

Cut-off wheels for stationary applications



7



7

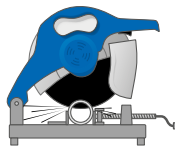


Cut-off wheels for stationary applications

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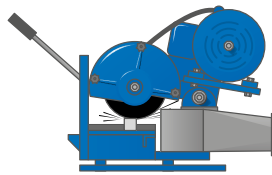
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Cut-off wheels for stationary applications



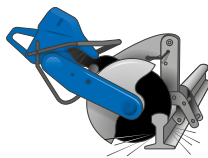
CHOPSAW
12–16" dia.

9



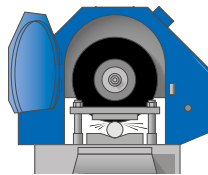
CHOPSAW HD
12–16" dia.

12



RAIL
12–16" dia.

13



HEAVY DUTY
10–26" dia.

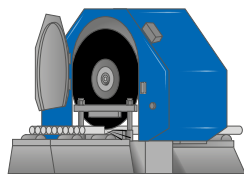
14



Reducing rings

15

Large diameter cut-off wheels made to order



250–2,000 mm dia. (10–80" dia.)

16

PFERD quality

Stationary cut-off wheels from PFERD are developed, manufactured and tested in accordance with the strictest quality requirements.

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

PFERD quality management is certified according to ISO 9001.



Technical support

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

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



Cut-off wheels for stationary applications

Technical information and safety notes

PFERD is a founding member of oSa

PFERD voluntarily manufactures quality products conforming to the strictest safety standards. Member companies of oSa (the Organization for Safety of Abrasives) are committed to continuous product safety and quality monitoring. PFERD products carry the oSa mark.



Safety standard

Abrasives made by PFERD conform to the highest quality and safety requirements and are marked according to the following key European and international safety standards:

- ANSI B7.1
- OSHA regulations
- EN 12413

Maximum operating speed

The maximum permissible operating speed [m/s] can be found on the product labels and in the product tables of this catalogue. The maximum permissible rotational speed specification applies to the nominal diameter of the unused wheels. For safety reasons, these must never be exceeded.



Safety notes



= Wear eye protection!



= Wear hearing protection!



= Wear a dust mask!



= Wear gloves!



= Please read the safety notes!



= Do not use if damaged!



= Not permitted for hand-held or manually guided grinding!

User information

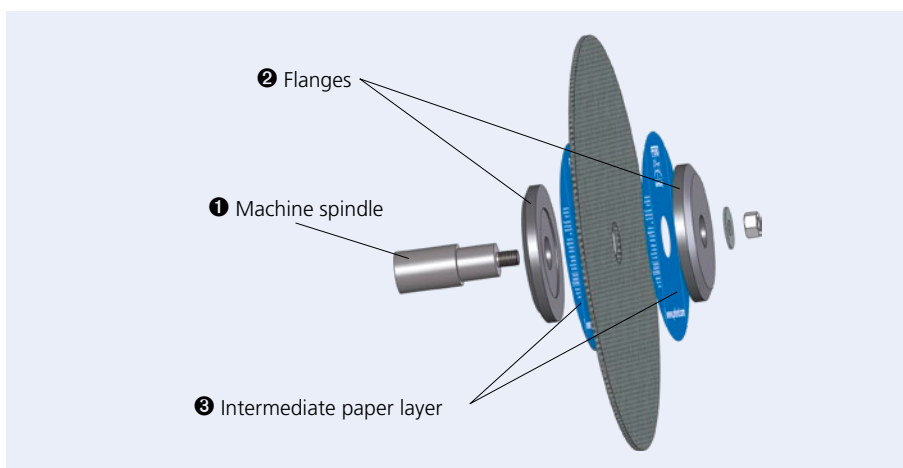
Please observe the user information provided with all products on the safe use of stationary cut-off wheels as well as the user information for the grinding machine used.



Proper clamping of cut-off wheels

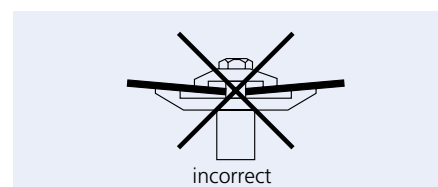
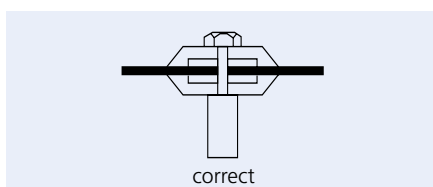
The correct clamping of the cut-off wheel is a prerequisite for optimum performance and is essential to ensure user safety. The adjacent illustration shows the right way to do it:

- 1 Machine spindle with high concentricity.
- 2 Equally sized flanges.
- 3 Intermediate paper layers (blotters), if required for secure clamping and safe use. Our recommendations:
 - After every second wheel change, change the intermediate paper layers (blotters).
 - As from a wheel diameter > 16 inches, always use intermediate paper layers (blotters).



Safety notes:

The safe use of PFERD products depends largely on proper clamping systems. Both flanges between which a grinding product is mounted must have the same outer diameter and same support area (according to EN 13218, ANSI B7.1, AS 1788.1).

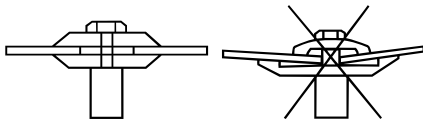


Storage of stationary cut-off wheels

- Stationary cut-off wheels should be stored in such a way as to prevent any adverse effects caused by moisture, frost or large temperature variations and so as to avoid mechanical damage. Do not use resinoid-bonded abrasive wheels or abrasive products using coated abrasives that have been exposed to severe humidity, damp, or high temperatures.

