

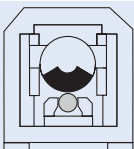


# Stationary cut-off wheels

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More detailed information and ordering data for grinding discs and cut-off wheels for manual applications can be found in Catalogue 206.

 < 3 kW	Stationary CHOPSAW cut-off grinding machine up to 3 kW
	Stationary CHOPSAW cut-off grinding machine with powerful drive
	Stationary cut-off grinding machine for cutting rails

	Stationary cut-off grinding machine for cutting laboratory samples
	Stationary high-performance cut-off grinding machine

## PFERD support and service

PFERD offers you individual targeted support to solve your application problems. The experienced field staff of PFERD will be pleased to assist you.

With their expertise, our technical advisors will also help you to solve complex problems related to applications and use.

Due to our many years of collaboration with manufacturers of cut-off grinding machines in Germany and abroad, we can also advise you on the design of appropriate machining equipment.

Please contact us.



### PFERD quality

PFERD stationary cut-off wheels are developed, manufactured and tested to the highest quality standards.

Research and Development, in-house machine and plant construction, as well as the continuous testing and further development of the quality and safety standards in our own laboratories guarantee the high PFERD quality.

PFERD quality management is certified according to ISO 9001.

### Applications

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

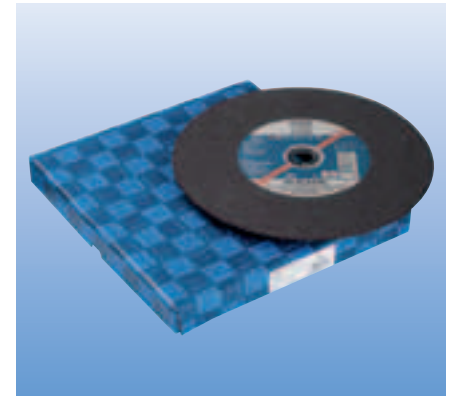
- Rolling mills
- Foundries
- Machine engineering
- Steel construction
- Maintenance of rails
- Forging plants and their finishing processes
- Laboratories

### Advantages of stationary cut-off grinding

- Universal cutting processes 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
- Due to smooth cutting surfaces and blank cuts in cold cutting-off, no post-processing is required
- Short cutting times regardless of the 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 cut quality over the entire life of the cut-off wheel due to its continuous self-sharpening qualities
- Cutting of already cooled rolled or forged parts in hot cut lines is possible

### PFERD packaging

PFERD supplies stationary cut-off wheels in robust industrial packaging that protects the tools from damage. For packaging units please refer to the product tables. Important information, such as article number, description, EAN code and technical information can be found on the packaging labels.



### PFERD is a long-standing member of oSa

Together with other manufacturers, PFERD has voluntarily undertaken to produce quality tools conforming to the most exacting safety standards.

Member companies of oSa (The Organization for Safety of Grinding Tools) are committed to continuous product safety and quality monitoring.

PFERD tools carry the oSa mark.

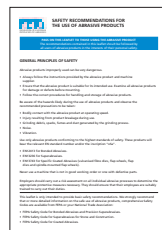


### Maximum operating speed

The maximum operating speed [m/s] is indicated on all product labels and product packs by an EN 12413 colour bar. The maximum permissible rotational speed specification applies to the nominal diameter of the unused wheels.

Maximum operating speed	Colour bar
80 m/s	red
100 m/s	green

### FEPA



The FEPA safety recommendations can be downloaded at [www.pferd.com](http://www.pferd.com).

### Safety notes



= Wear eye protection!



= Wear hearing protection!



= Wear a respirator!



= Wear gloves!



= Please read the safety instructions!



= Do not use if damaged!



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



Please observe the German Abrasive Manufacturer's (VDS) safety instructions. Further information can be found at: [www.pferd.com](http://www.pferd.com)

### Safety standard

PFERD cut-off wheels conform to the highest safety requirements and are marked according to EN 12413 for grinding tools made of bonded abrasives.



### PFERDVIDEO

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

# Stationary cut-off wheels

The fast way to the best tool



## Product lines

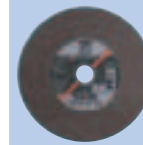
For the many different cutting tasks in industry and crafts, PFERD offers stationary cut-off wheels in two product lines with diverse special features.

### Universal Line PS-FORTE (PSF)



For general use in industry and crafts






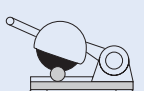

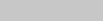




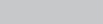
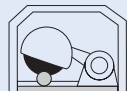
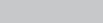

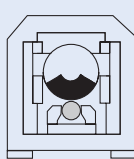
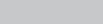
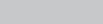
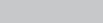
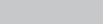





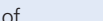
### Performance Line SG-ELASTIC (SG)



Widest range of tools for professional use in industry and crafts



Based on the performance of the existing drive system ①, the material to be cut ② and the application ③, the overview shows the various types of tools in the product range and helps you to find the best tool.

① Drive system	② Material	③ Application	Type	Page
<b>CHOPSAW</b>  <b>&lt; 3 kW</b>	Steel	Cutting of solid material, profiles and pipes	<b>PS-FORTE</b> Hardness K  <b>SG-ELASTIC</b> Hardness K 	6 7
	Stainless steel (INOX)	Cutting of solid material, profiles and pipes	<b>PS-FORTE</b> Hardness K  <b>SG-ELASTIC</b> Hardness K 	6 7
<b>CHOPSAW-HD</b> 	Steel	Cutting of solid material, profiles and pipes	<b>SG-ELASTIC</b> Hardness L  Hardness O 	8 8
	Stainless steel (INOX)	Cutting of solid material, profiles and pipes	<b>SG-ELASTIC</b> Hardness L 	8
	Cast iron	Cutting of solid material, profiles and pipes	<b>SG-ELASTIC</b> Hardness L 	9
	Stone	Cutting of solid material, profiles and pipes	<b>SG-ELASTIC</b> Hardness L 	9
<b>RAIL</b> 	Steel	Cutting of rails	<b>SG-ELASTIC</b> Hardness Q 	9
<b>LABOR</b> 	Steel	Producing precision cuts, cutting of laboratory samples	<b>SG-ELASTIC</b> Hardness H 	10
	Stainless steel (INOX)	Producing precision cuts, cutting of laboratory samples	<b>SG-ELASTIC</b> Hardness H 	10
<b>HEAVY DUTY</b> 	Steel	Cutting of solid material, profiles and pipes	<b>SG-ELASTIC</b> Hardness T  Hardness P  Hardness R  Hardness L  Hardness N  Hardness Q  Hardness S 	10 10 10 11 11 11 11
	Cast iron	Cutting of solid material, profiles and pipes	<b>SG-ELASTIC</b> Hardness T  Hardness P  Hardness R 	10 10 10
<b>Products made to order up to dia. 1,250 mm</b>	On request, we can produce stationary cut-off wheels in premium PFERD quality up to a diameter of 1,250 mm, tailor-made to meet the requirements of your job. Please contact us. Our experienced technical advisors will be pleased to assist you.			12

