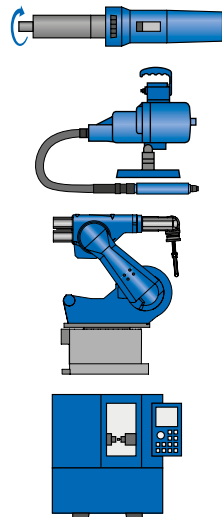


# Carbide burs and bi-metal hole saws

## Table of contents

General information	3
Quick product selection guide	4

## Milling

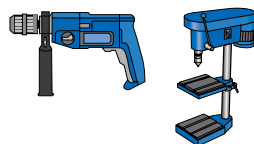


### Carbide burs

■ General information	6
■ Bur shapes	7
■ PFERD cuts and their application	8
■ Products made to order	9
■ Recommendations for use and instances of misuse	10
■ Types with extended shank	11
■ Spindle extensions	12
<b>Universal line</b>	13
■ Single cut, double cut, diamond cut for fine and coarse stock removal	14
<b>Performance line</b>	28
■ OMNI cut for versatile use	29
<b>High-performance line</b>	37
■ STEEL cut for steel and cast steel	38
■ INOX cut for stainless steel (INOX)	43
■ ALU cut for aluminum and non-ferrous metals	48
■ CAST cut for cast iron	55
■ TOUGH cut for tough applications	59
■ MICRO cut for fine finishing	65
■ EDGE, EDGE ALU cuts for flexible and defined work on edges	69

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

## Cutting out holes

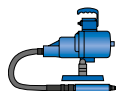


### Bi-metal hole saws

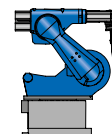
■ General information	74
■ Bi-metal hole saws	75
■ Bi-metal hole saw sets	76
■ Accessories	77



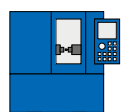
Straight grinder



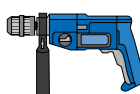
Flexible shaft



Robot



CNC machines



Power drill



Drill press

Visit [perfd.com](http://perfd.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](http://pferd.com) to learn more.



### Packaging

PFERD carbide burs and bi-metal hole saws are packaged to provide 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](http://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 **PFERDERGONOMICS**® and **PFERDEFFICIENCY**®:

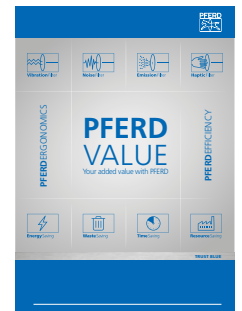
As part of **PFERDERGONOMICS**®, PFERD offers ergonomically optimized products and power tools that contribute to greater safety and working comfort, and thus to health protection.



As part of **PFERDEFFICIENCY**®, 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".



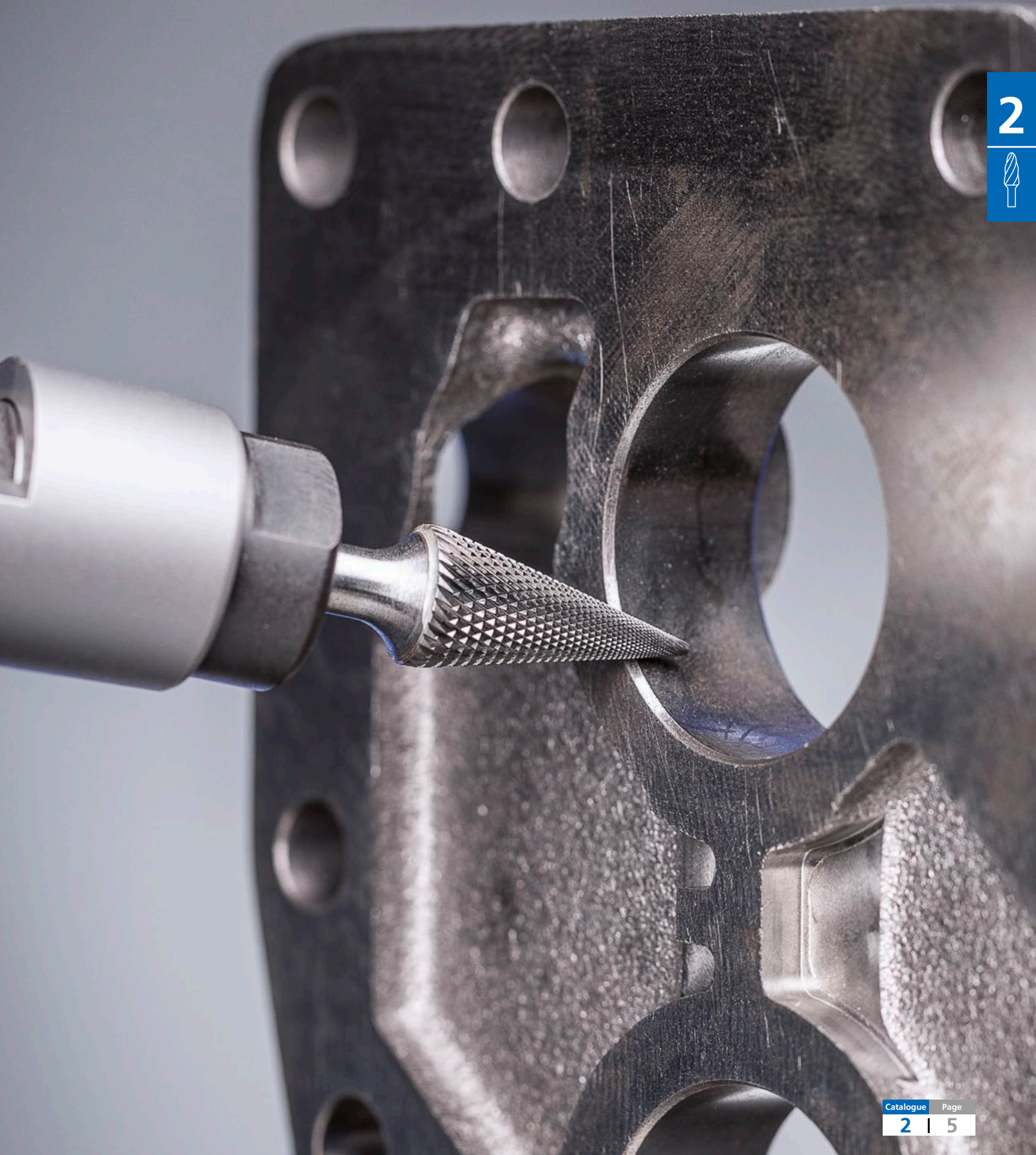
# Carbide burs and bi-metal hole saws

## 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	ALU cut	48	OMNI cut	29	Single cut	
			Brass, copper, zinc	Coarse stock removal	ALU cut	48	OMNI cut	29	Diamond cut	
				Fine stock removal	MICRO cut	65	-	-	Single cut	
		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	
				Fine stock removal	MICRO cut	65	-	-	Single cut	
				Coarse stock removal	On request	-	-	-	Diamond cut	
				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



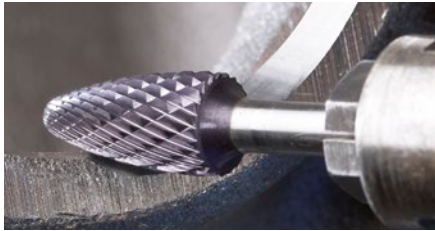


### Extended shank burs

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 shank 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 burr 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 burr.

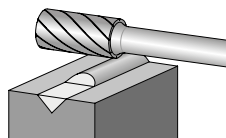


### PFERDPRAXIS brochures

Our PFERDPRAXIS 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.

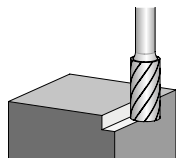


**Cylindrical shape**



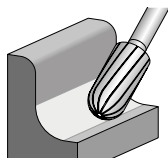
**Shape A**

**Cylindrical shape with end cut**



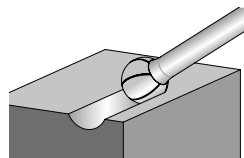
**Shape B**

**Cylindrical shape with radius end**



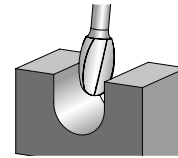
**Shape C**

**Ball shape**



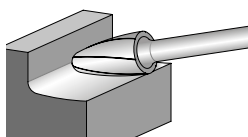
**Shape D**

**Oval shape**



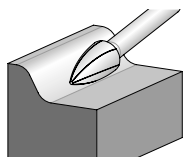
**Shape E**

**Tree shape with radius end**



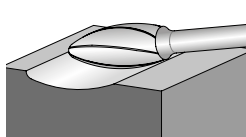
**Shape F**

**Pointed tree shape**



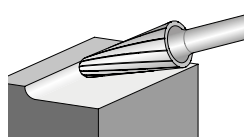
**Shape G**

**Flame shape**



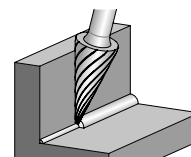
**Shape H**

**Cone shape with radius end**



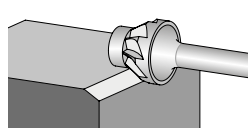
**Shape L**

**Cone pointed shape**



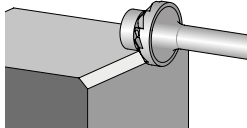
**Shape M**

**EDGE 30°**



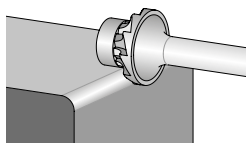
**Shape EDGE 30°**

**EDGE 45°**

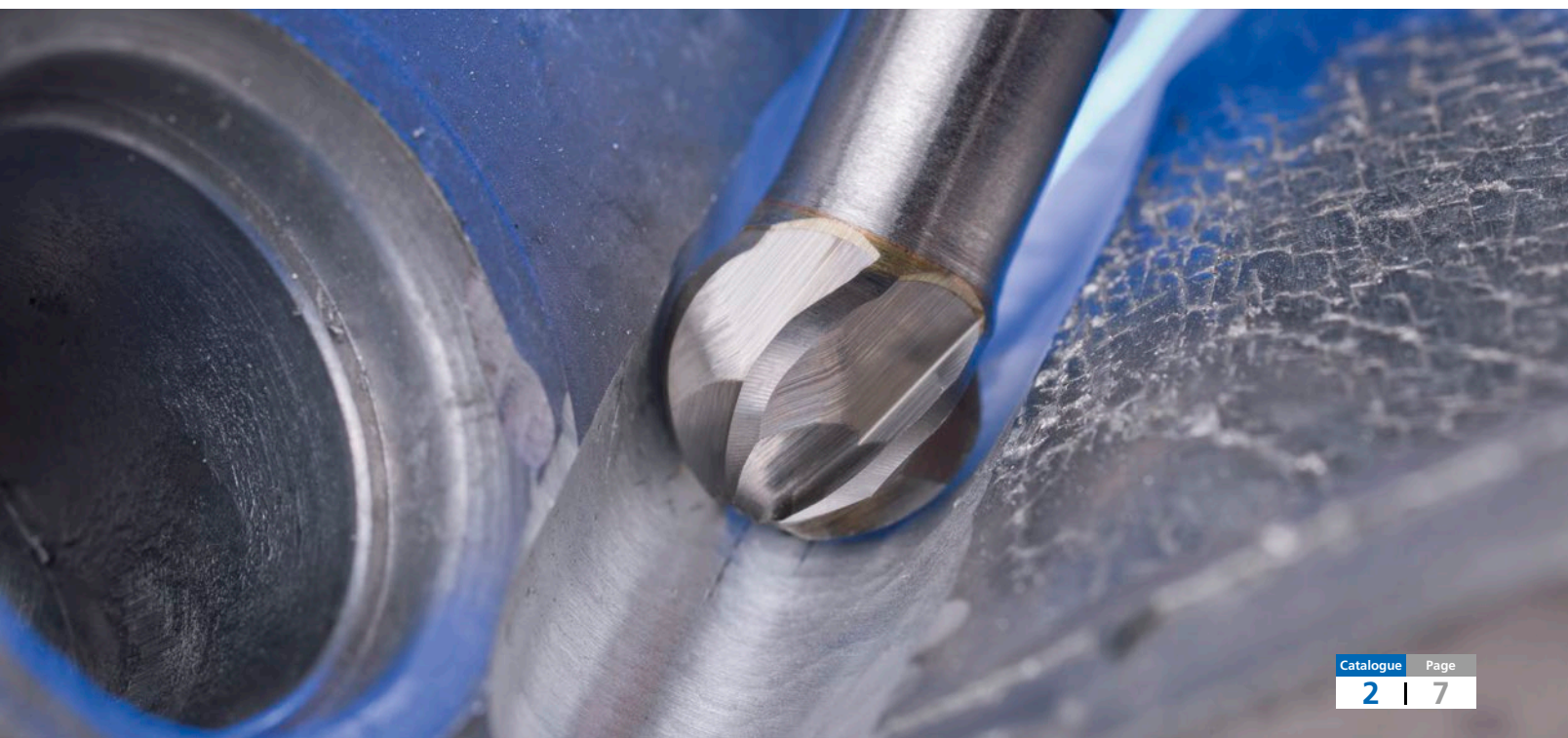


**Shape EDGE 45°**

**EDGE R-1/8"**



**Shape EDGE R-1/8"**



# Carbide burs

## PFERD cuts and their application

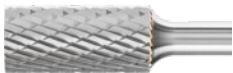
### PFERD cuts for universal applications

#### Single cut



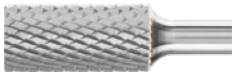
- Machining of steel, cast iron, stainless steel (INOX), nickel-based alloys and titanium alloys.
- High stock removal.
- Good surface finish.

#### 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

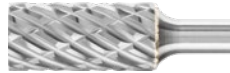


- High stock removal rate on key materials such as steel, cast steel, stainless steel (INOX), non-ferrous metals and cast iron.
- Similar to the double cut but with a significantly higher stock removal rate.



### 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



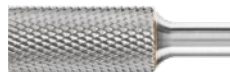
- Creates exact edge shapes – with either 30° or 45° chamfering or a defined radius of 1/8".
- Safe and comfortable to guide.

#### 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.



2



**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!

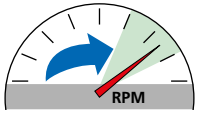


# Carbide burs

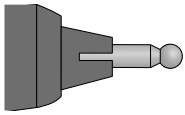
## Recommendations for use and instances of misuse

### Recommendations for use:

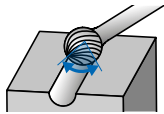
An optimum rotational speed and power output for the power tool (air-powered or electric grinders, flexible shaft drive) is required for cost-effective use of carbide burs.



- 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).

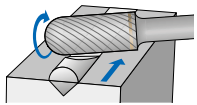


- Use only rigid clamping systems and power tools as impacts on the burs and bur chatter lead to premature wear.



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







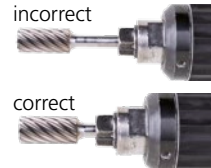


Figure	Consequences of misuse	Solution
	The bur becomes clogged during use.	Use the correct cut for the material being machined. Use tools with a HICOAT® coating or use grinding oil.
	Pronounced discoloration can be seen in the transition between the toothed section and the shank.*	Observe the recommended rotational speeds and/or reduce the contact pressure and surface contact angle.
	The 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.
	The clamping length is incorrect.	Do not choose a bur clamping depth that is too short. <b>In general</b> , 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 discoloration 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 burr 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 burr 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 burr and the workpiece is not guaranteed, the **③** maximum idling speeds stated in the table must not be exceeded.

