
















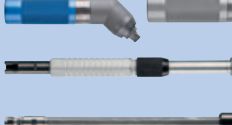












Content	Page
■ General information, PFERDERGONOMICS®	3
■ Comparison of drive systems	4
■ Well packed and presented	5
■ Services	6
Drive	Page
<b>Air grinders</b>	<b>7</b>
■ General information	8
 Straight grinders	9
 Angle grinders	37
 Belt grinders	49
 Special drives	52
 Special drives ■ Filing machine ■ Marking pens	54
 Fittings	55
<b>Electric grinders</b>	<b>57</b>
■ General information	58
 Straight grinders	59
 Angle grinders	66
 Drum grinder	69
 Belt grinders	70
 Pipe belt grinders	71
 Special drives	72
 Fillet weld grinder	74

Drive	Content	Page
<b>Flexible shaft drives</b>		<b>75</b>
■ General information		76
	Multi-speed machines with stepless regulation	79
	Multi-speed machines with gears	79, 85, 89
	Flexible shafts	90
<b>Tool drive accessories</b>		<b>103</b>
	<b>Handpieces</b>	103
	■ Straight handpieces	
	■ Angle handpieces	
	<b>Special handpieces</b>	103
	■ Telescopic angle handpieces	
	■ Flexible special handpiece	
	<b>Belt sanders</b>	104
	<b>Accessories for flexible shafts</b>	
	■ Drum grinders, straight type	104
	■ Drum grinders, angle type	104
	■ Angle drives	105
	■ Overdrive for flexible shaft drives	105
	<b>Collets</b>	106
	■ Reducing collet	108
	■ Extensions	108
	<b>Belt grinder attachment holder and arms</b>	109
	<b>Maintenance products</b>	110
<b>Personal protection equipment (PPE)</b>		
	<b>Safety glasses</b>	111
	<b>Protective gloves</b>	112
	<b>Ear and breathing protection</b>	112

The use of PFERD high-performance tools and the correctly selected tool drive allows the most economical working with optimum results.

The PFERD range includes tool drives for grinding, milling, brushing, cutting and polishing in manual applications. PFERD is one of only a few manufacturers that can offer a wide range of tools for surface finishing and cutting of materials, as well as drives designed specifically for these tools, all from a single source.

The wide product range includes air-powered drives, electric drives and flexible shaft drives and thus offers the best solution for almost any working environment.

PFERD tool drives are characterized by their performance and durability. They are less prone to faults and comply with the latest technological standards.

PFERD sales representatives and technical advisors will be happy to analyze your application with you – on site if you wish. They will work with you to find the best and most economical individual combination of high-performance tool and tool drive. Please contact us.



### Economic value

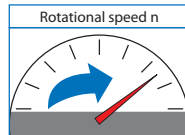


Time is money. The cost-effectiveness of a process is determined by the performance of the tool and the time required. The faster

the grinding process, the greater its cost-effectiveness. The best results are achieved by tools that have a consistently high aggressiveness throughout the processing time, in combination with PFERD quality tool drives. These are powerful, durable and less susceptible to faults.

$$t = \text{€}$$

### Rotational speed n



The rotational speed n is given in revolutions per minute [RPM]. The required rotational speed is determined from the cutting speed V in metres

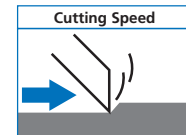
per minute [m/min] or in metres per second [m/s] and the diameter of the tool  $d \times \pi$  (3.14).

#### Note:

The rotational speed data for the tools relates to their use under load.

$$n = \frac{V}{d \times \pi}$$

### Cutting speed V



The cutting speed is the speed at which a tool bit moves through the material to be worked in the direction of the cut, removing a chip.

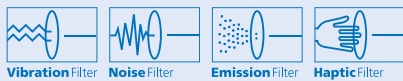
The cutting speed, V, is given in metres per minute [m/min] or metres per second [m/s]. It depends on the rotational speed of the drive n in revolutions per minute [RPM] and the diameter of the tool  $d \times \pi$  (3.14).

$$V = n \times d \times \pi$$

### PFERDERGONOMICS®

The PFERDERGONOMICS® programme aims at the long-term reduction of dust, noise and vibration levels produced by tools, and on perceptibly increasing tool haptics. The focus is on people.

Recognize straight away the areas where our tools offer you advantages. Tools with PFERDERGONOMICS® properties are marked with corresponding pictograms.



#### Less vibration

- Elastically mounted spindles
- Anti-vibration handle
- Autobalancer
- EU Occupational Health Directive 2002/44/EC

#### Reduced noise

- Quieter than 75 dB(A)
- EU Occupational Health Directive 2003/10/EC

#### Minimized emissions

- Oil-free drives

#### Optimized feel

- Light
- Easy to handle
- Slim
- Ergonomic



For further information and appropriate PFERD tools, please refer to the brochure "PFERDERGONOMICS® – The focus is on people" and "Health and safety at the workplace – Noise and vibration limits".

### Safety regulations

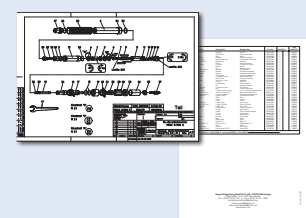


= Please observe the respective safety regulations!

In accordance with legal requirements, all machines are accompanied by operating manuals, a CE-declaration of conformity and safety notes.






You can find drawings and spare parts lists for our tool drives on our homepage at [www.pferd.com](http://www.pferd.com) or you can order them at [info@pferd.com](mailto:info@pferd.com)





The PFERD product range includes three drive systems:

Air grinders	Electric grinders	Flexible shaft drives
		
<b>Applications and economic value</b>		
Single workplace, stationary	Single workplace, flexible use on assembly sites	Single workplace, stationary with a variety of tool applications, very easy to handle at high power output
High power output, low wear, long service life, economical air consumption, robust, hard-wearing slide vane and turbine motors	High power output, low wear, long service life	Very robust, low wear, long service life
<b>Drive type</b>		
Straight grinders	Straight grinders	Straight grinders
Angle grinders	Angle grinders	Angle grinders
Belt grinders	Belt grinders	Belt grinders
-	Drum grinders	Drum grinders
-	Fillet weld grinder	-
Special drives	Special drives	Special drives
<b>Drive characteristics</b>		
No risk of overloading, can be loaded up to machine standstill	Overload protection, can briefly withstand up to four times the nominal output	Overload protection, can briefly withstand up to six times the nominal output
Optimum rotational speed and power ratios	Optimal tuning possible for tool application	Optimal tuning possible for tool application
Good size to power output ratio	Higher power output compared to air grinders at the same rotational speed	High motor power output, compact handpieces, high power transmission to the tool
Achieve high rotational speeds	Achieve constant speed, ideal for tools that need a constant rotational speed	Cover large rotational speed ranges
<b>Ergonomics/Handling</b>		
Drive size and shape suitable for many applications	Ergonomic drive shapes, easy to handle	Light arbors that are easy to handle for low-fatigue work
<b>Rotational speed range [RPM]</b>		
4,000 to 100,000	750 to 33,000	0 to 40,000
<b>Rotational speed regulation</b>		
Single-rotation speed	Stepless, electronic	Stepless, electronic, alternatively using gears
<b>Energy</b>		
Compressed air (6.3 bar)	1-phase alternating current	1-phase alternating current, 3-phase alternating current
<b>Power range [W]</b>		
75 to 1,100	500 to 1,750	500 to 6,100
<b>Safety</b>		
Safe energy form, no sparking	Safeguard to prevent unintentional re-starting	42-volt type suitable for safe use in narrow, conductive spaces
<b>Maintenance</b>		
Simple replacement of worn parts	Simple replacement of carbon brushes	Maintenance by technically accomplished employees possible





### PFERD packaging

PFERD provides tool drives as standard in industrial packaging.

#### Advantages:

- Robust packaging protecting the tools from dirt and damage
- All the important information included on the packaging label to facilitate product selection



### PFERD packaging label

In addition to the description and the EAN code, the most important technical information is shown with the help of pictograms.

#### Advantages:

- Easier comparison of product features thanks to clear pictograms
- The label contains information on other accessories






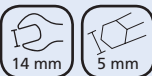

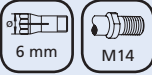





### PFERD TOOL-CENTER















All tool drives can be presented with special supports on the PFERD TOOL-CENTER. The information and symbol cards present all the important information on the use of suitable PFERD tools on the spot.

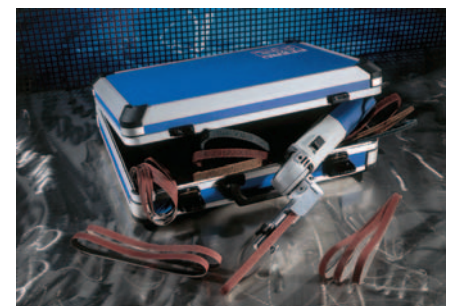


Further information on PFERD TOOL-CENTER systems can be found in the brochure "The PFERD TOOL-CENTER – More Turnover for You at the Point of Sale".

### Explanation of the pictograms used

General	
	Rotational speed
	Belt speed
	Power output
	Matching keys
	
Holder requirements	
	Collets/ stud bolts
	Centre hole
	Guard
	Suitable for disc diameter
	Suitable for drum grinder dimensions
	Belt length

Air grinders		
		Note on use can be used with/ without oil
		Air pressure
		Air supply hose diameter
Electric grinders and flexible shaft drives		
		Voltage
		Frequency
		Insulated
		Protective earthing
Flexible shafts		
		Drive side shaft connection
		Handpiece side sliding-type coupling
		Core diameter
		Length flexible shaft/core



### Tool sets with tool drives

PFERD provides various tool sets in cases. They contain the tool drive, as well as various tools in the most common dimensions. More detailed information and ordering data can be found in Catalogue 204.



### Maintenance and repair service

PFERD provides a maintenance and repair service, which includes basic cleaning, repair and final safety checks at our factory. Our qualified specialists will be happy to quickly create a detailed quotation without obligation.

Should the repair costs exceed the replacement value, you will also receive a quotation for a new tool drive. Only original PFERD spare parts will be used for the repair of the tool drive.

After the repair, you will receive your tool drive in as-new condition.



### Repair training

Worldwide, PFERD offers hands-on training on the safe handling of professional tool drives and expert maintenance. The knowledge provided enables fast on-site repairs and thus reduces downtime. The expert maintenance also extends the life of the tool drive. On request, the training can also be held on-site at your company. Please contact us.



### Performance test bench

PFERD has modern performance test benches for quality control, drive optimization and verification of safety guidelines. On request, you will receive a detailed PFERD performance certificate for your professional tool drive. For each machine type, we perform safety checks according to the current state of the art and write test reports.



### Products made to order

If you cannot find the solution for your particular application in our comprehensive product catalogue, on request we can produce tool drives in premium PFERD quality, tailor-made to meet the requirements of your job.

### PFERD-PRAXEN



PFERD PRAXIS brochures contain much valuable information about material properties, as well as tips and tricks on the use of PFERD tools and tool drives.

### PFERD support

PFERD offers you individual targeted support to solve your application problems. PFERD's experienced sales representatives and technical advisors are happy to help you select your tool drive – by visiting you on-site if desired. Please contact us

### Guarantee

Our PFERD guarantee for defects on electric and air grinders as also the required accessories is exercised in such a manner that all parts, which have material defects, will either be repaired or replaced free of charge. Warranty for these material defect claims shall be valid for a period of twelve (12) month at the most. This does not apply if longer periods of time are stipulated by law.

The warranty shall not cover damage caused by improper handling, the use of spare parts other than our own, or by repairs carried out in workshops other than our own.

### Technical modifications

Technical developments and ergonomic improvements are continuously incorporated into our design and manufacture. We therefore reserve the right to make technical changes to our products.

In the event of changes to the design, we still ensure the availability of spare parts for four years.



### PFERDVIDEO

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





# Air grinders

## General information

Air grinders are the "top speed" machines amongst the drives. They achieve higher rotational speed than electric or flexible shaft drives. Measured against their small size, they have a high power output. The robust and resistant slide vane and turbine motors have a long service life and are very easy to service.

### Areas of application

Air grinders are very versatile. They are used economically and reliably in series production and assembly lines, especially in medium- and large-sized companies that have a compressed air network.

### Criteria for selecting the optimum air grinder

The most important prerequisite for cost-effective work is the selection of the optimum tool. The appropriate drive is selected taking the following criteria into consideration:

#### 1. Design, shape and size

Every type of application places specific demands on the shape and size of the tool drive. The different designs can be used for various applications: The ideal drive should be selected for the task at hand, depending on the dimensions, accessibility, type and frequency of the application.

#### 2. Rotational speed

The drive should always be selected according to the rotational speed and cutting speed recommendations for the tool. Please refer to Catalogues 202–208 for these recommendations.

### Recommendations and prerequisites for the cost-effective use of air grinders

#### 1. Air pressure

The drive should be operated at an air pressure of 6–6.3 bar. A sufficient flow rate must always be ensured. Over-pressure leads to premature and higher levels of wear.

#### 2. Air consumption

All data in this catalogue refers to air consumption in cubic metres per minute [m<sup>3</sup>/min]. This is the volume of the air when expanded to atmospheric pressure. Unless otherwise indicated, the air consumption figures stated are always for a pressure of 6 bar and the maximum consumption of the drive in question. Non-regulated air grinders have the highest consumption at idling speed. Centrifugal-force controlled air grinders have their highest air consumption under full load.

#### 3. Rotational speed

Rotational speed data are stated in revolutions per minute [RPM] and refer to the idling speed at a pressure of 6 bar. In the case of non-regulated drives, the rotational speed under full load is approximately 50 % of the idling speed. In the case of centrifugal force-controlled drives, the speed under full load is approximately 80 to 90 % of the idling speed.

#### 4. Oil mist lubrication

Adequate oil mist lubrication, when relevant, is of crucial importance for optimum machine

### PFERD product range

PFERD offers straight, angle and belt grinders, as well as special drives. PFERD air grinders are technically up to date and incorporate the latest ergonomic findings and requirements. They have been developed especially for the economic application of grinding and milling tools and cover a wide rotational speed range (3,500–100,000 RPM) and power range (75–1,000 Watts).

#### 3. Power output

The tool drive's power output is the decisive factor for maintaining the rotational speed under load. The load is determined by the material to be machined, the cutting characteristics of the tool and the contact pressure.

#### 4. Holder requirements

Depending on the PFERD tool selected, different tool holders are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to pages 106–108 for an overview of collets and spindle extensions.

If you have any further questions, your personal PFERD sales representative will be happy to help you.

operation (oil viscosity at 40° C according to ISO VG 22–32 mm<sup>2</sup>/s (cSt)). For special lubricating oil, see page 110.

#### 5. Drives for oil-free compressed air operation

Drives marked oil-free can be used without oil mist lubrication. Drives which can operate with or without oil have a minimal reduction in rotational speed and power output when used without oil.

#### 6. Maintenance unit

It is recommended to install a complete maintenance unit consisting of dirt filter 5 µm, pressure reducer and lubricator. The maintenance unit should be located no more than approximately 5 m from the tool drive. The size of the filter pores should be 3–5 µm. If the compressed air is humid, air grinders should not be operated without oil.

#### 7. In-line fine filter

To ensure trouble-free machine operation, particularly with frequent connection and disconnection, we recommend the use of the appropriate in-line fine filter, filter size 5 µm.

#### 8. Air supply hose




The supply hose must have an inner diameter that at least corresponds to those stated for the drives and if possible be ≤ 5 m.

### Advantages

- Compact, ergonomic design
- Low weight
- Technically tried and tested
- High power compared to weight
- Versatile use
- Fixed rotational speeds
- No risk of overloading, can be loaded up to machine standstill
- Housing insulated against cold and vibration
- Low maintenance
- Easy to service
- Economical

### Operates with or without oil

Turbine and air grinders are marked with the following symbols:

	<b>Use only without oil.</b>
	<b>Can be used with or without oil.</b>
	<b>Use only with oil.</b>

### Advantages of oil-free compressed air

- Protects both people's health, the environment and the workplace
- Reduces operating costs, because oil and fittings can be dispensed with
- Avoids oily deposits on the workpiece

#### 9. Fittings

Always use additional fittings such as hose nozzles, self-closing valve couplings etc. with the largest possible inner diameter. It is advisable not to use more than one valve coupling to prevent pressure losses.

#### 10. Noise level

Air tool operators must always wear hearing protection as the process noise emission exceeds 85 dB(A) in many applications, even though the idling noise of the air grinders is low.



For hearing protection, see page 112.

#### 11. Vibrations

PFERD air grinders meet the requirements of the EC Machinery Directive regarding vibrations from hand-held or hand-guided machines. This is achieved through:

- Precise concentricity
  - Vibration-damping intermediate layers
  - Vibration-insulated housings
- For protective gloves, see page 112

#### 12. Maintenance and safety

We recommend:

- Maintenance of the drives at regular intervals
- Wearing personal protective equipment (see pages 111–112)



**Use only without oil.**

- Highest rotational speed
- No oil residues on the workpiece
- In-line fine filter recommended

Accessories included:

2 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 3 mm collet, 2 keys

**PGT 1/1000**

**Rotational speed: 100,000 RPM / Output: 75 watts**



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGT 1/1000	653449	front	ring	0.17	1	5	0.240

### Collets

Group	For shank dia.		
	2.34 mm	3 mm	1/8 inch
	<b>EAN 4007220</b>		
1	196342	196359	196366

For dimensions see pages 106–107.

### Keys

Description	EAN
EM SW 7 mm	4007220
EM SW 7 mm	592885

### Connecting set

Description	EAN
AS 1	351109

See page 56.

### In-line fine filter

Description	EAN
SF 24 STG-IG 1/4	953259

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burs</b> <b>Cut 3 PLUS, 4, 5, ALU, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 5 mm  Dia. up to 8 mm Width ≤ 13 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GHR</b> Dia. up to 4 mm <b>LR, TX</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. up to 3.5 mm Shank dia. 3 mm  <b>CBN grinding points</b> Dia. up to 4.5 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



# Air grinders

## Straight grinders



PGAS 2/800 E

Rotational speed: 80,000 RPM / Output: 110 watts



Use only with oil,  
1 to 1.5 drops per minute.



