm]	
Flexible shaft (includes handpiece 94315)										
94015	BW 7 ZGU DIN 10 2 m	DIN 10	1.18	30	G22	0.87	22	3/4 x 85	18 x 2,154	4.41
Replacement core										
94815	SE 7 ZGU DIN 10/G22 2 m	DIN 10	M10		G22	5 / 3.85	0.20 / 0.15	1/4 x 82	7 x 2,089	1.32
Replacement casing										
94515	SCH 7 ZGU DIN 10/G22 2 m	DIN 10	1.18	30	G22	0.87	22	3/4 x 81	18 x 2,053	2.43

Flexible shaft adapter BWA G22/DIN 10 (EDP 95893)
For coupling flexible shafts or as connector for rigid extensions STV.

Maintenance sets for the maintenance of flexible shafts see page 58.

Handpieces

EDP number	Description		Diameter x length nominal [Inches]	Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94315	HA 7 ZGA G22	straight handpiece	1 x 5	25,000	G22	1/4"	60	
94375	WZ 7 45° G22	angle handpiece (45°)	2-1/4 x 7	17,100	G22	1/4"	60	
94355	WZ 7 B G22	angle handpiece (90°)	2 x 6	17,100	G22	1/4"	60	
94385	WT 7 E M 14 G22	angle grinder drive	3 x 7	25,000	G22	M14 thread	60	

Collets

Group	For shank diameter and EDP number					
	3/32"	1/8"	1/4"	3 mm	6 mm	8 mm
6	93067	93072	93074	93057	93062	93064
11	93174	93179	93182	93157	93163	93166

For all available collets, see pages 62–63.

Flexible shaft drives
Recommended products for flexible shafts 10 ZG

Recommended PFERD products

The following products can be found in catalogue sections 2–8 of the TOOL MANUAL, and are recommended for use with flexible shaft 10 ZG on the following page.

RPM Output	Catalogue section 2	Catalogue section 3*	Catalogue section 4*	Catalogue section 8
14,400 RPM	**Tungsten carbide burs** 3/8″ to 1/2″ diameter	**Mounted points** 3/4″ to 2″ diameter	**COMBIDISC® abrasive discs** 1-1/2″, 2″ diameter **Abrasive spiral bands** 1-1/8″, 1-1/2″ diameter **POLIROLL cartridge rolls** 1/2″ diameter **POLICAP® abrasive caps** 5/8″ diameter **Mounted flap wheels** 3/4″ to 1″diameter **POLISTAR coated abrasive stars** 3/4″ diameter **POLINOX® cross buffs** 1-1/2″ diameter **Poliflex® finishing points** **Rubber bond** 5/8″ diameter **Leather bond** 1″ diameter **Felt polishing points** 5/16″ to 1/2″ diameter	**Crimped wire wheels** up to 3″ diameter **Knot wheels** 3″ to 4″ diameter **Stem mounted end brushes** 1/2″ up to 1″ diameter **Mounted cup and bevel brushes** up to 3″ diameter **Pilot bonding brushes** **Circular end brushes**
11,400 RPM	**Tungsten carbide burs** 3/8″ to 5/8″ diameter	**Mounted points** 1-1/2″ to 2″ diameter	**COMBIDISC® Mini-POLIFAN® discs** 3″ diameter **COMBIDISC® abrasive discs** 2″, 3″ diameter **COMBIDISC® non-woven discs** 1-1/2″, 2″ diameter **COMBIDISC® TX discs** 2″, 3″ diameter **COMBIDISC® POLICLEAN® discs** 2″ diameter	**Crimped wire wheels** up to 3″ diameter **Knot wheels** 3″ to 4″ diameter **Stem mounted end brushes** 1/2″ up to 1″ diameter **Cup and bevel brushes** up to 4″ diameter **Pilot bonding brushes** **Circular end brushes**
9,600 RPM	**Tungsten carbide burs** 1/2″ to 3/4″ diameter		**Abrasive spiral bands** up to 2-3/8″ diameter **Poliflex® finishing points** **Rubber bond** up to 1″ diameter **Leather bond** up to 1-1/4″ diameter **POLICAP® abrasive caps** up to 7/8″ diameter **Mounted flap wheels** up to 1-1/2″diameter **POLIROLL cartridge rolls** up to 5/8″ diameter **POLISTAR coated abrasive stars** up to 1-1/4″ diameter **POLINOX® unitized wheels** 2″ diameter **Felt polishing points** 3/4″ diameter	**Crimped wire wheels** up to 4″ diameter **Knot wheels** up to 6″ diameter **Cup brushes** up to 4″ diameter **Stem mounted end brushes** up to 1″ diameter **Stem mounted miniature brushes** **Circular end brushes**

Note: Product recommendations are based on general peripheral and rotational speeds.
Where no shank diameter is indicated, the shank diameter specification is 1/4″.