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

#### Example

Carbide burr, 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**

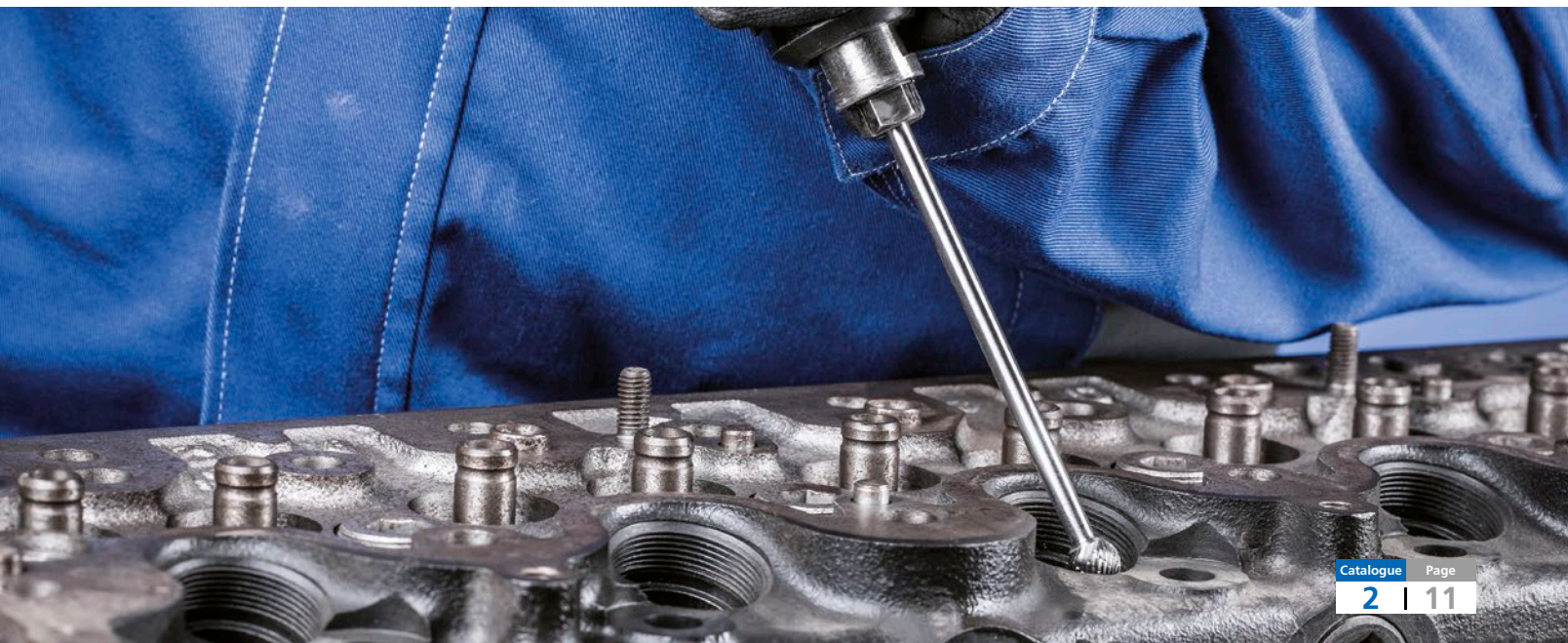
To determine the recommended rotational speed range [RPM], please proceed as follows:

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

① Bur dia. [Inches]	③ Maximum rotational free speed [RPM] (No contact to the workpiece)	② 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.



# Carbide burs

## Spindle extensions



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.



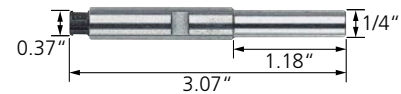
More detailed information and ordering information for spindle extensions can be found in catalogue section 9.



= Read the safety notes!

### 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



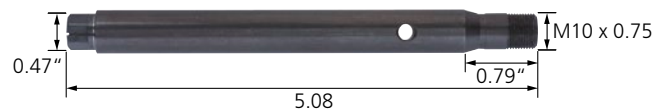
### SPV 75-1/4 S3/8 for shank diameter of 3/8"

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





# 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



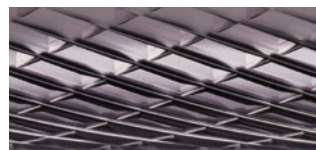
- Machining of stainless steel (INOX), steel and high-temperature-resistant materials such as nickel-based and cobalt-based alloys.
- High stock removal with short chips.
- Good surface.

## 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 850 - 1,500 SFPM Diamond cut 850 - 1,500 SFPM 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 850 - 1,150 SFPM
			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 850 - 1,150 SFPM
			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 850 - 1,500 SFPM
			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 1,500 - 2,000 SFPM

### 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:

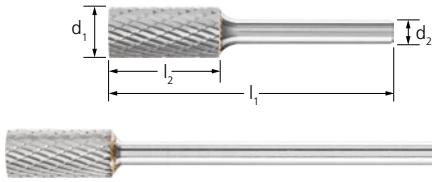


Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

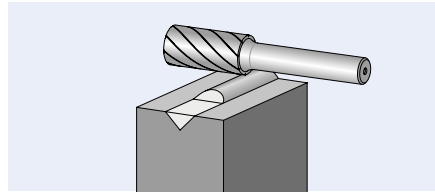
❺ Bur dia. [Inches]	❻ Peripheral speed [SFPM]					
	850	1,150	1,500	2,000	2,500	3,000
	Rotational speed [RPM]					
3/32	35,000	56,000	72,000	95,000	119,000	120,000
1/8	27,000	37,000	48,000	64,000	80,000	95,000
3/16	16,000	22,000	29,000	38,000	48,000	57,000
1/4	13,000	19,000	24,000	32,000	40,000	48,000
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 burr 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

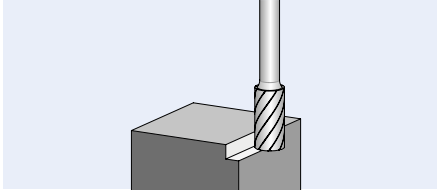
Time Saving

d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number				
				Single 	Double 	Double HC-FEP 	Diamond 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>								
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
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>								
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	1	SA-7	2-3/4	-	24122	-	-	1
	1	SA-9	2-3/4	-	24162	-	-	1
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>								
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



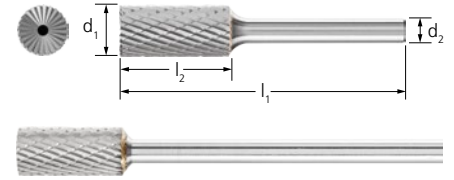
### Safety notes:








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

### PFERDVALUE®:

With HICOAT® coating:

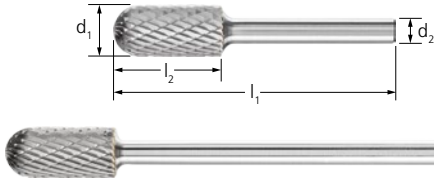


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number				
				Single 	Double 	Double HC-FEP 	Diamond 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>								
1/4	1/2	SB-51	1-11/16	23171	-	-	-	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>								
3/16	5/8	SB-14	1-15/16	-	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
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>								
3/8	3/4	SB-3L6	6-5/8	-	25842	-	-	1
1/2	1	SB-5L6	6-7/8	-	25852	-	-	1

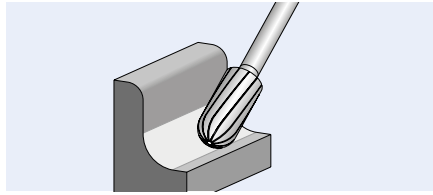


# Carbide burs, universal line

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®:

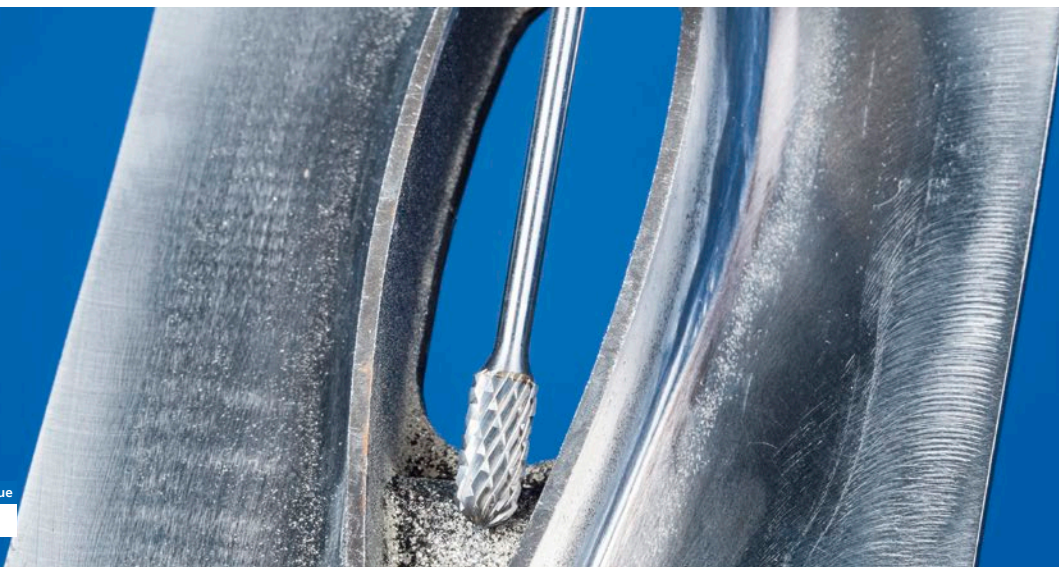
With HICOAT® coating:



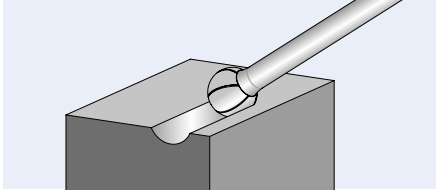
Waste Saving

Time Saving

d <sub>1</sub> [Inches]	I <sub>2</sub> [Inches]	SCTI no.	I <sub>1</sub> [Inches]	Cut type and EDP number				
				Single 	Double 	Double HC-FEP 	Diamond 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>								
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
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>								
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
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>								
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



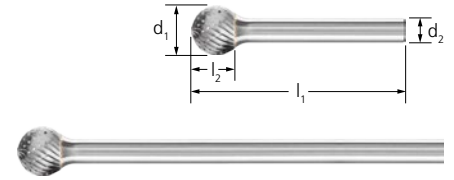
### Safety notes:



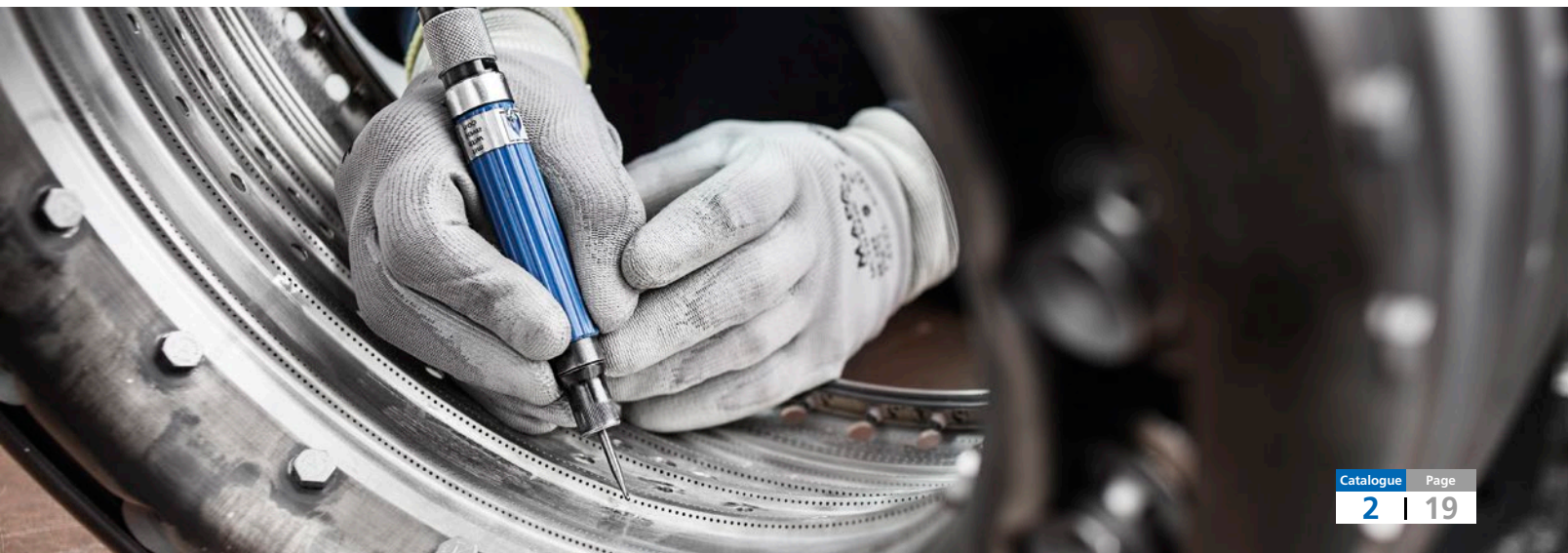
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

### PFERDVALUE®:

With HICOAT® coating:

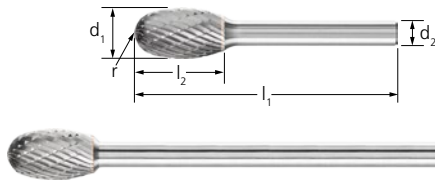


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number				
				Single 	Double 	Double HC-FEP 	Diamond 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>								
3/32	3/32	SD-41	1-1/2	23231	23232	-	-	1
1/8	3/32	SD-42	1-1/2	23241	23242	-	-	1
3/16	1/8	SD-53	1-3/8	23261	23262	-	-	1
1/4	3/16	SD-51	1-3/8	23251	23252	-	-	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>								
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
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>								
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

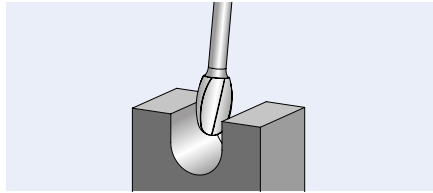


# Carbide burs, universal line

For fine and coarse stock removal







Oval bur – Shape E



**Safety notes:**

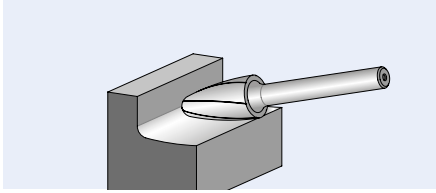


Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number				
					Single 	Double 	Diamond 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>									
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	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>									
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	
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>									
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



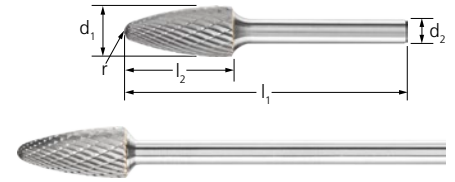
### Safety notes:



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

### PFERDVALUE®:

With HICOAT® coating:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number				
					Single 	Double 	Double HC-FEP 	Diamond 	

### Shank dia. 1/8" [d<sub>2</sub>]

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<sub>2</sub>]

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

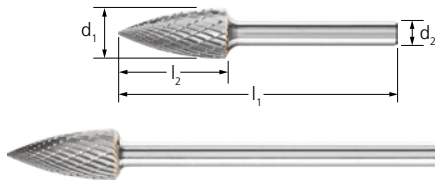
### Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)

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

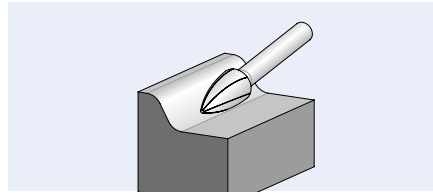


# Carbide burs, universal line

For fine and coarse stock removal







## Tree bur with pointed end – Shape G



### Safety notes:

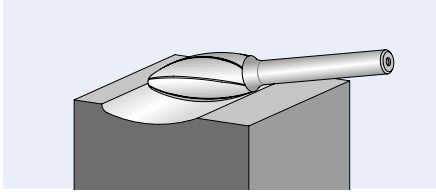


Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number			
				Single 	Double 	Diamond 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>							
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
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>							
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
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>							
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