- Elastic remounted spindles
- Low vibration use
- Detachable spindle sleeve
- In-line fine filter recommended

Accessories included:  
1 m exhaust hose and 2 m air supply hose  
without nozzle, 3 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 2/800 E	832479	rear	ring	0.29–0.31	1	5	0.208

### Collets

Group	For shank dia.		
	2.34 mm	3 mm	1/8 inch
	EAN 4007220		
1	196342	196359	196366

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 8 mm G	206867

### Connecting set

Description	EAN 4007220
AS 1	351109

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG T5	957103

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burs</b> Cut 3 PLUS, 4, 5, ALU, INOX, MICRO Dia. up to 3 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 5 mm  Dia. up to 6 mm Width ≤ 13 mm  Dia. up to 10 mm Width ≤ 10 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GHR</b> Dia. up to 4 mm <b>LR, TX</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. up to 4.5 mm Shank dia. 3 mm  <b>CBN grinding points</b> Dia. up to 5.5 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.







Use only with oil,  
1 drop per minute.

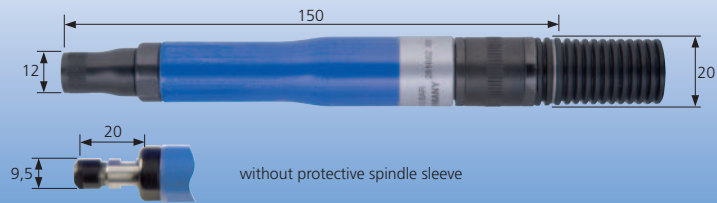
- Detachable spindle sleeve
- In-line fine filter recommended

Accessories included:

0.6 m exhaust hose and 2 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 3 mm collet, 2 keys

PGAS 1/750

Rotational speed: 75,000 RPM / Output: 110 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 1/750	507803	rear	ring	0.20	1	5	0.150

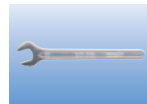
### Collets



Group	For shank dia.		
	2.34 mm	3 mm	1/8 inch
	EAN 4007220		
1	196342	196359	196366

For dimensions see pages 106–107.

### Keys



Description	EAN
EM SW 7 mm	4007220
	592885

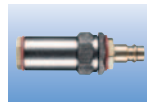
### Connecting set



Description	EAN
AS 1	4007220
	351109

See page 56.

### In-line fine filter



Description	EAN
SF 24 STG-IG 1/4	4007220
	953259

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burrs</b> <b>Cut 3 PLUS, 4, 5, ALU, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 5 mm Dia. up to 8 mm Width ≤ 13 mm Dia. up to 10 mm Width ≤ 2 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GHR</b> Dia. up to 4 mm <b>LR, TX</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. up to 4.5 mm Shank dia. 3 mm <b>CBN grinding points</b> Dia. up to 6.0 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

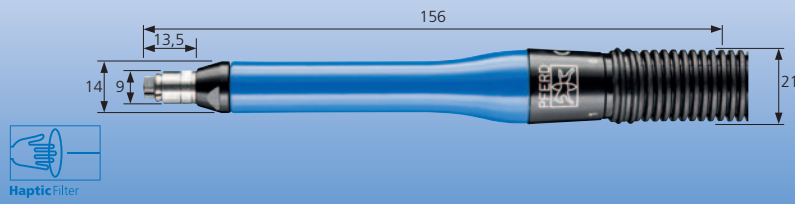


# Air grinders

## Straight grinders



**PGAS 1/700** Rotational speed: 70,000 RPM / Output: 100 watts



**Use only with oil, 1 drop per minute.**

- Particularly slim
- Light and easy to handle
- In-line fine filter recommended

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose with threaded quick coupling (STG), 3 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 1/700	948873	rear	ring	0.20	15	5	0.100

### Collets

Group	For shank dia.		
	3 mm	3/32 inch	1/8 inch
EAN 4007220			
15	851814	851838	851821

For dimensions see pages 106–107.

### Keys

Description	EAN
DM SW 6/8 mm	851791

### Connecting set

Description	EAN
AS 1	351109

See page 56.

### In-line fine filter

Description	EAN
SF 24 STG T5	957103

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burrs</b> <b>Cut 3 PLUS, 4, 5, ALU, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 5 mm Dia. up to 8 mm Width ≤ 13 mm Dia. up to 13 mm Width ≤ 3 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GHR</b> Dia. up to 4 mm <b>LR, TX</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. up to 5.0 mm Shank dia. 3 mm  <b>CBN grinding points</b> Dia. up to 5.5 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Can be used with or without oil, 1 to 5 drops per minute.

- With or without oil – no speed difference at the same power, no oil residues on the workpiece
- Highest power output in the indicated rotational speed range
- Centrifugal governor gives rotational speed stability
- Tools with shank diameter 6 mm / 1/4" can also be used
- In-line fine filter recommended

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose without nozzle, 3 mm collet, 3 mm collet, 2 keys

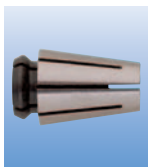
PGTA 3/700

Rotational speed: 70,000 RPM / Output: 220 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGTA 3/700	373248	rear	push-pull	0.25–0.80	4	8	0.390

### Collets



Group	For shank dia.			
	3 mm	6 mm	1/8 inch	1/4 inch
EAN 4007220				
4	349311	349298	349328	349304

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 14 mm	206836

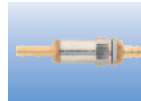
### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burs</b> <b>Cut 3 PLUS, 4, 5, ALU, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 5 mm  Dia. up to 8 mm Width ≤ 13 mm  Dia. up to 13 mm Width ≤ 3 mm Shank dia. 3 mm  Dia. up to 10 mm Width ≤ 25 mm  Dia. up to 13 mm Width ≤ 20 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GHR</b> Dia. up to 4 mm <b>LR, TX</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. up to 5.0 mm  for CRP/GRP Dia. up to 10.0 mm  Shank dia. 3 + 6 mm  <b>CBN grinding points</b> Dia. up to 7.0 mm Shank dia. 3 + 6 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



# Air grinders

## Straight grinders



PGAS 1/600

Rotational speed: 60,000 RPM / Output: 110 watts



Use only with oil,  
1 drop per minute.

- Detachable protective spindle sleeve
- In-line fine filter recommended

Accessories included:

0.6 m exhaust hose and 2 m air supply hose with male threaded connection 1/4" and threaded quick coupling (STG), 3 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 1/600	507780	rear	ring	0.20	1	5	0.150

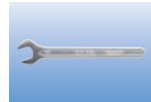
### Collets



Group	For shank dia.		
	2.34 mm	3 mm	1/8 inch
	EAN 4007220		
1	196342	196359	196366

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 7 mm	592885

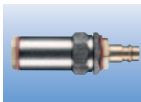
### Connecting set



Description	EAN 4007220
AS 1	351109

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-IG 1/4	953259

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burs</b> <b>Cut 3 PLUS, 4, 5, ALU, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm  <b>HSS rotary cutters</b> <b>Special cuts</b> Dia. 1.6 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 6 mm  Dia. up to 8 mm Width ≤ 16 mm  Dia. up to 13 mm Width ≤ 3 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GR</b> Dia. up to 4 mm <b>GHR, LR, TX</b> Dia. up to 8 mm <b>LHR</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 3.0 to 5.5 mm Shank dia. 3 mm  <b>CBN grinding points</b> Dia. 5.0 to 5.5 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





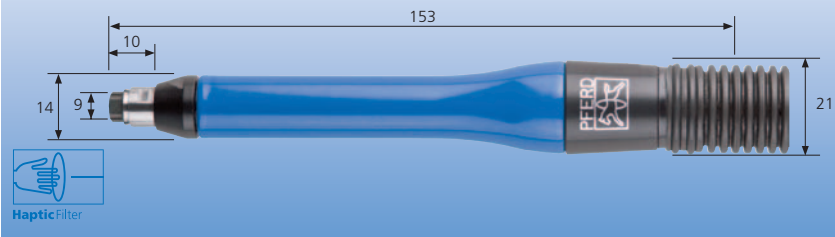
Use only with oil,  
1 drop per minute.

- Very slim drive housing
- Light and easy to handle
- In-line fine filter recommended

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose with threaded quick coupling (STG), 3 mm collet, 2 keys

PGAS 1/550

Rotational speed: 55,000 RPM / Output: 100 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 1/550	896600	rear	ring	0.12	15	5	0.101

### Collets



Group	For shank dia.		
	3 mm	3/32 inch	1/8 inch
EAN 4007220			
15	851814	851838	851821

For dimensions see pages 106–107.

### Keys



Description	EAN
DM SW 6/8 mm	851791

### Connecting set



Description	EAN
AS 1	351109

See page 56.

### In-line fine filter



Description	EAN
SF 24 STG T5	957103

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burrs</b> <b>Cut 3 PLUS, 4, 5, ALU, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm  <b>HSS rotary cutters</b> <b>Special cuts</b> Dia. up to 1.6 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 8 mm  Dia. up to 10 mm Width ≤ 16 mm  Dia. up to 16 mm Width ≤ 4 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GR</b> Dia. up to 4 mm <b>GHR, LR, TX</b> Dia. up to 6 mm <b>LHR</b> Dia. up to 8 mm <b>GHR, LR, TX, LHR</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 2.8 to 5.5 mm Shank dia. 3 mm  <b>CBN grinding points</b> Dia. up to 5.5 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



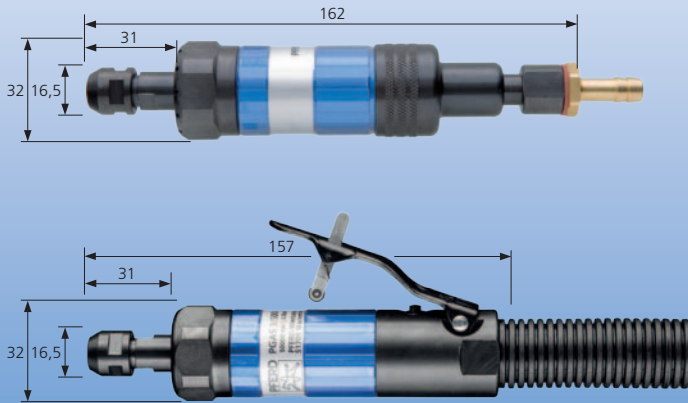
# Air grinders

## Straight grinders



PG 3/500 S  
PGAS 3/500 HV

Rotational speed: 50,000 RPM / Output: 200 watts



Use only with oil,  
3 drops per minute.

- Light and easy to handle
- In-line fine filter recommended (for PG 3/500 S please use SF 24 STG-T8 and for PGAS 3/500 HV use SF 24 STG-IG 1/4)

Accessories included:

**PG 3/500 S**

6 mm collet, 2 keys, hose nozzle

**PGAS 3/500 HV**

1 m exhaust hose and 3 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 6 mm collet, 2 keys.



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 3/500 S	286326	front	push-pull	0.45	5	8	0.370
PGAS 3/500 HV	286333	rear	lever	0.45	5	8	0.460

### Collets

Group	For shank dia.	
	3 mm, 1/8 inch	6 mm
	EAN 4007220	
5	299944	299951

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 7/16"	300480
EM SW 9/16"	186831

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-IG 1/4	953259
SF 24 STG-T8	809020

See page 56.

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<p><b>TC burrs</b> Cut 3 PLUS, 4, 5, ALU, INOX, MICRO Dia. up to 3 mm Shank dia. 3 mm</p> <p><b>HSS rotary cutters</b> Special cuts Dia. up to 1.6 mm Shank dia. 3 mm</p>	<p><b>Mounted points</b> Dia. 8 mm Dia. up to 10 mm Width ≤ 16 mm Dia. up to 16 mm Width ≤ 4 mm Shank dia. 3 mm Dia. 10 mm Dia. up to 16 mm Width ≤ 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> Dia. up to 4 mm <b>GHR, LR, TX</b> Dia. up to 10 mm <b>LHR</b> Dia. up to 15 mm</p> <p><b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 8 mm</p>	<p><b>Diamond grinding points</b> Dia. 3.5 to 7.0 mm Shank dia. 3 + 6 mm</p> <p><b>CBN grinding points</b> Dia. 6.0 to 9.0 mm Shank dia. 3 + 6 mm</p>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.  
**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Use only with oil,  
2 drops per minute.

### PGAS 3/440 DH

- Smallest and lightest straight grinder of this output category
- Ergonomic grip for optimum power transmission, particularly in axial direction.

### PGZ 3/440 SU with support PGZ 3/440 without support

- With reinforced drive housing for attachment of the straight grinder in stationary use
- Drive with elastically mounted spindle for robot applications, available on request.

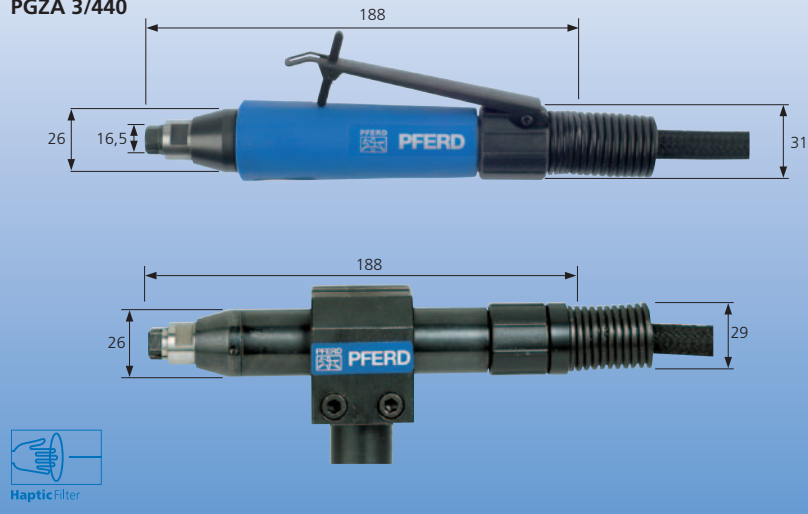
Accessories included:

0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

**PFERDERGONOMICS®:**  
PGAS 3/440 DH

PGAS 3/440 DH  
PGZA 3/440 SU  
PGZA 3/440

Rotational speed: 44,000 RPM / Output: 220 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 3/440 DH	176603	rear	ring/lever	0.35	6	8	0.340
PGZA 3/440 SU	348437	rear	ring	0.35	6	8	1.420
PGZA 3/440	176580	rear	ring	0.35	6	8	0.450

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 204*	Catalogue 206
<b>TC burs</b> Cut 3 PLUS, 4, 5, ALU, INOX, MICRO Dia. up to 4 mm  <b>HSS rotary cutters</b> Special cuts Dia. up to 2.3 mm	<b>Mounted points</b> Dia. 10 mm Dia. up to 13 mm Width ≤ 13 mm  Dia. up to 20 mm Width ≤ 6 mm Shank dia. 3 mm  Dia. 10 mm  Dia. up to 16 mm Width ≤ 32 mm  Dia. up to 20 mm Width ≤ 25 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> Dia. up to 6 mm <b>GHR</b> Dia. up to 15 mm <b>LR</b> Dia. up to 12 mm <b>TX</b> Dia. up to 10 mm <b>LHR</b> Dia. up to 20 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 13 mm  <b>Catalogue 205</b>  <b>Diamond grinding points</b> Dia. 3.5 to 8.0 mm Shank dia. 3 + 6 mm  <b>CBN grinding points</b> Dia. 7.0 to 10.0 mm Shank dia. 3 + 6 mm	<b>Cut-off wheels EHT</b> Dia. 30 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

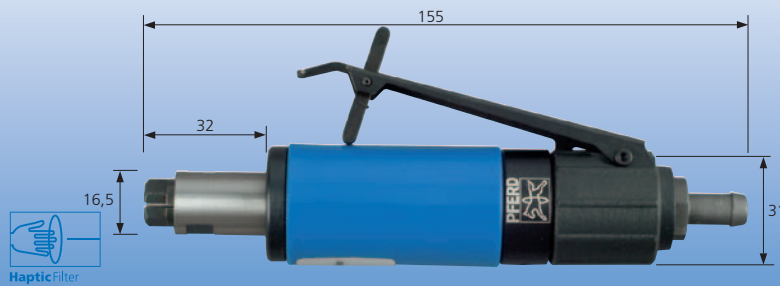
# Air grinders

## Straight grinders



PG 3/380 DH

Rotational speed: 38,000 RPM / Output: 220 watts



Use only with oil,  
2 drops per minute.

- Easy to handle and to guide
- In-line fine filter recommended

Accessories included:  
Hose connection nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 3/380 DH	176627	front	ring/lever	0.35	6	8	0.310

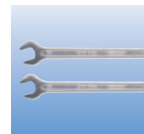
### Collets



Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

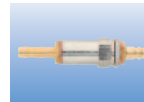
### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, MICRO, FVK, FVKS, PLAST Dia. 4 to 6 mm  <b>HSS rotary cutters</b> Special cuts Dia. up to 2.3 mm	<b>Mounted points</b> Dia. 10 mm Dia. up to 13 mm Width ≤ 13 mm  Dia. 20 mm Width ≤ 6 mm Shank dia. 3 mm  Dia. 10 mm  Dia. up to 16 mm Width ≤ 40 mm  Dia. 20 mm Width ≤ 32 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> Dia. up to 6 mm <b>GHR, LR, TX</b> Dia. up to 15 mm <b>LHR</b> Dia. up to 20 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 15 mm	<b>Diamond grinding points</b> Dia. 4.0 to 9.0 mm Shank dia. 3 + 6 mm  <b>CBN grinding points</b> Dia. 8.0 to 13.0 mm Shank dia. 3 + 6 mm	<b>Cut-off wheels EHT</b> Dia. 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



Use only with oil,  
2 drops per minute.