	With a middle fabric for aggressive cutting with minimized burr formation		With two outer fabrics for high lateral stability
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**PFERD description**  
80 T 350-3,0 A 30 L SG-CHOP-HD-INOX/25,4  
1 2 3 4 5 6 7 8 9 10 11

### 1 Maximum operating speed in [m/s]

### 2 Description and shape of the tool

T = flat type  
PT = depressed-centre type  
CT = conical type

### 3 Outer diameter

Outer dia. D in [mm]

### 4 Wheel thickness

Width T in [mm]

### 5 Abrasive

A = Aluminium oxide  
C = Silicon carbide  
ZA = Zirconia alumina/aluminium oxide

### 6 Grit size

Grit size according to ISO 8486

### 7 Hardness grade (wheel properties)

Hardness grade	Wheel properties	Material group
<b>Universal Line PS-FORTE (PSF)</b>		
K	very soft	Steel, stainless steel (INOX)
<b>Performance Line SG-ELASTIC (SG)</b>		
H	very soft	Steel, stainless steel (INOX), cast iron
K	very soft	Steel, stainless steel (INOX)
L	soft	Steel, stainless steel (INOX), cast iron, stone, plastics, non-ferrous metals
N	soft	Steel
O	medium-hard	Steel
P	medium-hard	Steel, cast iron
Q	medium-hard	Steel
R	hard	Steel, cast iron
S	hard	Steel
T	very hard	Steel, cast iron

### 8 PFERD product line

Universal Line PS-FORTE (PSF)  
Performance Line SG-ELASTIC (SG)

### 9 Product groups

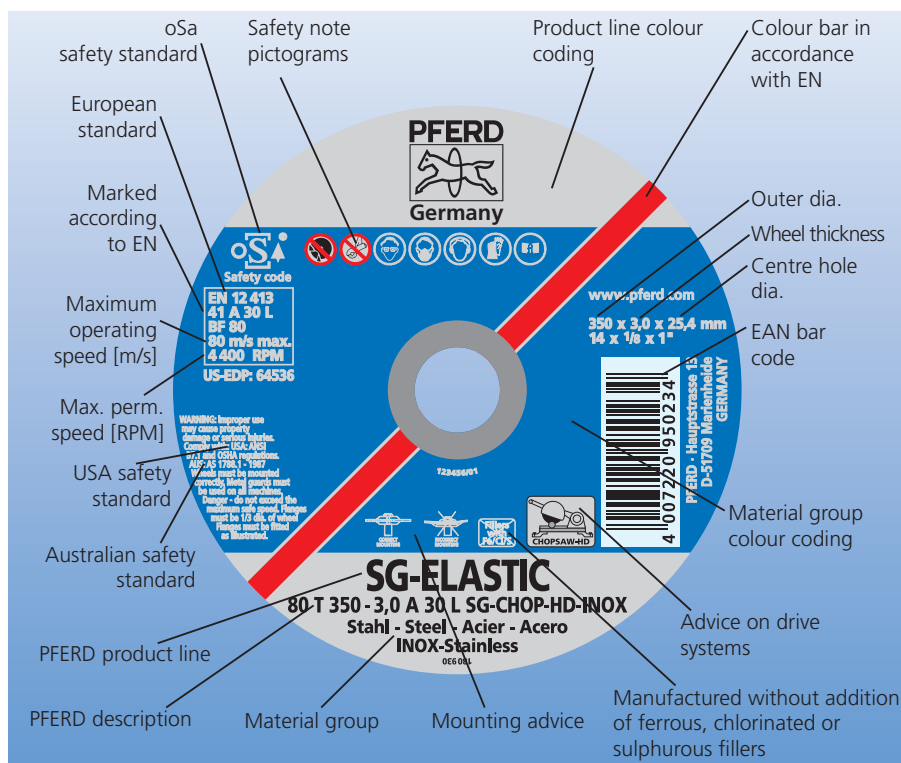
CHOPSAW = for aggressive cutting with minimized burr formation  
CHOPSAW-HD = for high lateral stability  
RAIL = for rails  
LABOR = for laboratory samples  
HEAVY DUTY = for high-performance machines

### 10 Material group

See also point 7

### 11 Centre hole diameter

Centre hole dia. H in [mm]



### Designation according to EN 12413

41 A 30 L BF 80  
1 2 3 4 5 6

### 1 Type and shape of the wheel

41 = flat cut-off wheel  
42 = depressed-centre cut-off wheel

### 2 Grit designation

A = Aluminium oxide  
C = Silicon carbide  
ZA = Zirconia alumina/aluminium oxide

### 3 Grit size

Grit size according to ISO 8486

### 4 Hardness grade (wheel properties)

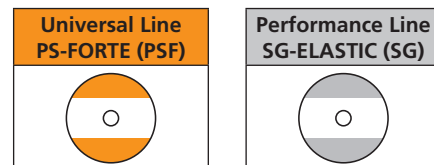
Abrasive hardness grades are classified using letters in increasing alphabetical order from the softest to hardest (A to Z).

### 5 Bond

BF = fibre-reinforced resinoid bond with fabric

### 6 Maximum operating speed in [m/s]

### Colour coding for the two product lines



### Colour coding of the materials to be worked

Universal Line PS-FORTE (PSF)	
Material = Colour	Page
Steel = black	6
Stainless steel (INOX) = blue	6

Performance Line SG-ELASTIC (SG)	
Material = Colour	Page
Steel = black	7 8 9 11
Steel/cast iron = black/red	10
Stainless steel (INOX) = blue	7 8 10
Stone/cast iron = green/red	9



# Stationary cut-off wheels

## Universal Line PS-FORTE, CHOPSAW



Tool of hardness K, which cuts very easily, with a middle fabric. For aggressive cutting with minimized burr formation.