Please consult the appropriate catalogue section for technical information on specific recommended speeds based on application, abrasive grain, product size/shape, and workpiece material.

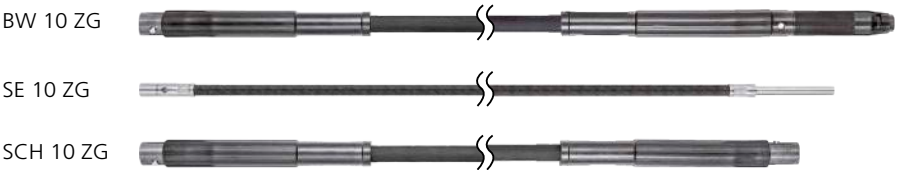
*Shank mounted product recommendations are based on 1/2″ shank overhang.
Comply with ANSI B7.1-2000 standards and OSHA regulations.

Flexible shaft 10 ZG
- Rotational speed and power output ranges for this shaft should not be exceeded or underrun.
- Do not bend the shaft to a radius of less than 6-3/4".
- This shaft is available in both standard length (1.68 m / 66-1/4") and extended length (2 m / 86") versions. Please refer to the table below for dimensions and details.
- Cores and hoses with double-sided sliding coupling are available on request.

Please note:
Observe listed rotational speed and power output ranges unless otherwise noted. Refer to page 49 for information on flexible shaft speeds, power outputs, and operational safety. Special shaft lengths are available on request.

BW 10 ZG DIN 10

18,000–750 RPM / 3.3 HP / 2,450 watts



EDP number	Description	Drive-side coupling			Handpiece-side coupling			Diameter x length		Weight [lb]
		Connection	Diameter [Inches]	Diameter [mm]	Connection	Diameter [Inches]	Diameter [mm]	nominal [Inches]	metric [mm]	
Flexible shaft (includes handpiece 94320)										
94020	BW 10 ZG DIN 10	DIN 10	1.18	30	G28	1.10	28	7/8 x 66	22 x 1,683	5.51
94025	BW 10 ZG DIN 10 2 m	DIN 10	1.18	30	G28	1.10	28	7/8 x 86	22 x 2,183	6.50
Replacement core										
94820	SE 10 ZG DIN 10/G28	DIN 10	M10		G28	0.30/0.23	7.5/5.85	3/8 x 63	10 x 1,600	1.43
94825	SE 10 ZG DIN 10/G28 2 m	DIN 10	M10		G28	0.30/0.23	7.5/5.85	3/8 x 83	10 x 2,100	2.09
Replacement casing										
94520	SCH 10 ZG DIN 10/G28	DIN 10	1.18	30	G28	1.10	28	7/8 x 61	22 x 1,553	3.09
94525	SCH 10 ZG DIN 10/G28 2 m	DIN 10	1.18	30	G28	1.10	28	7/8 x 80	22 x 2,053	3.42

Flexible shaft adapter BWA G28/DIN 10 (EDP 95894)
For coupling flexible shafts or as connector for rigid extensions STV.

Maintenance sets for the maintenance of flexible shafts see page 58.

Handpieces

EDP number	Description		Diameter x length nominal [Inches]	Max. RPM	Shaft connection	Included collet size	Catalogue detail page	Photo
94320	HA 10 ZGE G28	straight handpiece	1 x 6-3/4	18,000	G28	1/4"	60	
94380	WZ 10 45° G28	angle handpiece (45°)	1-1/4 x 6-1/2	17,100	G28	1/4"	60	
94360	WZ 10 B G28	angle handpiece (90°)	2-1/4 x 7	17,100	G28	1/4"	60	
94330	HA 12 ZGA G28	straight handpiece	2-1/4 x 6-1/2	18,000	G28	1/2"	60	
94418	FSH G28	rigid extension (can be bent up to 40°)	1 x 20-1/2	12,000	G28	1/4"	60	

Collets

Group	For shank diameter and EDP number								
	3/32"	1/8"	1/4"	3/8"	1/2"	3 mm	6 mm	8 mm	12 mm
6	93067	93072	93074	-	-	93057	93062	93064	-
11	93174	93179	93182	-	-	93157	93163	93166	-
12	-	-	93211	93215	93218	-	93196	93199	93203

For all available collets, see pages 62–63.

Flexible shaft drives
Special flexible shafts for tube and pipe applications

Flexible shafts PST-T for internal tube and pipe grinding and finishing

These special flexible shafts **do not** have a handpiece for mounting the product, and are particularly flexible in the front section. The POLISTAR-TUBE flexible stars are attached directly to the core of the flexible shaft with screws (INOX type). POLINOX flexible tools PNST are screwed on with adapter AD M4 or AD M5 (accessories). This combination is highly recommended for gradual fine grinding and cleaning of inner surfaces of pipes and pipe bends. Both pipe bend ends can be deburred from the entry side.