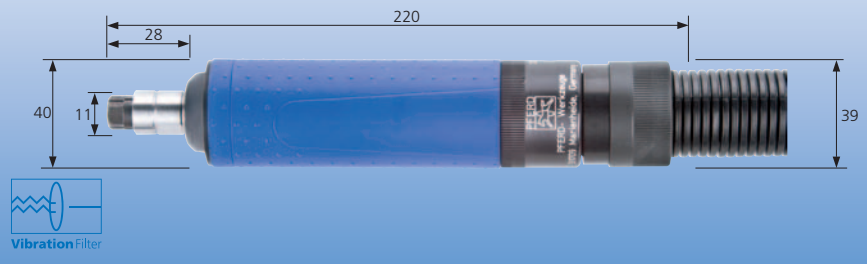
- Elastically mounted spindle guarantees longer tool life for TC burrs
- Low vibration use
- In-line fine filter recommended

Accessories included:

1 m exhaust hose and 2.5 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 6 mm collet, 2 keys

PGAS 4/350 E

Rotational speed: 35,000 RPM / Output: 290 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 4/350 E	896693	rear	ring	0.45	6	8	0.500

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burrs</b> <b>Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, MICRO, FVK, FVKS, PLAST</b> Dia. 4 to 6 mm  <b>HSS rotary cutters</b> <b>Special cuts</b> Dia. up to 2.3 mm	<b>Mounted points</b> Dia. 20 mm  Dia. up to 25 mm Width ≤ 6 mm Shank dia. 3 mm  Dia. 13 mm  Dia. 16 mm Width ≤ 40 mm  Dia. up to 25 mm Width ≤ 25 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR, PUR</b> Dia. up to 8 mm <b>GHR, LR, TX</b> Dia. up to 16 mm <b>LHR</b> Dia. up to 20 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 15 mm	<b>Diamond grinding points</b> Dia. 4.5 to 10.0 mm Shank dia. 3 + 6 mm  <b>CBN grinding points</b> Dia. 8.0 to 14.0 mm Shank dia. 3 + 6 mm	<b>Cut-off wheels EHT</b> Dia. 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

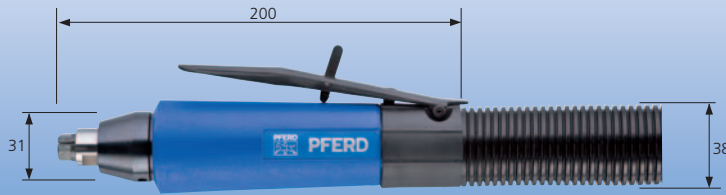
# Air grinders

## Straight grinders



PGAS 5/280 HV

Rotational speed: 28,000 RPM / Output: 370 watts



Use only with oil,  
3 to 4 drops per minute.

- Compact design
- In-line fine filter recommended
- Frequency damper on request

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 5/280 HV	176733	rear	lever	0.60	6	8	0.620

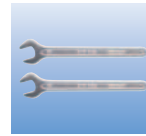
### Collets



Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

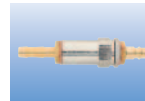
### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burrs</b> <b>Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, MICRO</b> Dia. 4 to 6 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 6 to 12 mm  <b>HSS rotary cutters</b> <b>Special cuts</b> Dia. 3.2 mm	<b>Mounted points</b> Dia. 20 mm  Dia. up to 25 mm Width ≤ 16 mm Shank dia. 3 mm  Dia. 13 mm  Dia. up to 28 mm Width ≤ 40 mm  Dia. up to 32 mm Width ≤ 20 mm  Dia. 32 mm Width ≤ 40 mm Shank dia. 8 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR, PUR</b> Dia. up to 10 mm <b>GHR, LR, TX, LHR</b> Dia. up to 20 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 19 mm  <b>POLICAP®</b> Dia. up to 7 mm Shank dia. 3 + 6 mm  <b>Mounted flap wheels</b> Dia. up to 20 mm Shank dia. 3 + 6 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm	<b>Diamond grinding points</b> Dia. 5.5 to 12.0 mm  <b>CBN grinding points</b> Dia. 10.0 to 15.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  <b>Ring wheels ER</b> Dia. 30 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Use only with oil,  
1 to 3 drops per minute.

- Compact design
- Light and easy to handle
- In-line fine filter recommended

Accessories included:  
Hose nozzle, 6 mm collet, 2 keys

PG 3/250 S

Rotational speed: 25,000 RPM / Output: 225 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 3/250 S	286340	front	push-pull	0.21–0.49	5	8	0.370

### Collets

Group	For shank dia.	
	3 mm, 1/8 inch	6 mm
	EAN 4007220	
5	299944	299951

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 7/16"	300480
EM SW 9/16"	186831

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, MICRO Dia. 4 to 6 mm  <b>Cut FVK, FVKS, PLAST</b> Dia. 8 mm  <b>HSS rotary cutters</b> Cut 3, special cuts Dia. up to 4 mm	<b>Mounted points</b> Dia. 25 mm Width ≤ 6 mm Shank dia. 3 mm  Dia. 13 mm  Dia. up to 20 mm Width ≤ 50 mm  Dia. up to 25 mm Width ≤ 40 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 10 mm <b>GHR, LR, TX, LHR</b> Dia. up to 25 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 22 mm  <b>POLICAP®</b> Dia. up to 10 mm Shank dia. 3 + 6 mm  <b>Mounted flap wheels</b> Dia. up to 15 mm Shank dia. 3 + 6 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm  <b>Felt points</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. 6.0 to 12.0 mm  <b>CBN grinding points</b> Dia. 12.0 to 18.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbor</b> <b>BO 6/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  <b>Ring wheels ER</b> Dia. 30 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

# Air grinders

## Straight grinders

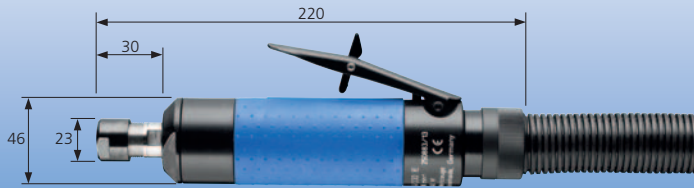


PGAS 7/250 E-HV

Rotational speed: 25,000 RPM / Output: 540 watts



Use only with oil,  
4 to 5 drops per minute.

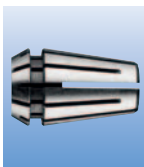


- Elastically mounted spindle
- Low vibration use
- In-line fine filter recommended

Accessories included:  
1 m exhaust hose and 2.5 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 7/250 E-HV	948880	rear	lever	0.72	16	8	0.870

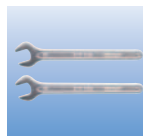
### Collets



Group	For shank dia.			
	6 mm	8 mm	10 mm	1/4 inch
	EAN 4007220			
16	956984	957004	957028	957035

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 17 mm	204542
EM SW 20 mm	957059

### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, MICRO Dia. 6 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 8 to 12 mm  <b>HSS rotary cutters</b> Cut 3, special cuts Dia. up to 4 mm	<b>Mounted points</b> Dia. 25 mm Width ≤ 6 mm Shank dia. 3 mm  Dia. 13 mm  Dia. up to 20 mm Width ≤ 50 mm  Dia. up to 32 mm Width ≤ 32 mm  Dia. 32 mm Width ≤ 40 mm Shank dia. 8 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 10 mm <b>GHR, LR, TX, LHR</b> Dia. up to 20 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 22 mm  <b>Mounted flap wheels</b> Dia. up to 15 mm Shank dia. 3 + 6 mm  <b>POLICAP®</b> Dia. up to 10 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm  <b>Felt points</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. 6.0 to 12.0 mm  <b>CBN grinding points</b> Dia. 12.0 to 18.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  <b>Ring wheels ER</b> Dia. 30 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



Can be used with or without oil, 3 to 4 drops per minute.

- Without oil: 18,000 RPM, power output 340 W, no oil residues on the workpiece
- In-line fine filter recommended
- Frequency damper on request

### PGAS 5/230 HV

- Compact design

### PGAS 5/230 VE-HV

- Elastically mounted spindle

Accessories included:

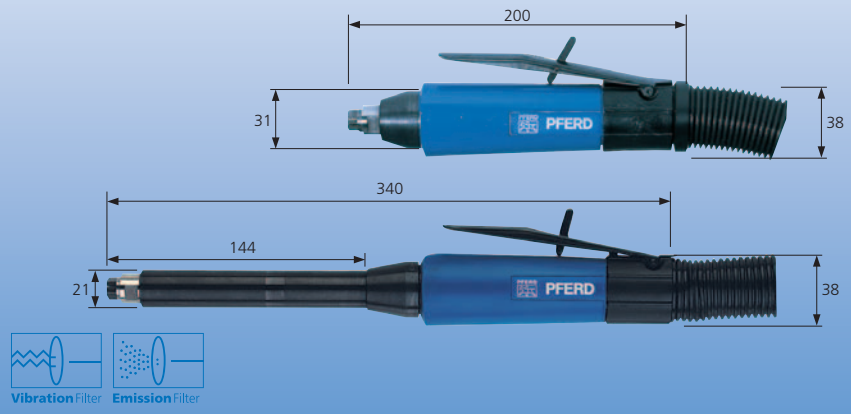
0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

### PFERDERGONOMICS®:

PGAS 5/230 VE-HV

### PGAS 5/230 HV PGAS 5/230 VE-HV

Rotational speed with oil: 23,000 RPM / Output: 370 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 5/230 HV	235294	rear	lever	0.63	6	8	0.620
PGAS 5/230 VE-HV	235300	rear	lever	0.63	6	8	0.840

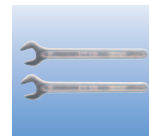
### Collets



Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
	EAN 4007220					
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	
<b>TC burrs</b> <b>Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 6 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 8 to 12 mm  <b>HSS rotary cutters</b> <b>Cut 3, special cuts</b> Dia. up to 4 mm	<b>Mounted points</b> Dia. up to 32 mm Width ≤ 32 mm  Dia. up to 40 mm Width ≤ 20 mm  Dia. up to 32 mm Width ≤ 40 mm Shank dia. 8 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 12 mm <b>GHR, LR, TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 30 mm  <b>Poliflex® fine grinding discs</b> Bond: <b>TX</b> Dia. up to 25 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 22 mm	<b>Mounted flap wheels</b> Dia. up to 20 mm  <b>POLICAP®</b> Dia. up to 10 mm  <b>POLIROLL®</b> Dia. up to 6 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm  <b>Felt points</b> Dia. up to 8 mm	<b>Diamond grinding points</b> Dia. 7.0 to 15.0 mm  <b>CBN grinding points</b> Dia. 12.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  <b>Ring wheels ER</b> Dia. 40 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

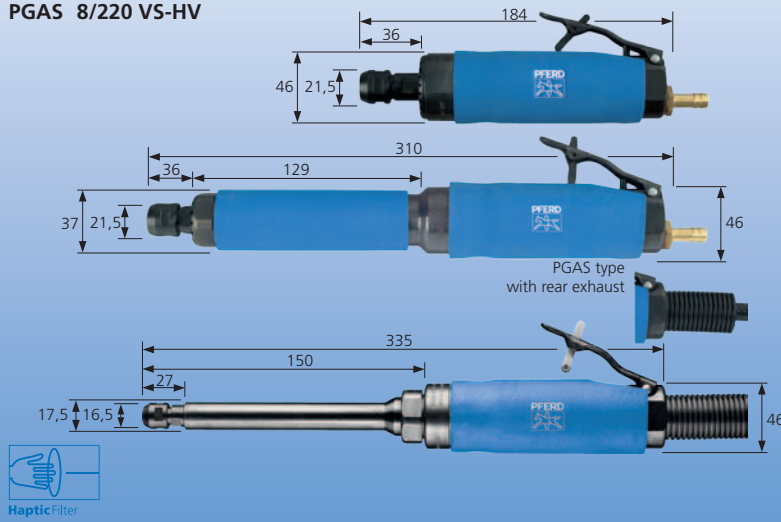
# Air grinders

## Straight grinders



PG 8/220 HV  
PGAS 8/220 HV  
PG 8/220 V-HV  
PGAS 8/220 VS-HV

Rotational speed: 22,000 RPM / Output: 600 watts



Use only with oil,  
4 to 5 drops per minute.

- In-line fine filter recommended
- PG 8/220 HV, PGAS 8/220 HV**  
(incl. EM SW 9/16", EM SW 3/4")
- Compact shape
- PG 8/220 V-HV**  
(incl. EM 9/16", EM 3/4")
- Alternative drive with counterclockwise rotation available
- Supported version available on request
- PGAS 8/220 VS-HV**  
(incl. EM SW 7/16", EM SW 9/16")
- Particularly slim drive extension.

Accessories included:  
1 m exhaust hose and 3 m air supply hose (PGAS type only) with 1/4" male threaded connection and threaded quick coupling (STG), 6 mm collet, 2 keys.

**PFERDERGONOMICS®:**  
PGAS 8/220 VS-HV

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 8/220 HV	450840	front	lever	0.85	7	9	0.950
PGAS 8/220 HV	286401	rear	lever	0.85	7	9	1.000
PG 8/220 V-HV	177167	front	lever	0.85	7	9	1.400
PGAS 8/220 VS-HV	836859	rear	lever	0.85	5	9	1.170

### Collets

Group	For shank dia.			
	3 mm, 1/8 inch	6 mm	8 mm	1/4 inch
EAN 4007220				
5	299944	299951	-	606032
7	187074	186855	187050	187067

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 7/16"	300480
EM SW 9/16"	186831
EM SW 3/4"	186848

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	205	Catalogue 206
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON- FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 6 to 10 mm	<b>Mounted points</b> Dia. 16 mm Dia. up to 32 mm Width ≤ 32 mm Dia. 40 mm Width ≤ 20 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 12 mm <b>GHR, LR, TX, LHR</b> Dia. up to 25 mm <b>Poliflex®-Discs</b> Bond: <b>TX</b> Dia. 25 mm Dia. 40 mm	<b>Abrasive spiral bands/drum holder</b> Dia. up to 22 mm <b>POLICAP®</b> Dia. up to 11 mm <b>Mounted Flap wheels</b> Dia. up to 20 mm <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm <b>Felt points</b> Dia. up to 8 mm	<b>Diamond grinding points</b> Dia. 7.0 to 15.0 mm <b>CBN grinding points</b> Dia. 13.0 to 20.0 mm <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm
<b>Cut 1, ALU, FVK, FVKS, PLAST, EDGE</b> Dia. 10 to 16 mm	Shank dia. 8 mm Dia. 32 mm Width ≤ 40 mm			<b>Cut-off wheels EHT</b> Dia. 50 mm with guard Dia. 65 mm <b>Ring wheels ER</b> Dia. 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





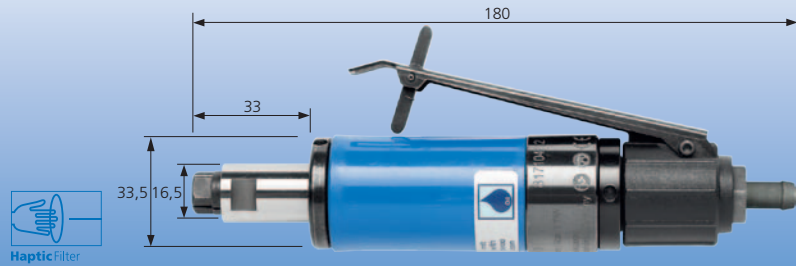
Use only with oil,  
2 to 3 drops per minute.

- Easy to handle and to guide
- With guide sleeve particularly suitable for use of TC burs for work on edges

Accessories included:  
Connecting nozzle, 6 mm collet, 2 keys

PG 3/210 DH

Rotational speed: 21,000 RPM / Output: 220 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 3/210 DH	606315	front	ring/lever	0.48	6	8	0.430

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Guide sleeve

Description	EAN 4007220
EFH PG 3/210	948897



### PFERDVIDEO

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



### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO, FVK, FVKS, PLAST Dia. 6 to 10 mm  <b>Cut EDGE</b> Dia. 16 mm This drive is particularly well suited for use of TC burs with EDGE cut.  <b>HSS rotary cutters</b> Cut 3, special cuts Dia. up to 5 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 32 mm  Dia. up to 40 mm Width ≤ 20 mm  Shank dia. 8 mm Dia. 32 mm Width ≤ 40 mm  <b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. up to 25 mm	<b>POLIROLL®</b> Dia. up to 6 mm  <b>Poliflex® fine grinding discs</b> Bond: <b>TX</b> Dia. 25 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 25 mm  <b>POLICAP®</b> Dia. up to 10 mm  <b>Mounted flap wheels</b> Dia. up to 20 mm  <b>Felt points</b> Dia. up to 8 mm	<b>Diamond grinding points</b> Dia. 7.0 to 15.0 mm  <b>CBN grinding points</b> Dia. 14.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  <b>Ring wheels ER</b> Dia. 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

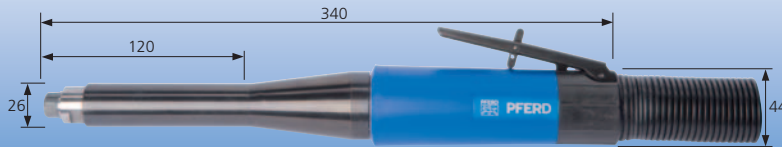
**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

# Air grinders

## Straight grinders



**PGAS 10/200 V-HV** Rotational speed: 20,000 RPM / Output: 900 watts



Use only with oil,  
6 to 7 drops per minute.

- High power delivery
- In-line fine filter recommended

Accessories included:  
1.7 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 10/200 V-HV	776889	rear	lever	1.20	8	9	1.600

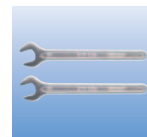
### Collets



Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
EAN 4007220					
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 14 mm	206836
EM SW 17 mm	204542

### Connecting set



Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 6 to 10 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST, EDGE</b> Dia. 10 to 16 mm  <b>HSS rotary cutters</b> Cut 3, special cuts Dia. up to 5 mm	<b>Mounted points</b> Dia. up to 40 mm Width ≤ 50 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 12 mm <b>GHR, LR, TX, LHR</b> Dia. up to 25 mm  <b>POLIROLL®</b> Dia. up to 6 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 30 mm  <b>POLICAP®</b> Dia. up to 10 mm  <b>Mounted flap wheels</b> Dia. up to 20 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm  <b>Felt points</b> Dia. up to 8 mm	<b>Diamond grinding points</b> Dia. 8.0 to 18.0 mm  <b>CBN grinding points</b> Dia. 14.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  <b>Ring wheels ER</b> Dia. 40 mm	<b>Wheel brushes</b> knotted RBG dia. 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



Use only with oil,  
2 to 4 drops per minute.