### Advantages:

- Long tool life
- Fast cutting
- Low side friction
- For multipurpose cutting work

**Abrasive: Aluminium oxide A**

### Materials to be worked:

Steel

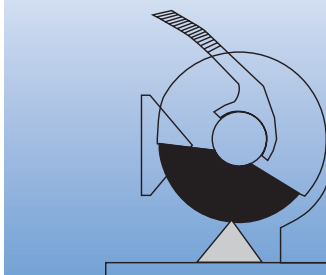
### Applications:


Cutting of solid material, sections and pipes

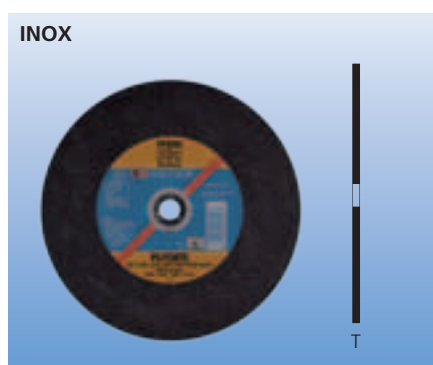
### Recommendations for use:

- Provides exceptional cutting results on drive systems with up to 3 kW output

< 3 kW



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-2,8 A 36 K PSF-CHOP/25,4	832264	41 A 36 K BF 80	300 x 2.8 x 25.4 (1)	5,100	20
80 T 350-2,8 A 36 K PSF-CHOP/25,4	817605	41 A 36 K BF 80	350 x 2.8 x 25.4 (1)	4,400	10
80 T 400-3,8 A 36 K PSF-CHOP/25,4	832271	41 A 36 K BF 80	400 x 3.8 x 25.4 (1)	3,800	10



Tool of hardness K, which cuts very easily, with a middle fabric. For aggressive cutting with minimized burr formation.

### Advantages:

- Long tool life
- Fast cutting
- Low side friction
- For multipurpose cutting work

**Abrasive: Aluminium oxide A**

Manufactured without addition of ferrous, chlorinated or sulphurous fillers.

### Materials to be worked:


Stainless steel (INOX)

### Applications:

Cutting of solid material, sections and pipes

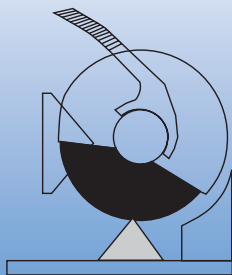
### Recommendations for use:

- Provides exceptional cutting results on drive systems with up to 3 kW output

Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-2,8 A 36 K PSF-CHOP-INOX/25,4	950180	41 A 36 K BF 80	300 x 2.8 x 25.4 (1)	5,100	20
80 T 350-2,8 A 36 K PSF-CHOP-INOX/25,4	950197	41 A 36 K BF 80	350 x 2.8 x 25.4 (1)	4,400	10
80 T 400-3,8 A 36 K PSF-CHOP-INOX/25,4	950210	41 A 36 K BF 80	400 x 3.8 x 25.4 (1)	3,800	10



< 3 kW



Tool of hardness K, which cuts very easily, with a middle fabric. For aggressive cutting with minimized burr formation.

### Advantages:

- Very long tool life
- Fast cutting
- Low side friction
- For demanding cutting work

**Abrasive: Aluminium oxide A**

**Materials to be worked:**

Steel

### Applications:

Cutting of solid material, sections and pipes


### Recommendations for use:

- Provides exceptional cutting results on drive systems with up to 3 kW output

Steel



T

Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-2,8 A 36 K SG-CHOP/25,4	629123	41 A 36 K BF 80	300 x 2.8 x 25.4 (1)	5,100	20
80 T 300-2,8 A 36 K SG-CHOP/32,0	639573	41 A 36 K BF 80	300 x 2.8 x 32.0 (1 1/4)	5,100	20
80 T 350-2,8 A 36 K SG-CHOP/25,4	629154	41 A 36 K BF 80	350 x 2.8 x 25.4 (1)	4,400	10
80 T 350-2,8 A 36 K SG-CHOP/32,0	639597	41 A 36 K BF 80	350 x 2.8 x 32.0 (1 1/4)	4,400	10
80 T 400-3,8 A 36 K SG-CHOP/25,4	638675	41 A 36 K BF 80	400 x 3.8 x 25.4 (1)	3,800	10
80 T 400-3,8 A 36 K SG-CHOP/32,0	639610	41 A 36 K BF 80	400 x 3.8 x 32.0 (1 1/4)	3,800	10

Tool of hardness K, which cuts very easily, with a middle fabric. For aggressive cutting with minimized burr formation.

### Advantages:

- Very long tool life
- Fast cutting
- Low side friction
- For demanding cutting work

**Abrasive: Aluminium oxide A**

Manufactured without addition of ferrous, chlorinated or sulphurous fillers.

### Materials to be worked:

Stainless steel (INOX)

### Applications:

Cutting of solid material, sections and pipes


### Recommendations for use:

- Provides exceptional cutting results on drive systems with up to 3 kW output

INOX



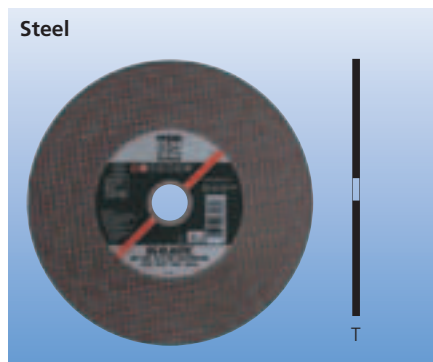
T

Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-2,8 A 36 K SG-CHOP-INOX/25,4	803219	41 A 36 K BF 80	300 x 2.8 x 25.4 (1)	5,100	20
80 T 350-2,8 A 36 K SG-CHOP-INOX/25,4	639634	41 A 36 K BF 80	350 x 2.8 x 25.4 (1)	4,400	10
80 T 400-2,8 A 36 K SG-CHOP-INOX/25,4	669303	41 A 36 K BF 80	400 x 2.8 x 25.4 (1)	3,800	10



# Stationary cut-off wheels

## Performance Line SG-ELASTIC, CHOPSAW-HD



Tool of hardness L and O, with two outer fabrics. For cutting work that requires high stability.