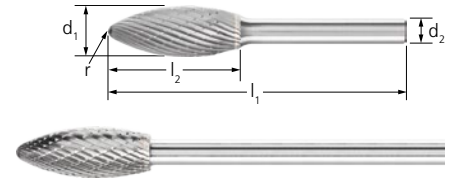
## Flame bur – Shape H



### Safety notes:



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

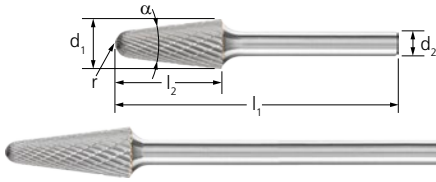


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number				
					Single 	Double 	Diamond 		
<b>Shank dia. 1/8" [d<sub>1</sub>]</b>									
1/8	1/4	SH-41	1-1/2	.031	23401	23402	-	1	
<b>Shank dia. 1/4" [d<sub>1</sub>]</b>									
1/4	5/8	SH-1	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	
<b>Extended shank – dia. 1/4" [d<sub>1</sub>], SL 6" (L6)</b>									
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	

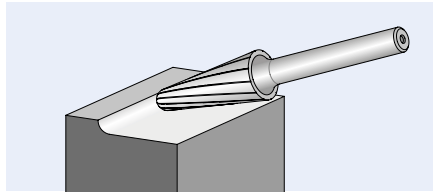


# Carbide burs, universal line

For fine and coarse stock removal



## 14° Taper bur with radius end – Shape L



### Safety notes:





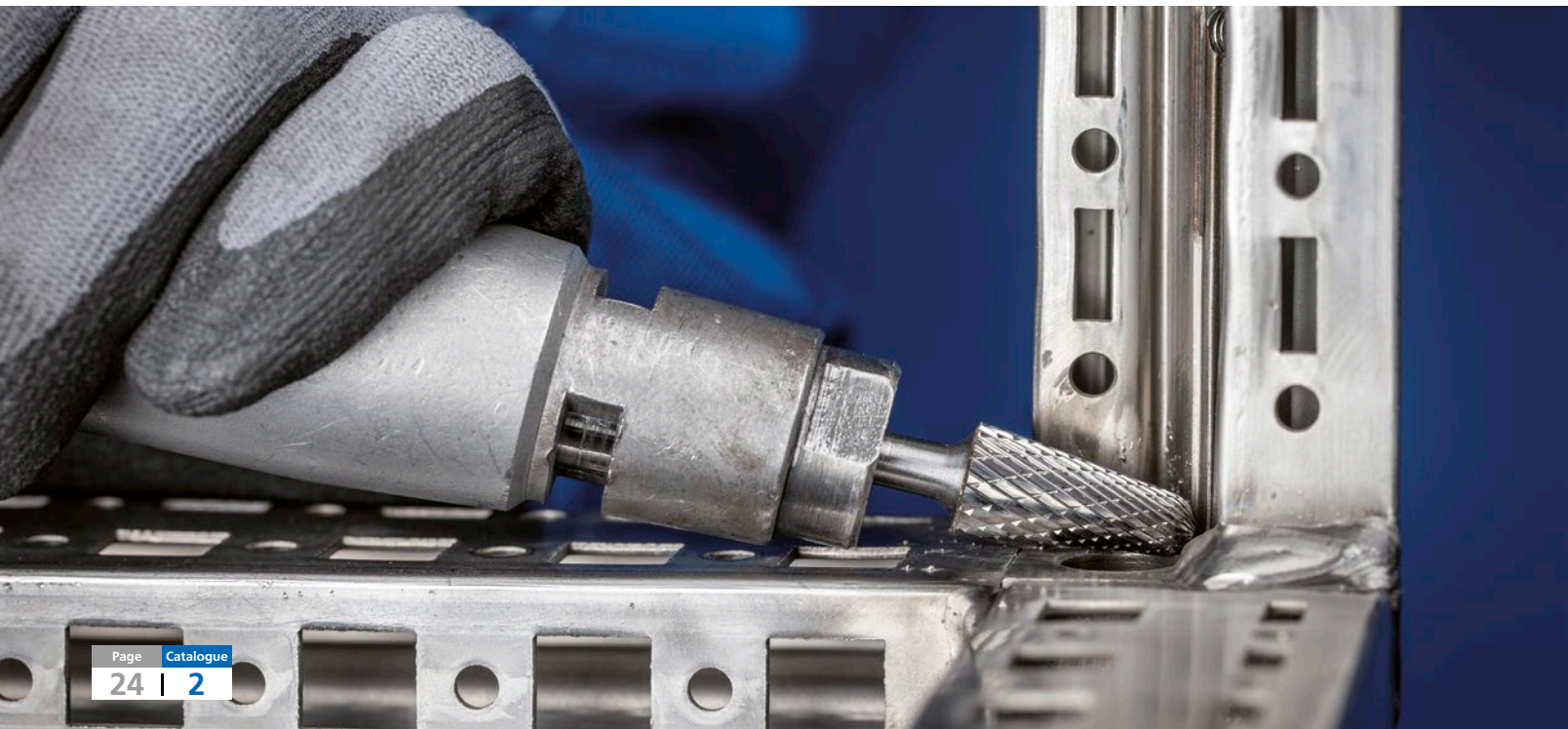
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.

### PFERDVALUE®:

With HICOAT® coating:

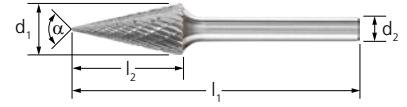
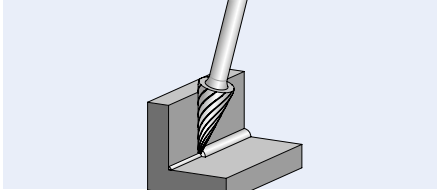






d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number				
						Single 	Double 	Double HC-FEP 	Diamond 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>										
1/8	1/2	SL-42	14°	1-1/2	.035	23451	23452	-	-	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>										
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
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>										
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 <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	Cut type and EDP number			
					Single 	Double 	Diamond 	

### Shank dia. 1/8" [d<sub>2</sub>]

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<sub>2</sub>]

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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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.

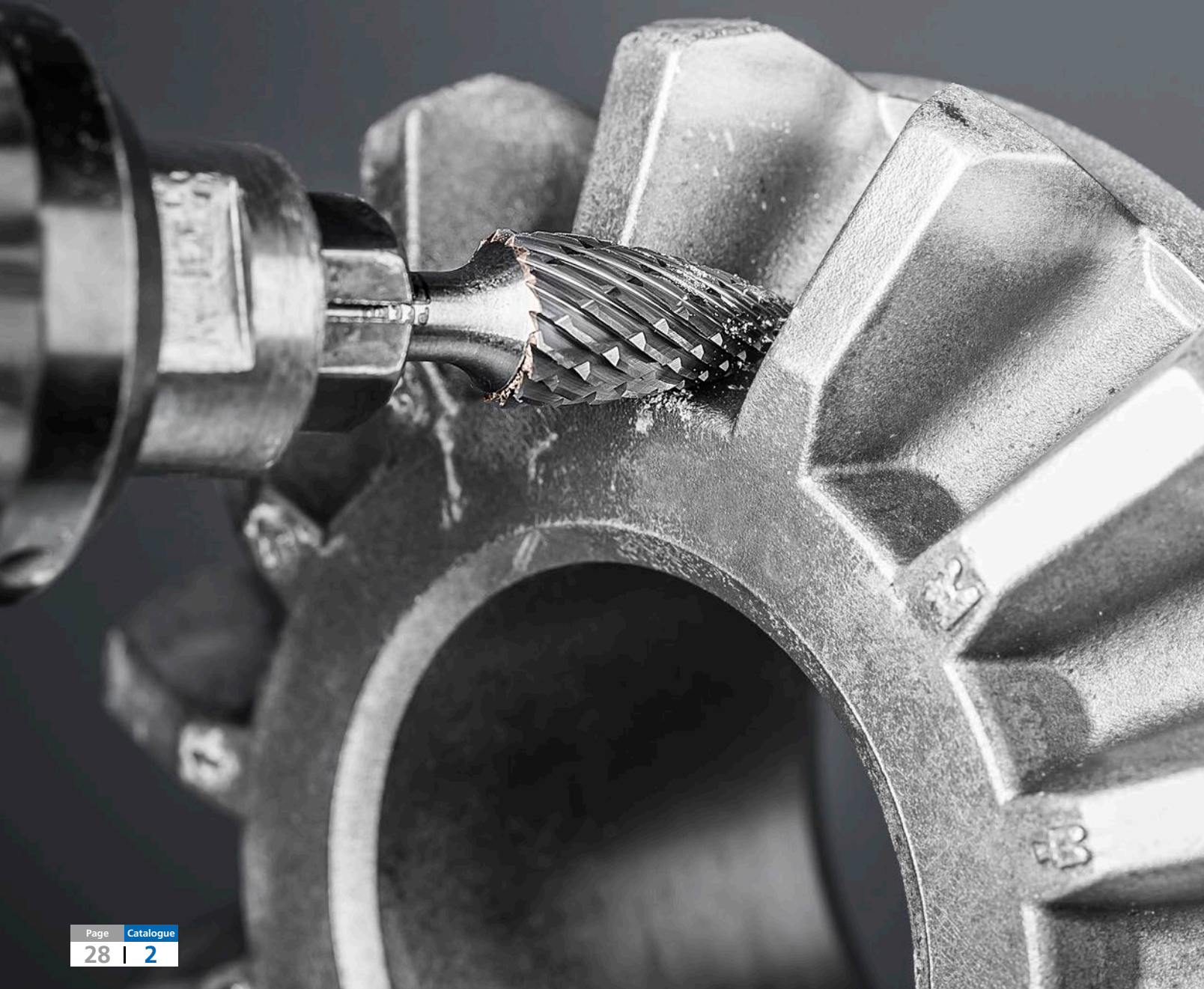
### EDP 26552

#### 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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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



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.

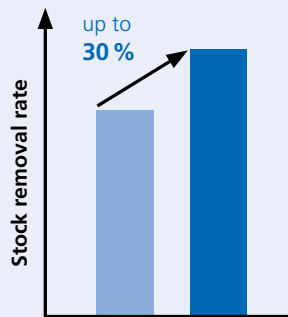
### Advantages:

- 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.

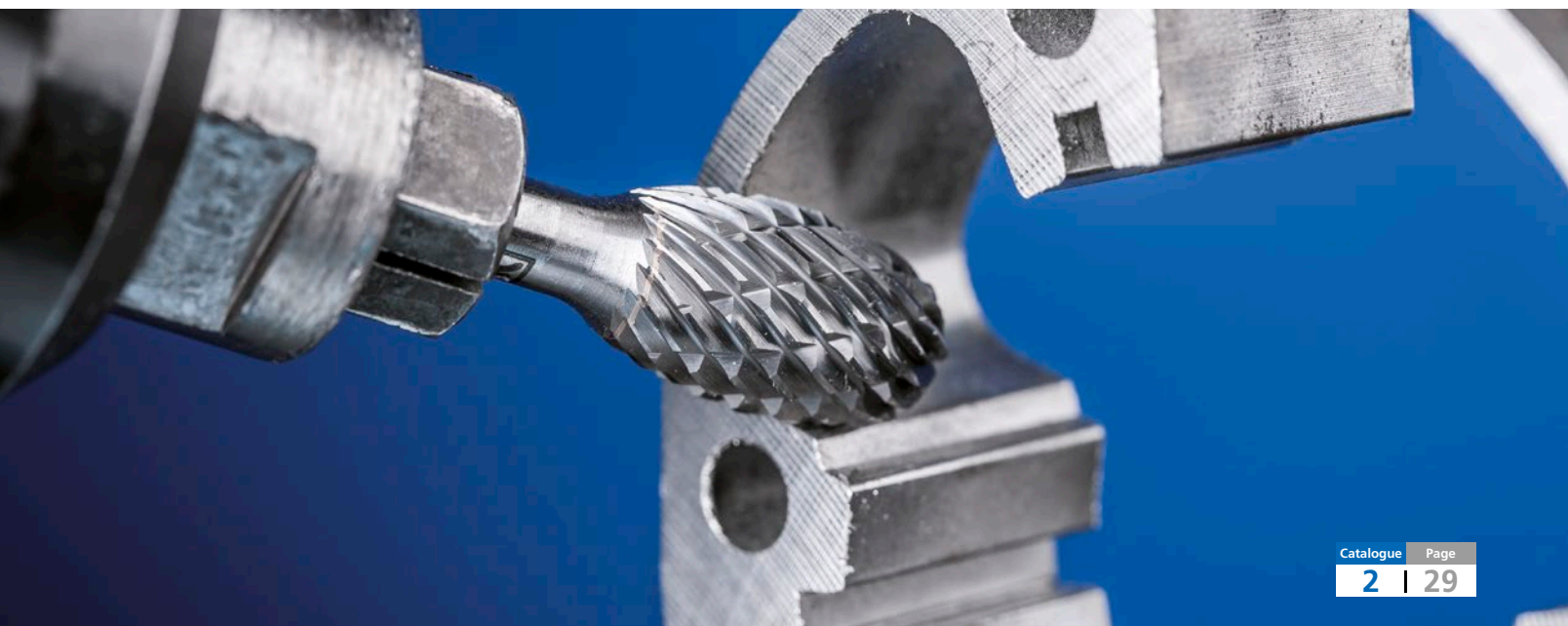


### PFERDVALUE®:

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

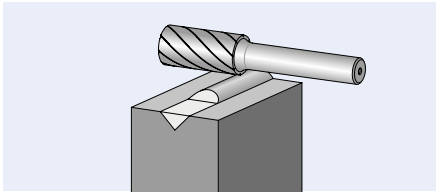
#### Example:

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**

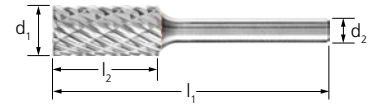
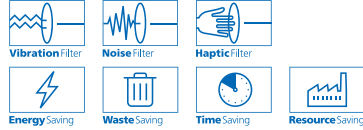
❸ Bur dia. [Inches]	❹ Peripheral speed [SFPM]				
	850	1,500	2,000	2,500	3,000
	Rotational speeds [RPM]				
1/4	13,000	24,000	32,000	40,000	48,000
3/8	8,000	14,000	19,000	24,000	29,000
7/16	8,000	13,000	17,500	22,000	29,000
1/2	7,000	12,000	16,000	20,000	26,500
5/8	5,000	9,000	12,000	15,000	18,000



## Cylindrical bur with plain end (uncut) – Shape A



PFERDVALUE®:

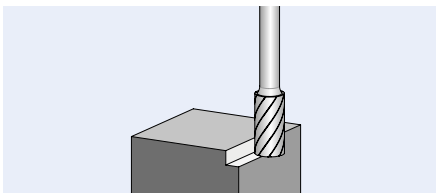


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				OMNI 	

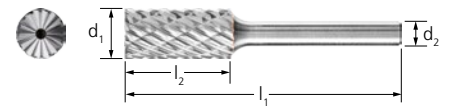
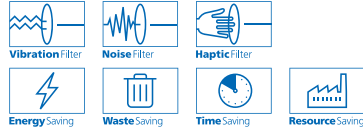
Shank dia. 1/4" [d<sub>2</sub>]

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 <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				OMNI 	

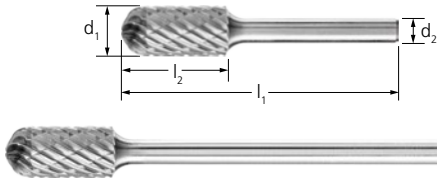
Shank dia. 1/4" [d<sub>2</sub>]