- Constant power delivery due to the centrifugal governor
- In-line fine filter recommended
- Frequency damper on request

### PGAS 5/180 HV

- Compact design

### PGAS 5/180 VE-HV

- Elastically mounted spindle

Accessories included:

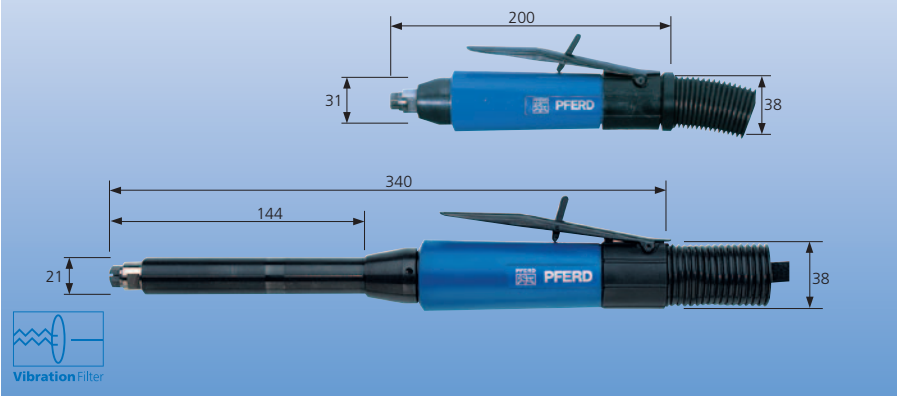
0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

PFERDERGONOMICS®:

PGAS 5/180 VE-HV

PGAS 5/180 HV  
PGAS 5/180 VE-HV

Rotational speed: 18,000 RPM / Output: 370 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 5/180 HV	176719	rear	lever	0.30–0.60	6	8	0.620
PGAS 5/180 VE-HV	176726	rear	lever	0.30–0.60	6	8	0.840

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
	EAN 4007220					
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO, FVK, FVKS, PLAST Dia. 8 to 12 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 6 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. up to 50 mm Width ≤ 25 mm  Shank dia. 8 mm Dia. 32 mm  Dia. up to 50 mm Width ≤ 50 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. up to 30 mm  <b>Poliflex® fine grinding discs</b> Bond: <b>TX</b> Dia. 25 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 30 mm	<b>POLICAP®</b> Dia. up to 13 mm  <b>POLINOX® cross buffs</b> Dia. up to 25 mm  <b>Mounted flap wheels</b> Dia. up to 40 mm  <b>POLISTAR</b> Dia. 20 mm  <b>Felt points</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 8.0 to 18.0 mm  <b>CBN grinding points</b> Dia. 18.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 40 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. 50 mm  matching <b>arbors</b> <b>BO 6/6 3-10</b> <b>BO 8/10 6-20</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.


Note: Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

# Air grinders

## Straight grinders

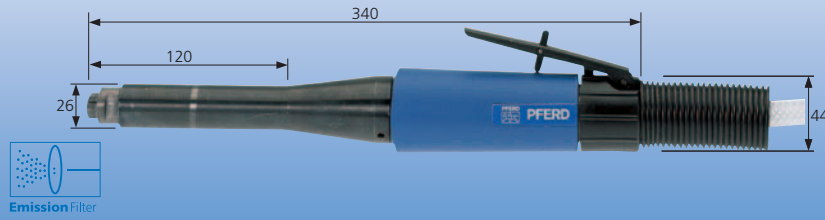


**PGAS 9/180 V-HV** Rotational speed with oil: 18,000 RPM / Output: 600 watts

 Can be used with or without oil, 4 to 5 drops per minute.

- Without oil: 15,000 RPM, power output 550 watts, no oil residues on the work-piece
- High power delivery
- In-line fine filter recommended

Accessories included:  
1.7 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 9/180 V-HV	319765	rear	lever	0.90	8	9	1.600

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
EAN 4007220					
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 17 mm	204542

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Arbors

Description	EAN 4007220	Tool mounting [mm]
SDD 1016	348444	dia. 10 x 16

The arbor replaces the collet and is used for direct adaptation of tools with a centre hole dia. of 10 mm.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO, FVK, FVKS, PLAST Dia. 8 to 12 mm  <b>Cut 1, ALU, EDGE</b> Dia. 16 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 6 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. up to 50 mm Width ≤ 25 mm  Shank dia. 8 mm Dia. 32 mm  Dia. up to 50 mm Width ≤ 50 mm	<b>Poliflex® fine grinding points</b> Bonds: GR, PUR Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. up to 30 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 30 mm  <b>Mounted flap wheels</b> Dia. up to 40 mm  <b>POLISTAR</b> Dia. up to 20 mm  <b>Felt points</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 8.0 to 18.0 mm  <b>CBN grinding points</b> Dia. 18.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 40 to 50 mm  matching <b>arbors</b> BO 6/10 3 BO 8/10 3	<b>Cut-off wheels EHT</b> Dia. 50 mm  matching <b>arbors</b> BO 6/6 0-4 BO 6/10 0-4 BO 8/10 0-4  <b>Ring wheels ER</b> Dia. 50 mm  matching <b>arbors</b> BO 6/6 3-10 BO 8/10 6-20	<b>End brushes</b> crimped PBU dia. 10 to 12 mm  knotted PBG dia. 19 mm PBG dia. 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 30 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Use only with oil,  
2 to 5 drops per minute.

- Constant power delivery due to the centrifugal governor

### PG 8/160 HV

- Compact shape

### PGAS 8/160 VM-HV

- Slim drive extension
- In-line fine filter recommended

Accessories included:

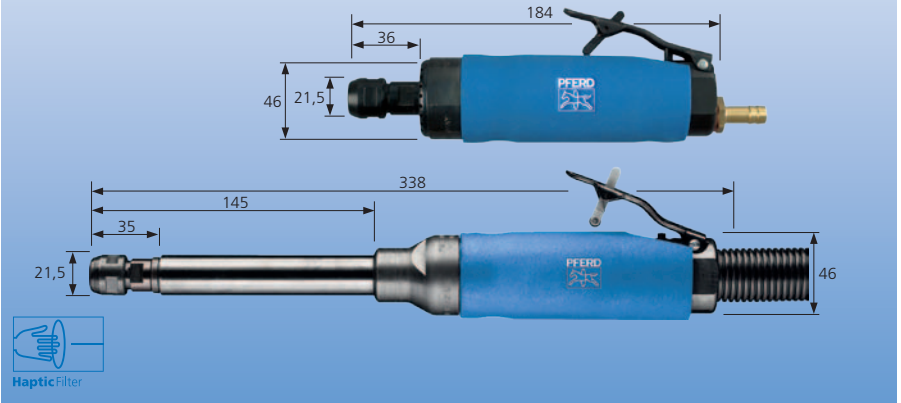
1 m exhaust hose and 3 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG) (PGAS type only), 6 mm collet, 2 keys

**PFERDERGONOMICS®:**

PGAS 8/160 VM-HV

**PG 8/160 HV**  
**PGAS 8/160 VM-HV**

Rotational speed: 16,000 RPM / Output: 600 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 8/160 HV	536339	front	lever	0.34–0.85	7	9	0.950
PGAS 8/160 VM-HV	843079	rear	lever	0.34–0.85	7	9	1.200

### Collets

Group	For shank dia.			
	3 mm, 1/8 inch	6 mm	8 mm	1/4 inch
	EAN 4007220			
7	187074	186855	187050	187067

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 9/16"	186831
EM SW 3/4"	186848

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burrs</b> <b>Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 8 to 12 mm <b>Cut 1, ALU, EDGE</b> Dia. up to 16 mm <b>HSS rotary cutters</b> <b>Cut 1, 2, 3, 5, special cuts</b> Dia. 2.3 to 6 mm	<b>Mounted points</b> Dia. 15 mm Dia. up to 32 mm Width ≤ 40 mm Dia. up to 50 mm Width ≤ 25 mm Shank dia. 8 mm Dia. 32 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. 12 to 30 mm <b>Poliflex® fine grinding discs</b> Bond: <b>TX</b> Dia. 25 mm <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 30 mm	<b>POLICAP® Mounted flap wheels</b> Dia. up to 29 mm Dia. up to 25 mm <b>POLINOX® cross buffs</b> Dia. up to 25 mm <b>POLIROLL®</b> Dia. up to 16 mm <b>POLISTAR</b> Dia. up to 20 mm <b>Felt points</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 10,0 to 20,0 mm <b>CBN grinding points</b> Dia. 18.0 to 20.0 mm <b>Diamond cut-off wheels</b> Dia. 22 mm Dia. 40 to 50 mm
				<b>Cut-off wheels EHT</b> Dia. 50 mm <b>Ring wheels ER</b> Dia. 40 mm <b>Catalogue 208</b> <b>Wheel brushes knotted</b> RBG dia. 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

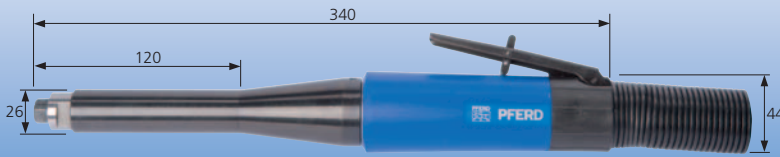
# Air grinders

## Straight grinders



**PGAS 10/160 V-HV**

Rotational speed: 16,000 RPM / Output: 900 watts



Use only with oil,  
6 to 7 drops per minute.

- Constant power delivery due to the centrifugal governor
- In-line fine filter recommended

Accessories included:  
1.7 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 10/160 V-HV	777282	rear	lever	1.20	8	9	1.600

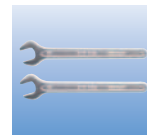
### Collets



Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
<b>EAN 4007220</b>					
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 14 mm	206836
EM SW 17 mm	204542

### Connecting set



Description	EAN 4007220
AS 3	351123

See page 56.

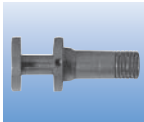
### In-line fine filter



Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Arbors



Description	EAN 4007220	Tool mounting [mm]
SDD 1016	348444	dia. 10 x 16

The arbor replaces the collet and is used for direct adaptation of tools with a centre hole dia. of 10 mm.

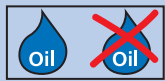
### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burs</b> Cut 3, 3 PLUS, 4, 5, <b>STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 8 to 12 mm  <b>Cut 1, ALU, EDGE</b> Dia. up to 16 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 6 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. up to 50 mm Width ≤ 25 mm  Shank dia. 8 mm Dia. 32 mm  Dia. up to 50 mm Width ≤ 50 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. 12 to 30 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 30 mm  <b>POLICAP®</b> Dia. up to 29 mm  <b>Mounted flap wheels</b> Dia. up to 25 mm  <b>POLISTAR</b> Dia. up to 20 mm  <b>Felt points</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 10.0 to 20.0 mm  <b>CBN grinding points</b> Dia. 18.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 40 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. 50 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>	<b>Wheel brushes</b> knotted RBG dia. 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



Can be used with or without oil, 2 to 5 drops per minute.

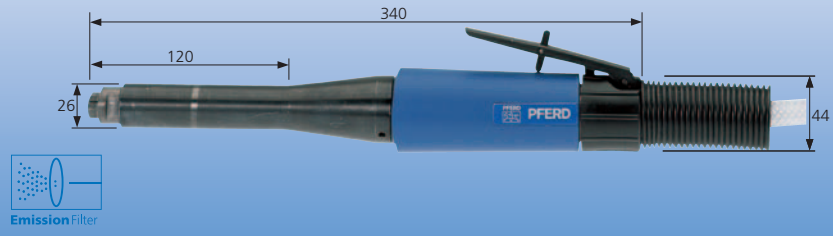
- With or without oil – no difference in rotational speed at the same power output, no oil residues on the workpiece
- Constant rotational speed due to the centrifugal governor
- In-line fine filter recommended

Accessories included:

1.7 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys

### PGAS 9/120 V-HV

Rotational speed: 12,000 RPM / Output: 600 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 9/120 V-HV	319758	rear	lever	0.40–0.90	8	9	1.600

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
	EAN 4007220				
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 17 mm	204542

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Arbors

Description	EAN 4007220	Tool mounting [mm]
SDD 1016	348444	dia. 10 x 16

The arbor replaces the collet and is used for direct adaptation of tools with a centre hole dia. of 10 mm.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 10 to 20 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST, EDGE</b> Dia. up to 16 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 8 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. up to 50 mm Width ≤ 25 mm  Shank dia. 8 mm Dia. 32 mm  Dia. up to 50 mm Width ≤ 50 mm  <b>Catalogue 204*</b>  <b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. 8 to 20 mm <b>GHR, LR, TX, LHR</b> Dia. 15 to 40 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 45 mm  <b>Mounted flap wheels</b> Dia. up to 40 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 50 mm  <b>POLIROLL®</b> Dia. up to 12 mm  <b>POLICAP®</b> Dia. up to 16 mm  <b>Felt points</b> Dia. up to 15 mm	<b>Diamond grinding points</b> Dia. 15.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. 50 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>	<b>End brushes</b> crimped PBU dia. 10 to 20 mm  knotted PBG dia. 19 mm PBG dia. 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 40 mm  knotted RBG dia. 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

# Air grinders

## Straight grinders



**PGAS 12/120 V-HV** Rotational speed: 12,000 RPM / Output: 1,000 watts



**Oil** Use only with oil, 6 to 7 drops per minute.

- Constant power delivery due to the centrifugal governor
- Robust design
- In-line fine filter recommended

Accessories included:  
1.25 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 12/120 V-HV	177396	rear	lever	1.30	8	12	2.400

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
	EAN 4007220				
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 22 mm	206850

### Connecting set

Description	EAN 4007220
AS 4	351130

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 30 STG 12-T12	809051

See page 56.

### Arbors

Description	EAN 4007220	Tool mounting [mm]
SDM 14 x 20 MF	179291	dia. 14/22.23 x 20

### Guard

Description	EAN 4007220	Tool cover dia. [mm]
H 35-125S	179307	125

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON- FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 10 to 20 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. up to 50 mm Width ≤ 25 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 45 mm  <b>Mounted flap wheels</b> Dia. up to 40 mm	<b>Diamond grinding points</b> Dia. 15.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 50 mm  with guard Dia. up to 75 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm with guard Dia. up to 125 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. 50 mm with guard Dia. up to 125 mm  matching <b>arbors</b> <b>BO 8/10 6-20</b> <b>BO 8/10 4-8</b>	<b>End brushes</b> crimped PBU dia. 10 to 20 mm  knotted PBG dia. 19 mm PBG dia. 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 40 mm  knotted RBG dia. 70 mm
<b>Cut 1, ALU, EDGE</b> Dia. up to 16 mm	Shank dia. 8 mm Dia. 32 mm	<b>POLINOX® unitized wheels PNER</b> Dia. 50 mm			
<b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 8 mm	Dia. up to 50 mm Width ≤ 50 mm  <b>Catalogue 204*</b>  <b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. 8 to 20 mm <b>GHR, LR, TX, LHR</b> Dia. 15 to 40 mm	<b>POLIROLL®</b> Dia. up to 12 mm  <b>POLICAP®</b> Dia. up to 16 mm  <b>Felt points</b> Dia. up to 15 mm			

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Use only with oil,  
2 to 5 drops per minute.

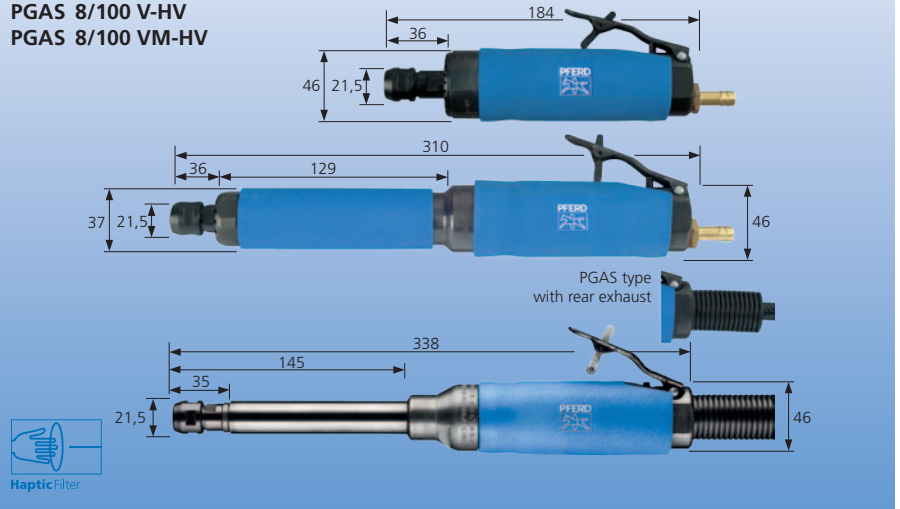
- Constant power delivery due to the centrifugal governor
- PG 8/100 HV, PGAS 8/100 HV**
- Compact design
- PG 8/100 V-HV, PGAS 8/100 V-HV**
- Alternative drive with counterclockwise rotation available
- Supported version on request
- PGAS 8/100 VM-HV**
- Slim drive extension
- In-line fine filter recommended

Accessories included:  
1 m exhaust hose and 3 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG) (PGAS type only), 6 mm collet, 2 keys

**PFERDERGONOMICS®:**  
PGAS 8/100 VM-HV

**PG 8/100 HV**  
**PGAS 8/100 HV**  
**PG 8/100 V-HV**  
**PGAS 8/100 V-HV**  
**PGAS 8/100 VM-HV**

Rotational speed: 10,000 min<sup>-1</sup> / Output: 600 Watt



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 8/100 HV	536438	front	lever	0.17–0.85	7	9	0.950
PGAS 8/100 HV	286272	rear	lever	0.17–0.85	7	9	1.000
PG 8/100 V-HV	176825	front	lever	0.17–0.85	7	9	1.400
PGAS 8/100 V-HV	286289	rear	lever	0.17–0.85	7	9	1.400
PGAS 8/100 VM-HV	843086	rear	lever	0.17–0.85	7	9	1.200

### Collets

Group	For shank dia.			
	3 mm, 1/8 inch	6 mm	8 mm	1/4 inch
	EAN 4007220			
7	187074	186855	187050	187067

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 9/16"	186831
EM SW 3/4"	186848

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON- FERROUS, CAST, TOUGH, TOUGH-S, MICRO, EDGE Dia. 10 to 20 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. up to 50 mm Width ≤ 25 mm	<b>Poliflex® points</b> Bonds: <b>GR, PUR</b> Dia. 8 to 25 mm <b>GHR, LR, TX, LHR</b> Dia. 15 to 40 mm <b>Abrasive spiral bands/drum holders</b> Dia. up to 60 mm <b>POLICAP®</b> Dia. up to 21 mm <b>Mounted flap wheels</b> Dia. up to 40 mm	<b>POLINOX® mounted grinding wheels</b> <b>POLINOX® unitized wheels PNER</b> Dia. up to 50 mm <b>POLIROLL®</b> Dia. up to 18 mm <b>POLINOX® cross buffs</b> Dia. up to 25 mm <b>Felt points</b> Dia. up to 20 mm	<b>Diamond grinding points</b> Dia. 18.0 to 20.0 mm <b>Diamond cut-off wheels</b> Dia. 22 to 30 mm  <b>Catalogue 206</b> <b>Cut-off wheels EHT</b> Dia. 50 mm <b>Ring wheels ER</b> Dia. 50 mm
<b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 10 mm	Shank dia. 8 mm Dia. 32 mm  Dia. up to 50 mm Width ≤ 50 mm			<b>End brushes</b> crimped PBU dia. 12 to 30 mm encapsulated PVB dia. 22 to 30 mm knotted PBG dia. 25 mm  <b>Wheel brushes</b> crimped RBU dia. 50 to 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

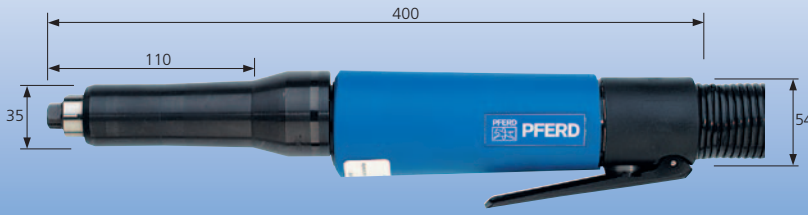
# Air grinders

## Straight grinders



PGAS 12/70 V-HV

Rotational speed: 7,000 RPM / Output: 1,000 watts



Use only with oil,  
6 to 8 drops per minute.