Mounting of stationary cut-off wheels

- Only use stationary machines that are intended for use with the relevant product.
- Never use a stationary machine that is not in good condition.
- Use only stationary cut-off wheels whose outer diameter and centre-hole diameter and/or thread match the specifications of the stationary machine.
- Never use damaged stationary cut-off wheels. Stationary cut-off wheels must be visually inspected and checked for any possible damage before each use.
- Keep mounting components clean and in good mechanical condition.
- Replace them if they become damaged or worn. If the manufacturer of the stationary machine provides tools for fixation of the stationary cut-off wheels (e.g. a key), then these are to be used.



- In principle, only clamping flanges having a contact surface with the same outer diameter and which are identically shaped on the contact side are to be used.
- If required, use blotters between the stationary cut-off wheel and clamping components.
- To prevent the stationary machine from accidentally turning on, disconnect the power supply before mounting or changing the stationary cut-off wheel.
- Never exceed the maximum operating speed of a stationary cut-off wheel. Make sure that the speed of the stationary machine (rev/min, 1/min, RPM or min⁻¹) does not exceed the maximum permissible speed given on the stationary cut-off wheel, the accompanying label or packaging.
- Do not make any unauthorized changes to stationary cut-off wheels.
- Each time that a wheel is mounted, perform a trial run at operating speed with the guard properly installed, for at least 1 minute. During the trial run, move away from the stationary machine in such a way that in the event of any failure of the stationary cut-off wheel you are not struck by any fragments.
- Stationary cut-off wheels must only be used on appropriate stationary cut-off grinding machines. They are not permitted for hand-held or manually guided grinding. The maximum permitted power output must never be exceeded. Be sure, that machine power is not too high for the stationary cut-off wheel.
- Clamping flanges for stationary cut-off wheels must meet today's requirements according to ANSI B7.1. Our PFERD sales department will be happy to advise you.

Use of stationary cut-off wheels

- Ensure that the correct stationary cut-off wheel is selected. Never use a product if it cannot be properly identified.
- Always be aware of the potential dangers during use of stationary cut-off wheels.
- Always use protective equipment and guards in compliance with the operating instructions for the stationary machine and make sure they are properly mounted and in good condition, before you switch on the stationary machine.

- Comply with the ANSI B7.1 regulations on safety guards depending on the mounted wheel:
 - Type 1 wheels must be used with a guard covering at least 180° of the lateral wheel surface and face.
- The workpiece must be fixed without tension by appropriate clamping devices.
- The stationary machine must always be turned on before the abrasive wheel comes into contact with the workpiece.
- Always bring stationary cut-off wheels carefully into contact with the workpiece surface.
- Always guide stationary cut-off wheels in a straight line. No lateral load should be applied to the stationary cut-off wheel and it should not be used for face grinding. Use only on stationary cut-off machines. Stationary cut-off wheels are not allowed to be used on handheld gas saw machines.
- Stationary machines like a CHOPSAW machine may only be transported once they have been turned off and have come to a complete stop.

Hazards due to product breakage, abrasive particles, sparks, dust, fumes, noise, vibration and bodily contact with the abrasive product at operation speed

- Warning! The cutting process may generate dust and fumes. Inhalation of cutting dust can lead to severe lung damage. Sufficient extraction or other appropriate measures must be provided and appropriate personal protective equipment must be worn at all times.
- The use of appropriate personal protective equipment is required for all cutting operations to provide protection against mechanical impacts, abrasive particles, sparks, dust and fumes, noise and vibration. This includes eye protection, ear protection, respiratory protection, and hand protection. Long-sleeved, flame-resistant clothing and appropriate safety footwear must be worn. Tie back long hair and do not wear loose clothing, ties or jewelry. These rules apply not only to the operator of the stationary machine but also to any other persons in the working environment.
- Predominantly, dust and fumes in a cutting process originate from the workpiece material. Review the Safety Data Sheet (SDS) of the workpiece material.
- Do not use stationary cut-off wheels in the vicinity of flammable materials.
- Flammable and explosive substances must be removed from the working environment before starting work. This includes, for example, dust deposits, cardboard, packaging material, textiles, wood and wood chips, as well as flammable liquids and gases.
- In the event of excessive vibrations stop the stationary machine and investigate.
- Prevent accidental start-up of the stationary machine before mounting or changing an stationary cut-off wheel, isolate the stationary machine from the power source.
- Never remove guards from stationary machines and ensure they are in good condition and properly adjusted before starting the stationary machine.
- After switching off the stationary machine, ensure the product has come to a complete stop before leaving the stationary machine unattended.

Disposal of stationary cut-off wheels

- Worn or defective stationary cut-off wheels must be disposed of according to all local and/or national regulations.
- Note that stationary cut-off wheels may become contaminated by work on certain materials.
- Stationary cut-off wheels for disposal should be destroyed in a clearly visible manner in order to prevent re-use.
- Further information can be obtained from Voluntary Product information provided by the supplier.



Cut-off wheels for stationary applications

Wheel and packaging label information

Label

oSa – Organization for the Safety of Abrasives

As a founding member of oSa, PFERD voluntarily manufactures quality products conforming to the strictest safety standards. Member companies of oSa are committed to continuous product safety and quality monitoring.

Safety information

Observe all safety guidelines mentioned on page 4 when using cut-off wheels.

Recommended power tool

The pictogram shows which power tool the product can be used on.

Material colour coding

Material information

The bottom section of every label indicates the material or materials for which the product is suitable.

Information bar

Here you will find the product line, star rating, diameter, thickness, and arbor measurements.