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

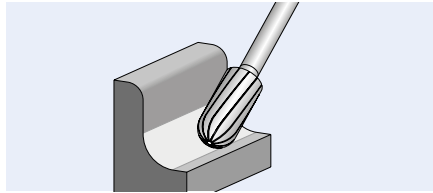


# Carbide burs, performance line

OMNI cut for versatile use



## Cylindrical bur with radius end – Shape C

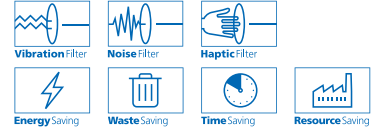




### Safety notes:



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

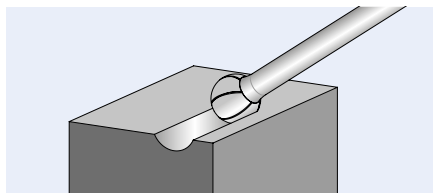
### PFERDVALUE®:



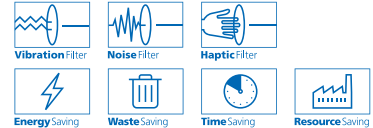
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				OMNI 	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
1/4	5/8	SC-1	1-15/16	28024	1
3/8	3/4	SC-3	2-1/2	28006	1
1/2	1	SC-5	2-3/4	28001	1
5/8	1	SC-6	2-3/4	28030	1
<b>Extended shank – dia. 1/4" [d<sub>2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





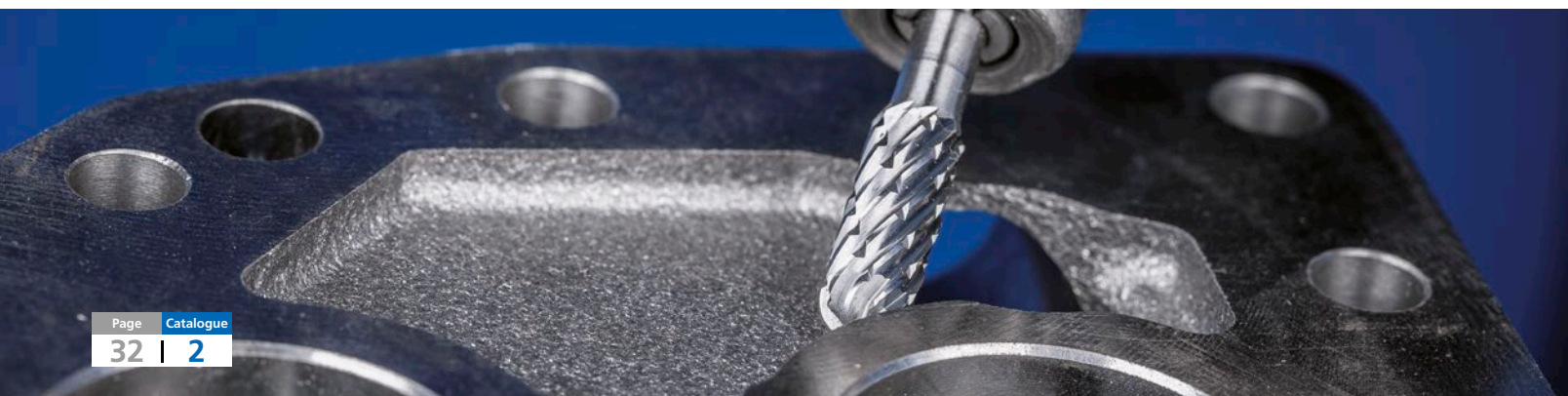
## Ball bur – Shape D



### PFERDVALUE®:

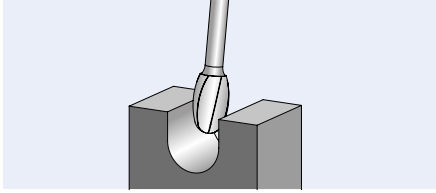


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				OMNI 	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
1/4	3/16	SD-1	1-15/16	28034	1
3/8	5/16	SD-3	2-1/16	28021	1
1/2	7/16	SD-5	2-3/16	28028	1





## Oval bur – Shape E

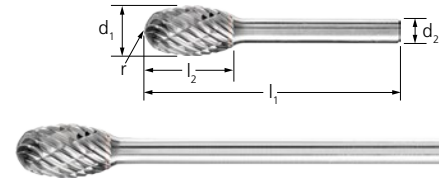


### Safety notes:





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

### PFERDVALUE®:

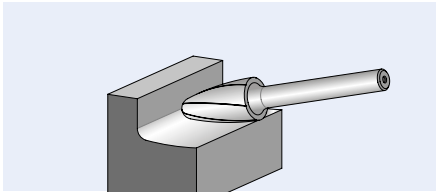


2



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

## Tree bur with radius end – Shape F

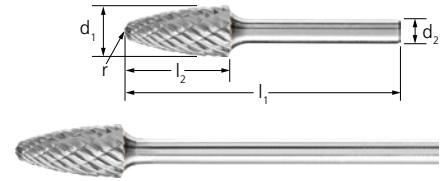




### Safety notes:



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

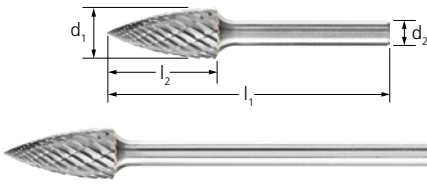
### PFERDVALUE®:



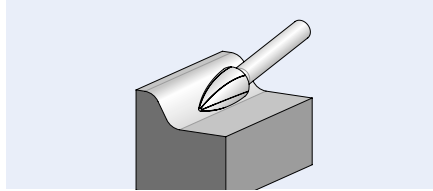
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
					OMNI		
<b>Shank dia. 1/4" [d<sub>1</sub>]</b>							
1/4	5/8	SF-1	1-15/16	.059	28012		1
3/8	3/4	SF-3	2-1/2	.098	28007		1
7/16	1	SF-4	2-3/4	.012	28002		1
1/2	1	SF-5	2-3/4	.098	28000		1
5/8	1	SF-6	2-3/4	.141	28033		1
<b>Extended shank – dia. 1/4" [d<sub>1</sub>], SL 6" (L6)</b>							
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

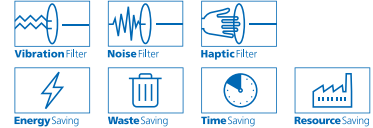


### Safety notes:



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

### PFERDVALUE®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				OMNI 	

### Shank dia. 1/4" [d<sub>2</sub>]

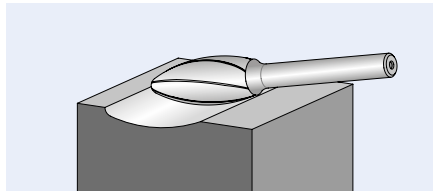
3/8	3/4	SG-3	2-1/2	28015	1
1/2	1	SG-5	2-3/4	28009	1

### Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)

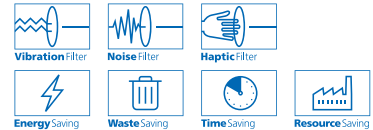
3/8	3/4	SG-3L6	6-3/4	28031	1
1/2	1	SG-5L6	6-7/8	28023	1



## Flame bur – Shape H



### PFERDVALUE®:



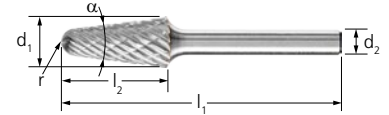
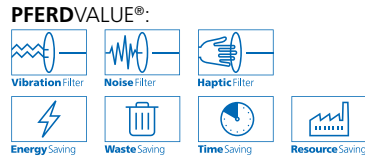
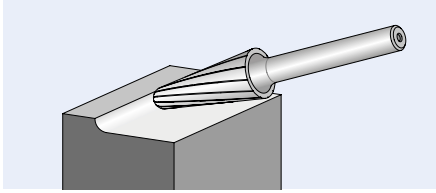
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number	
					OMNI 	

### Shank dia. 1/4" [d<sub>2</sub>]

1/2	1-1/4	SH-5	3	.082	28004	1
-----	-------	------	---	------	-------	---



## 14° Taper bur with radius end – Shape L

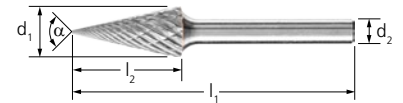
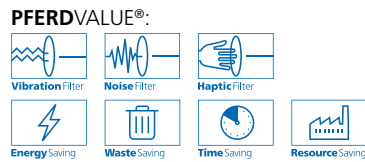
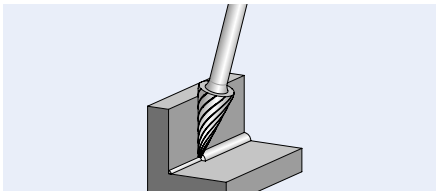


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number	
						OMNI 	

Shank dia. 1/4" [d<sub>2</sub>]

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

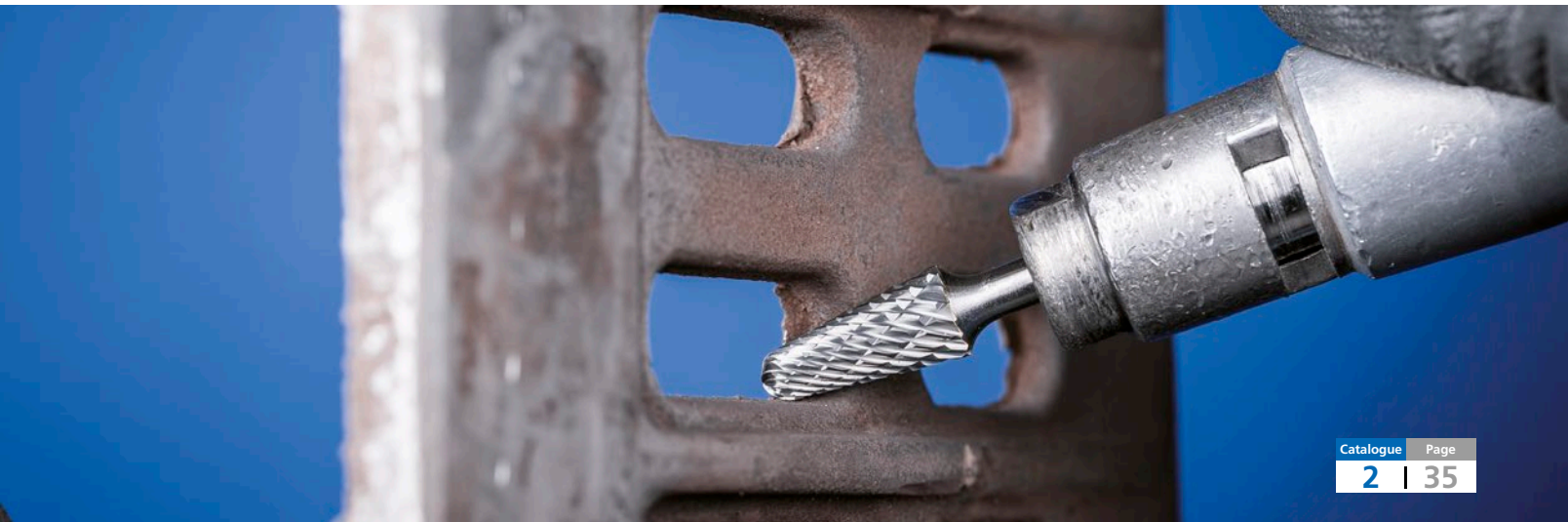
## Cone bur with pointed end – Shape M



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	Cut type and EDP number	
					OMNI 	

Shank dia. 1/4" [d<sub>2</sub>]

1/4	1	SM-3	10°	1-15/16	28036	1
1/2	1	SM-5	28°	2-3/4	28016	1



# Carbide burs, performance line

## OMNI cut for versatile use



### 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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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		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.

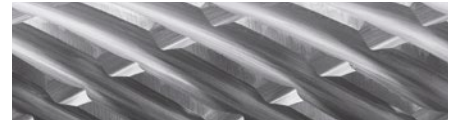
Set contents shape	Bur dia. d <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [Inches]	SCTI no.	Cut type and set EDP number		
				 OMNI	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5		28005	1
Cylindrical (radius end)	1/2	1	SC-5		28001	1
Oval	1/2	7/8	SE-5		28025	1
Tree (radius end)	1/2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



# 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.

### Applications:

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

### Safety note:

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

### PFERDVALUE®:

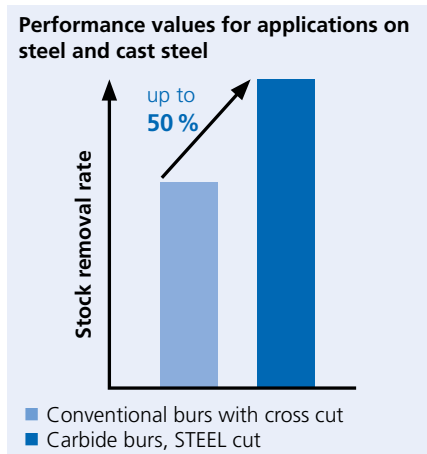
PFERDERGONOMICS® recommends burs with STEEL cut as an innovative product solution for comfortable working with significantly reduced vibration and less noise.



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".



### 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

## 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
	Hardened, heat-treated steels over 370 HV (38 HRC)	Tool steels, tempering steels, alloyed steels, cast steel		

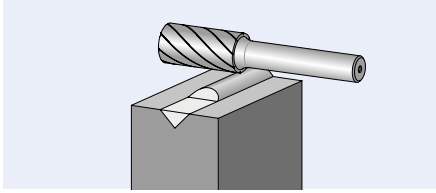
### Example:

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

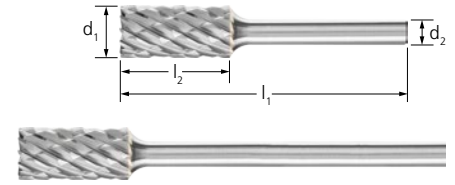
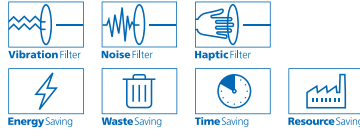




### Safety notes:



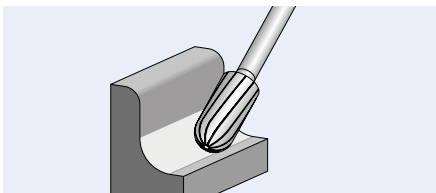
The rotational speeds for extended shank burs relate to applications where the bur is in contact with the workpiece. More safety notes can be found on page 11.

### PFERDVALUE®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				STEEL		
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
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
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>						
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

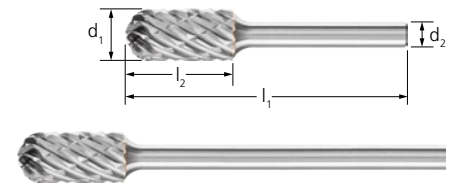
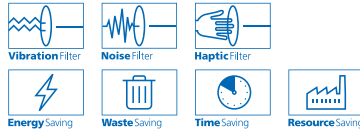




### Safety notes:



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.