- Constant power delivery due to the centrifugal governor
- Robust design
- In-line fine filter recommended

Accessories included:  
1.25 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 12/70 V-HV	177419	rear	lever	1.30	8	12	2.400

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
EAN 4007220					
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 22 mm	206850

### Connecting set

Description	EAN 4007220
AS 4	351130

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 30 STG 12-T12	809051

See page 56.

### Arbors

Description	EAN 4007220	Tool mounting [mm]
SDM 14 x 20 MF	179291	dia. 14/22.23 x 20

### Guard

Description	EAN 4007220	Tool cover dia. [mm]
H 35-125S	179307	125

### Suitable PFERD tools

Catalogue 202	Catalogue 204*	Catalogue 205	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO, EDGE Dia. up to 20 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 4 to 12 mm  <b>Catalogue 203*</b>  <b>Mounted points</b> Hardness D Dia. 16 mm  Dia. up to 40 mm Width ≤ 32 mm	<b>Poliflex® fine grinding points</b> Bonds: GR, PUR Dia. 8 to 25 mm GHR, LR, TX, LHR Dia. 25 to 40 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 75 mm  <b>POLICAP®</b> Dia. up to 21 mm  <b>Mounted flap wheels</b> Dia. 50 to 60 mm	<b>POLINOX® mounted grinding wheels</b> Dia. up to 60 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 75 mm  <b>POLICLEAN® discs/-mounted tools</b> Dia. 50 mm  <b>POLIROLL®</b> Dia. up to 18 mm  <b>POLINOX® cross buffs</b> Dia. up to 38 mm  <b>Felt points</b> Dia. 25 mm	<b>Diamond cut-off wheels</b> Dia. 30 to 40 mm  matching <b>arbors</b> BO 6/10 3 BO 8/10 3  <b>End brushes</b> knotted PBG dia. 10 to 12 mm  <b>Wheel brushes</b> encapsulated RBV dia. 63 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



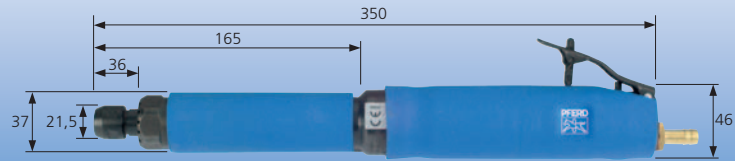
Use only with oil,  
4 to 5 drops per minute.

- Light, compact design
- Support version for fixing the straight grinder in stationary use, on request
- In-line fine filter recommended

Accessories included:  
6 mm collet, 2 keys, hose nozzle

PG 8/50 V-HV

Rotational speed: 5,000 RPM / Output: 600 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PG 8/50 V-HV	176788	front	lever	0.85	7	9	1.600

### Collets

Group	For shank dia.			
	3 mm, 1/8 inch	6 mm	8 mm	1/4 inch
	EAN 4007220			
7	187074	186855	187050	187067

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 9/16"	186831
EM SW 3/4"	186848

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>HSS rotary cutters</b> Cut ALU, 1, 2, 3, 5 Dia. 5 to 16 mm  <b>HSS aluminium cutters</b> 119 120  matching <b>threaded arbors</b> BO 6/10 BO 8/10 for HSS rotary cutters	<b>Mounted points</b> <b>Hardness D</b> Dia. 16 mm  Dia. up to 40 mm Width ≤ 32 mm  <b>Catalogue 204*</b>  <b>Poliflex® fine grinding points</b> <b>Poliflex® fine grinding discs</b> Dia. 25 to 50 mm  <b>Abrasive spiral bands and</b> <b>rubber drum holders</b> Dia. 50 mm  <b>Mounted flap wheels</b> Dia. 56 to 80 mm	<b>POLINOX® mounted grinding</b> <b>wheels</b> Dia. 50 to 80 mm  <b>POLINOX® cross buffs</b> Dia. 38 mm  <b>POLICLEAN® discs/mounted</b> <b>tools</b> Dia. 50 mm  <b>Felt points</b> <b>Mounted felt flap wheels</b> <b>Felt wheels</b> Dia. up to 45 mm  matching <b>arbor</b> BO 6/6 3-10	<b>Diamond cut-off wheels</b> Dia. 40 mm  matching <b>arbors</b> BO 6/10 3 BO 8/10 3

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.  
**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

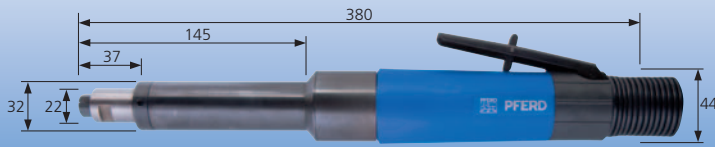
# Air grinders

## Straight grinders



### PGAS 10/40 V-HV

Rotational speed: 4,000 RPM / Output: 900 watts



Use only with oil,  
6 to 7 drops per minute.

- Constant power delivery due to the centrifugal governor
- In-line fine filter recommended

Accessories included:  
1.7 m exhaust hose and 3 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PGAS 10/40 V-HV	802649	rear	lever	1.20	8	9	1.700

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
EAN 4007220					
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 17 mm	204542

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.

### Arbors

Description	EAN 4007220	Tool mounting [mm]
SDD 1016	348444	dia. 10 x 16

The arbor replaces the collet and is used for direct adaptation of tools with a centre hole dia. of 10 mm.

### Suitable PFERD tools

Catalogue 202	Catalogue 204*	Catalogue 205
<b>HSS rotary cutters</b> <b>Cut ALU, 1, 2, 3, 5</b> Dia. 6 to 16 mm  <b>HSS aluminium cutters</b> 119 120  matching <b>threaded arbors</b> <b>BO 6/10</b> <b>BO 8/10</b> for HSS rotary cutters	<b>Poliflex® fine grinding points</b> <b>Poliflex® fine grinding discs</b> Dia. 25 to 80 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. 100 mm  <b>Mounted flap wheels</b> Dia. up to 80 mm  <b>POLINOX® mounted grinding wheels</b> Dia. 60 to 100 mm  <b>POLICLEAN® discs</b> Dia. 50 and 75 mm  <b>Felt points</b> <b>Mounted felt flap wheels</b> <b>Felt wheels</b> Dia. up to 50 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>	<b>Diamond cut-off wheels</b> Dia. 40 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



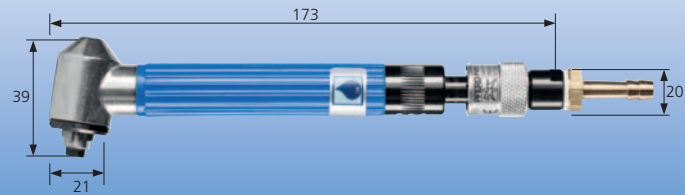
Use only with oil,  
1 drop per minute.

- Smallest high-revving angle grinder
- In-line fine filter recommended

Accessories included:  
3 mm collet, 2 keys, hose nozzle

PWS 1/800

Rotational speed: 80,000 RPM / Output: 75 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWS 1/800	176900	rear	push-pull	0.18	2	5	0.115

### Collets

Group	For shank dia.		
	2.34 mm, 3/32 inch	3 mm	1/8 inch
	EAN 4007220		
2	207864	207840	207857

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 6 mm	204504
EM SW 8 mm G	206867

### Connecting set

Description	EAN 4007220
AS 1	351109

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG T5	957103

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205
<b>TC burrs</b> <b>Cut 3 PLUS, 4, 5, INOX, MICRO</b> Dia. up to 3 mm Shank dia. 3 mm  <b>Cut ALU</b> Dia. up to 3 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. 5 mm  Dia. 6 mm Width ≤ 13 mm  Dia. 10 mm Width ≤ 2 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GHR</b> Dia. up to 4 mm <b>LR, TX</b> Dia. up to 6 mm	<b>Diamond grinding points</b> Dia. up to 4.0 mm Shank dia. 3 mm  <b>CBN grinding points</b> Dia. 3.5 to 6.0 mm Shank dia. 3 mm

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

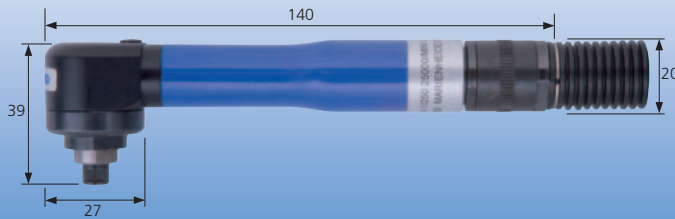
**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





### PWSA 1/250

Rotational speed: 25,000 RPM / Output: 110 watts



Use only with oil,  
1 to 2 drops per minute.

- Light and easy to handle
- In-line fine filter recommended

Accessories included:  
0.6 m exhaust hose and 2 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 3 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 1/250	802588	rear	ring	0.20	3	5	0.225

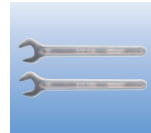
### Collets



Group	For shank dia.		
	3 mm	3/32 inch	1/8 inch
	EAN 4007220		
3	188262	188378	188354

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 10 mm	188514
EM SW 13/64"	188279

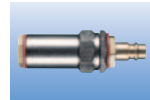
### Connecting set



Description	EAN 4007220
AS 1	351109

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-IG 1/4	953259

See page 56.

### Arbors



Description	EAN 4007220	Use for
ASD 20 CD 1/4-20 G	308417	COMBIDISC® tools, SBH 20, SBH 25, SBH 38, CD 20, CD 38

The arbor replaces the collet. It is used for direct mounting of COMBIDISC® tools.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*
<b>TC burrs</b> <b>Cut 3 PLUS, 4, 5, INOX, MICRO</b> Dia. 3 mm Shank dia. 3 mm  <b>Cut 1, 3 and special cuts</b> Dia. up to 4 mm Shank dia. 3 mm	<b>Mounted points</b> Dia. up to 13 mm Width ≤ 13 mm  Dia. up to 25 mm Width ≤ 6 mm Shank dia. 3 mm	<b>Poliflex® fine grinding points</b> Shank dia. 3 mm Bonds: <b>GR, PUR</b> Dia. up to 10 mm <b>GHR, LR, TX, LHR</b> Dia. up to 20 mm

**COMBIDISC® abrasive discs**  
 Dia. up to 25 mm  
 with  
**arbor**  
**ASD 20 CD 1/4-20G**

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

Note: Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Use only with oil,  
3 to 4 drops per minute.

- Low angle head height
- In-line fine filter recommended
- Frequency damper on request

Accessories included:  
0.75 m exhaust hose and 2 m air supply  
hose without nozzle, 6 mm collet, 2 keys

PWSA 5/210 HV

Rotational speed: 21,000 RPM / Output: 370 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 5/210 HV	177075	rear	lever	0.60	6	8	0.710

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 17 mm	204542

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Grinding wheel adapter set

Description	EAN 4007220	Tool mounting [mm]
SAS 10/50	238462	dia. 10 x 1-9

Using this adapter set, cut-off and reinforced grinding wheels can be used up to dia. 50 mm and a thickness of 1–9 mm. Simple handling: Remove the collet, connect the hand protection, place the washer onto the spindle and tighten the grinding wheel with the clamping screw (washer is not needed for discs thicker than 6 mm).

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 6 to 12 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 10 to 16 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. up to 5 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 32 mm  Dia. up to 40 mm Width ≤ 20 mm  Shank dia. 8 mm Dia. 16 mm  Dia. up to 32 mm Width ≤ 32 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 12 mm <b>GHR, LR, TX, LHR</b> Dia. up to 25 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 22 mm  <b>POLICAP®</b> Dia. up to 11 mm	<b>Mounted flap wheels</b> Dia. up to 20 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm  <b>COMBIDISC® abrasive discs</b> Dia. 20 to 38 mm	<b>Diamond grinding points</b> Dia. 7.0 to 15.0 mm  <b>CBN grinding points</b> Dia. 14.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b> or <b>adapter set SAS 10/50</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  matching <b>adapter set SAS 10/50</b>  <b>Ring wheels ER</b> Dia. 50 mm  matching <b>adapter set SAS 10/50</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

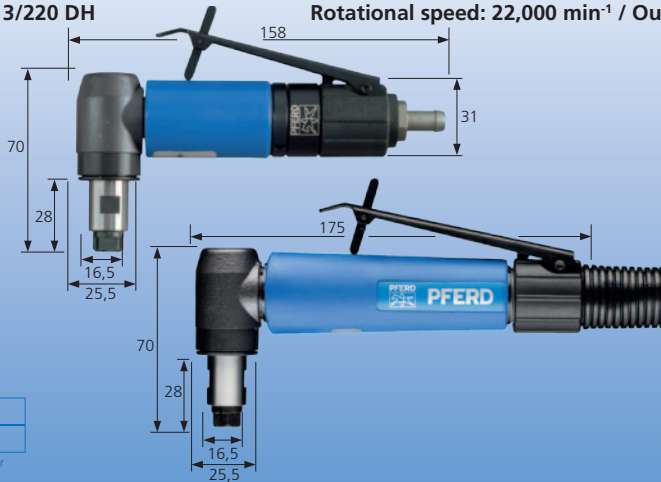
# Air grinders

## Angle grinders



**PWS 3/200 DH**  
**PWSA 3/220 DH**

Rotational speed: 20,000 min<sup>-1</sup> / Output: 220 Watt  
 Rotational speed: 22,000 min<sup>-1</sup> / Output: 220 Watt



**Oil** Use only with oil, 1 to 2 drops per minute.

- Slim angle head for work in hard-to-reach areas
- Easy to handle, compact shape
- Frequency damper on request
- In-line fine filter recommended

Accessories included:  
**PWS 3/200 DH**  
 6 mm collet, 2 keys, hose nozzle

**PWSA 3/220 DH**  
 ■ **Frequency damper** on request  
 0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

**PFERDERGONOMICS®:**  
 PWS 3/200 DH

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWS 3/200 DH	282175	front	ring/lever	0.35	6	8	0.370
PWSA 3/220 DH	566503	rear	ring/lever	0.46	6	8	0.380

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
	EAN 4007220					
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 6 to 10 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. up to 5 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 32 mm  Dia. 40 mm Width ≤ 20 mm  Shank dia. 8 mm Dia. 32 mm Width ≤ 40 mm  <b>Catalogue 204*</b>  <b>Poliflex® fine grinding points</b> Bonds: GR, PUR Dia. up to 12 mm GHR, LR, TX, LHR Dia. up to 25 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 22 mm  <b>POLICAP®</b> Dia. up to 11 mm  <b>Mounted flap wheels</b> Dia. up to 20 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm  <b>COMBIDISC® abrasive discs</b> Dia. 20 to 50 mm  <b>COMBIDISC® non-woven discs</b> hard type <b>VRH 20</b>	<b>Diamond grinding points</b> Dia. 8.0 to 15.0 mm  <b>CBN grinding points</b> Dia. 15.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. up to 50 mm  <b>Ring wheels ER</b> Dia. up to 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



Use only with oil,  
3 to 4 drops per minute.

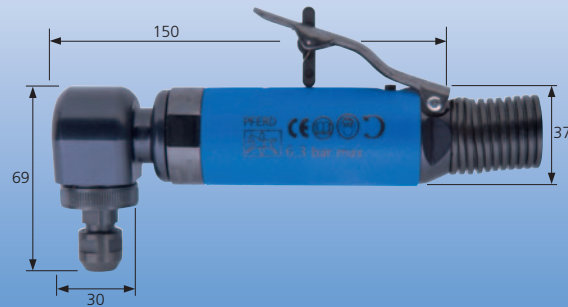
- Compact design
- In-line fine filter recommended

Accessories included:

1 m exhaust hose and 3 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), 6 mm collet, 2 keys

PWSA 4/200 HV

Rotational speed: 20,000 RPM / Output: 300 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 4/200 HV	598184	rear	lever	0.57	5	9	0.520

### Collets

Group	For shank dia.	
	3 mm, 1/8 inch	6 mm
	EAN 4007220	
5	299944	299951

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 7/16 "	300480
EM SW 9/16 "	186831

### Connecting set

Description	EAN 4007220
AS 3	351123

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-IG 1/4	953259

See page 56.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206
<b>TC burs</b> <b>Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 7 to 10 mm <b>HSS rotary cutters</b> <b>Cut 1, 2, 3, 5, special cuts</b> Dia. up to 5 mm	<b>Mounted points</b> Dia. 16 mm Dia. up to 32 mm Width ≤ 32 mm Dia. 40 mm Width ≤ 20 mm Shank dia. 8 mm Dia. 32 mm Width ≤ 40 mm <b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 12 mm <b>GHR, LR, TX, LHR</b> Dia. up to 25 mm <b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 22 mm	<b>POLICAP®</b> Dia. up to 11 mm <b>Mounted flap wheels</b> Dia. up to 20 mm <b>POLINOX® unitized wheels PNER</b> Dia. 25 mm <b>COMBIDISC® abrasive discs</b> Dia. 20 to 50 mm <b>COMBIDISC® non-woven discs</b> hard type <b>VRH 20</b>	<b>Diamond grinding points</b> Dia. 8.0 to 15.0 mm <b>CBN grinding points</b> Dia. 15.0 to 20.0 mm <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm matching <b>arbor</b> <b>BO 6/10 3</b>	<b>Cut-off wheels EHT</b> Dia. up to 50 mm <b>Ring wheels ER</b> Dia. up to 40 mm matching <b>arbor</b> <b>BO 6/6 3-10</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.


# Air grinders

## Angle grinders



**PWSA 5/170-45 HV** Rotational speed with oil: 17,000 RPM / Output: 370 watts



 Can be used with or without oil, 3 to 4 drops per minute.