### Advantages:

- High lateral stability
- Very long tool life
- For demanding cutting work

### Abrasive: Aluminium oxide A

### Materials to be worked:

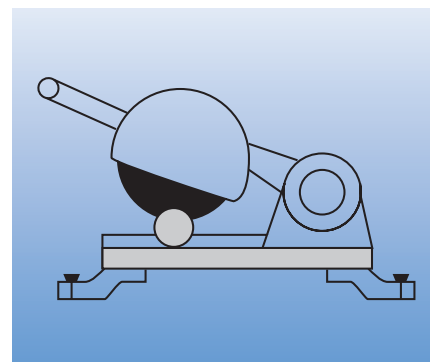
Steel


### Applications:

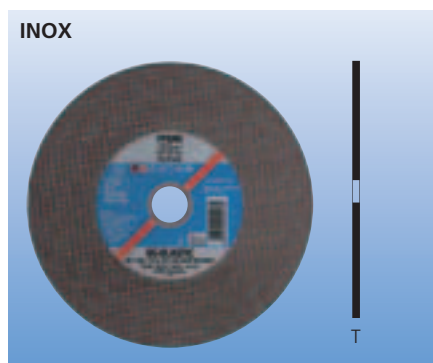
Cutting of solid material, sections and pipes

### Recommendations for use:

- Optimum cutting results are achieved with powerful drive systems



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-3,0 A 30 L SG-CHOP-HD/25,4	629185	41 A 30 L BF 80	300 x 3.0 x 25.4 (1)	5,100	20
80 T 300-3,0 A 30 L SG-CHOP-HD/32,0	639580	41 A 30 L BF 80	300 x 3.0 x 32.0 (1 1/4)	5,100	20
80 T 300-3,4 A 30 O SG-CHOP-HD/25,4	540299	41 A 30 O BF 80	300 x 3.4 x 25.4 (1)	5,100	20
80 T 350-3,0 A 30 L SG-CHOP-HD/25,4	629130	41 A 30 L BF 80	350 x 3.0 x 25.4 (1)	4,400	10
80 T 350-3,0 A 30 L SG-CHOP-HD/32,0	639603	41 A 30 L BF 80	350 x 3.0 x 32.0 (1 1/4)	4,400	10
80 T 350-3,8 A 30 O SG-CHOP-HD/25,4	540329	41 A 30 O BF 80	350 x 3.8 x 25.4 (1)	4,400	10
80 T 400-4,0 A 30 L SG-CHOP-HD/25,4	638682	41 A 30 L BF 80	400 x 4.0 x 25.4 (1)	3,800	10
80 T 400-4,0 A 30 L SG-CHOP-HD/32,0	639627	41 A 30 L BF 80	400 x 4.0 x 32.0 (1 1/4)	3,800	10
<b>Maximum operating speed 100 m/s, flat type T (shape 41)</b>					
100 T 350-4,2 A 30 O SG-CHOP-HD/25,4	540336	41 A 30 O BF 100	350 x 4.2 x 25.4 (1)	5,500	10



Tool of hardness L, which cuts easily, with two outer fabrics. For cutting work that requires high stability.

### Advantages:

- High lateral stability
- Very long tool life
- For demanding cutting work

### Abrasive: Aluminium oxide A

Manufactured without addition of ferrous, chlorinated or sulphurous fillers.

### Materials to be worked:

Stainless steel (INOX)


### Applications:

Cutting of solid material, sections and pipes

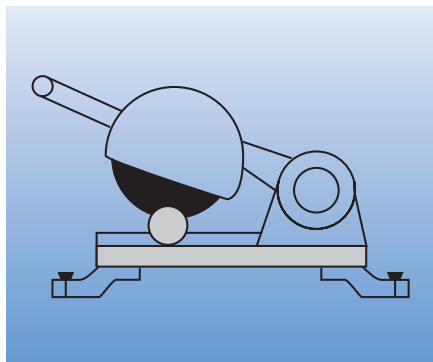
### Recommendations for use:

- Optimum cutting results are achieved with powerful drive systems



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-3,0 A 30 L SG-CHOP-HD-INOX/25,4	950227	41 A 30 L BF 80	300 x 3.0 x 25.4 (1)	5,100	20
80 T 350-3,0 A 30 L SG-CHOP-HD-INOX/25,4	950234	41 A 30 L BF 80	350 x 3.0 x 25.4 (1)	4,400	10
80 T 400-4,0 A 30 L SG-CHOP-HD-INOX/25,4	950272	41 A 30 L BF 80	400 x 4.0 x 25.4 (1)	3,800	10





Tool of hardness L, which cuts easily, with two outer fabrics. For cutting work that requires high stability.

### Advantages:

- High lateral stability
- Very long tool life
- For demanding cutting work

### Abrasive: Silicon carbide C

### Materials to be worked:

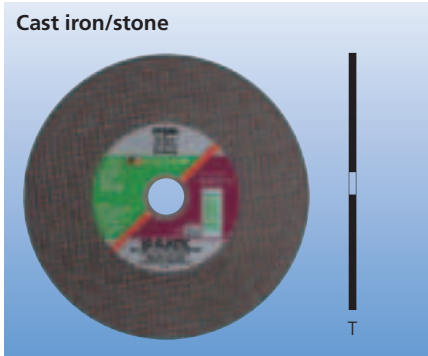
Cast iron, stone, plastic, non-ferrous metals


### Applications:

Cutting of solid material, sections and pipes

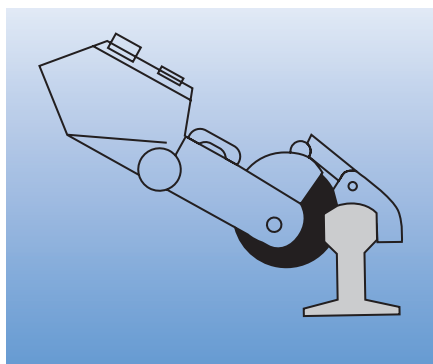
### Recommendations for use:

- Optimum cutting results are achieved with powerful drive systems



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-3,0 C 36 L SG-CHOP-HD/25,4	540268	41 C 36 L BF 80	300 x 3.0 x 25.4 (1)	5,100	20
80 T 350-3,4 C 36 L SG-CHOP-HD/25,4	540275	41 C 36 L BF 80	350 x 3.4 x 25.4 (1)	4,400	10
80 T 400-4,0 C 36 L SG-CHOP-HD/25,4	540282	41 C 36 L BF 80	400 x 4.0 x 25.4 (1)	3,800	10

## Performance Line SG-ELASTIC, RAIL



Tool of hardness Q for fast and economic cutting of rails.