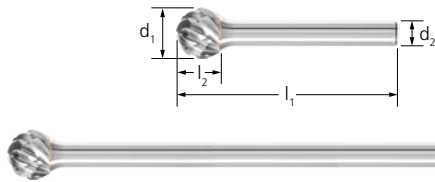
### PFERDVALUE®:



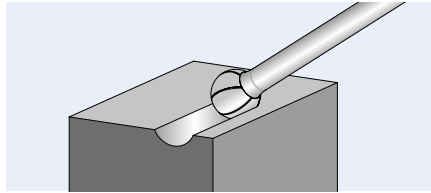
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				STEEL		
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
1/4	5/8	SC-1	1-15/16	24398		1
3/8	3/4	SC-3	2-1/2	24428		1
1/2	1	SC-5	2-3/4	24468		1
5/8	1	SC-6	2-3/4	24478		1
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>						
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®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving





Waste Saving



Time Saving



Resource Saving

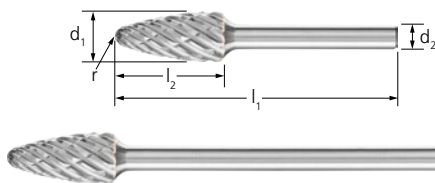
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				STEEL 	

### Shank dia. 1/4" [d<sub>2</sub>]

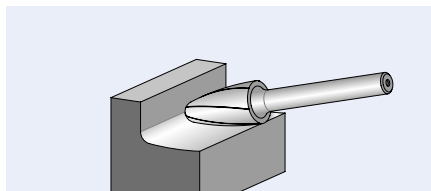
1/4	3/16	SD-1	1-15/16	24546	1
3/8	5/16	SD-3	2-1/16	24568	1
1/2	7/16	SD-5	2-3/16	24588	1
5/8	9/16	SD-6	2-5/16	24599	1

### Extended shank – dia. 1/4" [d<sub>2</sub>], 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 <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number	
					STEEL 	

### Shank dia. 1/4" [d<sub>2</sub>]

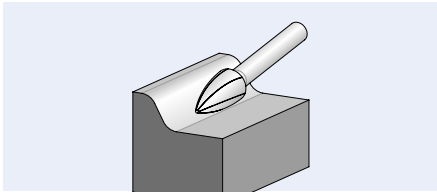
1/4	5/8	SF-1	1-15/16	.059	24698	1
3/8	3/4	SF-3	2-1/2	.098	24708	1
1/2	1	SF-5	2-3/4	.098	24728	1
5/8	1	SF-6	2-3/4	.141	24748	1

### Extended shank – dia. 1/4" [d<sub>2</sub>], 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.

### PFERDVALUE®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



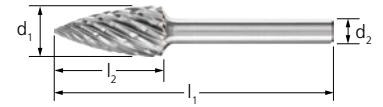
Waste Saving



Time Saving



Resource Saving



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				STEEL 	

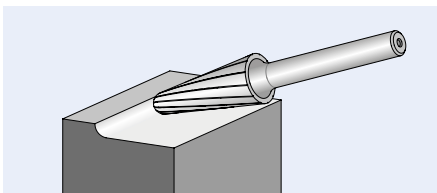
### Shank dia. 1/4" [d<sub>2</sub>]

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<sub>2</sub>], 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.

### PFERDVALUE®:



Vibration Filter



Noise Filter



Haptic Filter



Energy Saving



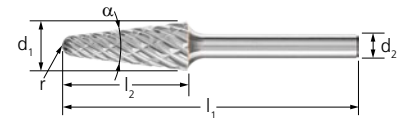
Waste Saving



Time Saving



Resource Saving



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number	
						STEEL 	

### Shank dia. 1/4" [d<sub>2</sub>]

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<sub>2</sub>], 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

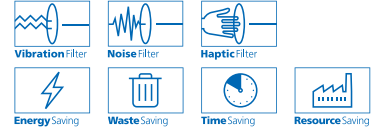
Contains five carbide burs for processing steel and cast steel in the most common shapes and dimensions.



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

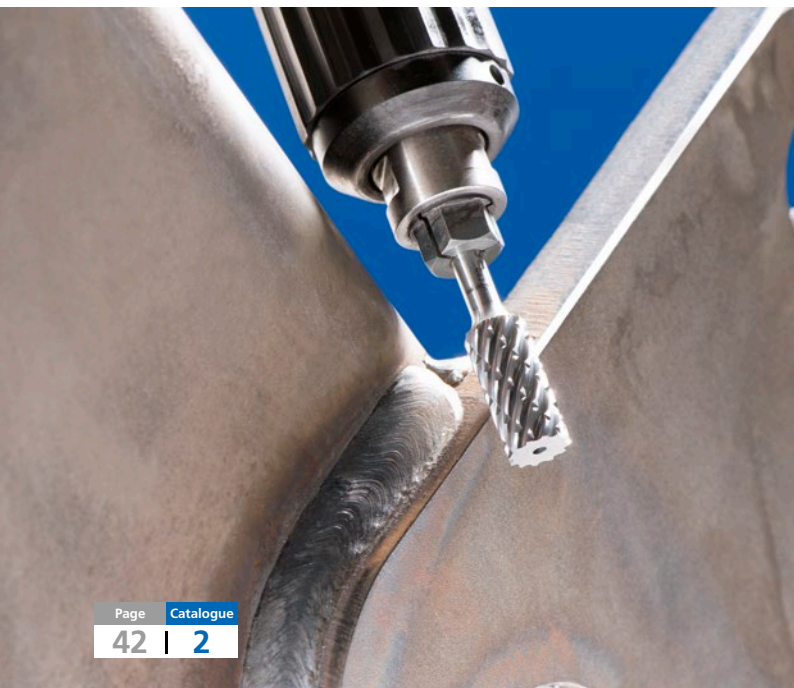
#### EDP 26553 5 piece STEEL cut carbide bur set 1/4" shank (plastic case)

Contains 5 pcs. burs with 1/4" shank diameter and STEEL cut.

#### PFERDVALUE®:



Set contents shape	Bur dia. d <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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.

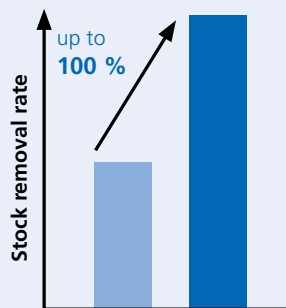
### Advantages:

- 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/mm<sup>2</sup>)

### 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:

- 1 Select the material group to be machined.
- 2 Refer to the table for the peripheral speed.
- 3 Select the required bur diameter.
- 4 The peripheral speed range and the bur diameter determine the recommended rotational speed range.

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

### Example:

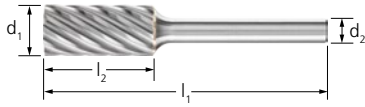
Carbide bur,  
INOX cut,  
bur diameter of 1/2".  
Coarse stock removal on stainless steel (INOX).  
Peripheral speed: 1,500–2,000 SFPM

**Rotational speed range:**  
**12,000–16,000 RPM**

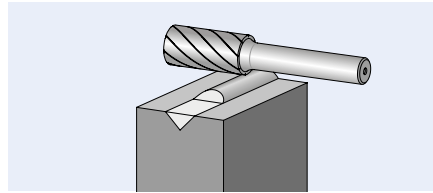
3 Bur dia. [Inches]	4 Peripheral speeds [SFPM]		
	850	1,500	2,000
Rotational speeds [RPM]			
1/8	27,000	48,000	64,000
1/4	13,000	24,000	32,000
3/8	8,000	14,000	19,000
1/2	7,000	12,000	16,000

# Carbide burs, high performance line

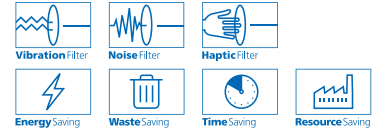
## INOX cut for stainless steel (INOX)





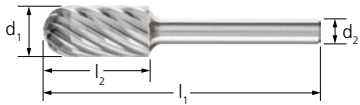
### Cylindrical burr with plain end (uncut) – Shape A



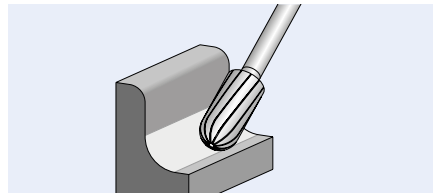
PFERDVALUE®:



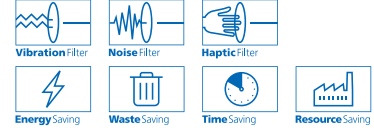
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				INOX 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
1/8	1/2	SA-43	1-1/2	23127		1
1/4	1/2	SA-51	1-11/16	23137		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
1/4	5/8	SA-1	1-15/16	24037		1
3/8	3/4	SA-3	2-1/2	24067		1
1/2	1	SA-5	2-3/4	24107		1





### Cylindrical burr with radius end – Shape C



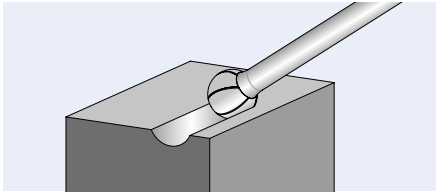
PFERDVALUE®:



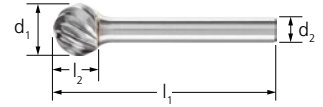
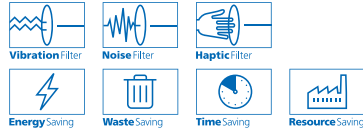
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				INOX 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
1/8	1/2	SC-42	1-1/2	23197		1
1/4	1/2	SC-51	1-11/16	23207		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
1/4	5/8	SC-1	1-15/16	24397		1
3/8	3/4	SC-3	2-1/2	24427		1
1/2	1	SC-5	2-3/4	24467		1





## Ball bur – Shape D

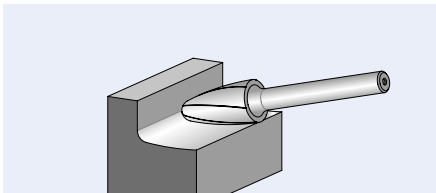


### PFERDVALUE®:

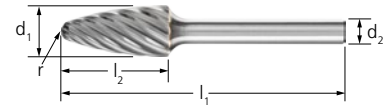
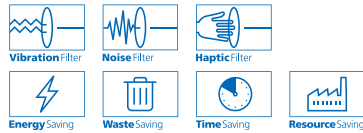




d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				INOX 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
1/8	3/32	SD-42	1-1/2	23247		1
1/4	3/16	SD-51	1-3/8	23257		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
1/4	3/16	SD-1	1-15/16	24527		1
3/8	5/16	SD-3	2-1/16	24567		1
1/2	7/16	SD-5	2-3/16	24587		1

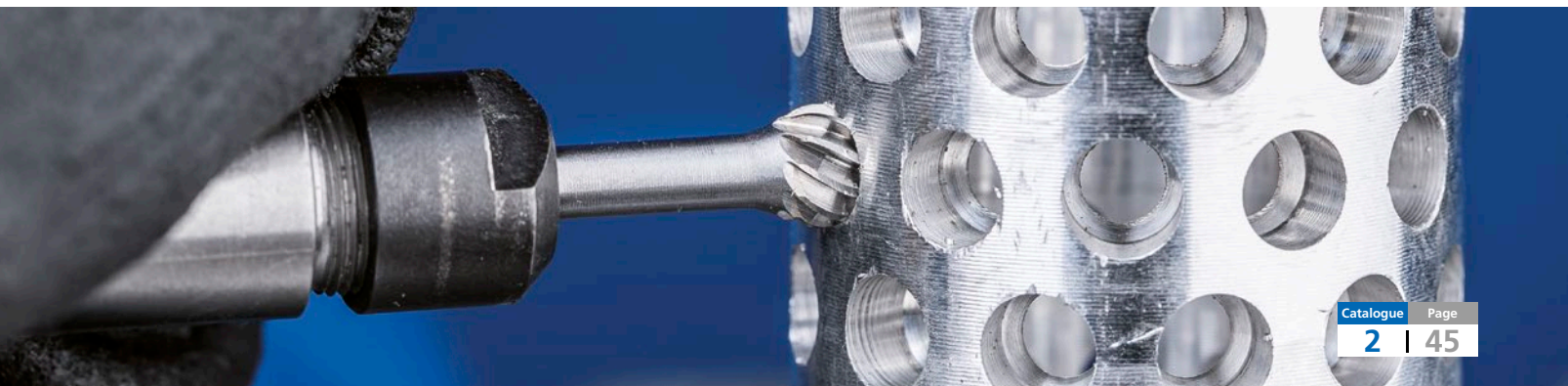
## Tree bur with radius end – Shape F



### PFERDVALUE®:

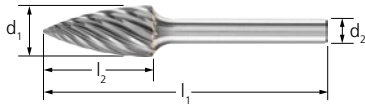


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
					INOX 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>							
1/8	1/2	SF-42	1-1/2	.029	23317		1
1/4	1/2	SF-51	1-11/16	.059	23327		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>							
1/4	5/8	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

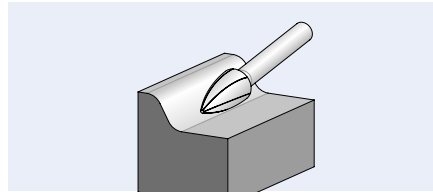


# Carbide burs, high performance line

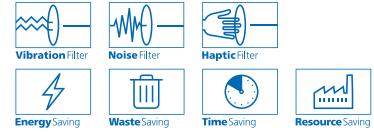
## INOX cut for stainless steel (INOX)





### Tree bur with pointed end – Shape G



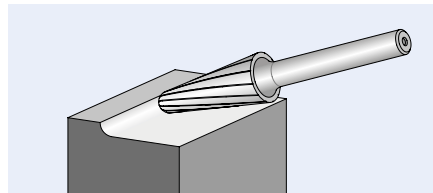
#### PFERDVALUE®:



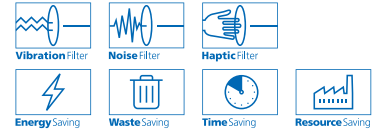
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				INOX		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
1/8	1/4	SG-41	1-1/2	23357		1
1/4	1/2	SG-51	1-11/16	23387		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
1/4	5/8	SG-1	1-15/16	24787		1
3/8	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®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
						INOX		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>								
1/8	1/2	SL-42	14°	1-1/2	.035	23457		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>								
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





# Carbide burs, high performance line

## INOX cut for stainless steel (INOX)

### 5 piece carbide bur sets – INOX cut

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

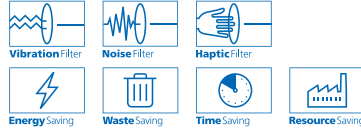
The sturdy plastic box protects the burs from dirt and damage. Five additional slots are available for other burs.



#### 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®:



Set contents shape	Bur dia. d <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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-reinforcing 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:

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

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

- 5 Select the required bur diameter.
- 6 The peripheral speed range and the bur diameter determine the recommended rotational speed range.