- Without oil: 14,000 RPM, power output 340 watts, no oil residues on the work-piece
- Angle head with 45° inclination to improve work in corners and hard-to-reach places
- In-line fine filter recommended

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 5/170-45 HV	484999	rear	lever	0.63	6	8	0.880

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 17 mm	204542

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Suitable PFERD tools

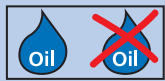
Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 8 to 12 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. up to 6 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. 50 mm Width ≤ 25 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. 12 to 30 mm  <b>Poliflex® fine grinding discs</b> Bond: <b>TX</b> Dia. up to 25 mm  <b>Abrasive spiral bands/drum holders</b> Dia. up to 30 mm  <b>POLICAP®</b> Dia. up to 13 mm  <b>Mounted flap wheels</b> Dia. up to 25 mm  <b>Felt points</b> Dia. up to 10 mm	<b>Diamond grinding points</b> Dia. 9.0 to 20.0 mm  <b>CBN grinding points</b> Dia. 18.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 40 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. up to 40 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>	<b>End brushes</b> crimped PBU dia. 10 to 20 mm  knotted PBG dia. 19 mm PBG dia. 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 30 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





Can be used with or without oil, 3 to 4 drops per minute.

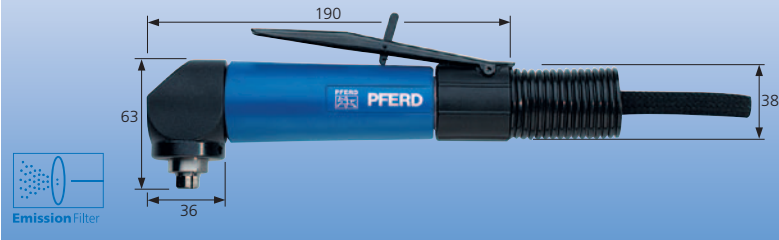
- Without oil: 13,000 RPM, power output 340 watts, no oil residues on the work-piece
- Low angle head height
- In-line fine filter recommended

Accessories included:

0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys

PWSA 5/160 HV

Rotational speed with oil: 16,000 RPM / Output: 370 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m <sup>3</sup> /min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 5/160 HV	235287	rear	lever	0.63	6	8	0.710

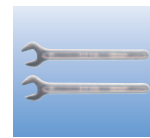
### Collets



Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 11 mm	206812
EM SW 17 mm	204542

### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Grinding wheel adapter set



Description	EAN 4007220	Tool mounting [mm]
SAS 10/50	238462	dia. 10 x 1-9

Using this adapter set, cut-off and reinforced grinding wheels can be used up to dia. 50 mm and a thickness of 1–9 mm. Simple handling: Remove the collet, connect the hand protection, place the washer onto the spindle and tighten the grinding wheel with the clamping screw (washer is not needed for discs thicker than 6 mm).

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 9 to 12 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 6 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 32 mm Width ≤ 40 mm  Dia. 50 mm Width ≤ 25 mm	<b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. up to 15 mm <b>GHR, LR, TX, LHR</b> Dia. 12 to 30 mm  <b>POLICAP®</b> Dia. up to 13 mm  <b>COMBIDISC® abrasive discs</b> Dia. 20 to 50 mm  <b>COMBIDISC® TX discs</b> Dia. 50 mm	<b>Diamond grinding points</b> Dia. 9.0 to 20.0 mm  <b>CBN grinding points</b> Dia. 18.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 40 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b> or <b>adapter set SAS 10/50</b>	<b>Cut-off wheels EHT</b> Dia. up to 50 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b> or <b>adapter set SAS 10/50</b>  <b>Ring wheels ER</b> Dia. up to 50 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b> or <b>adapter set SAS 10/50</b>	<b>End brushes</b> crimped PBU dia. 10 to 20 mm  knotted PBG dia. 19 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.


# Air grinders

## Angle grinders



PWSA 5/130 HV

Rotational speed: 13,000 RPM / Output: 370 watts

 Can be used with or without oil, 1 to 4 drops per minute.

- With or without oil – no difference in speed at the same power output, no oil residues on the workpiece
- Constant power delivery due to the centrifugal governor
- Low angle head height
- In-line fine filter recommended

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose without nozzle, 6 mm collet, 2 keys



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 5/130 HV	271766	rear	lever	0.30–0.60	6	8	0.710

### Collets

Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
EAN 4007220						
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 11 mm	206812
EM SW 17 mm	204542

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Grinding wheel adapter set

Description	EAN 4007220	Tool mounting [mm]
SAS 10/50	238462	dia. 10 x 1-9

Using this adapter set, cut-off and reinforced grinding wheels can be used up to dia. 50 mm and a thickness of 1–9 mm. Simple handling: Remove the collet, connect the hand protection, place the washer onto the spindle and tighten the grinding wheel with the clamping screw (washer is not needed for discs thicker than 6 mm).

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 10 to 16 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 7 mm	<b>Mounted points</b> Dia. 16 mm Dia. up to 32 mm Width ≤ 40 mm Dia. 50 mm Width ≤ 25 mm  <b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR</b> Dia. 8 to 20 mm <b>GHR, LR, TX, LHR</b> Dia. 15 to 40 mm	<b>Poliflex® fine grinding discs</b> Bond: <b>TX</b> Dia. 25 to 40 mm  <b>POLICAP®</b> Dia. up to 13 mm  <b>COMBIDISC® abrasive discs</b> Dia. 20 to 50 mm  <b>COMBIDISC® TX discs</b> Dia. 50 and 75 mm	<b>Diamond grinding points</b> Dia. 12.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 22 and 50 mm  matching <b>arbors</b> <b>BO 3/1,7 1</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b> or <b>adapter set</b> <b>SAS 10/50</b>	<b>Cut-off wheels EHT</b> Dia. up to 50 mm matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. up to 50 mm matching <b>arbor</b> <b>BO 6/6 3-10</b>	<b>End brushes</b> crimped PBU dia. 10 to 20 mm  knotted PBG dia. 19 mm PBG dia. 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 40 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



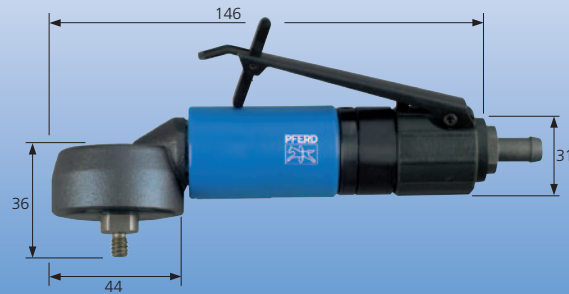
Use only with oil,  
2 drops per minute.

- Special spindle for holding all COMBIDISC® tools (use a backing pad without shank)
- Flat angle head for work in hard-to-reach areas
- In-line fine filter recommended

Accessories included:  
1 key, 1 hose nozzle

PW 3/120 DH

Rotational speed: 12,000 RPM / Output: 220 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Drive spindle thread	Air supply hose inner dia. [mm]	Net weight [kg]
PW 3/120 DH	271780	front	ring/lever	0.35	1/4" - 20 UNC	8	0.390

### Keys

Description	EAN 4007220
EM SW 11 mm	206812

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Extension for drive spindle

Description	EAN 4007220	Use for
SPV 20 CD 1/4-20 UNC	333167	COMBIDISC® abrasive disc holder without threaded shank

### Suitable PFERD tools

#### Catalogue 204

#### COMBIDISC® abrasive discs

Dia. 20 to 75 mm

#### COMBIDISC® non-woven discs

Dia. 20 to 75 mm

#### COMBIDISC® abrasive disc holder

SBH 20, 25, 38, 50, 75  
without threaded shank

#### COMBIDISC® TX discs

Dia. 50 and 75 mm

#### POLICLEAN® discs

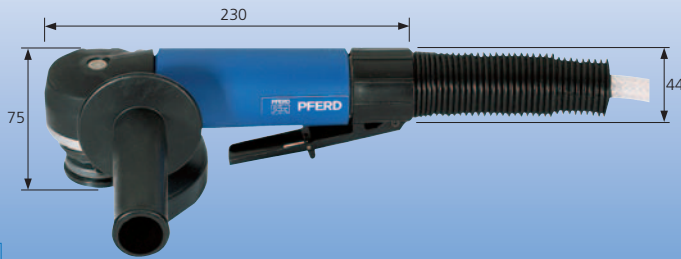
Dia. 50 mm


**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



### PWAS 9/120 HV

Rotational speed: 12,000 RPM / Output: 600 watts




**Can be used with or without oil, 4 to 5 drops per minute.**

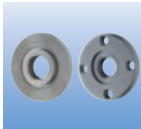
- With or without oil – no difference in speed at the same power output, no oil residues on the workpiece
- Max. tool diameter 115 mm
- With spindle lock pin
- Low angle head height
- In-line fine filter recommended

Accessories included:  
1.7 m exhaust hose and 3 m air supply hose without nozzle, 1 key, clamping flanges, guard and side handle



Description	EAN 4007220	Exhaust direction	Throttle type	Air con- sumption [m <sup>3</sup> /min]	Drive spindle thread	Air supply hose inner dia. [mm]	Tool mounting [mm]	Net weight [kg]
PWAS 9/120 HV	319772	rear	lever	0.90	M14	9	22.23	1.750

#### Clamping flanges



Description	EAN 4007220
SPF 95774001	426036
SPM 95732801	316238

#### Keys



Description	EAN 4007220
STL SW 35 x 5 mm	193853

#### Connecting set



Description	EAN 4007220
AS 3	351123

See page 56.

#### In-line fine filter



Description	EAN 4007220
SF 24 STG-T9	809044

See page 56.



#### PFERDVIDEO

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

#### Suitable PFERD tools

Catalogue 204	Catalogue 205	Catalogue 206	Catalogue 208
<b>COMBICLICK® fibre discs</b> Dia. up to 115 mm  matching <b>backing pads</b> <b>CC-GT 115/125</b>  <b>Fibre discs</b> Dia. up to 115 mm  matching <b>backing pad</b> <b>GT 115</b>	<b>Diamond cut-off wheels</b> Dia. 115 mm	<b>Cut-off and reinforced grinding wheels</b>  <b>POLIFAN® flap discs</b> Dia. up to 115 mm	<b>Cup brushes</b> crimped TBU dia. 60 to 75 mm M14  <b>Bevel brushes</b> crimped KBU dia. 100 to 115 mm M14  <b>Wheel brushes</b> RBU dia. 115 mm M14

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.







Use only with oil,  
6 to 8 drops per minute.

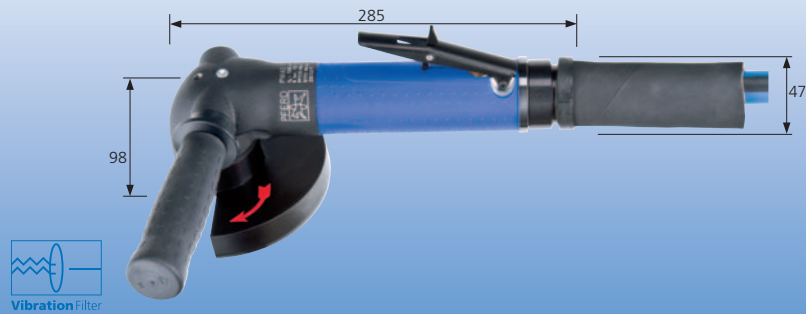
- Max. tool diameter 125 mm
- Autobalancer on the work spindle
- Side anti-vibration handle
- Spindle locking pin for tool change with one key
- In-line fine filter recommended

Accessories included:

1 m exhaust hose and 2.5 m air supply hose with 1/2" male threaded connection, 2 keys, clamping flanges, guard and side handle

PWAS 13/120 AVH

Rotational speed: 12,000 RPM / Output: 1.100 watts



Description	EAN 4007220	Exhaust direction	Throttle type	Air con- sumption [m³/min]	Drive spindle thread	Air supply hose inner dia. [mm]	Tool mounting [mm]	Net weight [kg]
PWAS 13/120 AVH	896709	rear	lever	0.90	M14	12	22.23	2.100

### Clamping flanges

Description	EAN 4007220	Item no.
(1) SPM14 98980036	902189	1
(2) FLS 98980037	902202	3
(3) DHFL 98980039	902226	2
(4) DHTR 98980040	902233	4
(5) FLS-CC 98980038	902219	5

### Keys

Description	EAN 4007220
SKS SW 4 mm	204450
STL SW 35 x 5 mm	193853

### Connecting set

Description	EAN 4007220
AS 4	351130

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 30 STG 12-T12	809051

See page 56.



### PFERDVIDEO

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

### Suitable PFERD tools

Catalogue 204	Catalogue 205	Catalogue 206	Catalogue 208
<b>COMBICLICK® fibre discs</b> Dia. up to 115 mm  matching <b>backing pad</b> CC-GT 115/125	<b>Fibre discs</b> Dia. up to 115 mm  matching <b>backing pad</b> GT 115	<b>Diamond cut-off wheels</b> Dia. 115 mm  <b>Cut-off and reinforced grinding wheels</b>  <b>POLIFAN® flap discs</b> Dia. up to 115 mm	<b>Cup brushes</b> crimped TBU dia. 60 to 75 mm M14  <b>Bevel brushes</b> crimped KBU dia. 100 to 115 mm M14  <b>Wheel brushes</b> RBU dia. 115 mm M14

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





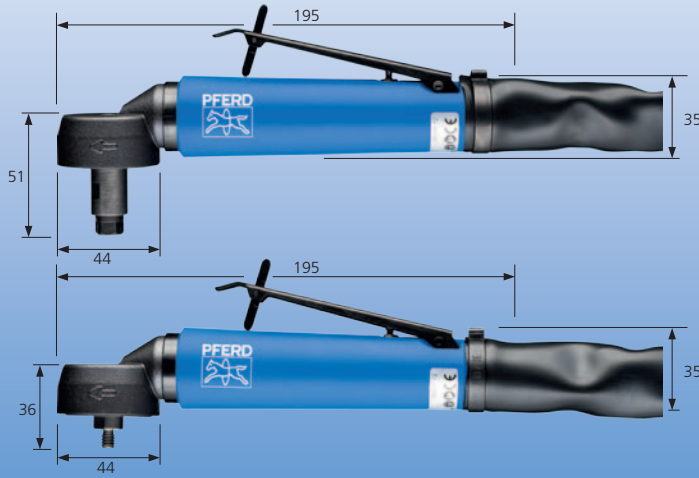
# Air grinders

## Angle grinders



PWSA 4/45 HV  
PWAS 4/45 HV-CD

Rotational speed: 4,500 RPM / 250 watts



Use only with oil,  
2 to 3 drops per minute.

■ Constant power delivery due to the centrifugal governor

### PWSA 4/45 HV

■ For low-speed grinding tools with shank diameter up to 8 mm

### PWAS 4/45 HV-CD

■ Special spindle to hold all low-speed COMBIDISC® tools (use backing pad without shank)

■ Spindle extension (20 mm)  
SPV 20 CD 1/4-20 UNC

■ In-line fine filter recommended

Accessories included:

0.75 m exhaust hose and 2 m air supply hose without nozzle, 2 keys (PWAS 4/45 HV-CD only EM SW 11), only PWSA 4/45 HV with 6 mm collet

Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Collet group	Drive spindle thread	Air supply hose inner dia. [mm]	Net weight [kg]
PWSA 4/45 HV	948750	rear	lever	0.50	6	-	8	0.560
PWAS 4/45 HV-CD	948767	rear	lever	0.50	-	1/4"-20 UNC	8	0.510

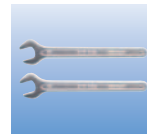
### Collets



Group	For shank dia.					
	3 mm	6 mm	8 mm	3/32 inch	1/8 inch	1/4 inch
	EAN 4007220					
6	212875	212851	212936	234969	212882	212868

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 11 mm	206812
EM SW 14 mm	206836

### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Extension for drive spindle



Description	EAN 4007220	Use for
SPV 20 CD 1/4-20 UNC	333167	COMBIDISC® abrasive disc holder without threaded shank

### Suitable PFERD tools

#### Catalogue 204\*

Poliflex® fine grinding points  
Poliflex® fine grinding discs  
Dia. up to 80 mm

Poliflex® marbling tools  
PFZY 5040

Felt points  
Felt wheels  
Dia. up to 45 mm

COMBIDISC® diamond abrasive discs  
Dia. up to 75 mm

COMBIDISC® non-woven discs  
Dia. 75 mm

COMBIDISC® felt discs  
Dia. up to 75 mm

COMBIDISC® POLICLEAN® discs  
Dia. up to 75 mm

COMBIDISC® abrasive disc holder  
SBH 75

COMBIDISC® brush  
Dia. 50 mm

matching arbors  
SBH 50  
BO PFF 50

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogue 204: This data applies to an unsupported shank length of 10 mm and the max. stated mounted point dimensions.



Use only with oil,  
1 to 2 drops per minute.

### PBS 3/200 DH 99

- Incl. belt grinder attachment arm BSVAK 9/9 x 305
- Easy to handle, compact shape.

### PBS 3/200 DH oVA

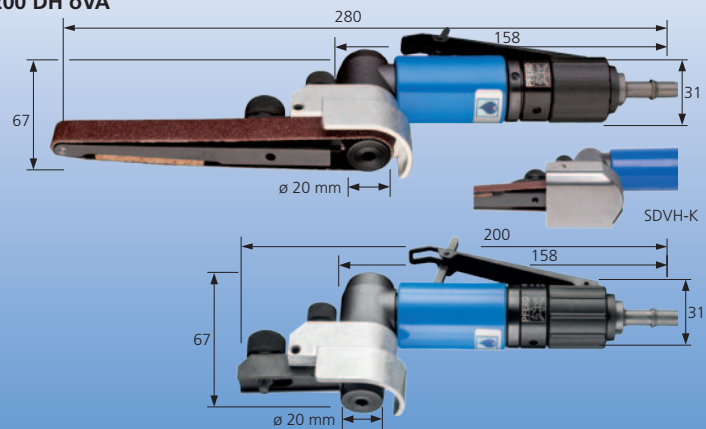
- Please order belt grinder attachment arm separately (see below)
- In-line fine filter recommended

Accessories included:

Hose nozzle, 3 keys, protective cover

### PBS 3/200 DH 99 PBS 3/200 DH oVA

Belt length 305 mm x width 3–12 mm



Description	EAN 4007220	Exhaust direction	Throttle type	Air con- sumption [m <sup>3</sup> /min]	Belt speed [m/s]	Power output [watts]	Air supply hose inner dia. [mm]	Net weight [kg]
PBS 3/200 DH 99	801857	front	ring/lever	0.35	21	220	8	0.575
PBS 3/200 DH 99 oVA	948781	front	ring/lever	0.35	21	220	8	0.500

### Keys



Description	EAN 4007220
SKS SW 3 mm	584538
SKS SW 5 mm	204467
EM SW 14 mm	206836

### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

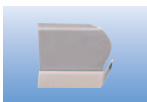
### In-line fine filter



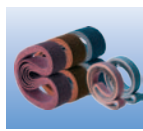
Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Protective cover



Description	EAN 4007220
SDVH-K	544938



For further information and ordering data on abrasive and non-woven short belts, please refer to Catalogue 204.