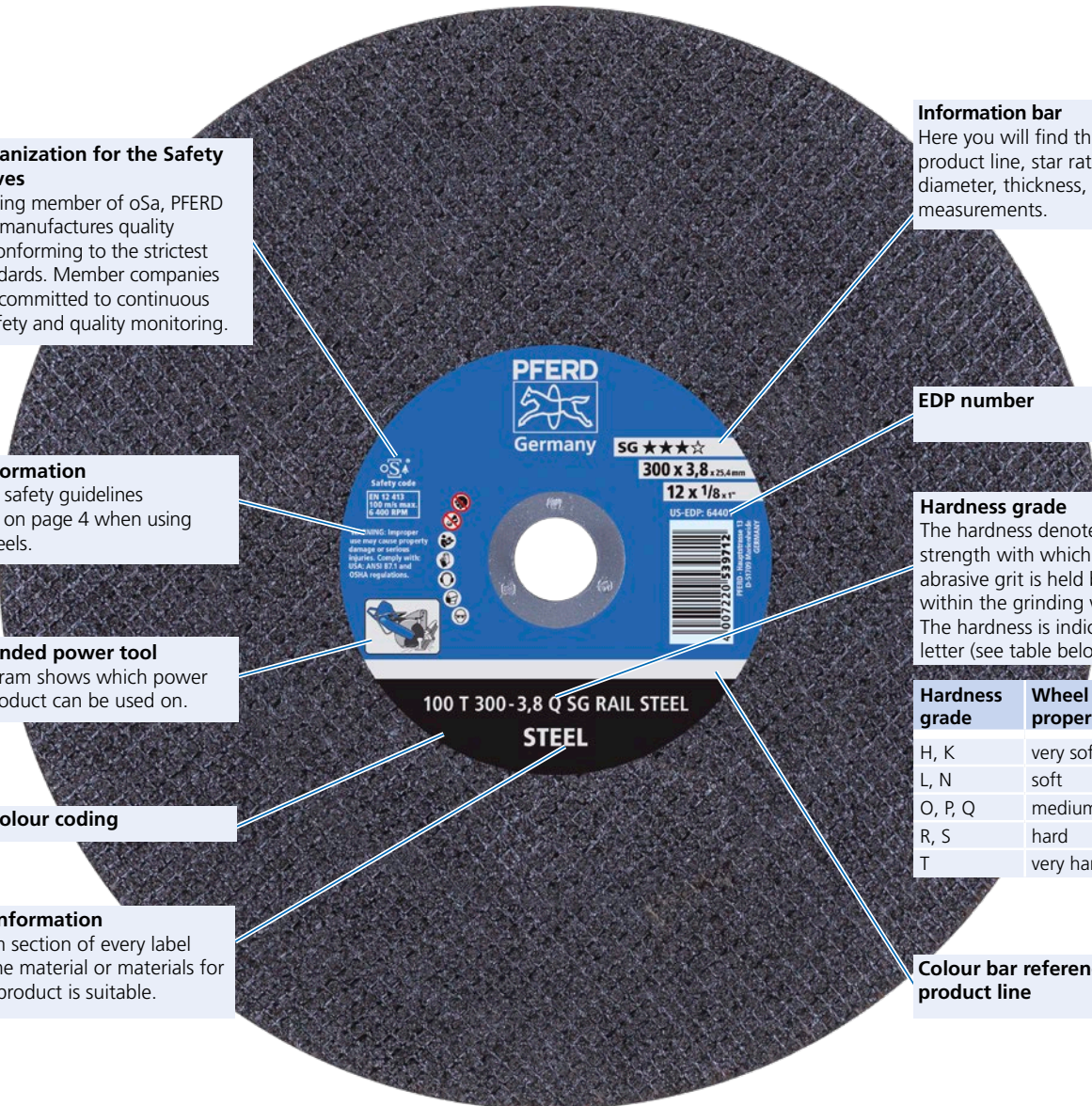
EDP number

Hardness grade

The hardness denotes the strength with which the abrasive grit is held by the bond within the grinding wheel. The hardness is indicated with a letter (see table below).

Hardness grade	Wheel properties
H, K	very soft
L, N	soft
O, P, Q	medium-hard
R, S	hard
T	very hard

Colour bar referencing product line



Packaging label

Box quantity	10	Language-neutral technical information
Product line (colour coding system)	350 mm / 14 inch, 25,4 mm / 1 inch, 3,0 mm / 1/8 inch, T 41 / T1, SG ★★★★★	PFERD description
Material information	Stahl Steel, Acier, Acero, STEELOX, INOX Stainless	EAN (European Article Number)
Product type	80 T 350-3,0 L SG CHOP HD STEELOX 25,4	EDP and UPC code
Packing date and lot number	EDP 64536, Mat.-Nr. 66323582, 0 97758 64536 2, 4 007 220 939712	

Packaging

The packaging of stationary cut-off wheels provides the wheels with optimum protection against dirt and damage. Three packaging types are available which is determined by the quantity, type and size of the wheel ordered.



Box



Crate



Pallet

Transport and storage

To avoid damage to cut-off wheels through improper transport or adverse environmental influences during storage, e.g. UV radiation, temperature or humidity, please observe the following:

- Transport and store cut-off wheels in their original packaging lying on a flat surface, e.g. on a shelf or vertically in racks.
- Avoid bending the wheels.
- Ensure that the cut-off wheels are stored in dry, temperature controlled areas.
- Use supplies in the order received.