1 Material group		2 Application		3 Cut		4 Peripheral speed		
Non-ferrous metals	Soft non-ferrous metals	Aluminum alloys	Coarse stock removal	ALU	2,000 - 3,600 SFPM	HICOAT® HC-NFE		
			Fine stock removal	ALU				3,000 - 3,600 SFPM
		Brass, copper, zinc	Coarse stock removal	ALU	2,000 - 3,600 SFPM	HICOAT® HC-NFE		
			Fine stock removal	ALU				3,000 - 3,600 SFPM
		Hard non-ferrous metals	Hard aluminum alloys (high Si content)	Coarse stock removal	ALU	2,000 - 3,600 SFPM	HICOAT® HC-NFE	
				Fine stock removal	ALU			3,000 - 3,600 SFPM
	Bronze		Coarse stock removal	ALU	2,000 - 3,000 SFPM	HICOAT® HC-NFE		
			Fine stock removal	ALU				2,000 - 3,600 SFPM
	Plastics, other materials	Thermoplastics, fibre-reinforced plastics (GRP/CRP)	Coarse stock removal	ALU	2,000 - 3,600 SFPM	HICOAT® HC-NFE		
			Fine stock removal	ALU				2,000 - 3,600 SFPM

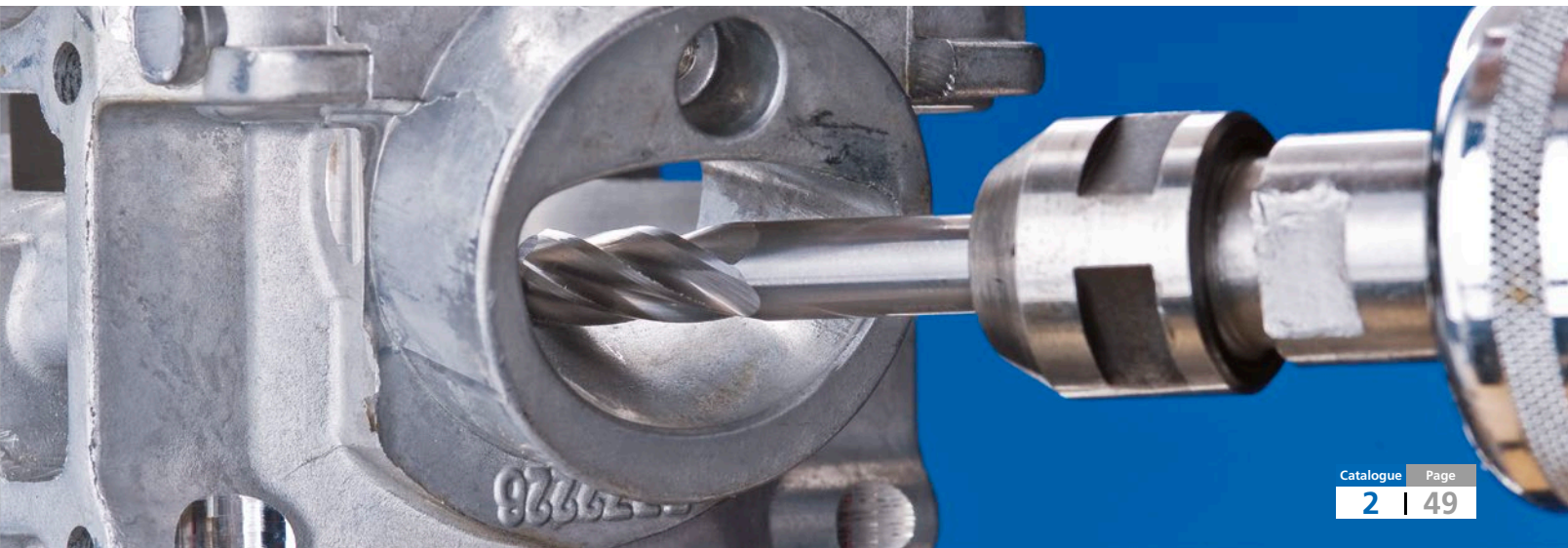
#### Example:

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

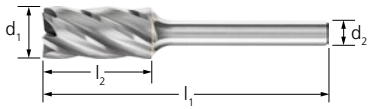
**Rotational speed range:**  
**16,000–24,000 RPM**

5 Bur dia. [Inches]	6 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

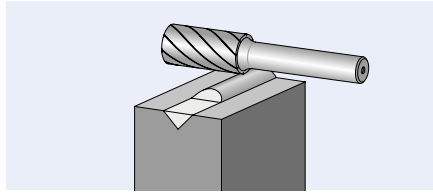


# Carbide burs, high performance line

ALU cut for aluminum/non-ferrous metals



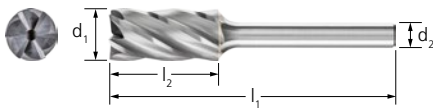
## Cylindrical bur with plain end (uncut) – Shape A



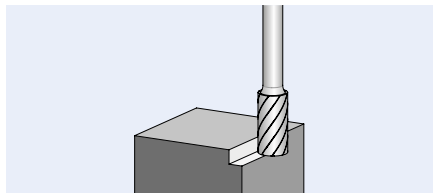
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				ALU		

### Shank dia. 1/4" [d<sub>2</sub>]

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:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				ALU	ALU HC-NFE	

### Shank dia. 1/8" [d<sub>2</sub>]

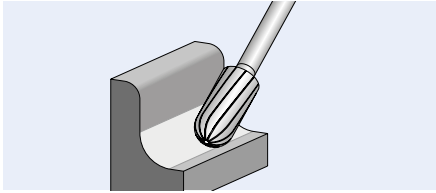
1/8	9/16	SB-43	1-1/2	23165	-	1
1/4	1/2	SB-51	1-11/16	23175	-	1

### Shank dia. 1/4" [d<sub>2</sub>]

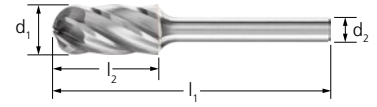
1/4	5/8	SB-1	1-15/16	24215	-	1
3/8	3/4	SB-3	2-1/2	24245	24250	1
1/2	1	SB-5	2-3/4	24285	27105	1
5/8	1	SB-6	2-3/4	24295	-	1






## Cylindrical bur with radius end – Shape C

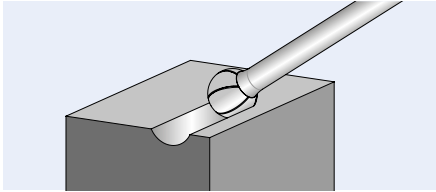


**PFERDVALUE®:**  
With HICOAT® coating:






d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				ALU 	ALU HC-NFE 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
1/8	1/2	SC-42	1-1/2	23195	-	1
1/4	1/2	SC-51	1-11/16	23205	-	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
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



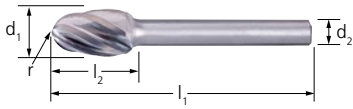
**PFERDVALUE®:**  
With HICOAT® coating:



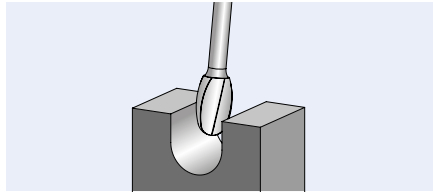
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number		
				ALU 	ALU HC-NFE 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
1/8	3/32	SD-42	1-1/2	23245	-	1
1/4	3/16	SD-51	1-3/8	23255	-	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
1/4	3/16	SD-1	1-15/16	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



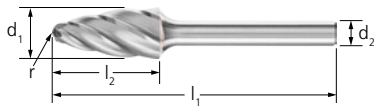
### Oval bur – Shape E



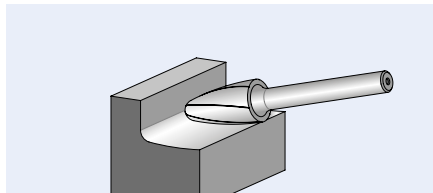
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
					ALU		

#### Shank dia. 1/4" [d<sub>2</sub>]

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:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
					ALU	ALU HC-NFE	

#### Shank dia. 1/8" [d<sub>2</sub>]

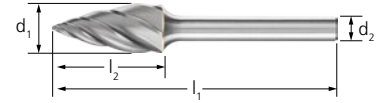
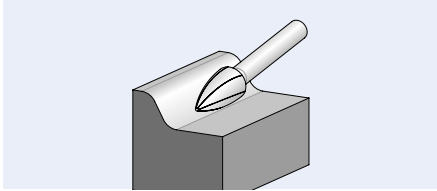
1/8	1/2	SF-42	1-1/2	.029	23315	-	1
1/4	1/2	SF-51	1-11/16	.059	23325	-	1

#### Shank dia. 1/4" [d<sub>2</sub>]

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

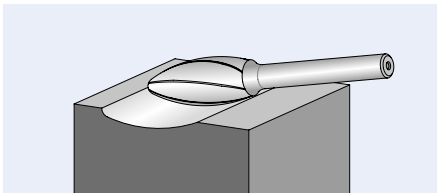


$d_1$ [Inches]	$l_2$ [Inches]	SCTI no.	$l_1$ [Inches]	Cut type and EDP number	
				ALU 	

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 	

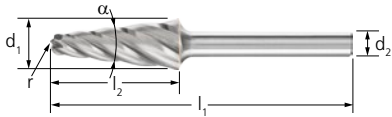
Shank dia. 1/4" [ $d_2$ ]

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

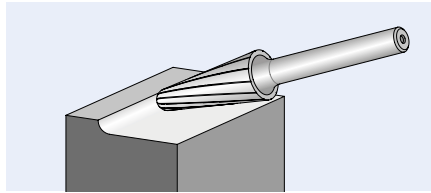


# Carbide burs, high performance line

## ALU cut for aluminum/non-ferrous metals






### 14° Taper bur with radius end – Shape L



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



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α [Inches]	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
						ALU 	ALU HC-NFE 	

Shank dia. 1/4" [d<sub>2</sub>]

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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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:

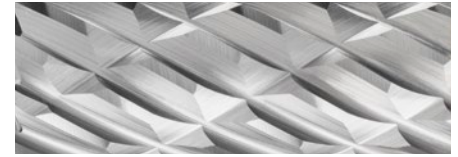
- Up to 100% higher stock removal rate when used on cast iron due to the innovative tooth geometry, when compared with conventional double cut burs.
- Significantly increased aggressiveness, large chips and very good chip removal.
- Comfortable working with reduced vibration and less noise.

### 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



### Safety note:

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

### PFERDVALUE®:

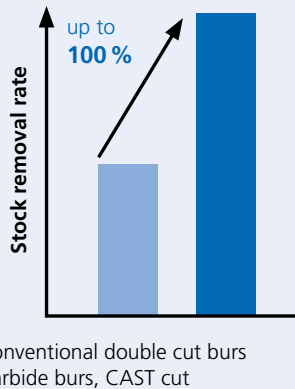
PFERDERGONOMICS® recommends burs with CAST cut as an innovative bur solution for comfortable working with significantly reduced vibration and less noise.



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



Performance values for applications on 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: from 300 watts.
- Please observe the rotational speed recommendations.

### Compatible with:

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

## Recommended rotational speed range [RPM]

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

- 1 Refer to the table for the peripheral speed.
- 2 Select the required bur diameter.
- 3 The peripheral speed range and the bur diameter determine the recommended rotational speed range.

Material group		Application	Cut	1 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	CAST	1,500 - 2,500 SFPM

### Example

Carbide bur, CAST cut, bur diameter: 1/2"

Coarse stock removal on cast iron.

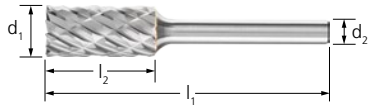
Peripheral speed: 1,500–2,500 SFPM

**Rotational speed: 12,000–20,000 RPM**

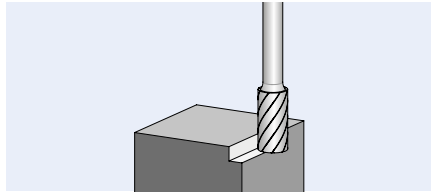
2 Bur dia. [Inches]	3 Peripheral speeds [SFPM]	
	1,500	2,500
	Rotational speeds [RPM]	
3/8	14,000	24,000
1/2	12,000	20,000

# Carbide burs, high performance line

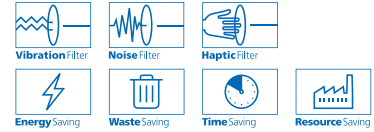
CAST cut for cast iron



## Cylindrical bur with plain end (uncut) – Shape A



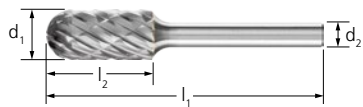
PFERDVALUE®:



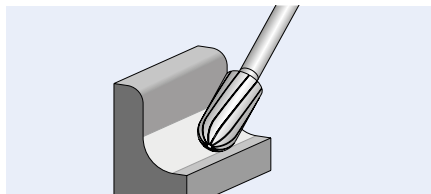
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				CAST 	

Shank dia. 1/4" [d<sub>2</sub>]

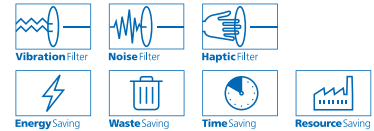
3/8	3/4	SA-3	2-1/2	24069	1
1/2	1	SA-5	2-3/4	24109	1



## Cylindrical bur with radius end – Shape C



PFERDVALUE®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				CAST 	

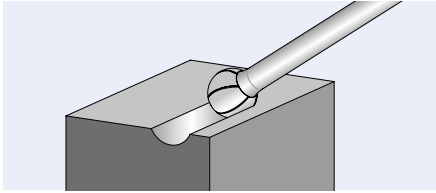
Shank dia. 1/4" [d<sub>2</sub>]

3/8	3/4	SC-3	2-1/2	24429	1
1/2	1	SC-5	2-3/4	24469	1

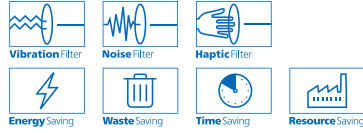






## Ball bur – Shape D



PFERDVALUE®:

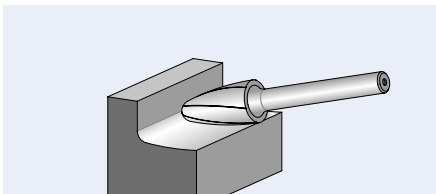


$d_1$ [Inches]	$l_2$ [Inches]	SCTI no.	$l_1$ [Inches]	Cut type and EDP number	
				CAST 	

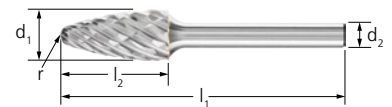
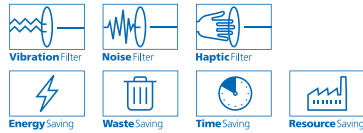
Shank dia. 1/4" [ $d_2$ ]



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 	

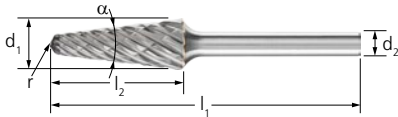
Shank dia. 1/4" [ $d_2$ ]

3/8	3/4	SF-3	2-1/2	.098	24709	1
1/2	1	SF-5	2-3/4	.098	24729	1

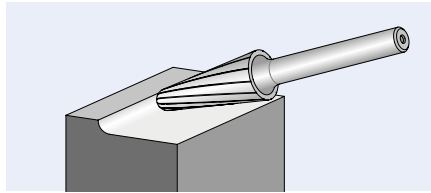


# Carbide burs, high performance line

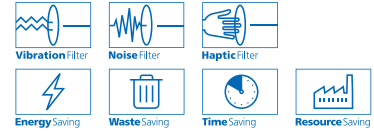
CAST cut for cast iron





## 14° Taper bur with radius end – Shape L



PFERDVALUE®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
						CAST		

Shank dia. 1/4" [d<sub>2</sub>]

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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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:

- 1 Select the material group to be machined.
- 2 Select the cut.
- 3 Establish the peripheral speed range.

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

- 4 Select the required bur diameter.
- 5 The peripheral speed range and the bur diameter determine the recommended rotational speed range.