### Belt grinder attachment arms



- Robust steel design
- Use of the full roller width possible
- Extremely slim fixing lugs on the facing roller
- Asymmetrical arms for flush lateral grinding
- Belt arm guide can be fixed
- BSVAK 9/25-1 with conical guide roller (range 1 mm)

Description	EAN 4007220	Width x roll dia. [mm]	Suitable belt width [mm]	Suitable belt length [mm]	Net weight [kg]
BSVAK 9/25 x 305	544914	9 x 25	3, 6, 9, 12	305	0.083
BSVAK 9/25-1 x 305	544921	9 x 25	3, 6, 9, 12	305	0.082
BSVAK 4/16 x 305	544884	4 x 16	3, 6, 9	305	0.052
BSVAK 9/9 x 305	544891	9 x 9	9, 12	305	0.075
BSVAK 9/16 x 305	544907	9 x 16	9, 12	305	0.088

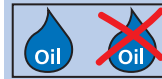
# Air grinders

## Belt grinders

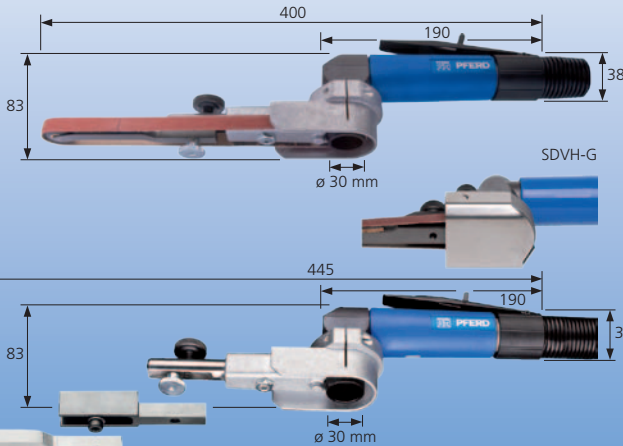


**PBSA 5/160 HV 925**  
**PBSA 5/160 HV oVA**

Belt lengths: 520 (610\*) mm x width 3–20 mm



Can be used with or without oil, 3 to 4 drops per minute.



- \*Belt length 610 mm x width 3–20 mm with adapter BSAD 41/36 x 610
- The belt grinder attachment can be pivoted on the drive

### PBSA 5/160 HV 925

- Including belt grinder attachment arm BSVA 9/25 x 520

### PBSA 5/160 HV oVA

- Please order belt grinder attachment arm separately (see below)
- In-line fine filter recommended

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose without nozzle, 1 key



Description	EAN 4007220	Exhaust direction	Throttle type	Air consumption [m³/min]	Belt speed [m/s]	Power output [watts]	Air supply hose inner dia. [mm]	Net weight [kg]
PBSA 5/160 HV 925	801963	rear	lever	0.63	20–25	370	8	1.250
PBSA 5/160 HV oVA	948804	rear	lever	0.63	20–25	370	8	1.150

### Keys

Description	EAN 4007220
SKS SW 4 mm	204450

### Connecting set

Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 24 STG-T8	809020

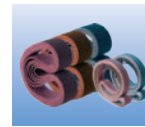
See page 56.

### Protective cover

Description	EAN 4007220
SDVH-G	956861

### Adapters

Description	EAN 4007220
BSAD 41/36 x 610	395967



For further information and ordering data on abrasive and non-woven short belts, please refer to Catalogue 204.

### Belt grinder attachment arms



- Robust steel design
- Use of the full roller width possible
- Extremely slim fixing lugs on the facing roller
- Asymmetrical arms for flush lateral grinding
- Belt arm guide can be fixed
- BSVA 9/25-1 with conical guide roller (range 1 mm)

Description	EAN 4007220	Width x roll dia. [mm]	Suitable belt width [mm]	Suitable belt length [mm]	Net weight [kg]
BSVA 9/25 x 520	323007	9 x 25	3, 6, 9, 12, 16	520, 610	0.095
BSVA 9/25-1 x 520	494288	9 x 25	3, 6, 9, 12	520, 610	0.095
BSVA 4/16 x 520	322987	4 x 16	6	520, 610	0.060
BSVA 9/16 x 520	322994	9 x 16	12	520, 610	0.096
BSVA 12/19 x 520	323014	12 x 19	12, 16	520, 610	0.107
BSVA 18/23 x 520	349267	18 x 23	20	520, 610	0.203



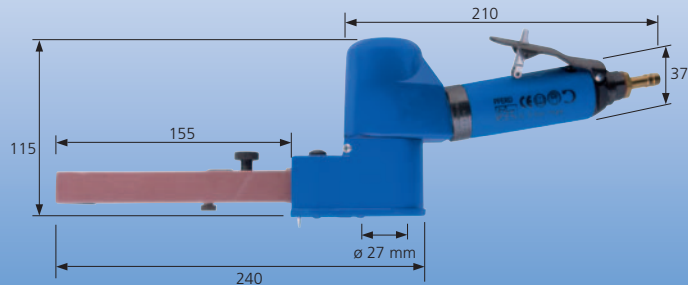
Use only with oil,  
3 to 4 drops per minute.

- **\*Belt length 610 mm** x width 6–12 mm with **belt grinder attachment arm BSA 5/155-4/16 or 9/16**
- The belt grinder attachment can be pivoted on the drive
- Balanced handling
- In-line fine filter recommended

Attachments included:  
Hose nozzle, 2 keys

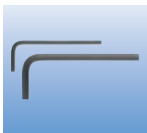
PBS 5/155 HV 824  
PBS 5/155 HV 1924  
PBS 5/155 HV 2324

Belt lengths: 480 (610\*) mm x width 6–25 mm



Description	EAN 4007220	Incl. belt arm	Exhaust direction	Throttle type	Air con- sumption [m <sup>3</sup> /min]	Belt speed [m/s]	Power output [watts]	Air supply hose inner dia. [mm]	Net weight [kg]
PBS 5/155 HV 824	792674	1	front	lever	0.60	21	370	8	1.390
PBS 5/155 HV 1924	792681	2	front	lever	0.60	21	370	8	1.390
PBS 5/155 HV 2324	792698	3	front	lever	0.60	21	370	8	1.390

### Keys



Description	EAN 4007220
SKS SW 3 mm	584538
SKS SW 5/32"	500439

### Connecting set



Description	EAN 4007220
AS 2	351116

See page 56.

### In-line fine filter



Description	EAN 4007220
SF 24 STG-T8	809020

See page 56.

### Belt grinder attachment arms

BSVA 5/155-8/24x480



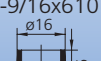
BSVA 5/155-4/16x610



BSVA 5/155-19/24x480



BSVA 5/155-9/16x610



BSVA 5/155-23/24x480



- Robust steel design
- Use of the full roller width possible
- Slim fixing lugs on the facing roller
- Asymmetrical arms for flush lateral grinding
- Belt arm guide can be fixed
- For further information and ordering data on abrasive and non-woven short belts, please refer to Catalogue 204

Description	EAN 4007220	Belt arm	Width x roll dia. [mm]	Suitable belt width [mm]	Suitable belt length [mm]	Net weight [kg]
BSVA 5/155-8/24x480	794098	1	8 x 24	6, 10, 12	480	0.070
BSVA 5/155-19/24x480	794081	2	19 x 24	16, 20	480	0.086
BSVA 5/155-23/24x480	794104	3	23 x 24	25	480	0.088
BSVA 5/155-4/16x610	808054	-	4 x 16	6	610	0.070
BSVA 5/155-9/16x610	801871	-	9 x 16	6, 10, 12	610	0.132

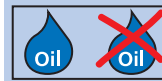
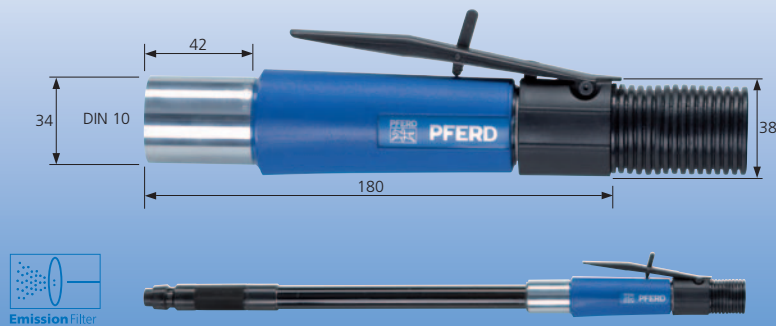
# Air grinders

Special drives for rigid extensions, handpieces



## PMAS 5/230 HV

Rotational speed with oil: 23,000 RPM / Output: 370 watts



Can be used with or without oil, 3 to 4 drops per minute.

- With oil: 18,000 RPM, power output 340 watts, no oil residues on the workpiece
- Drive motor for rigid extensions STV 20 or STV 27
- In-line fine filter recommended
- Exhaust direction: rear
- Throttle type: lever

Accessories included:  
0.75 m exhaust hose and 2 m air supply hose without nozzle, 2 keys

Description	EAN 4007220	Rotational speed [RPM]	Output	Air consumption [m <sup>3</sup> /min]	Connection coupling [DIN]	Air supply hose inner dia. [mm]	Matching extension	Net weight [kg]
PMAS 5/230 HV	263235	23,000	370	0.63	10	8	STV 20, STV 27	0.650

### Keys

Description	EAN
STS D 4 mm	205020

### Connecting set

Description	EAN
AS 2	351116

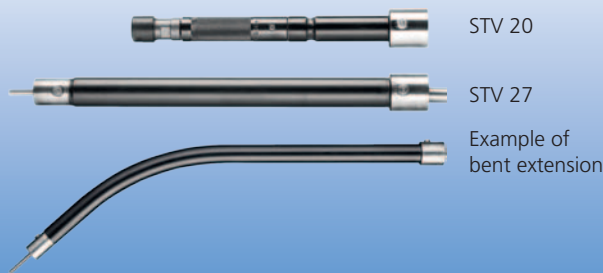
See page 56.

### In-line fine filter

Description	EAN
SF 24 STG-T8	809020

See page 56.

### Rigid extensions for air-power motors



Rigid extensions combined with air-power motors, provide the ideal solution for tough applications e.g. during cleaning or milling work on hard-to-reach workpieces in foundries. Rigid extensions are frequently used in series production. They are adapted exactly to the workpiece geometries. Other lengths and bending radii to meet customer requirements are available on request.

Description	EAN 4007220	Connection coupling [DIN]	Sliding coupling [G]	Dia. x length [mm]	Bending radius [mm]	Suitable arbors	Net weight [kg]
STV 20 L 200	272770	10	16/22	20 x 200	150	incl. HA 4 ZGA G16/22	0.400
STV 20 L 400	179604	10	16/22	20 x 400	150	incl. HA 4 ZGA G16/22	0.630
STV 20 L 600	179703	10	16/22	20 x 600	150	incl. HA 4 ZGA G16/22	0.890
STV 27 L 250	282137	10	22	27 x 250	250	HA 7 ZGA G22, WZ 7 B STV G22, WZ 7-45° STV G22	0.550
STV 27 L 500	179499	10	22	27 x 500	250	HA 7 ZGA G22, WZ 7 B STV G22, WZ 7-45° STV G22	0.930

### Handpieces



Description	EAN 4007220	Max. perm. speed [RPM]	Sliding coupling [G]	Dia. x length [mm]	Transmission ratio	Incl. collet dia. [mm]	Collet group	Net weight [kg]
HA 4 ZGA G16/22	247952	25,000	16/22	20 x 110	-	6	11	0.165
HA 7 ZGA G22	181928	25,000	22	27 x 130	-	6	11	0.320
WZ 7 B STV G22	334645	17,100	22	55 x 157	1.3 : 1	6	6	0.710
WZ 7-45° STV G22	334614	17,100	22	57 x 175	1.3 : 1	6	6	0.750





Use only with oil,  
6 to 7 drops per minute.

- Constant power delivery due to the centrifugal governor, except type PMAS 12/200 HV
- In-line fine filter recommended
- Exhaust direction: rear
- Throttle type: lever

Accessories included:

1.25 m exhaust hose and 3 m air supply hose without nozzle, 2 keys

PMAS 12/200 HV  
PMAS 12/120 HV  
PMAS 12/70 HV

Rotational speed: 20,000 min<sup>-1</sup> / Output: 1,000 Watt  
Rotational speed: 12,000 min<sup>-1</sup> / Output: 1,000 Watt  
Rotational speed: 7,000 min<sup>-1</sup> / Output: 1,000 Watt



Description	EAN 4007220	Rotational speed [RPM]	Output	Air consumption [m <sup>3</sup> /min]	Connection coupling [DIN]	Air supply hose inner dia. [mm]	Matching extension	Net weight [kg]
PMAS 12/200 HV	178058	20,000	1,000	1.30	10	12	STV 33	2.160
PMAS 12/120 HV	178034	12,000	1,000	0.60–1.30	10	12	STV 33	2.160
PMAS 12/70 HV	358122	7,000	1,000	0.60–1.30	10	12	STV 33	2.320

### Keys

Description	EAN 4007220
STS D 4 mm	205020

### Connecting set

Description	EAN 4007220
AS 4	351130

See page 56.

### In-line fine filter

Description	EAN 4007220
SF 30 STG 12 T12	809051

See page 56.

Rigid extensions combined with air-power motors provide the ideal solution for tough applications e.g. during cleaning or milling work on hard-to-reach workpieces in foundries.

Rigid extensions are frequently used in series production. They are adapted exactly to the workpiece geometries. Other lengths and bending radii are available to meet customer requirements on request.

### Rigid extensions for air-power motors



Description	EAN 4007220	Connection coupling [DIN]	Sliding coupling [G]	Dia. x length [mm]	Bending radius [mm]	Suitable arbors	Net weight [kg]
STV 33 L 250	179420	10	28	33 x 250	300	HA 10 ZGE, HA 12 ZGA, WZ 10 B STV, WZ 10-45° STV	1.025
STV 33 L 500	179468	10	28	33 x 500	300	HA 10 ZGE, HA 12 ZGA, WZ 10 B STV, WZ 10-45° STV	2.100
STV 33 L 1000	179758	10	28	33 x 1,000	300	HA 10 ZGE, HA 12 ZGA, WZ 10 B STV, WZ 10-45° STV	3.250

### Handpieces



Description	EAN 4007220	Max. perm. speed [RPM]	Sliding coupling [G]	Dia. x length [mm]	Transmission ratio	Incl. collet dia. [mm]	Collet group	Net weight [kg]
HA 10 ZGE G28	181966	18,000	28	33 x 170	-	6	11	0.515
HA 12 ZGA G28	181959	18,000	28	33 x 162	-	12	12	0.510
WZ 10 B STV G28	334638	17,100	28	55 x 156	1.3 : 1	6	6	0.805
WZ 10-45° STV G28	334621	17,100	28	57 x 184	1.3 : 1	6	6	0.845

# Air grinders

## Special drives, filing machine, marking pen



### Air-powered filing machine PFGA 07/220

Frequency: 22,000 strokes/min



Use only without oil.

- Light, easy to handle design
- In-line fine filter recommended

Accessories included  
0.32 m exhaust hose and 1.5 m air supply hose with 1/4" female threaded connection and threaded quick coupling (STG), 1 key and arbor

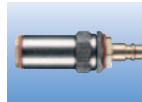
Description	EAN 4007220	Exhaust direction	Throttle type	Air con- sumption [m <sup>3</sup> /min]	Air supply hose inner dia. [mm]	Frequency [strokes/ min]	Stroke length [mm]	Net weight [kg]
PFGA 07/220	657638	rear	ring	0.05	4	22,000	0.7	0.180

#### Keys



Description	EAN 4007220
SKS SW 2,5 mm	785980

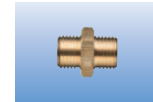
#### In-line fine filter



Description	EAN 4007220
SF 24 STG-IG 1/4	953259

See page 56.

#### Double nipple



Description	EAN 4007220
DN 1/4	178577

For further information and ordering data on ceramic fibre files, please refer to Catalogue 204.

For further information and ordering data on diamond files for air-powered filing machines, please refer to Catalogue 205.

### Marking pen MST 31

Frequency: 30,000–36,000 strokes/min



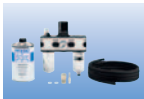
Use only with a little oil,  
1 drop every 5 minutes.

- Very high stroke frequency
- For applying markings and labels on metal, glass, plastics and on hardened tool steel (fine needle gauge)
- In-line fine filter recommended

Accessories included  
2 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STG), tungsten carbide engraving needle

Description	EAN 4007220	Needle gauge	Throttle type	Exhaust direction	Air con- sumption [m <sup>3</sup> /min]	Air supply hose inner dia. [mm]	Frequency [strokes/min]	Operation pressure [bar]	Net weight [kg]
MST 31 F	450314	F (fine)	ring	front	0.03	4	30,000–36,000	6–7	0.150
MST 31 M	450079	M (medium)	ring	front	0.03	4	30,000–36,000	6–7	0.150
MST 31 G	450307	G (coarse)	ring	front	0.03	4	30,000–36,000	6–7	0.150

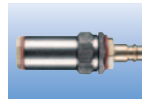
#### Connecting set



Description	EAN 4007220
AS 1	351109

See page 56.

#### In-line fine filter



Description	EAN 4007220
SF 24 STG-IG 1/4	953259

See page 56.

#### Replacement TC engraving needles for marking pens



Description	EAN 4007220	Needle gauge	Net weight [kg]
HM-GN MST 31 F	455722	F (fine)	0.003
HM-GN MST 31 M	455753	M (medium)	0.003
HM-GN MST 31 G	455760	G (coarse)	0.003

### How to choose the correct connection fittings for your air grinder

In general, PFERD air grinders with "rear exhaust" are supplied with air supply and exhaust hose.

Air grinders with "front exhaust" are generally supplied with fixed screw-on nozzles, matching the required inner dia. of the air hose.