Recommendations for use:

- Before product is inserted into the pipe with the shaft, the tool should be pre-formed and adapted to the pipe diameter.
- Reduce the rotational speed of the product during insertion.
- Pipes with more than three pipe bends should be ground from both ends of the pipe if possible.
- When the product emerges from the pipe end, it can be pulled back while still in rotation. The rear of the POLISTAR-TUBE deburrs the pipe end and also grinds the inside of the pipe during the backward movement.
- All flexible shaft drives with a speed range of 7,650–1,500 RPM and flexible shaft connection DIN 10 can be used.

Ordering notes:

- Special lengths available on request.
- Maintenance set 4 ZG for flexible shaft maintenance, EDP 96111.
- Maintenance set 7 ZG for flexible shaft maintenance, EDP 96112.

Flexible shaft 4 PST-T DIN 10/M4

- For use with POLISTAR-TUBE diameters from 2″ to 3-1/8″, POLINOX® cross buff diameters from 3/4″ to 2″, and threaded nylon tube brushes with 8-32 UNC thread using the AD M4 adapter (EDP 95810).

Flexible shaft 7 PST-T DIN 10/M5

- Only for use with POLISTAR-TUBE diameters from 3-1/2″ to 4″, POLINOX® cross buff diameters from 3/4″ to 2″, and threaded nylon tube brushes with 8-32 UNC thread using the AD M5 adapter (EDP 95811).

BW 4 PST-T DIN 10/M4
BW 7 PST-T DIN 10/M5

7,650–1,500 RPM / 450–100 watts
4,250–1,500 RPM / 1,000–370 watts

BW 4 PST-T
BW 7 PST-T

SE 4 PST-T
SE 7 PST-T

SCH 4 PST-T
SCH 7 PST-T

EDP number	Description	Drive-side coupling			Product mounting			Diameter x length		Weight [lb]
		Connection	Diameter [Inches]	Diameter [mm]	Connection	Diameter [Inches]	Diameter [mm]	nominal [Inches]	metric [mm]	
Flexible shaft										
94264	BW 4 PST-T DIN 10/M4	DIN 10	1.18	30	M4	0.16	4	1/2 x 61	13 x 1,550	1.06
94274	BW 7 PST-T DIN 10/M5	DIN 10	1.18	30	M5	0.20	5	3/4 x 81	18 x 2,052	2.91
Replacement core										
94978	SE 4 PST-T DIN 10/M4	DIN 10	M10		M4	0.16	4	3/16 x 60-5/8	4 x 1,540	0.27
94988	SE 7 PST-T DIN 10/M5	DIN 10	M10		M5	0.20	5	1/4 x 80	7 x 2,042	0.99
Replacement casing										
94775	SCH 4 PST-T DIN 10/M4	DIN 10	1.18	30	-	-	-	1/2 x 60-1/2	13 x 1,550	0.79
94786	SCH 7 PST-T DIN 10/M5	DIN 10	1.18	30	-	-	-	3/4 x 81	18 x 2,052	1.92

AD M4/8-32 UNC
AD M5/8-32 UNC

Threaded adapter

FLS M4
FLS M5

Mounting screw

EM SW 7 mm
EM SW 8 mm G

Key

Accessories for flexible shafts BW 4 PST-T, 7 PST-T

EDP number	Description	Product mounting	Suitable for flexible shaft	Net weight [lb]
95810	Threaded adapter for M4 shaft	8-32 UNC thread	BW 4 PST-T (EDP 94264)	0.004
95811	Threaded adapter for M5 shaft	8-32 UNC thread	BW 7 PST-T (EDP 94274)	0.007
97557	POLISTAR-TUBE M4 mounting screw	dia. 4 mm	BW 4 PST-T (EDP 94264)	0.004
97558	POLISTAR-TUBE M5 mounting screw	dia. 5 mm	BW 7 PST-T (EDP 94274)	0.007
93327	7 mm key	-	BW 4 PST-T (EDP 94264)	0.018
93328	8 mm key	-	BW 7 PST-T (EDP 94274)	0.031

Table stand

The TS L 1400 table stand comes with a clamp for secure attachment to tables measuring up to 2.56″ in thickness. Telescope construction for manual height adjustment up to 5.51″ max.

EDP number	Description	Suitable for flexible shaft drives	Weight [lb]
95520	TS L 1400	RUER 5/250 SI 120 V, RUER 10/250 SI 120 V, RUER 15/30 SI 120 V	4.78

Lubricants

Special grease with special lubrication and adhesive properties for flexible shafts 4 ZG–10 ZG.

After approximately 100 operating hours, the core of a flexible shaft must be re-lubricated. The core and hose must be degreased and the new special flexible shaft grease must be applied to the core.

Flexible shaft grease FT 4
Grease with special lubrication and adhesive properties for flexible shafts 4 ZG to 15 KG.