Recommendation:

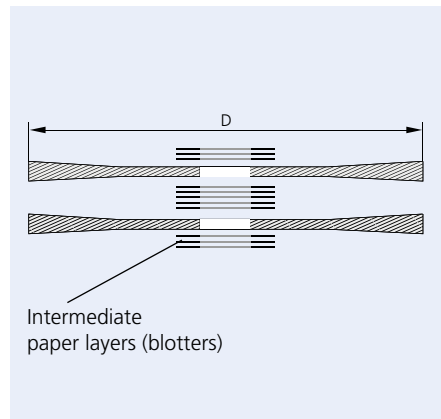
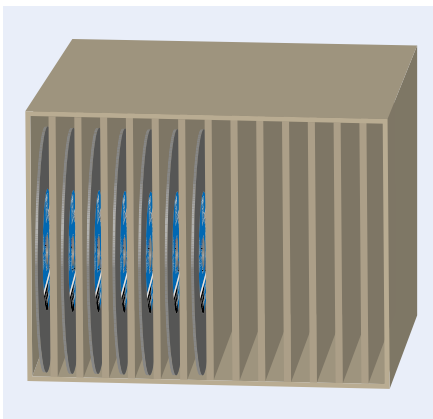
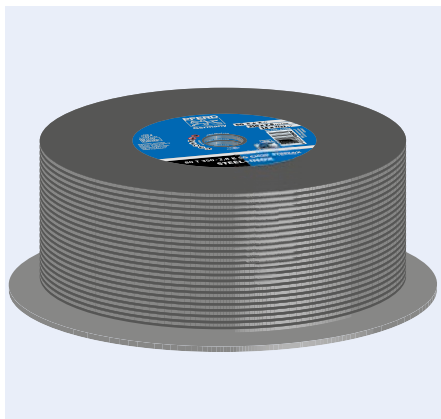
Room temperature: 65–72°F
 Relative humidity: 45–65%
 No direct sunlight



Advice on the storage of conical wheels (CT)

Conical cut-off wheels must be stacked with intermediate paper layers (blotters), so that the tapered area is supported and bending of the cut-off wheels is avoided.

PFERD supplies conical cut-off wheels with intermediate paper layers (blotters) included.




Cut-off wheels for stationary applications

Quick product selection guide

Product lines and colour coding

Universal Line PSF ★★☆☆



Choose the Universal Line PSF for processing of the most common materials. Products achieve good results with increased economic efficiency.

Performance Line SG ★★☆☆



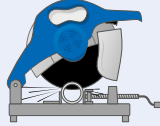







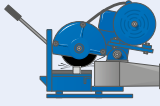

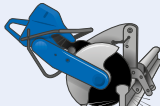

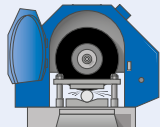



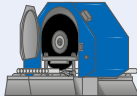
The wide range Performance Line SG offers high-performance solutions for every application and material. Products achieve optimum results with excellent economic efficiency.


Special Line SGP ★★☆☆




Special Line SGP includes products engineered for specific tasks and offers the user key advantages over conventional products. This quality line also includes products that, due to their particularly high performance, offer ultimate economic efficiency.

Product group selection

Power tool	Application	Product line	Steel (STEEL)	Stainless steel (INOX)	Cast material (CAST)	
CHOPSAW < 5 horsepower 	Cutting of solid material, sections and pipes	Universal Line PSF ★★☆☆	 PSF CHOP STEEL Hardness K Page 9	 PSF CHOP STEELOX Hardness K Page 9	 PSF CHOP STEELOX Hardness K Page 9	
		Performance Line SG ★★☆☆	 SG CHOP STEEL Hardness K Page 10	 SG CHOP STEELOX Hardness K Page 10	 SG STUD STEEL Hardness K Page 11	 SG CHOP STEELOX Hardness K Page 10
CHOPSAW HD 	Cutting of solid material, sections and pipes	Performance Line SG ★★☆☆	 SG CHOP HD STEEL Hardness L Page 12			
RAIL 	Cutting of rails	Performance Line SG ★★☆☆	 SG RAIL STEEL Hardness Q Page 13			
HEAVY DUTY 	Cutting of solid material, sections and pipes	Special Line SGP ★★☆☆	 SGP HD STEEL Hardness N, Q + S Page 14	 ZIRKON SGP HD CAST + STEEL Hardness R Page 15	 ZIRKON SGP HD CAST + STEEL Hardness R Page 15	
Products made to order up to 2,000 mm (80") dia. 	On request, we can produce stationary cut-off wheels in premium PFERD quality up to 2,000 mm (80") diameter, tailor-made to meet the requirements of your special application. Please review pages 16-20 of this section regarding our products made to order. Our experienced technical sales specialists will be pleased to assist you. Please contact ldco@pferdusa.com for more information.					



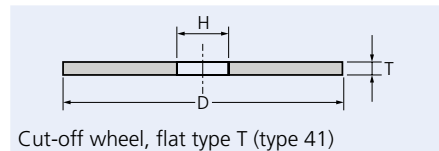
With a middle reinforcement layer for aggressive cutting with minimized burr formation



With two outer reinforcement layers for high lateral stability

Product type and dimensions

All cut-off wheels in this section use flat type T (shape 41). The diagram to the right shows the product dimension information for diameter (D), height (T), and bore size (H) of each cut-off wheel.



PSF CHOP STEEL ★★☆☆

General purpose K hardness wheel with a middle reinforcement layer. Aggressive free cutting with minimal burr formation.

Advantages:

- High productivity due to good service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- General purpose cutting work.

Workpiece materials:

steel

Applications:

cutting of solid material, sections and pipes

Abrasive:

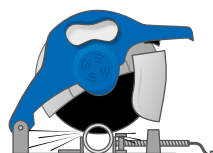
Aluminum oxide A

Technical information:

A 36 K

Compatible with:


CHOPSAW up to 5 horsepower



Safety notes:

- Use only on stationary machines with an output of up to 5 horsepower or less.



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64491	5,100	20
14	3/32	1	64492	4,400	10
16	1/8	1	64493	3,800	10

PSF CHOP STEELOX ★★☆☆

General purpose K hardness wheel with a middle reinforcement layer. Aggressive free cutting of steel and stainless steel (INOX) with minimal burr formation.