1 Material group			Application	2 Cut	3 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:

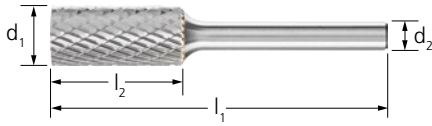
Carbide burr, TOUGH cut, bur diameter of 1/2".  
Coarse stock removal with impact load on steels up to 370 HV.  
Peripheral speed: 850–2,000 SFPM

**Rotational speed range: 7,000–16,000 RPM**

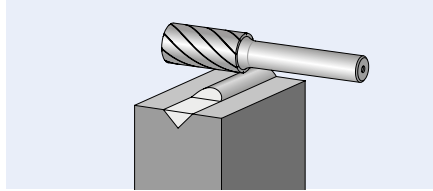
4 Bur dia. [Inches]	5 Peripheral speeds [SFPM]		
	850	1,150	2,000
	Rotational speeds [RPM]		
3/8	8,000	11,000	19,000
1/2	7,000	9,000	16,000
5/8	5,000	7,000	12,000


# Carbide burs, high performance line

TOUGH cut for tough applications



Cylindrical burr with plain end (uncut) – Shape A



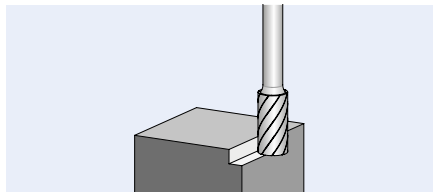
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				TOUGH 	



Shank dia. 1/4" [d<sub>2</sub>]

3/8	3/4	SA-3	2-1/2	22152	1
1/2	1	SA-5	2-3/4	22156	1



Cylindrical burr with end cut – Shape B



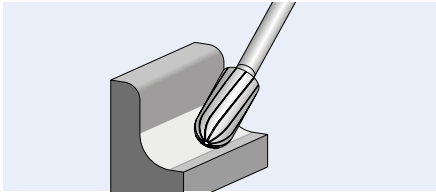
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				TOUGH 	

Shank dia. 1/4" [d<sub>2</sub>]

3/8	3/4	SB-3	2-1/2	22182	1
1/2	1	SB-5	2-3/4	22186	1



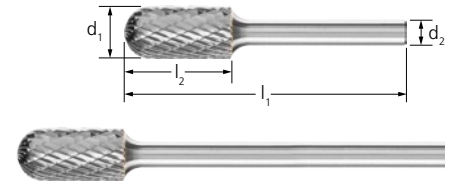
## Cylindrical bur with radius end – Shape C





### Safety notes:

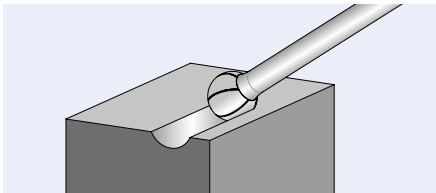




Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				TOUGH 	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
3/8	3/4	SC-3	2-1/2	22212	1
1/2	1	SC-5	2-3/4	22216	1
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>					
3/8	3/4	SC-3L6	6-5/8	22734	1

## Ball bur – Shape D

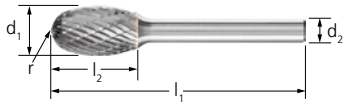


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				TOUGH 	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
1/2	7/16	SD-5	2-3/16	22244	1
5/8	9/16	SD-6	2-5/16	22246	1

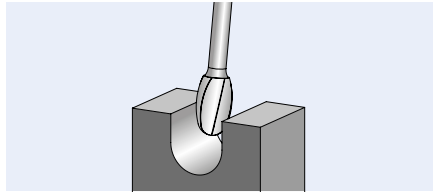




# Carbide burs, high performance line

TOUGH cut for tough applications



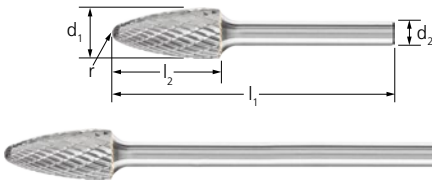
Oval bur – Shape E



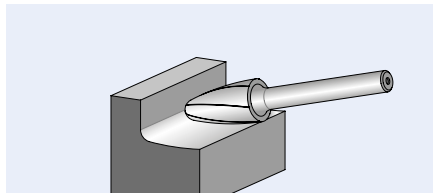
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number	
					TOUGH 	

Shank dia. 1/4" [d<sub>2</sub>]

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 <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number	
					TOUGH 	

Shank dia. 1/4" [d<sub>2</sub>]

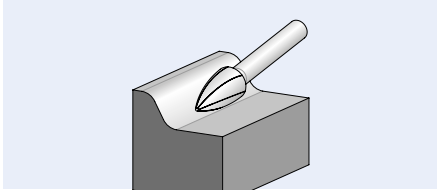
1/2	1	SF-5	2-3/4	.098	22276	1
5/8	1	SF-6	2-3/4	.141	22278	1

Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)

1/2	1	SF-5L6	6-7/8	.098	22754	1
-----	---	--------	-------	------	-------	---



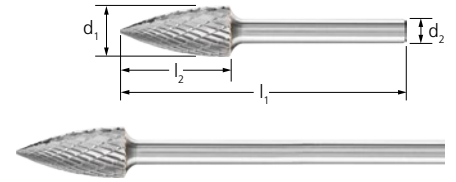
## Tree bur with pointed end – Shape G



**Safety notes:**



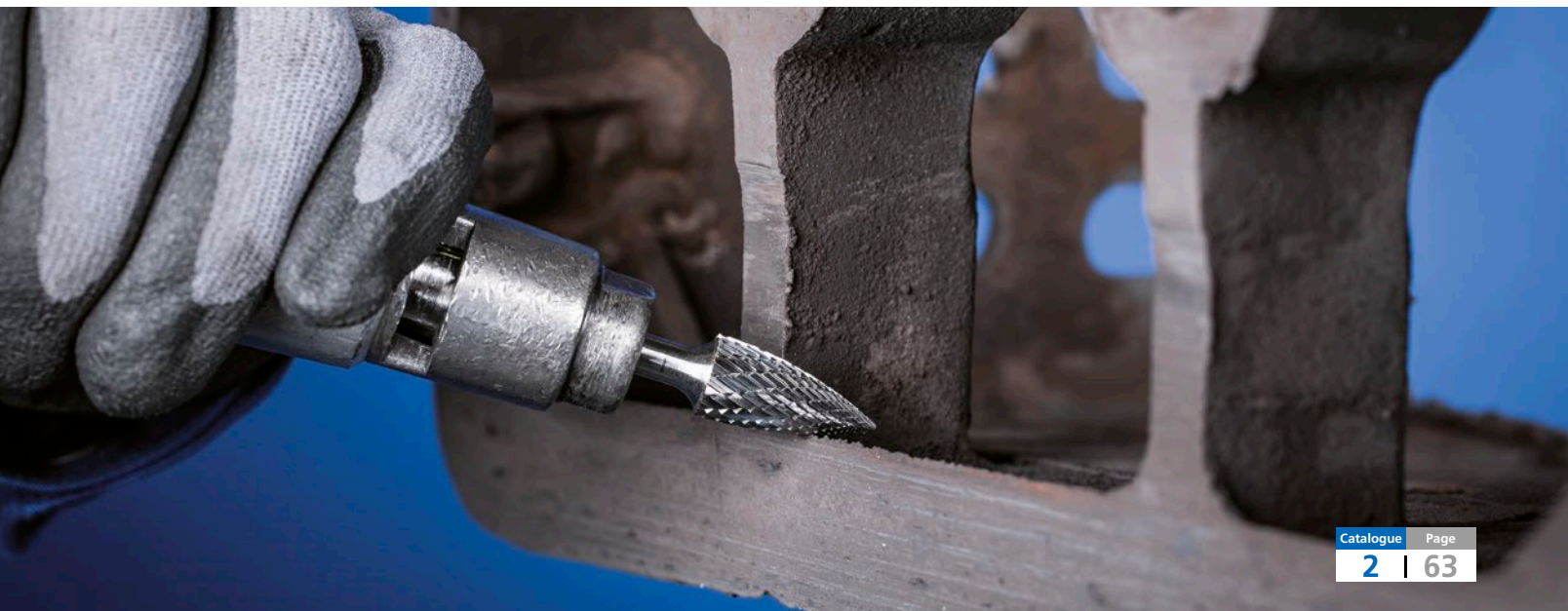
Please observe the reduced rotational speeds for extended shank burs. They can be found on page 11.



2

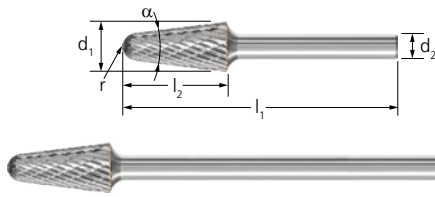


d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				TOUGH 	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
3/8	3/4	SG-3	2-1/2	22294	1
1/2	1	SG-5	2-3/4	22296	1
5/8	1	SG-6	2-3/4	22298	
<b>Extended shank – dia. 1/4" [d<sub>2</sub>], SL 6" (L6)</b>					
1/2	1	SG-5L6	6-7/8	22760	1

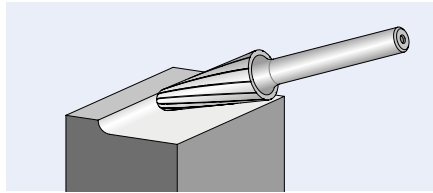


# Carbide burs, high performance line

## 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 <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	α	l <sub>1</sub> [Inches]	r [Inches]	Cut type and EDP number		
						TOUGH		

#### Shank dia. 1/4" [d<sub>2</sub>]

1/2	1-1/8	SL-4	14°	3-1/16	.130	22346	1
-----	-------	------	-----	--------	------	-------	---

#### Extended shank – dia. 1/4" [d<sub>2</sub>], 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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [Inches]	SCTI no.	Cut type and set EDP number		
				TOUGH	Individual bur EDP's in set	
Cylindrical (plain end)	1/2	1	SA-5		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:

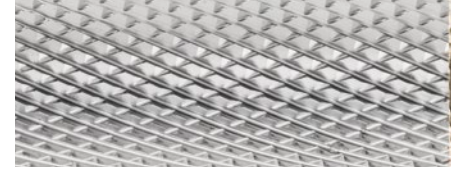
- Steel and cast steel
- Stainless steel (INOX)
- Non-ferrous metals
- Cast iron

### 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:

- 1 Select the material group to be machined.
- 2 Establish the peripheral speed range.

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

- 3 Select the required bur diameter.
- 4 The peripheral speed range and the bur diameter determine the recommended rotational speed range.

1 Material group			Application	Cut	2 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

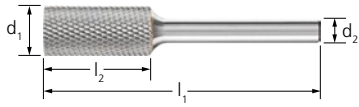
### Example

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**

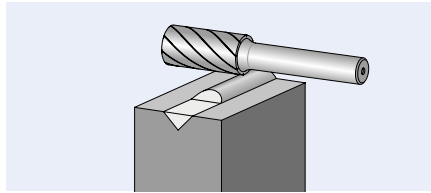
5 Bur dia. [Inches]	4 Peripheral speed [SFPM]		
	1,500	2,000	2,500
	Rotational speed [RPM]		
3/32	72,000	95,000	120,000
1/8	48,000	64,000	80,000
1/4	24,000	32,000	40,000
3/8	14,000	19,000	24,000

# Carbide burs, high performance line

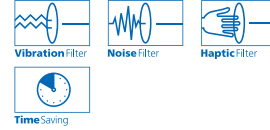
## MICRO cut for finishing work





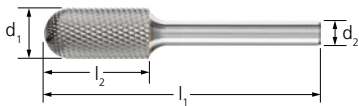
### Cylindrical bur with plain end (uncut) – Shape A



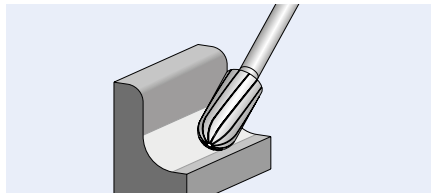
PFERDVALUE®:



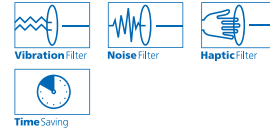
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				MICRO 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>					
1/8	1/2	SA-43	1-1/2	27500	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
1/4	5/8	SA-1	1-15/16	27512	1
3/8	3/4	SA-3	2-1/2	27516	1





### Cylindrical bur with radius end – Shape C



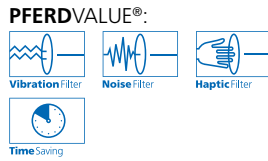
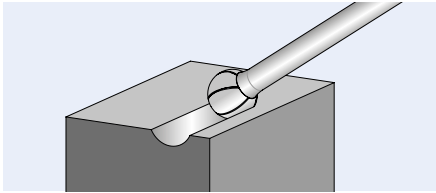
PFERDVALUE®:





d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				MICRO 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>					
1/8	1/2	SC-42	1-1/2	27540	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
1/4	5/8	SC-1	1-15/16	27541	1
3/8	3/4	SC-3	2-1/2	27542	1

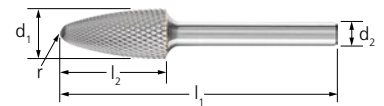
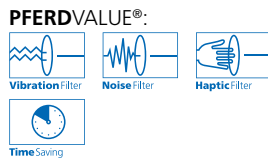
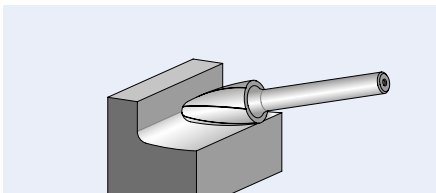




## Ball bur – Shape D



$d_1$ [Inches]	$l_2$ [Inches]	SCTI no.	$l_1$ [Inches]	Cut type and EDP number		
				MICRO 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>						
3/32	3/32	SD-41	1-1/2	27519		1
1/8	3/32	SD-42	1-1/2	27520		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>						
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

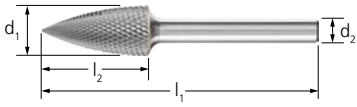


$d_1$ [Inches]	$l_2$ [Inches]	SCTI no.	$l_1$ [Inches]	$r$ [Inches]	Cut type and EDP number		
					MICRO 		
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>							
1/8	1/2	SF-42	1-1/2	.029	27524		1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>							
1/4	5/8	SF-1	1-15/16	.059	27528		1
3/8	3/4	SF-3	2-1/2	.141	27532		1

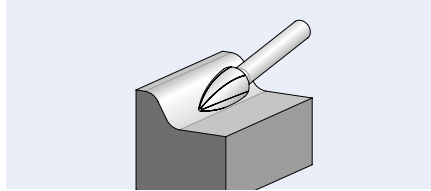


# Carbide burs, high performance line

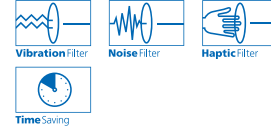
## MICRO cut for finishing work





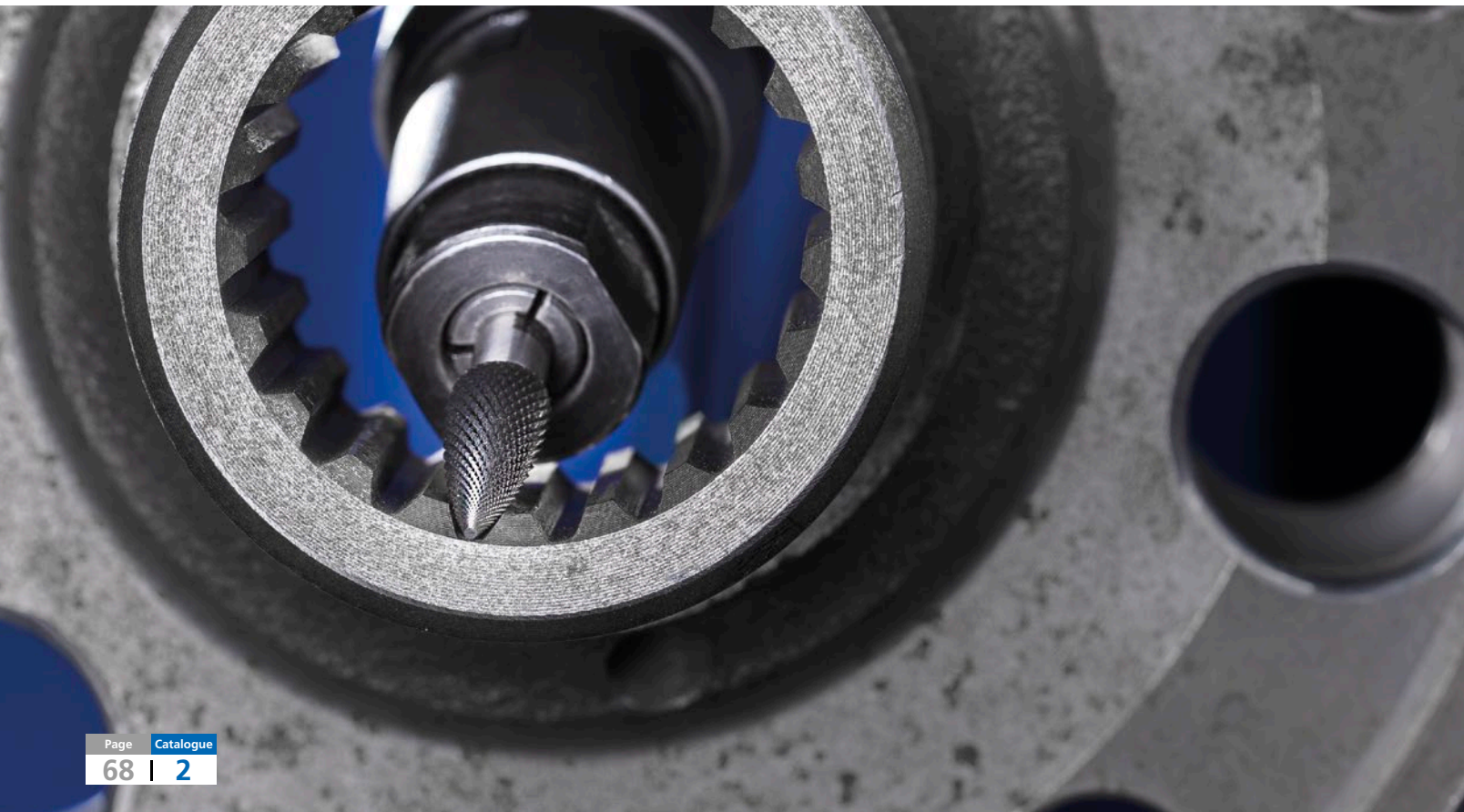
Tree bur with pointed end – Shape G



PFERDVALUE®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>1</sub> [Inches]	Cut type and EDP number	
				MICRO 	
<b>Shank dia. 1/8" [d<sub>2</sub>]</b>					
1/8	1/4	SG-41	1-1/2	27546	1
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>					
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 work 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 ship-building, 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.