Ball bearing grease FT 5
For all ball bearings. Light moistening of grease slingers to protect them against dust.

EDP number	Description		Contents [lb]
96008	FT 4	A special-grade lubricant with high lubricating and adhesion properties	1.10
96009	FT 5	For all ball bearings. Readily wets grease slingers to prevent dust contamination	0.22

Maintenance sets for flexible shafts

After approx. 100 operating hours, the core of a flexible shaft has to be re-lubricated. The core and hose must be degreased and new special shaft grease must be applied to the core.

Maintenance sets consist of:
- **1 casing brush**
  For removing the old grease from the flexible casing.
- **2 pieces of lint-free cleaning cloths (15.7 x 13 inches)**
  The core is freed of the old grease using a degreasing agent and a cleaning cloth (do not use cotton waste). Apply new grease on to the second cloth and pull the core through it.
- **1 can of shaft grease FT 4 (approx. 1.1 lbs)**
  Special grease with special lubrication and adhesive properties.

EDP number	Description	Suitable for flexible shaft	Contents [pcs.]
96111	P-SET 4 ZG	4 ZG, 4 PST-T, 6 ZG	2 cleaning cloths, can of shaft grease FT 4, casing brush 4 ZG
96112	P-SET 7 ZG	7 ZGU, 7 PST-T	2 cleaning cloths, can of shaft grease FT 4, casing brush 7 ZGU
96113	P-SET 10/12 ZG	10 ZG	2 cleaning cloths, can of shaft grease FT 4, casing brush 10 ZG

PFERD

Power tool accessories

9

Handpieces


HA 4 ZGB G16
EDP 94301


HA 7 ZGA G22
EDP 94315


HA 10 ZGE G28
EDP 94320


HA 12 ZGA G28
EDP 94330

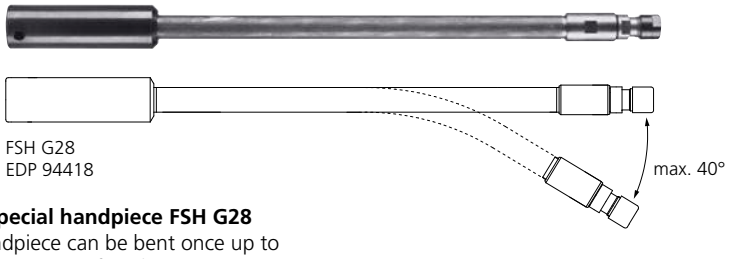

WZ 4 A G16
EDP 94351


WZ 7 B G22
EDP 94355


WZ 10 B G28
EDP 94360


WZ 7 45° G22
EDP 94375


WZ 10 45° G28
EDP 94380



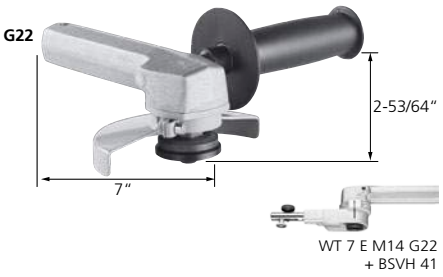
FSH G28
EDP 94418

Angle handpiece WZ 4 A G16
- When used with a 1/4" collet, the maximum permitted rotational speed is 15,000 RPM.

Flexible special handpiece FSH G28
- This handpiece can be bent once up to a bending radius of 8" (as per customer specification).
- Special lengths available by special order.

EDP number	Description		Diameter x length		Gear ratio	Max. input RPM	Shaft connection	Collet group	Included collet size [Inches]	Weight [lb]
			nominal [Inches]	metric [mm]						
Straight handpieces										
94301	HA 4 ZGB G16	straight handpiece	3/4 x 4	19 x 110	-	40,000	G16	9	1/4	0.31
94315	HA 7 ZGA G22	straight handpiece	1 x 5	27 x 130	-	25,000	G22	11	1/4	0.71
94320	HA 10 ZGE G28	straight handpiece	1 x 6-3/4	33 x 170	-	18,000	G28	11	1/4	1.14
94330	HA 12 ZGA G28	straight handpiece	1-1/4 x 6-1/2	33 x 162	-	18,000	G28	12	1/2	1.12
Angle handpieces										
94351	WZ 4 A G16	angle handpiece (90°)	1-3/4 x 4	43 x 111	1:1	20,000*	G16	10	1/8	0.60
94375	WZ 7 45° G22	angle handpiece (45°)	2-1/4 x 7	57 x 175	1.3:1	17,100	G22	6	1/4	1.47
94355	WZ 7 B G22	angle handpiece (90°)	2 x 6	55 x 157	1.3:1	17,100	G22	6	1/4	1.32
94380	WZ 10 45° G28	angle handpiece (45°)	2-1/4 x 7	57 x 184	1.3:1	17,100	G28	6	1/4	1.41
94360	WZ 10 B G28	angle handpiece (90°)	2-1/4 x 6-1/2	55 x 166	1.3:1	17,100	G28	6	1/4	1.68
Flexible special handpiece										
94418	FSH G28	special flexible handpiece	1 x 20-1/2	24 x 525	-	12,000	G28	11	1/4	2.20