Advantages:

- High productivity due to good service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- General purpose cutting work.

Workpiece materials:

steel, stainless steel (INOX)

Applications:

cutting of solid material, sections and pipes

Abrasive:

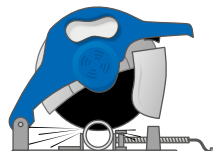
Aluminum oxide A

Technical information:

A 36 K

Compatible with:


CHOPSAW up to 5 horsepower



Safety notes:

- Use only on stationary machines with an output of up to 5 horsepower or less.



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64497	5,100	20
14	3/32	1	64498	4,400	10
16	1/8	1	64499	3,800	10



Cut-off wheels for stationary applications

Performance Line SG, CHOPSAW ★★☆☆☆



SG CHOP STEEL ★★☆☆☆

K hardness wheel with a middle reinforcement layer. Aggressive free cutting with minimal burr formation.

Advantages:

- Excellent productivity due to very long service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- Ideal for demanding cutting work.

Workpiece materials:

steel

Applications:

cutting of solid material, sections and pipes

Abrasive:

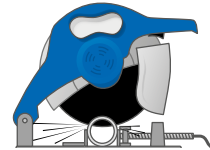
Aluminum oxide A

Technical information:

A 36 K


Compatible with:

CHOPSAW up to 5 horsepower or less.



Safety notes:

- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64501	5,100	20
14	3/32	1	64502	4,400	10
16	1/8	1	64503	3,800	10



SG CHOP STEELOX ★★☆☆☆

K hardness wheel with a middle reinforcement layer. Aggressive free cutting of steel and stainless steel (INOX) with minimal burr formation.

Advantages:

- Excellent productivity due to very long service life.
- Reduced cutting time.
- Minimal burr formation due to low side friction.
- Ideal for demanding cutting work.

Workpiece materials:

steel, stainless steel (INOX)

Applications:

cutting of solid material, sections and pipes

Abrasive:

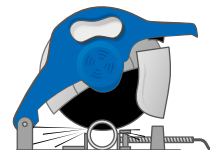
Aluminum oxide A

Technical information:

A 36 K


Compatible with:

CHOPSAW up to 5 horsepower or less.



Safety notes:

- Use only on stationary machines with an output of up to 5 horsepower or less.

D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	3/32	1	64510	5,100	20
14	3/32	1	64508	4,400	10
16	3/32	1	64509	3,800	10

SG STUD STEEL ★★☆☆

K hardness wheel with two outer reinforcement layers. For cutting work that requires high stability.

Advantages:

- Maximum economic efficiency due to long service life.
- High lateral stability due to outer reinforcement layers.
- Ideal for cutting stacks and bundles of building studs.

Workpiece materials:

steel

Applications:

cuts metal studs, thin rebar, sheet stock and light gauge metal

Abrasive:

Aluminum oxide A

Technical information:

A 36 K

Compatible with:


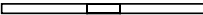
CHOPSAW up to 5 horsepower or less.



Safety notes:

- Use only on stationary machines with an output of up to 5 horsepower or less.



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41) 					
12	3/32	1	64504	5,100	20
14	3/32	1	64505	4,400	10
16	1/8	1	64506	3,800	10



Cut-off wheels for stationary applications

Performance Line SG, CHOPSAW HD ★★★★★



SG CHOP HD STEEL ★★★★★

Heavy Duty L hardness wheel with two outer reinforcement layers. For cutting work that requires high stability.

Advantages:

- High lateral stability due to outer reinforcement layers.
- Excellent productivity due to very long service life.
- Ideal for demanding cutting work.

Workpiece materials:

steel

Applications:

cutting of solid material, sections and pipes

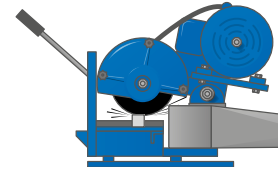
Abrasive:


Aluminum oxide A

Technical information:

A 30 L

Compatible with:
CHOPSAW HD



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 80 m/s, flat type T (shape 41)					
12	7/64	1	64530	5,100	20
14	7/64	1	64531	4,400	10
16	1/8	1	64532	3,800	10



SG RAIL STEEL ★★☆☆

Q hardness wheel for fast and economic cutting of rails.

Advantages:

- Fast and safe cutting due to aggressive abrasive grain.
- Excellent productivity due to optimal service life.

Workpiece materials:

steel

Applications:

cutting of rails

Abrasive:

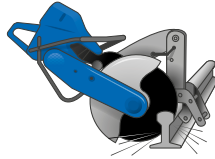
Aluminum oxide A


Technical information:

A 24 Q

Compatible with:

RAIL cutting machine



D [Inches]	T [Inches]	H [Inches/mm]	EDP number	Max. RPM	
Maximum operating speed 100 m/s, flat type T (shape 41)					
12	1/8	1	64401	6,400	20
		20 mm	64395	6,400	20
14	1/8	1	64402	5,500	10
		20 mm	64396	5,500	10
16	1/8	1	64403	4,800	10
		20 mm	64397	4,800	10



Cut-off wheels for stationary applications

Special Line SGP, HEAVY DUTY ★★★★★



SGP HD STEEL ★★★★★

Wheel for the highest cutting work demands. Suitable for requirements of white cut and minimal burr formation.

Advantages:

- Maximum value due to extended service life.
- Increased productivity due to excellent cutting characteristics.