### 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



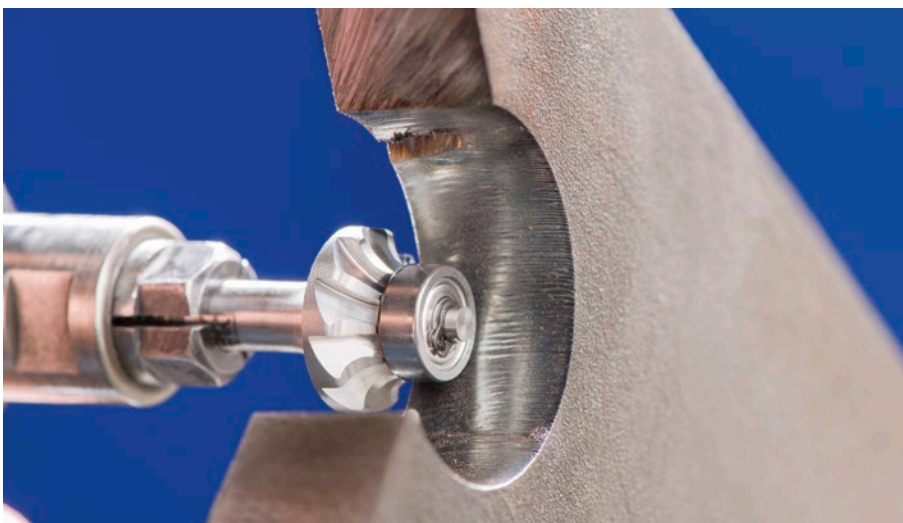
#### Guide sleeve

EFH PG 3/210  
EDP 95294



#### Guide plate

EFP PG 3/210  
EDP 95295



# Carbide burs, high performance line

## Carbide burs for work on edges

### 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	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	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)	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)	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	EDGE	2,000 - 3,000 SFPM
Plastics, other materials	Fibre-reinforced plastics (GRP/CRP), thermoplastics		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:

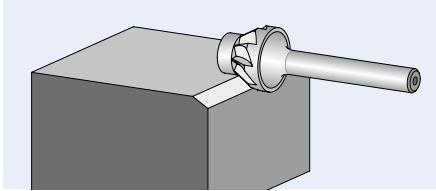
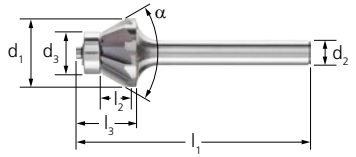
**12,000 - 18,000 RPM**

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®:



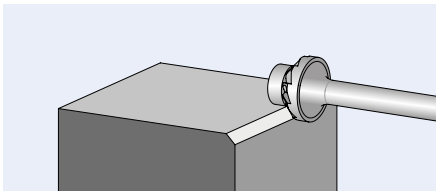
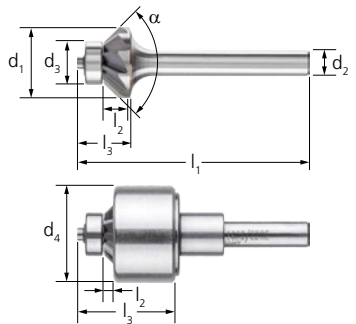
d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>3</sub> [Inches]	α [Inches]	l <sub>1</sub> [Inches]	d <sub>3</sub> [Inches]	Cut type and EDP number		
							EDGE	EDGE ALU	

Shank dia. 1/4" [d<sub>2</sub>]

5/8	3/16	SJ-6	9/16	60°	2-1/4	3/8	25045	25175	1
-----	------	------	------	-----	-------	-----	-------	-------	---

## Cone counterbore EDGE 45°

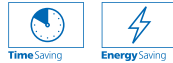
Cone counterbore bur for the production of precisely defined chamfers. Suitable for counterboring and chamfering of defined 45° chamfer angles. The chamfers created using the EDGE Cutting System (ECS) are .047" (+/- .007") wide.




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®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	SCTI no.	l <sub>3</sub> [Inches]	α [Inches]	l <sub>1</sub> [Inches]	d <sub>3</sub> [Inches]	d <sub>4</sub> [Inches]	Cut type and EDP number		
								EDGE	EDGE ALU	

Shank dia. 1/4" [d<sub>2</sub>]

5/8	1/8	SK-6	1/2	90°	2	3/8	-	25105	25176	1
-----	-----	------	-----	-----	---	-----	---	-------	-------	---

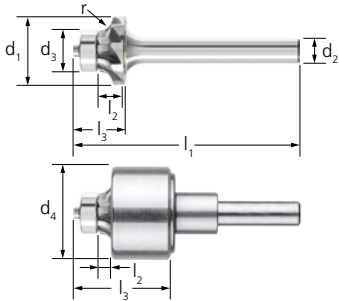
EDGE Cutting System (ECS) – Shank dia. 1/4" [d<sub>2</sub>]

5/8	.040	SK-6	5/16	90°	2	3/8	1	25106	25177	1
-----	------	------	------	-----	---	-----	---	-------	-------	---



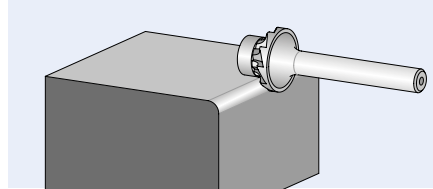
# Carbide burs, high performance line

## Carbide burs for work on edges



### 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®:



d <sub>1</sub> [Inches]	l <sub>2</sub> [Inches]	l <sub>3</sub> [Inches]	l <sub>1</sub> [Inches]	d <sub>3</sub> [Inches]	d <sub>4</sub> [Inches]	r [Inches]	Cut type and EDP number EDGE	
<b>Shank dia. 1/4" [d<sub>2</sub>]</b>								
5/8	1/8	1/2	2	3/8	-	1/8	25150	1
<b>EDGE Cutting System (ECS) – Shank dia. 1/4" [d<sub>2</sub>]</b>								
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 <sub>1</sub> [Inches]	Bur length l <sub>2</sub> [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

## 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 <sub>1</sub> [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

# Bi-metal hole saws

## Bi-metal hole saws

d <sub>1</sub> [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]	EDP number	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:

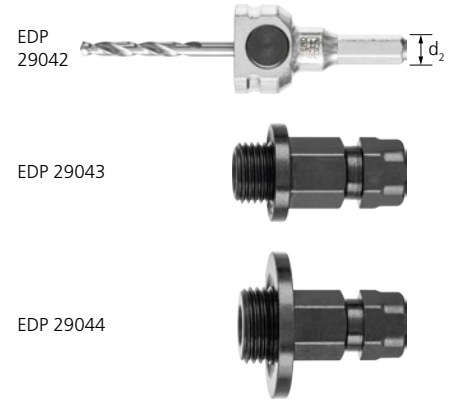
- Easily and quickly swap different hole saws.
- After the application is completed, the hole saw and quick-mounting system can be separated without the use of additional tools by simply pressing a button.
- Interchangeable bi-metal pilot drill.

#### 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.

#### Recommendations for use:

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



For hole saw threads	Suitable for hole saw diameters [Inches]	d <sub>2</sub> [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



### 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.
- The bi-metal pilot drill EDP 29039 can be used for the quick-mounting system EDP 29042.

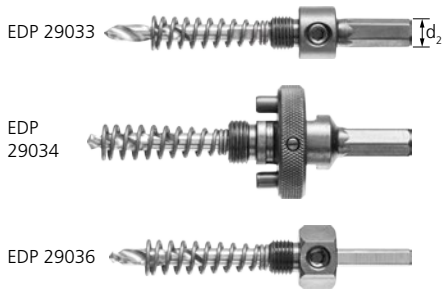


Shank dia. [Inches]	Shank dia. [mm]	Shank type	d <sub>2</sub> [Inches]	Suitable for hole saw diameters [Inches]	Suitable for arbors	EDP number	
1/4	6.35	Round	1/4	9/16 to 6	EDP 29033, EDP 29034	29040	1
	6.35	Round	1/4	9/16 to 6	EDP 29036	29039	1



# Bi-metal hole saws

## Accessories



### 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:

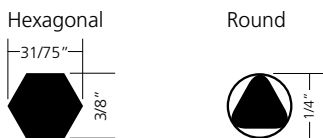
- Available in three sizes.
- Select the appropriate arbor, taking into account the hole saw diameter and available power tool.
- Hole saw arbors EDP 29033 and EDP 29034 are supplied with the bi-metal pilot drill EDP 29040 and an ejection spring.
- Hole saw arbors EDP 29036 are supplied with the bi-metal 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]



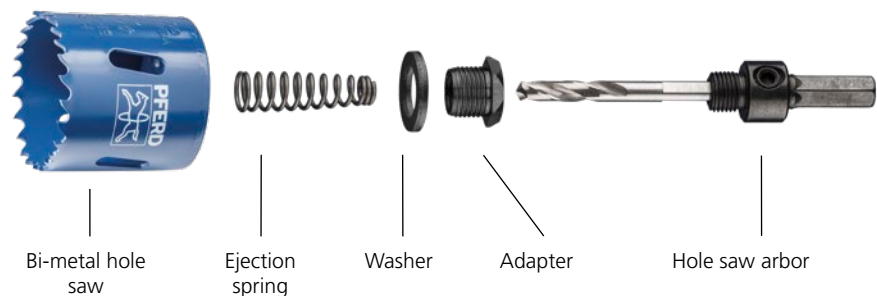
PFERD hole saw arbor EDP	Shank dia. [Inches]	Shank dia. [mm]	Shank shape	for PFERD hole saw dia. [Inches]
<b>29033</b>	3/8	9.53		9/16 to 1-3/16
<b>29034</b>	3/8	9.53		1-1/4 to 6
<b>29036</b>	1/4	6.35		9/16 to 1-3/16

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

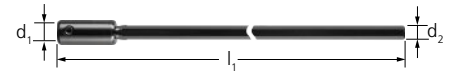



### Arbor extension for hole saws

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.



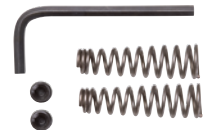
Hexagon socket $d_1$ [Inches]	Hexagon socket $d_1$ [mm]	$l_1$ [Inches]	$l_1$ [mm]	Shank type	Width across flats (AF) $d_2$ [Inches]	Width across flats (AF) $d_2$ [mm]	Suitable for arbors	EDP number	
3/8	9.53	12	300	hexagonal	7/16	11	EDP 29033, 29034	29071	1


### 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.



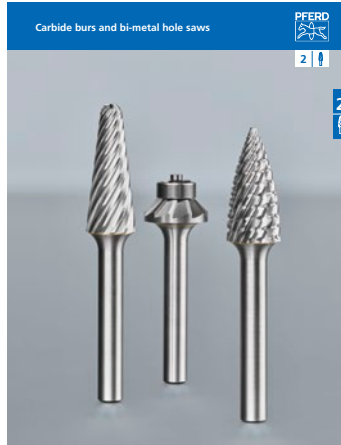
Suitable for hole saw diameters [Inches]	Suitable for arbors	EDP number	
1-1/4 – 1-1/2	EDP 29033, EDP 29036	29070	1





**Catalogue section 1**

Files



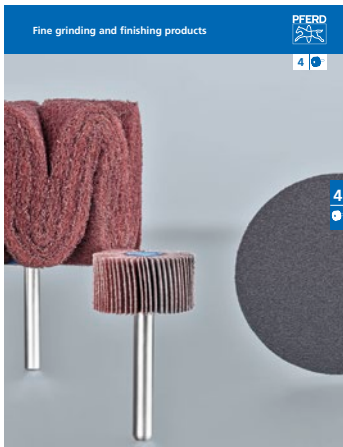
**Catalogue section 2**

Carbide burs and bi-metal hole saws



**Catalogue section 3**

Mounted points, cones and plugs, bench grinding wheels



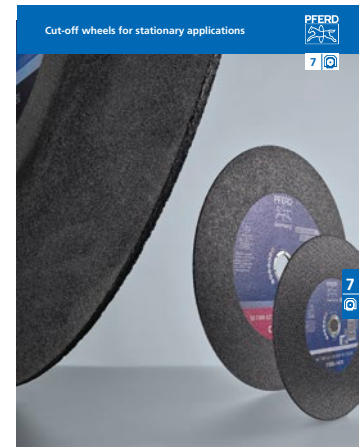
**Catalogue section 4**

Fine grinding and polishing tools



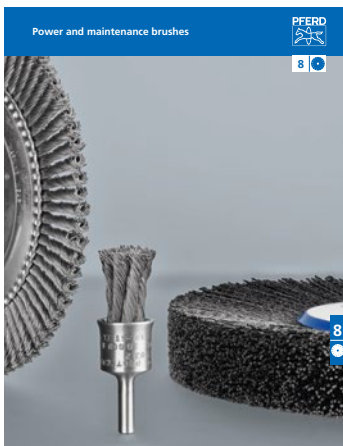
**Catalogue section 6**

Cut-off wheels, flap discs and grinding wheels



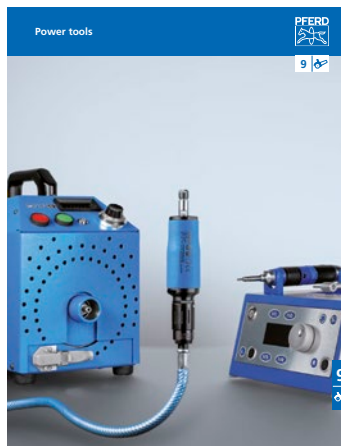
**Catalogue section 7**

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

Subject to technical modifications.

06/2019

Printed in U.S.A.

820 902