**max. 15,000 RPM when used with a 1/4"collet. For collet details, see pages 62–63.*



WT 7 E M14 G22
+ BSVH 41

Angle grinder drive WT 7 E M14 G22

Connectable to flexible shafts 7 ZGU G22 (instead of handpiece). Connection to flexible shaft can be pivoted 360°. Angle Grind WT 7 E M14 G22 type with belt grinder attachment holder BSVH 41. For belt grinder attachment holders, see page 61 .

Included accessories:
Handle, clamping flanges and 4-1/2" guard, 2 keys.

For compatible belt grinder attachment holder BSVH 41 and belt arms, see page 61.

Keys	EDP number
17 mm	93350
35 x 5 mm	93395

EDP number	Description		Diameter x length		Gear ratio	Max. input RPM	Shaft connection	Collet group	Included collet size	Weight [lb]
			nominal [Inches]	metric [mm]						
94385	WT 7 E M14 G22	angle grinder drive	2-5/8 x 7	67 x 178	2.7:1	25,000	G22	-	M14 thd.	1.46

Belt grinder attachment holders and arms

BSVH 25,5
EDP 95000

SDVH-K
EDP 95001

BSVH 41
EDP 95015

SDVH-G
EDP 95017

BSVAK 9/25
EDP 95006

BSVAK 9/25-1
EDP 95005

BSVAK 4/16
EDP 95009

BSVAK 9/9
EDP 95008

BSVAK 9/16
EDP 95007

BSAD 41/36 x 610
EDP 95016

BSVA 9/25
EDP 95020

BSVA 9/25-1
EDP 95021

BSVA 4/16
EDP 95018

BSVA 9/16
EDP 95019

BSVA 12/19
EDP 95022

BSVA 18/23
EDP 95023

Small belt grinder attachment BSVH 25,5 for belt length 305 mm.
Large belt grinder attachment BSVH 41 for belt lengths 520 and 610 mm.

Special features:

- The belt grinder attachment can be pivoted on the respective drive system or handpiece and therefore allows flexible adaptation to each individual work situation.
- Highly precise belt guidance due to adjustable belt clamping force and fixable belt arm.
- Easy, quick belt replacement due to spring clamping.

EDP number	Description	Mounting diameter [Inches]	Mounting diameter [mm]	Uses protective cover [EDP]	Drive roll [Inches]	Drive roll [mm]	Suitable for power tools/drives	Weight [lb]
95000	BSVH 25,5	1	25.5	95001 (SDVH-K)	3/4	20	PBS 3/200 HV oVA, PWS 3/200 HV	0.39
95015	BSVH 41	1-5/8	41	95017 (SDVH-G)	1-1/8	30	WT 7 E M14, UBS 5/100 SI oVA 120 V	0.69

EDP number	Description	Fits belt attachment holder	For belt length [Inches]	Width x roll dia. [Inches]	Width x roll dia. [mm]	Suitable belt width [Inches]	Use for
95016	BSAD 41/36 x 610	95015	-	-	-	-	Adapter to extend the belt length from 20-1/2" to 24"
95020	BSVA 9/25 x 520	95015	20-1/2	0.35 x 0.98	9 x 25	1/8, 1/4, 3/8, 1/2, 5/8	Finishing jobs, deburring, matting, fine grinding and seamless blending of inner radii/ channels, especially on pipe couplings.
95006	BSVAK 9/25 x 305	95000	12	0.35 x 0.98	8.8 x 25	1/8, 1/4, 3/8, 1/2	
95021	BSVA 9/25-1 x 520	95015	20-1/2	0.35 x 0.98	9 x 25	1/8, 1/4, 3/8, 1/2	Finishing in narrow inner radii/channels, especially on stainless steel (INOX) pipe couplings with very small welded seams (TIG welding).
95005	BSVAK 9/25-1 x 305	95000	12	0.35 x 0.98	8.8 x 25	1/8, 1/4, 3/8, 1/2	
95018	BSVA 4/16 x 520	95015	20-1/2	0.15 x 0.63	4 x 16	1/4	Leveling, deburring, matting, fine grinding, cleaning, blending of stainless steel in narrow, small areas.
95009	BSVAK 4/16 x 305	95000	12	0.15 x 0.63	3.8 x 16	1/8, 1/4, 3/8	
95008	BSVAK 9/9 x 305	95000	12	0.35 x 0.35	8.8 x 9	3/8, 1/2	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on small areas.
95019	BSVA 9/16 x 520	95015	20-1/2	0.35 x 0.63	9 x 16	1/2	
95007	BSVAK 9/16 x 305	95000	12	0.35 x 0.63	8.8 x 16	3/8, 1/2	
95022	BSVA 12/19 x 520	95015	20-1/2	0.45 x 0.75	12 x 19	1/2, 5/8	Leveling, chamfering, matting, fine grinding, cleaning and seamless blending on wide areas.
95023	BSVA 18/23 x 520	95015	20-1/2	0.71 x 0.91	18 x 23	3/4	