Workpiece materials:

steel

Applications:

cutting of solid material, sections and pipes

Abrasive:

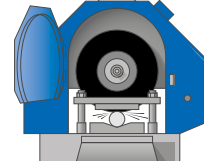
Aluminum oxide A


Technical information:

A 24/36 N/Q/S

Compatible with:

HEAVY DUTY cutting machine



D [Inches]	T [Inches]	H [Inches]	Hardness grade and EDP number			Max. RPM	
			N (soft)	Q (medium-hard)	S (hard)		
Maximum operating speed 80 m/s, flat type T (shape 41)							
10	3/32	5/8	-	-	66113	6,100	20
		1	-	-	66114	6,100	20
12	1/8	1	-	66115	-	5,100	20
14	1/8	1	-	66116	-	4,400	10
16	1/8	1	-	66117	-	3,800	10
20	3/16	1	66005	-	-	3,100	5
		1	-	66123	-	3,100	5
26	1/4	1	66132	-	-	2,300	5
Maximum operating speed 100 m/s, flat type T (shape 41)							
10	1/8	5/8	-	66009	-	7,600	20
12	1/8	1	-	66011	-	6,400	20
14	1/8	1	-	66012	-	5,500	10
16	3/16	1	-	-	66013	4,800	10
18	3/16	1	66016	-	-	4,200	5
20	1/4	1	66019	-	-	3,800	5
24	1/4	1	66022	-	-	3,200	5



ZIRKON SGP HD CAST + STEEL ★★★★★

R hardness wheel for the highest cutting work demands. Suitable for requirements of white cut and minimal burr formation.

Advantages:

- Maximum value due to extended service life.
- Increased productivity due to excellent cutting characteristics.

Workpiece materials:

cast iron, steel

Applications:

cutting of solid material, sections and pipes

Abrasive:

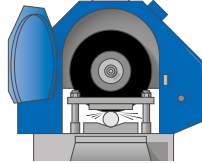
Zirconia alumina/aluminum oxide ZA


Technical information:

ZA 24 R

Compatible with:

HEAVY DUTY cutting machine



D [Inches]	T [Inches]	H [Inches]	EDP number	Max. RPM	
Maximum operating speed 100 m/s, flat type T (shape 41)					
20	3/16	1	66045	3,800	5
24	1/4	2-3/8	66050	3,200	5

Accessories

Reducing rings

Reducing rings enable secure adjustment of the standard centre hole to a reduced centre hole dimension.


Advantages:

- Allows for correct mounting of the wheel on various drive systems.
- With stop collar, to prevent the ring from pushing through the centre hole of the cut-off wheel.

Safety notes:

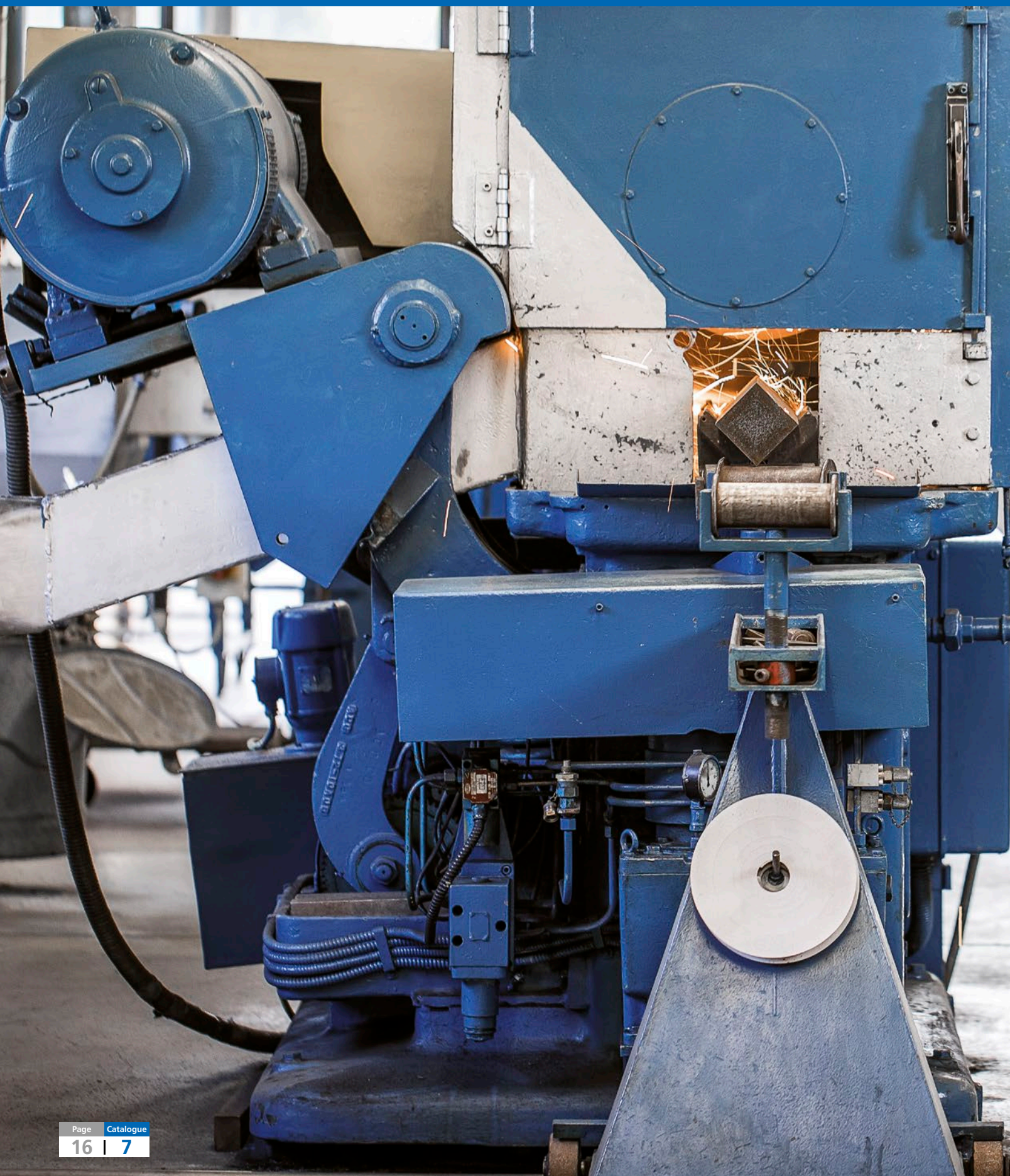
- Ensure that the flanges on the drive system are backed off in order to mount the wheel securely.