### Advantages:

- Aggressive cutting
- Highest cut quality
- Optimum tool life

### Abrasive: Aluminium oxide A

### Materials to be worked:

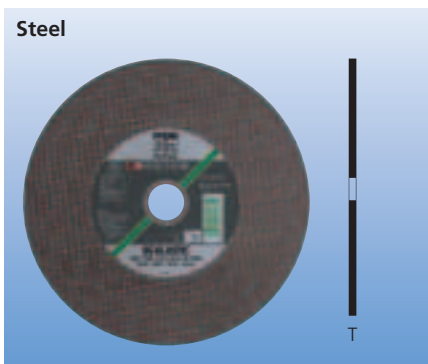
Steel


### Applications:

Cutting of rails

### Recommendations for use:

- Optimum cutting results are achieved with powerful drive systems



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 100 m/s, flat type T (shape 41)</b>					
100 T 300-3,8 A 24 Q SG-RAIL/22,23	539705	41 A 24 Q BF 100	300 x 3.8 x 22.23 (7/8)	6,400	20
100 T 300-3,8 A 24 Q SG-RAIL/25,4	539712	41 A 24 Q BF 100	300 x 3.8 x 25.4 (1)	6,400	20
100 T 350-3,8 A 24 Q SG-RAIL/22,23	539729	41 A 24 Q BF 100	350 x 3.8 x 22.23 (7/8)	5,500	10
100 T 350-3,8 A 24 Q SG-RAIL/25,4	539736	41 A 24 Q BF 100	350 x 3.8 x 25.4 (1)	5,500	10
100 T 400-4,2 A 24 Q SG-RAIL/25,4	539743	41 A 24 Q BF 100	400 x 4.2 x 25.4 (1)	4,800	10

# Stationary cut-off wheels

## Performance Line SG-ELASTIC, LABOR

INOX/steel



Tool of hardness H, which cuts very easily, for producing precision cuts and fast cutting of laboratory samples.

### Advantages:

- Special tool for metallographic sampling
- Highest cut quality
- Reinforced type for high stability

### Abrasive: Aluminium oxide A

Manufactured without addition of ferrous, chlorinated or sulphurous fillers.

### Materials to be worked:

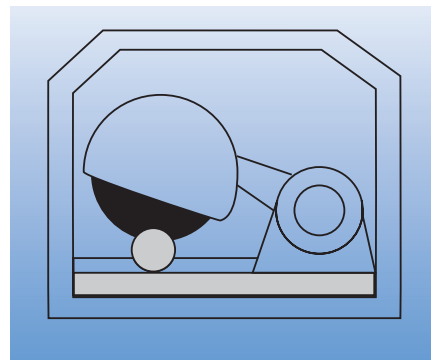
Stainless steel (INOX), steel, cast iron


### Applications:

Cutting of solid material, sections and pipes

### Recommendations for use:

- Due to their construction, these tools are only intended for use on stationary precision cutting machines
- Also suitable for wet cutting applications



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
SG-LAB-INOX					
80 T 150-1,0 A 60 H SG-LAB-INOX/22,23	804124	41 A 60 H BF 80	150 x 1.0 x 22.23 (7/8)	10,200	25
80 T 230-1,5 A 60 H SG-LAB-INOX/22,23	804865	41 A 60 H BF 80	230 x 1.5 x 22.23 (7/8)	6,600	25
80 T 250-1,8 A 46 H SG-LAB-INOX/32,0	804919	41 A 46 H BF 80	250 x 1.8 x 32.0 (1 1/4)	6,100	20
SG-LAB					
80 T 300-2,0 A 46 H SG-LAB/32,0	804926	41 A 46 H BF 80	300 x 2.0 x 32.0 (1 1/4)	5,100	20
80 T 350-2,5 A 46 H SG-LAB/32,0	805596	41 A 46 H BF 80	350 x 2.5 x 32.0 (1 1/4)	4,400	10
80 T 400-3,0 A 46 H SG-LAB/32,0	805657	41 A 46 H BF 80	400 x 3.0 x 32.0 (1 1/4)	3,800	10

## Performance Line SG-ELASTIC, HEAVY DUTY

Cast iron/steel



Tool with broad spectrum of hardness grades for the highest requirements of cutting work.

### Advantages:

- Optimum tool life
- Optimum cutting results

### Abrasive: Zirconia alumina/aluminium oxide ZA

### Materials to be worked:

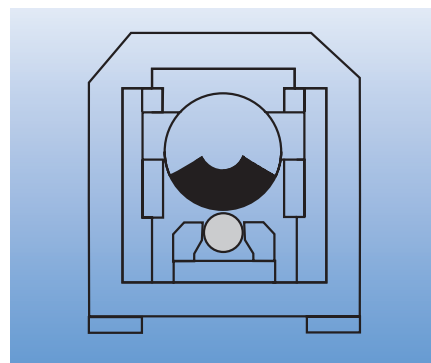
Cast iron, steel


### Applications:

Cutting of solid material, sections and pipes

### Recommendations for use:

- Optimum cutting results are achieved on stationary high-performance machines



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 100 m/s, flat type T (shape 41)</b>					
100 T 400-4,8 ZA 24 T SG-HD/40,0	539965	41 ZA 24 T BF 100	400 x 4.8 x 40.0 (1 1/2)	4,800	10
100 T 500-5,6 ZA 24 T SG-HD/40,0	803462	41 ZA 24 T BF 100	500 x 5.6 x 40.0 (1 1/2)	3,800	5
100 T 600-7,8 ZA 24 P SG-HD/60,0	803486	41 ZA 24 P BF 100	600 x 7.8 x 60.0 (2 3/8)	3,200	5
100 T 600-8,0 ZA 24 R SG-HD/60,0	166437	41 ZA 24 R BF 100	600 x 8.0 x 60.0 (2 3/8)	3,200	5

Tool with broad spectrum of hardness grades for the highest requirements of cutting work.