The fast way to the best collet

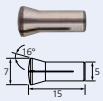
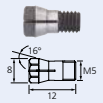
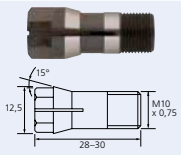
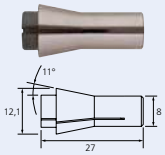
Please use the tables below to find the perfect collet for your product.

❶ Determine the correct collet group from the Power tool/handpiece table.
❷ Then, find the diameter and EDP of that collet group in the collet chart.

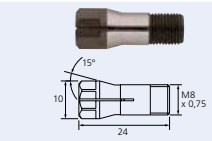
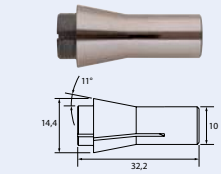
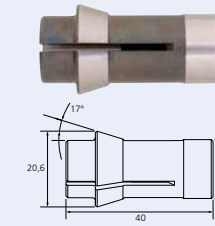
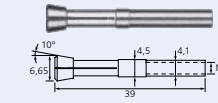
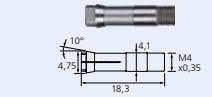
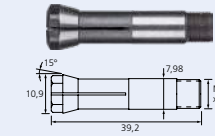
Overview of collet groups

Page	Power tools/handpieces	❶ Collet group
16	PGT 1/1000	1
17	PGAS 2/800 E-HV	1
18	PGAS 3/440 HV	6
19	PG 3/380 HV	6
20	PGAS 5/230 VE-HV	6
21	PG 3/210 HV	6
22	PGAS 5/40 V-HV	6
23	PWSA 1/800	2
24	PWSA 3/220 HV	6
33	Micro motor handpc. MIM HAS 3/800 SP1/8"	17
33	Micro motor handpc. MIM HAS 2/600 SP1/8"	17
33	Micro motor handpc. MIM HAS 3/600 SP1/8"	17
33	Micro motor handpc. MIM HAS 1/500 SP1/8"	17
33	Micro motor handpc. MIM HAS 3/500 VS-SP1/8"	17
34	Micro motor handpc. MIM HAS 3/600 S1/8"	19
34	Micro motor handpc. MIM HAS 3/600 S1/4"	19
34	Micro motor handpc. MIM WZS 3/300 90° S1/8"	18

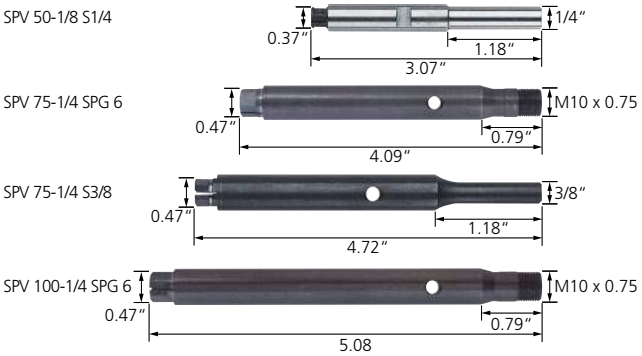
Page	Power tools/handpieces	❶ Collet group
34	Micro motor handpc. MIM WZS 3/300 45° S1/8"	18
35	UGER 5/250 SI	11
36	UGER 15/60 SI	12
60	Handpiece HA 4 ZGB G16	9
60	Angle handpiece WZ 4 A G16	10
60	Handpiece HA 7 ZGA G22	11
60	Angle handpiece WZ 7 45° G22	6
60	Angle handpiece WZ 7 B G22	6
60	Handpiece HA 10 ZGE G28	11
60	Angle handpiece WZ 10 45° G28	6
60	Angle handpiece WZ 10 B G28	6
60	Flexible special handpiece FSH G28	11
60	Handpiece HA 12 ZGA G28	12
64	Spindle extensions SPV 50-1/8 S1/4"	2
64	Spindle extensions SPV 75-1/4 SPG 6	10
64	Spindle extension SPV 75-1/4 S3/8	10
64	Spindle extension SPV 100-1/4 SPG 6	10
64	Spindle extensions SPV 100-1/4 S3/8	10