Outer dia. [Inches]	Inside dia. [Inches/mm]	Width [Inches]	EDP number	
2-3/8	1	1/4	69020	1
	1-1/4	1/4	69021	1
	1-1/2	1/4	69022	1
	1-3/4	1/4	69023	1
1-1/2	1-1/4	3/16	69001	1
1-1/4	1	3/16	69007	1
1-1/8	1	1/8	69008	1
1	7/8	1/8	69003	1
	20 mm	1/8	69004	1
	5/8	1/8	69005	1
7/8	5/8	5/64	69006	1



Large diameter cut-off wheels made to order



Products made to order

For application solutions beyond our standard catalogue offering, PFERD is capable of producing premium-quality stationary cut-off wheels up to 2,000 mm (80") diameter, in a variety of specifications, bonds, and abrasive grains to meet the requirements of any large-scale cutting task.

To learn more about PFERD made to order solutions, contact us for more information at ldco@pferdusa.com.



Advantages of large diameter cut-off wheels

- Suitable for all steels and castings, non-ferrous metal alloys, special alloys such as nickel and titanium-based alloys, as well as materials on which sawing and flame cutting are difficult or impossible.
- No post-processing is required due to smooth cutting surfaces and blank cuts in cold cutting-off.
- Short cutting times regardless of material quality.
- Significantly lower burr formation with hot cutting-off than with hot sawing.
- Lower noise levels than with hot sawing, for example:
 Hot cutting-off: 85 to 95 dBA
 Hot sawing: 105 to 110 dBA
- Consistent cutting quality over the entire life of the cut-off wheel due to its continuous self-sharpening qualities.
- Effective cutting of already cooled, rolled or forged parts in hot cut lines.

Applications

Cut-off grinding is one of the most powerful and cost-effective cutting processes and is used in the following areas:

- Rolling mills
- Foundries
- Machine engineering
- Steel construction
- Maintenance of rails
- Forging plants and their finishing processes
- Metallurgical laboratories



Large diameter cut-off wheels made to order

General information

Differentiation of cut-off grinding

A differentiation is made between cold, warm and hot cutting-off, depending on the material temperature of the workpiece.

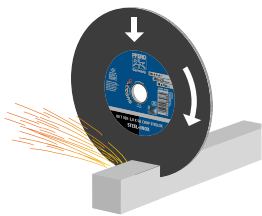
Operating conditions	Cold cut-off	Warm cut-off	Hot cut-off
Operating parameters			
Material temperature T	up to 212°F	212 to 1,112°F	1,112 to above 1,832°F
Peripheral speed V_s^*	80 to 100 m/s	80 to 100 m/s	80 to 100 m/s
Specific cutting performance Z	4 to 15 cm ² /s	8 to 20 cm ² /s	15 to 35 cm ² /s

* Please adhere to the maximum operating speed of the cut-off wheel.

Cut-off processes

According to the material and the application, cut-off processes differ depending on the positioning and relative motion of the cut-off wheel and workpiece.

Chop stroke cut



Application area:

- For cutting individual workpieces as well as small or slim material layers.
- Very common cut-off process.

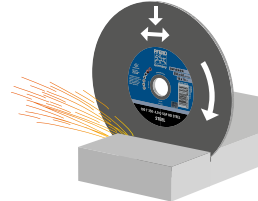
Cutting process:

- Cut-off wheel cuts the workpiece in a radial movement over a joint mid-point.

Advantages:

- Low vibration.
- Short cutting times.
- Less load on cut-off wheels for smaller material dimensions.

Oscillation cut



Application area:

- For cutting sprues and risers in foundries.
- Demanding tasks in wet cut-off grinding.

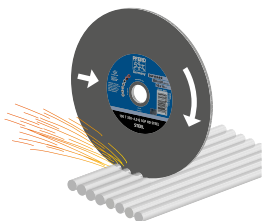
Cutting process:

- Cut-off wheel moves into the workpiece to be cut with additional forward and backward movements in the horizontal cut.

Advantages:

- Lower drive output required.
- Low workpiece temperature.
- Optimum removal of chips.

Horizontal cut



Application area:

- For cutting multiple adjacent workpieces, as well as slabs, plates and sheets.
- Especially for the approach side of the rolling mill after the cooling bed.

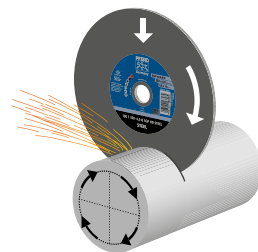
Cutting process:

- Cut-off wheel cuts the entire layer width of different cross sections in one cycle.

Advantages:

- Short cutting times.
- Very high throughput capacity.

Index cut



Application area:

- For cutting very large round solid material and blocks.
- Especially in steel works and foundries.

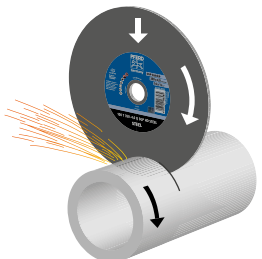
Cutting process:

- The workpiece is cut with several partial cuts. After each partial cut, the workpiece is rotated (2–4 partial cuts, 180–90° rotation, depending on the material dimensions).

Advantages:

- Working on very large material cross sections is possible with smaller wheel diameters.