### Advantages:

- Optimum tool life
- Optimum cutting results

**Abrasive: Aluminium oxide A**

### Materials to be worked:

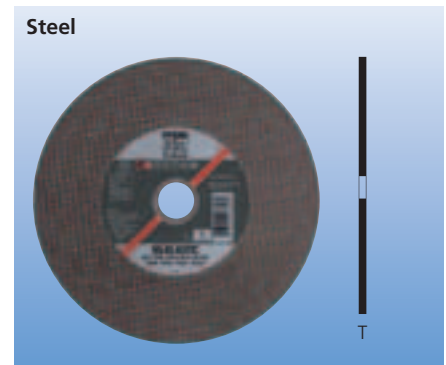
Steel


### Applications:

Cutting of solid material, sections and pipes

### Recommendations for use:

- Optimum cutting results are achieved on stationary high-performance machines



Description	EAN 4007220	EN designation	D x T x H [mm (inch)]	Max. perm. speed [RPM]	
<b>Maximum operating speed 80 m/s, flat type T (shape 41)</b>					
80 T 300-3,4 A 24 Q SG-HD/25,4	166185	41 A 24 Q BF 80	300 x 3.4 x 25.4 (1)	5,100	20
80 T 350-3,8 A 24 Q SG-HD/25,4	166260	41 A 24 Q BF 80	350 x 3.8 x 25.4 (1)	4,400	10
80 T 400-4,2 A 24 Q SG-HD/40,0	166307	41 A 24 Q BF 80	400 x 4.2 x 40.0 (1 1/2)	3,800	10
80 T 500-5,5 A 24 Q SG-HD/40,0	166321	41 A 24 Q BF 80	500 x 5.5 x 40.0 (1 1/2)	3,100	5
<b>Maximum operating speed 100 m/s, flat type T (shape 41)</b>					
100 T 250-1,8 A 24 Q SG-HD/30,0	539873	41 A 24 Q BF 100	250 x 1.8 x 30.0 (19/16)	7,600	20
100 T 250-1,8 A 24 Q SG-HD/32,0	803257	41 A 24 Q BF 100	250 x 1.8 x 32.0 (1 1/4)	7,600	20
100 T 300-3,0 A 24 N SG-HD/40,0	539842	41 A 24 N BF 100	300 x 3.0 x 40.0 (1 1/2)	6,400	20
100 T 300-3,6 A 24 Q SG-HD/40,0	166253	41 A 24 Q BF 100	300 x 3.6 x 40.0 (1 1/2)	6,400	20
100 T 350-3,8 A 24 N SG-HD/40,0	539859	41 A 24 N BF 100	350 x 3.8 x 40.0 (1 1/2)	5,500	10
100 T 350-4,0 A 24 Q SG-HD/25,4	166284	41 A 24 Q BF 100	350 x 4.0 x 25.4 (1)	5,500	10
100 T 400-4,3 A 24 N SG-HD/40,0	539866	41 A 24 N BF 100	400 x 4.3 x 40.0 (1 1/2)	4,800	10
100 T 400-4,6 A 24 S SG-HD/40,0	166314	41 A 24 S BF 100	400 x 4.6 x 40.0 (1 1/2)	4,800	10
100 T 400-4,8 A 24 Q SG-HD/40,0	539880	41 A 24 Q BF 100	400 x 4.8 x 40.0 (1 1/2)	4,800	10
100 T 500-6,3 A 24 L SG-HD/40,0	803417	41 A 24 L BF 100	500 x 6.3 x 40.0 (1 1/2)	3,800	5
100 T 500-5,8 A 24 N SG-HD/40,0	166338	41 A 24 N BF 100	500 x 5.8 x 40.0 (1 1/2)	3,800	5
100 T 500-5,8 A 24 Q SG-HD/40,0	539897	41 A 24 Q BF 100	500 x 5.8 x 40.0 (1 1/2)	3,800	5
100 T 500-5,8 A 24 S SG-HD/40,0	539958	41 A 24 S BF 100	500 x 5.8 x 40.0 (1 1/2)	3,800	5
100 T 600-7,6 A 24 N SG-HD/60,0	166482	41 A 24 N BF 100	600 x 7.6 x 60.0 (2 3/8)	3,200	5

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

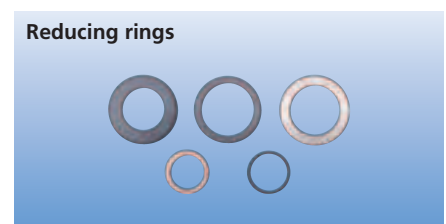
### Advantages:


- Flexible adjustment to the prerequisites of the drive system

- 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 tool securely



Description	EAN 4007220	Outer dia. [mm]	Inside dia. [mm]	Width [mm]	
RDR 25,4-20-3,0	956205	25.4	20	3.0	5
RDR 25,4-22,2-3,0	956212	25.4	22.23	3.0	5
RDR 40-25,4-3,0	956199	40	25.4	3.0	5
RDR 40-25,4-4,5	176306	40	25.4	4.5	5
RDR 40-30-3,0	956182	40	30	3.0	5
RDR 40-30-4,5	176283	40	30	4.5	5
RDR 40-32-3,0	956090	40	32	3.0	5
RDR 40-32-4,5	176276	40	32	4.5	5
RDR 60-40-6,5	956229	60	40	6.5	5



# Stationary cut-off wheels

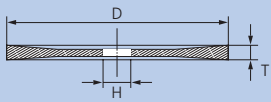
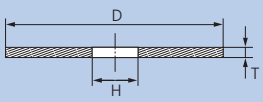
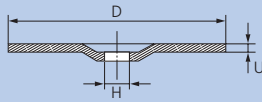
Products made to order



## Dimensions and designs to meet customer requirements

If you cannot find the solution for your particular application in our product range, we can produce stationary cut-off wheels in premium PFERD quality on request, tailor-made to meet the requirements of your job.



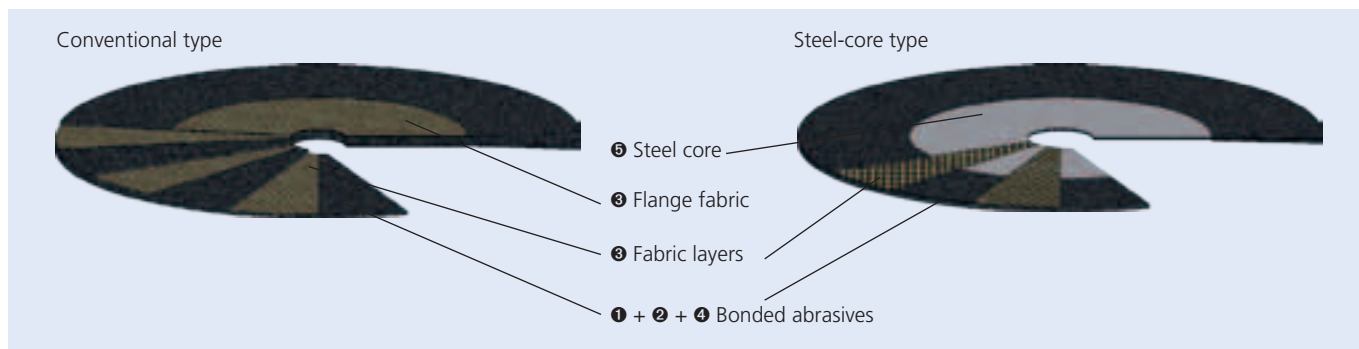
<b>CT</b> Conical type		<b>T</b> Flat type		<b>PT</b> Depressed-centre type	
					