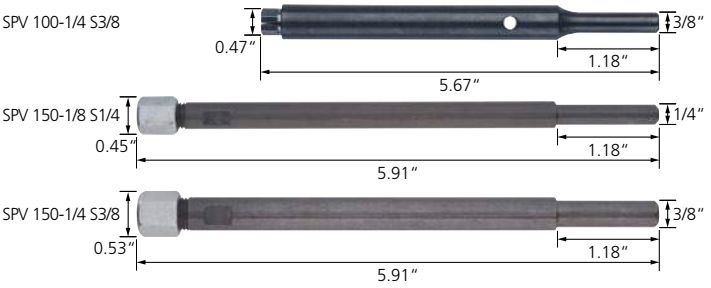
Collet group		Shank diameter [Inches]					Shank diameter [mm]					
		3/32	1/8	1/4	3/8	1/2	2.35	3	6	8	10	12
		❷ EDP number										
1		93006	93007	-	-	-	-	93003	-	-	-	-
2		93013	93012	-	-	-	-	93011	-	-	-	-
6		93067	93072	93074	-	-	-	93057	93062	93064	-	-
9		93120	93125	93127	-	-	-	93108	93114	-	-	-

Continued on next page

Collet group		Shank diameter [Inches]					Shank diameter [mm]					
		3/32	1/8	1/4	3/8	1/2	2.35	3	6	8	10	12
		❷ EDP number										
10		-	93146	93148	-	-	-	93134	93140	-	-	-
11		93174	93179	93182	-	-	-	93157	93163	93166	-	-
12		-	-	93211	93215	93218	-	-	93196	93199	93201	93203
17		-	93257	-	-	-	93256	93255	-	-	-	-
18		-	93267	-	-	-	93266	93265	-	-	-	-
19		-	93277	93279	-	-	93278	93276	93275	-	-	-

Extensions for drive spindles





Spindle extensions extend the shafts of grinding, brushing and milling products, allowing access to difficult-to-reach areas. The extensions are mounted into collets, or with threaded versions, directly onto the machine spindle.
Spindle extensions are a cost effective alternative to made-to-order burs and mounted points.

Safety note:
When working with long shank lengths, it is vital that the product is inserted into the workpiece (e.g. cores, pipes, ducts or keyways) **before** the power tool is switched on. Running the extension outside the workpiece (e.g. cores, pipes, ducts or keyways) increases the risk of buckling of the extension, and/or serious accidents.

The extensions are only intended for manual use in connection with suitable air-power, electric grinders or flexible shaft handpieces for tools. Always run product at the appropriate RPM, and be sure it is inserted with proper overhang into a centrical running chuck.

Do not connect multiple extensions, or mount products that already have extended-length shanks!

EDP number	Description	Max. speed [RPM]	Mounting pin dia. (motor/handpiece) [Inches]	Fits shank diameter [Inches]	Overall length [Inches]	Mounting pin length [Inches]	Max. spindle diameter [Inches]	Included collet dia. [Inches]	Collet group	Weight [lb]
95820	SPV 50-1/8 S1/4	44,000	1/4	1/8	3.07	1.18	0.37	1/8	2	0.08
95821	SPV 75-1/4 SPG 6	20,000	SPG 6	1/4	4.09	special	0.47	1/4	10	0.16
95822	SPV 75-1/4 S3/8	20,000	3/8	1/4	4.72	1.18	0.47	1/4	10	0.17
95823	SPV 100-1/4 SPG 6	20,000	SPG 6	1/4	5.08	special	0.47	1/4	10	0.21
95824	SPV 100-1/4 S3/8	20,000	3/8	1/4	5.67	1.18	0.47	1/4	10	0.22
95825	SPV 150-1/8 S1/4	10,000	1/4	1/8	5.91	1.18	0.45	-	-	0.12
95826	SPV 150-1/4 S3/8	10,000	3/8	1/4	5.91	1.18	0.53	-	-	0.18

Anti-vibration handle SENSOHANDLE

Vibration-damping, ergonomically optimized handle for use on all common angle grinders with M8, M10 or M14 female threads. M8 adapter is also compatible with WT 7 E M14 G22.

Advantages:
- Significant reduction in vibration transmission, because vibration source and handgrip surface are decoupled.
- Moreover, the vibration energy is absorbed/ reduced by the special rubber mixture.
- Safe and comfortable working, because of ergonomically optimized shape and dimensions.
- Secure hold due to the structured surface of the handle.

Accessories included:
1 handle, 3 adapters (M8, M10 and M14).