Rotary cut



Application area:

- For cutting very large pipes as well as round solid materials.

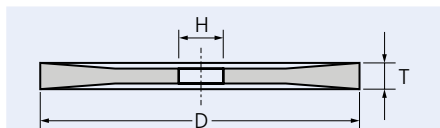
Cutting process:

- The workpiece is continuously rotated during the cutting process.

Advantages:

- Use of small wheel diameters is possible.
- Lower drive output required.
- Low workpiece temperature.

Dimensions and designs to meet customer requirements



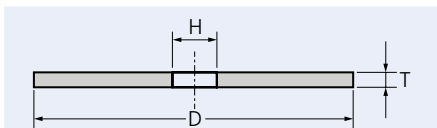
CT – Conical type

Application area:

- Particularly suitable for use in the steel industry.

Advantages:

- Less lateral friction.
- Particularly advantageous for deep cuts and traverse cutting.



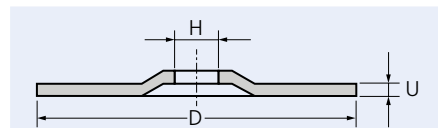
T – Flat type

Application area:

- Suitable for use in steel and plant construction, in the steel industry and in foundries.

Advantages:

- Suitable for universal use.



PT – Depressed-centre type

Application area:

- Particularly suitable for use in foundries.

Advantages:

- Clamping flange does not protrude beyond the cut-off wheel.
- Flush cutting of risers from castings is possible.
- In general, no post-processing required.

Outer dia. D [mm/in.]	Centre hole dia. H [mm]
2,000 (80")	80/100/127/152.4/200.3/ 203/230/250/280
1,840 (73")	80/100/127/152.4/200.3/ 203/230/250/280
1,600 (63")	80/100/127/152.4/200.3/ 203/230/250/280
1,500 (60")	80/100/127/152.4/200.3/ 203/230/250/280
1,380 (55")	80/100/127/152.4/200.3/ 203/230/250/280
1,250 (50")	80/100/127/152.4/200.3/ 203/230/250/280
1,000 (40")	80/100/127/152.4/200.3/ 203/230/250/280
800 (32")	80/100/127/152.4/200.3/ 203/230/250/280

Outer dia. D [mm/in.]	Centre hole dia. H [mm]
800 (32")	80/100/127/152.4/200.3/ 203/230/250/280
700 (28")	80/100/127/152.4/200.3/ 203/230/250/280
660 (26")	40/60/76.2/80/100
600 (24")	25.4/40/60/76.2/80/100
500 (20")	25.4/40/60/76.2/80/100
450 (18")	25.4/32/40/60/80
400 (16")	25.4/32/40/60/80
350 (14")	25.4/32/40
300 (12")	25.4/32/40
250 (10")	25.4/30/32

Outer dia. D [mm]	Centre hole dia. H [mm]
800 (32")	80/100/127/152.4/200.3/ 203/230/250/280
700 (28")	80/100/127/152.4/200.3/ 203/230/250/280
600 (24")	25.4/40/60/76.2/80/100
500 (20")	25.4/40/60/76.2/80/100
400 (16")	25.4/32/40/60/80

Other types and centre hole diameters are available on request. Please contact us for further information.

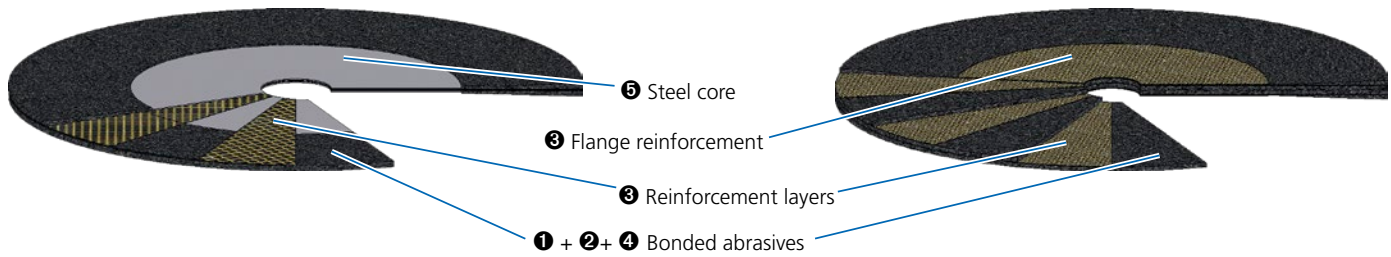


CUSTOMIZED
up to 2,000 mm (80") diameter



Large diameter cut-off wheels made to order

METALCORE cut-off wheel



METALCORE type

The PFERD developed and **patented** steel-core cut-off wheel is characterized by its solid steel body **5** constructed in layers which do not contain any abrasive material.

The special wheel structure has the following advantages:

1. Reduced cutting costs due to the use of smaller clamping flanges:

- Larger usable abrasive contact area.
- Allows for cutting of larger cross sections due to the increased depth of cut.
- Easier wheel changes due to smaller diameter of consumed wheel.

2. Longer service life due to:

- More stable cut with less vibration.

3. Reduced cut-off wheel width for chop stroke cut due to increased lateral stability:

- Shorter cutting times and higher material throughput rate with low-power cutting machines.
- Less loss of cut material.
- Reduced chips.

4. Steel-cores can be recycled as scrap.

Conventional type

For stationary cut-off grinding, resinoid-bonded, fibre-reinforced cut-off wheels are used, which are composed of four components:

- 1 Abrasives
- 2 Bond, which holds the abrasive grit in the cut-off wheel
- 3 Reinforcement layers/flange reinforcement, which ensure that the cut-off wheel is secure and stable
- 4 Active grinding fillers

Solid steel body
constructed in layers

Maximum utilization of
abrasive surface