<b>Application area:</b> <ul style="list-style-type: none"> <li>Particularly suitable for use in the steel industry</li> </ul>		<b>Application area:</b> <ul style="list-style-type: none"> <li>Suitable for use in the steel and plant construction, in the steel industry and in foundries</li> </ul>		<b>Application area:</b> <ul style="list-style-type: none"> <li>Particularly suitable for use in foundries</li> </ul>	
<b>Advantages:</b> <ul style="list-style-type: none"> <li>Lower side friction</li> <li>Particularly advantageous for deep cuts and traverse cutting</li> </ul>		<b>Advantages:</b> <ul style="list-style-type: none"> <li>Universally usable</li> </ul>		<b>Advantages:</b> <ul style="list-style-type: none"> <li>Clamping flange does not protrude beyond the cut-off wheel</li> <li>Flush cutting of risers for castings is possible</li> <li>In general, no post-processing required</li> </ul>	
Outer dia. D [mm]	Centre hole dia. H [mm]	Outer dia. D [mm]	Centre hole dia. H [mm]	Outer dia. D [mm]	Centre hole dia. H [mm]
1,250	127/152.4/230	-	-	-	-
1,000	100/127/152.4	-	-	-	-
800	80/100/152.4	800	80/100/152.4	800	80/100/152.4
-	-	700	60/80/100	700	60/80/100
-	-	660	40/60/80	-	-
-	-	600	40/60/76.2	600	40/60/76.2
-	-	500	40/60/76.2	500	40/60/76.2
-	-	450	25.4/32/40	-	-
-	-	400	25.4/32/40	400	25.4/32/40
-	-	350	25.4/32/40	-	-
-	-	300	25.4/32/40	-	-
-	-	250	25.4/30/32	-	-

Other designs and centre hole diameters are available on request. Please contact us!





### An example of the construction of a cut-off wheel



#### Conventional type

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

- ❶ Abrasives
- ❷ Bond, which holds the abrasive grit in the cut-off wheel
- ❸ Fabric layers/flange fabric, which ensure that the cut-off wheel is secure and stable
- ❹ Active additives

#### Steel-core type

The steel-core cut-off wheel, developed and patented by PFERD, is characterized by its solid steel body ❶ constructed in layers which does not contain any abrasive.

The special tool structure has the following advantages:

##### 1. Use of smaller clamping flanges possible

Advantages:

- Larger deployable grinding area
- Cutting of large material cross sections
- Reduced cutting costs

##### 2. Increased lateral stability of the cut-off wheel

Advantages:

- Stabler cut with less vibration
- Less noise
- Longer tool life
- Higher material throughput rate
- Shorter cutting times

##### 3. Reduced cut-off wheel width

Advantages:

- Lower drive power output required
- Less loss of cut material
- Reduced chips or cinder waste

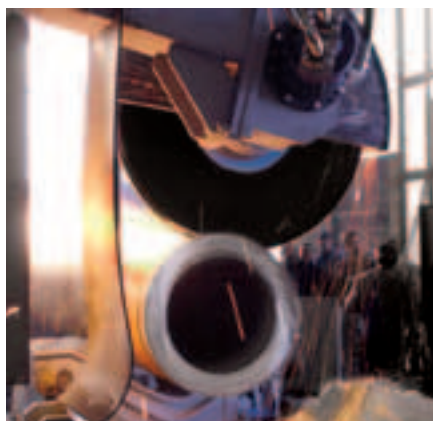
##### 4. No cost for the disposal of the old wheel

### Possible applications of cut-off grinding

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

Operating conditions	Cold cut-off	Warm cut-off	Hot cut-off
Operating parameters			
Material temperature T	up to 100 °C	100 to 600 °C	600 to above 1,000 °C
Peripheral speed $V_s^*$	80 to 100 m/s	80 to 100 m/s	80 to 100 m/s
Specific cutting efficiency Z	4 to 15 cm <sup>2</sup> /s	8 to 20 cm <sup>2</sup> /s	15 to 35 cm <sup>2</sup> /s

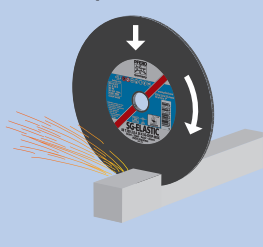
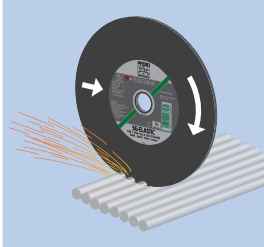
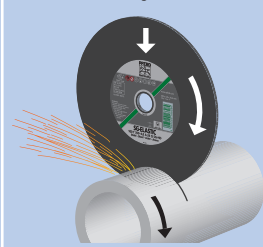
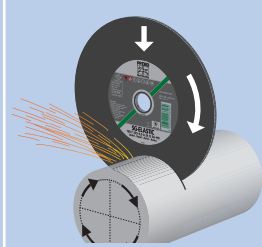
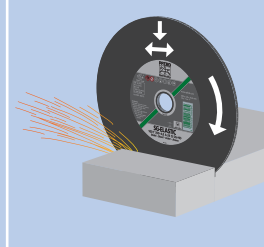
\* Please adhere to the maximum operating speed of the cut-off wheels.





## Cut-off processes

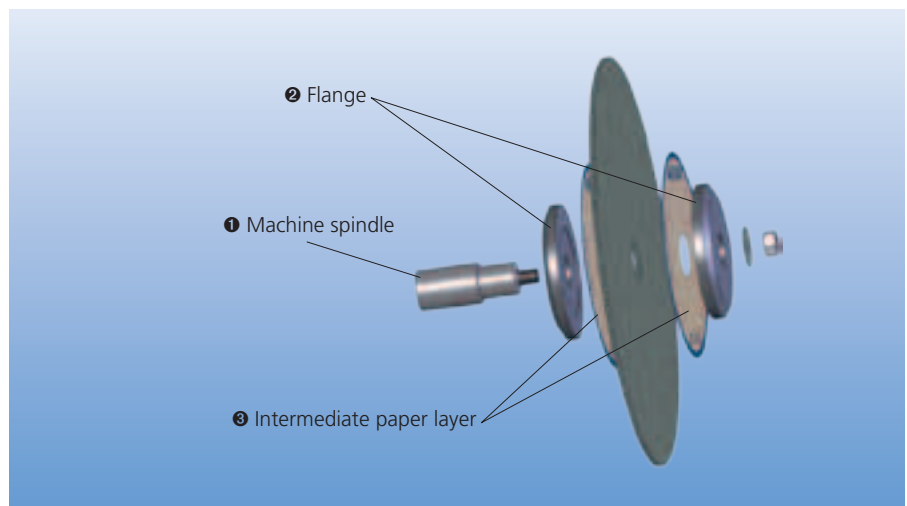
According to the material and the application, cut-off processes differ depending on the positioning and relative motion of the cut-off wheel and workpiece.