PFERDVALUE®:

EDP number	Included thread adapters	Suitable for power tools/drives	Weight [lb]
95506	M8	power tools with M8 metric thread, WT 7 E M14 G22	1.10
	M10	power tools with M10 metric thread	
	M14	power tools with M14 metric thread	

Material	Subgroups/ differentiation	Examples/brands	Properties	Recommendations for use	More information
Steel and cast steel	Steels up to 1,200 MPa (174,000 psi) (< 38 HRC)	Construction steels, carbon steels, tool steels, non-alloyed steels, case-hardened steels, alloyed steels	■ Easy to machine ■ Good heat conductor	■ Use products at the maximum peripheral speed to achieve the best economic results. ■ Use a high drive output to increase economic efficiency. ■ Use products specifically designated STEEL, STEELOX or carbon steel. ■ In catalogue section 6, recommended products are recognized by the colour black in the colour-coding system. In catalogue section 8, they can be recognized by the colour grey.	**PFERD-PRAXIS** PFERD products for use on construction steel 
	Hardened, heat-treated steels over 1,200 MPa (174,000 psi) (> 38 HRC)	Tool steels, tempering steels, alloyed steels	■ Difficult to machine ■ Good heat conductor		
	Cast steel	Non-alloyed cast steel, low-alloyed cast steel	■ Easy to machine ■ Good heat conductor		
Stainless steel (INOX)	Rust and acid-resistant steels	Austenitic and ferritic stainless steels, e.g. AISI/ASTM 301 410 304 412 316 416 316Ti	■ Tough material that is difficult to machine ■ Very poor heat conductor ■ Discolours at a temperature of over > 572°F ■ Risk of overheating during processing => corrosion	■ Reducing the peripheral speed and contact pressure increases the service life and efficiency. ■ Use products specifically named INOX, STEELOX, COOL, FREEZE or INOX-TOTAL. ■ To avoid corrosion, remove discolouration and adhered particles. ■ To avoid corrosion, do not alternate products between steel and stainless steel (INOX). ■ Recommended products have been manufactured without the addition of ferrous, chlorinated or sulphurous fillers. ■ In catalogue sections 6 and 8, recommended products can be recognized by the colour blue in the colour-coding system.	**PFERD-PRAXIS** PFERD products for work on stainless steel (INOX) 
Non-ferrous metals – Aluminum	Soft aluminum alloys	Non-hardening and hardening wrought alloys	■ Very good heat conductor ■ Lubricates very quickly	■ Reducing the peripheral speed and contact pressure increases the service life and efficiency. ■ Use burs at the maximum peripheral speed to achieve the most economic results. ■ Preferably use products named ALU or COOL. ■ Caution! A special extraction system is required for grinding aluminum. Risk of explosion! ■ In catalogue section 6, recommended products can be recognized by the colour silver in the colour-coding system.	**PFERD-PRAXIS** PFERD products for work on aluminum 
	Tough aluminum alloys	Aluminum-cast alloys with a low percentage of silicon			
	Hard aluminum alloys	Aluminum-cast alloys without silicon			
Non-ferrous metals	Soft non-ferrous metals	Brass, copper, zinc	■ Very good heat conductor		
	Hard non-ferrous metals	Bronze, titanium, titanium alloys	■ Very poor heat conductor	■ Reducing the peripheral speed and contact pressure increases the service life and efficiency. ■ Preferably use products with ceramic oxide grain (CO), diamond abrasives or products named COOL.	
	High-temperature-resistant materials	Nickel-based and cobalt-based alloys (Inconel®, Hastelloy®), titanium, engine and turbine construction	■ Very poor heat conductor		
Cast materials	Cast iron	Cast iron with flake graphite, with nodular graphite/nodular cast iron	■ Relatively hard material ■ Short-chipping, does not lubricate ■ Good heat conductor	■ Diamond products are recommended for work on grey and nodular cast iron. ■ Use products at the maximum peripheral speed to achieve the best economic results. ■ Use a high drive output to increase economic efficiency. ■ Preferably use products named CAST. ■ In catalogue section 6, recommended products can be recognized by the colour red in the colour-coding system.	
	Annealed cast iron	White annealed cast iron, black cast iron			
Plastics	Thermoplastics	Polypropylene (PP), polyethylene (PE), polyamide (PA), polyvinyl chloride (PVC)	■ Very poor heat conductor	■ Use thin cut-off wheels with silicon carbide (C/SiC) (type PSF CAST+STONE) or products with the FVK, FVKS or PLAST cut. ■ Use diamond products with grit size D 357 and D 427 for work on duroplastics. ■ Use mounted points named RUBBER for work on rubber.	**PFERD-PRAXIS** PFERD products for use on plastics 
	Duroplastics	Epoxy resin, GRP, CRP			
	Elastomers	Rubber, styrene-butadiene rubber (SBR), ethylene propylene diene monomer rubber (EPDM)			
Stone	Cotto, pumice, light concrete, sandstone, concrete, reinforced concrete, concrete block, roofing tiles, granite, clinker bricks, exposed aggregate concrete, tiles, ceramic tiles, slate		■ Very poor heat conductor ■ Creates lots of dust during processing	■ Use products with diamond (PCD) or silicon carbide (C/SiC) as abrasives. ■ Wear a dust mask! ■ In catalogue section 6, recommended products can be recognized by the colour green in the colour-coding system.	

Further information can be found in catalogue sections 1 to 9.

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