Chop stroke cut	Horizontal cut	Rotary cut	Index cut	Oscillation cut
 <p><b>Application area:</b></p> <ul style="list-style-type: none"> <li>For cutting individual workpieces as well as small or slim material layers</li> <li>Very common cut-off process</li> </ul> <p><b>Cutting process:</b></p> <ul style="list-style-type: none"> <li>Cut-off wheel cuts the workpiece in a radial movement over a joint mid-point</li> </ul> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Low vibration</li> <li>Short cutting times</li> <li>Less load on cut-off wheels for smaller material dimensions</li> </ul>	 <p><b>Application area:</b></p> <ul style="list-style-type: none"> <li>For cutting multiple adjacent workpieces, as well as slabs, plates and sheets</li> <li>In particular on the approach side of the rolling mill after the cooling bed</li> </ul> <p><b>Cutting process:</b></p> <ul style="list-style-type: none"> <li>Cut-off wheel cuts the entire layer width of different cross sections in one cycle</li> </ul> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Short cutting times</li> <li>Very high throughput capacity</li> </ul>	 <p><b>Application area:</b></p> <ul style="list-style-type: none"> <li>For cutting very large pipes as well as round solid material</li> </ul> <p><b>Cutting process:</b></p> <ul style="list-style-type: none"> <li>The workpiece is continuously rotated during the cutting process</li> </ul> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Use of small wheel diameters is possible</li> <li>Lower drive power output required</li> <li>Low workpiece temperature</li> </ul>	 <p><b>Application area:</b></p> <ul style="list-style-type: none"> <li>For cutting very large round solid material and blocks</li> <li>In particular in steel works and foundries</li> </ul> <p><b>Cutting process:</b></p> <ul style="list-style-type: none"> <li>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).</li> </ul> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Working on very large material cross sections is possible with smaller wheel diameters</li> </ul>	 <p><b>Application area:</b></p> <ul style="list-style-type: none"> <li>For cutting sprues and risers in foundries</li> <li>Demanding tasks in wet cut-off grinding</li> </ul> <p><b>Cutting process:</b></p> <ul style="list-style-type: none"> <li>Cut-off wheel moves into the material to be cut with additional for- and backward movements in the horizontal cut</li> </ul> <p><b>Advantages:</b></p> <ul style="list-style-type: none"> <li>Lower drive power output required</li> <li>Low workpiece temperature</li> <li>Optimum removal of chips</li> </ul>

## Proper clamping of cut-off wheels

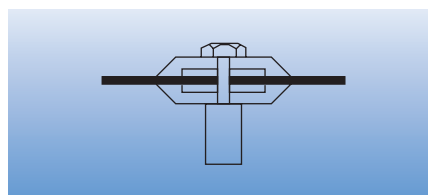
The correct clamping of the cut-off wheel is a prerequisite for optimum performance and is essential for the safety of the user. The adjacent illustration shows the right way to do it:

- ❶ Machine spindle with high concentricity
  - ❷ Equally sized flanges
  - ❸ Intermediate paper layers, if required for secure clamping and safe use
- Our recommendations:
- After every second wheel change, change the intermediate paper layers
  - For a wheel diameter > 400 mm, always use intermediate paper layers

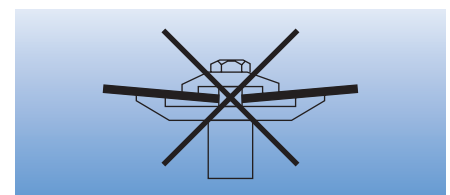


## Safety notes:

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



correct



wrong

### Packaging

The packaging unit and type match your individual needs. Three packaging types are available. Please select the packaging type when ordering.



Crate



Pallet



Carton

Printed in Germany.

### Transport and storage

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

- As far as possible, 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 tools

- Ensure that the cut-off wheels are stored in dry, frost-free rooms with consistent temperatures
- Use supplies in the order of their arrival

#### Recommendation:

Room temperature: 18–22 °C  
Relative humidity: 45–65 %  
No direct sunlight

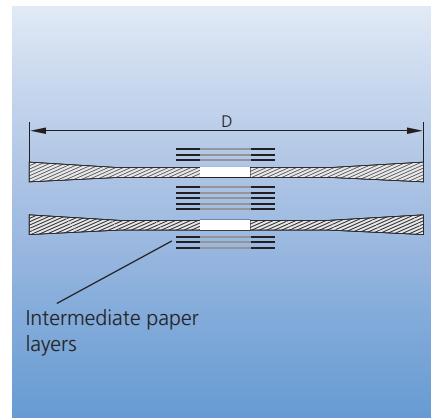
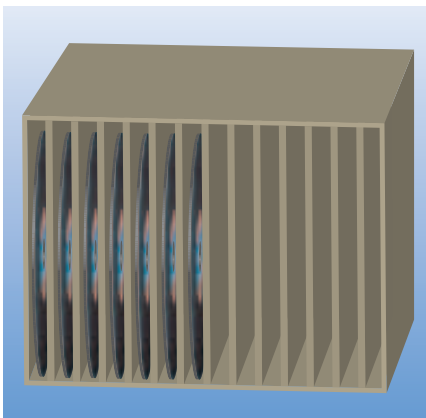
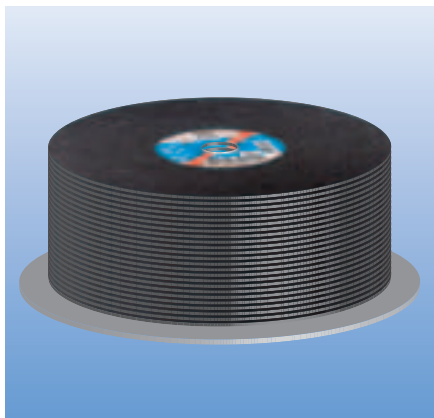


#### Advice on the storage of conical wheels (CT)

Conical cut-off wheels must be stacked with intermediate paper layers, 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 included.

Subject to technical modifications.



02/2014

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