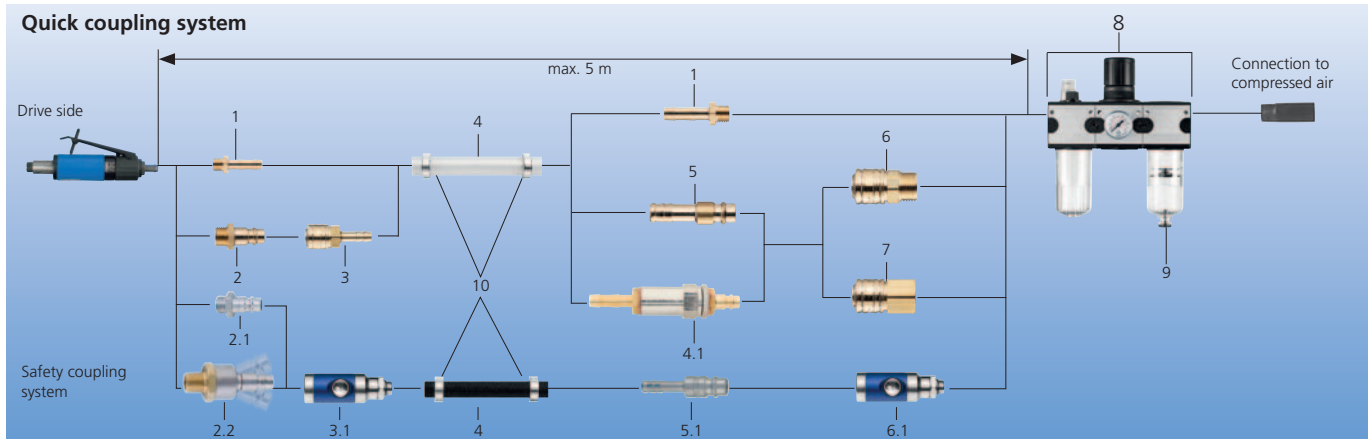
Some accessories can be used with several drives; they have been sorted into the groups 1–5. Please refer to the tables for the description of the matching accessory parts.

#### Connecting sets

The complete connection sets AS 1–4 for the individual air grinders are allocated in the table below. Please refer to the table on page 52 for the connection set contents.

Cat. page	Drive		Use		Air consumption [m³/min]	Exhaust direction		Air supply hose inner dia. [mm]	Air supply and exhaust hose supplied		Con-necting set no.	Drive group p. 56
			with oil	with-out oil		front	rear		Supply air	Exhaust air		
<b>Straight grinders</b>												
9	PGT 1/1000	100,000 RPM	-	•	0.17	•	-	5	•	-	1	1
10	PGAS 2/800 E	80,000 RPM	•	-	0.29–0.31	-	•	5	•	•	1	1
11	PGAS 1/750	75,000 RPM	•	-	0.20	-	•	5	•	•	1	1
12	PGAS 1/700	70,000 RPM	•	-	0.20	-	•	5	•	•	1	1
13	PGTA 3/700 (with oil)	70,000 RPM	•	•	0.25–0.80	-	•	8	•	•	2	5
14	PGAS 1/600	60,000 RPM	•	-	0.20	-	•	5	•	•	1	1
15	PGAS 1/550	55,000 RPM	•	-	0.12	-	•	5	•	•	1	1
16	PG 3/500 S	50,000 RPM	•	-	0.45	•	-	8	-	-	2	5
16	PGAS 3/500 HV	50,000 RPM	•	-	0.45	-	•	8	•	•	2	5
17	PGAS 3/440 DH	44,000 RPM	•	-	0.35	-	•	8	•	•	2	5
17	PGZA 3/440 SU	44,000 RPM	•	-	0.35	-	•	8	•	•	2	5
17	PGZA 3/440	44,000 RPM	•	-	0.35	-	•	8	•	•	2	5
18	PG 3/380 DH	38,000 RPM	•	-	0.35	•	-	8	-	-	2	5
19	PGAS 4/350 E	35,000 RPM	•	-	0.45	-	•	8	•	•	2	5
20	PGAS 5/280 HV	28,000 RPM	•	-	0.60	-	•	8	•	•	2	5
21	PG 3/250 S	25,000 RPM	•	-	0.21–0.49	•	-	8	-	-	2	5
22	PGAS 7/250 E-HV	25,000 RPM	•	-	0.72	-	•	8	•	•	2	5
23	PGAS 5/230 HV (with oil)	23,000 RPM	•	•	0.63	-	•	8	•	•	2	5
23	PGAS 5/230 VE-HV (with oil)	23,000 RPM	•	•	0.63	-	•	8	•	•	2	5
24	PG 8/220 HV	22,000 RPM	•	-	0.85	•	-	9	-	-	3	2
24	PGAS 8/220 HV	22,000 RPM	•	-	0.85	-	•	9	•	•	3	2
24	PG 8/220 V-HV	22,000 RPM	•	-	0.85	•	-	9	-	-	3	2
24	PGAS 8/220 VS-HV	22,000 RPM	•	-	0.85	-	•	9	•	•	3	2
25	PG 3/210 DH	21,000 RPM	•	-	0.48	•	-	8	-	-	2	5
26	PGAS 10/200 V-HV	20,000 RPM	•	-	1.20	-	•	9	•	•	3	2
27	PGAS 5/180 HV	18,000 RPM	•	-	0.30–0.60	-	•	8	•	•	2	5
27	PGAS 5/180 VE-HV	18,000 RPM	•	-	0.30–0.60	-	•	8	•	•	2	5
28	PGAS 9/180 V-HV (with oil)	18,000 RPM	•	•	0.90	-	•	9	•	•	3	2
29	PG 8/160 HV	16,000 RPM	•	-	0.34–0.85	•	-	9	-	-	3	2
29	PGAS 8/160 VM-HV	16,000 RPM	•	-	0.34–0.85	-	•	9	•	•	3	2
30	PGAS 10/160 V-HV	16,000 RPM	•	-	1.20	-	•	9	•	•	3	2
31	PGAS 9/120 V-HV (with oil)	12,000 RPM	•	•	0.40–0.90	-	•	9	•	•	3	2
32	PGAS 12/120 V-HV	12,000 RPM	•	-	1.30	-	•	12	•	•	4	4
33	PG 8/100 HV	10,000 RPM	•	-	0.17–0.85	•	-	9	-	-	3	2
33	PGAS 8/100 HV	10,000 RPM	•	-	0.17–0.85	-	•	9	•	•	3	2
33	PG 8/100 V-HV	10,000 RPM	•	-	0.17–0.85	•	-	9	-	-	3	2
33	PGAS 8/100 V-HV	10,000 RPM	•	-	0.17–0.85	-	•	9	•	•	3	2
33	PGAS 8/100 VM-HV	10,000 RPM	•	-	0.17–0.85	-	•	9	•	•	3	2
34	PGAS 12/70 V-HV	7,000 RPM	•	-	1.30	-	•	12	•	•	4	4
35	PG 8/50 V-HV	5,000 RPM	•	-	0.85	•	-	9	-	-	3	2
36	PGAS 10/40 V-HV	4,000 RPM	•	-	1.20	-	•	9	•	•	3	2
<b>Angle grinders</b>												
37	PWS 1/800	80,000 RPM	•	-	0.18	-	•	5	-	-	1	1
38	PWSA 1/250	25,000 RPM	•	-	0.20	-	•	5	•	•	1	1
39	PWSA 5/210 HV	21,000 RPM	•	-	0.60	-	•	8	•	•	2	5
40	PWSA 3/200 DH	20,000 RPM	•	-	0.35	•	-	8	-	-	2	5
40	PWAS 3/220 DH	22,000 RPM	•	-	0.46	-	•	8	•	•	2	5
41	PWSA 4/200 HV	20,000 RPM	•	-	0.57	-	•	9	•	•	3	5
42	PWSA 5/170-45 HV (with oil)	17,000 RPM	•	•	0.63	-	•	8	•	•	2	5
43	PWSA 5/160 HV (with oil)	16,000 RPM	•	•	0.63	-	•	8	•	•	2	5
44	PWSA 5/130 HV (with oil)	13,000 RPM	•	•	0.30–0.60	-	•	8	•	•	2	5
45	PW 3/120 DH	12,000 RPM	•	-	0.35	•	-	8	-	-	2	5
46	PWAS 9/120 HV (with oil)	12,000 RPM	•	•	0.90	-	•	9	•	•	3	2
47	PWAS 13/120 AVH	12,000 RPM	•	-	0.90	-	•	12	•	•	4	4
48	PWSA 4/45 HV	4,500 RPM	•	-	0.50	-	•	8	•	•	2	5
48	PWAS 4/45 HV-CD	4,500 RPM	•	-	0.50	-	•	8	•	•	2	5
<b>BelT grinders</b>												
49	PBS 3/200 DH 99	21 m/s	•	-	0.35	•	-	8	-	-	2	5
50	PBSA 5/160 HV 925	20–25 m/s	•	•	0.63	-	•	8	•	•	2	5
51	PBS 5/155 HV 824	21 m/s	•	-	0.60	•	-	8	-	-	2	5
<b>Special drives</b>												
52	PMAS 5/230 HV (with oil)	23,000 RPM	•	•	0.63	-	•	8	•	•	2	5
53	PMAS 12/200 HV	20,000 RPM	•	-	1.30	-	•	12	•	•	4	4
53	PMAS 12/120 HV	12,000 RPM	•	-	0.60–1.30	-	•	12	•	•	4	4
53	PMAS 12/70 HV	7,000 RPM	•	-	0.60–1.30	-	•	12	•	•	4	4
54	MST 31 F, M, G	30,000–36,000 Strokes/min	•	-	0.03	•	-	4	•	-	1	3
54	PFGA 07/220	22,000 Strokes/min	-	•	0.05	-	•	4	•	•	-	3

The **fittings** required to connect the air grinders are shown in the table below.



Drive group					Quick coupling system description and dimensions	EAN 4007220	Connecting set				Safety coupling system description	EAN 4007220	
1	2	3	4	5			1	2	3	4			
					<b>Pos. 1 Hose nozzle (supplied with the drive)</b>								
					TG 6 1/8	178362							
					TG 8 1/4	178379							
					TG 9 1/4	178409							
					<b>Pos. 2 Threaded quick coupling</b>								
					STG 1/8	178300							
					STG 1/4	178324							
					<b>Pos. 3 Self-closing valve coupling with hose nozzle</b>								
					VKT 6	178195							
					VKT 8	178201							
					VKT 9	178218							
					<b>Pos. 4 Air hose</b>								
					PLS 5	178461							
					PLS 6	178478							
					PLS 8	178485	3 m						
					PLS 9	178492		3 m					
					PLS 12	178508			3 m				
					Air hose for particularly harsh conditions on request.								
					<b>Pos. 4.1 In-line fine filter</b> (pore size: 5 µm)								
					SF 24 STG-T5	957103							
					SF 24 STG-T8	809020							
					SF 24 STG-T9	809044							
					SF 24 STG-IG 1/4	953259							
					SF 30 STG T12	809051							
					<b>Pos. 5 Nipples for quick coupling</b>								
					T 4	179208							
					T 5	179390							
					T 6	178331	1*						
					T 8	178522		1*					
					T 9	178386			1*				
					T 12 NW 12	178423				1*			
					<b>Pos. 6 Self-closing valve coupling with male thread</b>								
					VKA 1/4	178232		1*					
					VKA 1/2	178256			1*	1*			
					VKA 1/2 NW 12	178249				1*			
					<b>Pos. 7 Self-closing valve coupling with female thread</b>								
					VKI 1/4	178270							
					VKI 1/2	178287							
					<b>Pos. 8 Complete oil mist devices (filter 5 µm)</b>								
					ONG-A 1/4	801741		1*					
					ONG-A 1/2	801765			1*	1*	1*		
					Special lubricating oil 1L ONG OEL (see page 110)	179338		1*	1*	1*	1*		
					Special lubricating oil 5L ONG OEL (see page 110)	179321							
					<b>Pos. 9 Lubricator, loose</b>								
					OE-A 1/4	801772							
					OE-A 1/2	801789							
					<b>Pos. 10 Hose clamps</b>								
					K 9	178539							
					K 13	178546	2*	2*					
					K 16	178553			2*				
					K 20	204801				2*			
					<b>Connecting set</b>								
					AS 1	351109		•					
					AS 2	351116			•				
					AS 3	351123				•			
					AS 4	351130					•		

● = Matching accessories, dia. = The information refers to the inner dia. of the air hose in [mm].

\* Pieces per set





# Electric grinders

## General information

Electric tool drives are universal all-rounders. They offer a high power output in relation to their size and weight. They are particularly suitable for use with grinding tools that require a constant rotational speed.

### Areas of application

Electric grinders can be used for nearly every application. They are used in many industries for different processes. The stepless rotational speed adjustment allows the use of various types of tools on one single tool drive.

Electric grinders are not suitable for use

- in boiler construction
- in very dusty conditions (especially work on aluminium).

### Advantages

- Compact, ergonomic design
- Low weight
- Technically tried and tested
- High power output
- Universally usable
- Simple power supply
- Low maintenance
- Easy to service
- Economical

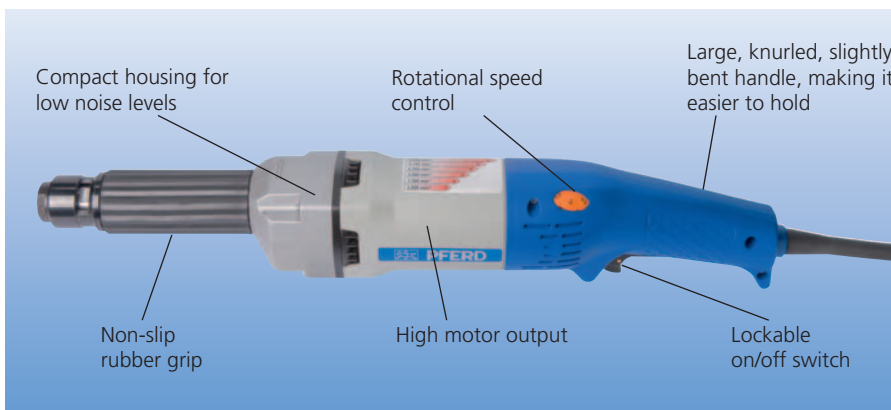
### The PFERD product range

PFERD provides a wide range of electric grinders: Straight grinders, angle grinders and belt grinders, as well as drum grinders and fillet weld grinders. PFERD electric grinders are of the highest technological standards and accord with the latest ergonomic knowledge and requirements. They were specially developed for economic use of grinding, milling, brushing, cut-off and polishing tools, and cover a wide rotational speed range (750–33,000 RPM) and power outputs (500–1,750 Watts). PFERD electric grinders have an electronic speed control for constant rotational speed values.



### Equipment/special features

- **Smooth start-up:**  
The electronically-regulated smooth start-up ensures a jolt-free start-up of the drive.
- **Undervoltage protection/ restart protection:**  
Should the power supply fail, PFERD electric grinders do not start up again inadvertently. The drive will only restart after it has been switched off and on again.
- **Current limiting/blocking protection:**  
On double nominal current input, the grinders switch off for approximately 0.2 seconds. By removing the load, the grinder is able to take up the initial rotational speed again.
- **Temperature overload protection:**  
When a critical temperature is reached, the safety electronic system switches into cooling mode. The drive cannot be placed under loads when in cooling mode. The drive will only start at the set operating speed after it has been switched on and off.



### Standards, safety, general guidelines

- PFERD electric grinders
- bear the CE mark,
  - are insulated and comply with protection class II.



- PFERD electric grinders comply with the
- EC Machinery Directive,
  - EC Low-Voltage Directive and
  - Electromagnetic Compatibility.

National regulations must be observed.

### Criteria for selecting the optimum electric grinder



The most important prerequisite for cost-effective work is the selection of the optimum tool. The appropriate tool drive is selected taking the following criteria into consideration:

#### 1. Design, shape and size

Each type of application places specific demands on the shape and size of the tool drive. The different designs can be used for various applications: The ideal tool drive should be selected for the task at hand depending on the dimensions, accessibility, type and frequency of the application.

#### 2. Rotational speed

The tool drive should always be selected according to the rotational speed and cutting speed recommendations for the tool. Please refer to Catalogues 202–208 for these recommendations.

#### 3. Power output

The tool drive's power output is the decisive factor for maintaining the RPM under load. The load is determined by the material to be machined, the cutting characteristics of the tool and the contact pressure.

#### 4. Mounting types

Depending on the PFERD tool selected, different mounting types are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to pages 106–108 for an overview of collets and spindle extensions.

If you have any further questions, your personal PFERD sales representative will be happy to help you.

### Special features

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

Accessories included:

3 m power cable, 6 mm collet, 2 keys

### UGER 11/330 SI

Rotational speed: 33,000 RPM / Output: 1,050 watts



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 11/330 SI 230 V	777367	15,000–33,000	230	1,050	650	8	2.250

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	1/4 inch	3/8 inch
EAN 4007220					
8	213674	213704	213711	213681	213728

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 18 mm	206843

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO Dia. 4 to 16 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST, EDGE</b> Dia. 6 to 16 mm  <b>HSS rotary cutters</b> <b>Special cuts</b> Dia. up to 3.2 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 50 mm Width ≤ 70 mm	<b>Poliflex® fine grinding points</b> Dia. 6 to 25 mm  <b>Abrasive spiral bands and rubber drum holders</b> Dia. 4 to 38 mm  <b>POLICAP®</b> Dia. 7 to 13 mm  <b>POLIROLL®/POLICO®</b> Dia. 6 to 12 mm  <b>Mounted flap wheels</b> Dia. 15 to 25 mm  <b>Felt points</b> Dia. 6 to 12 mm	<b>Diamond grinding points</b> Dia. 6.0 to 20.0 mm  <b>CBN grinding points</b> Dia. 9.0 to 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 to 55 mm  <b>Ring wheels ER</b> Dia. 50 to 55 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>	<b>End brushes</b> crimped PBU dia. 10 to 12 mm  knotted PBG dia. 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 30 mm  knotted RBG dia. 70 mm RBGIT dia. 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



# Electric grinders

## Straight grinders



UGER 5/250 SI

Rotational speed: 25,000 RPM / Output: 500 watts



### Special features

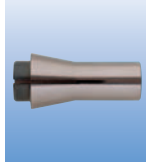
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Very easy-to-handle machine

Accessories included:

3 m power cable, 6 mm collet, 2 keys

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 5/250 SI 230 V	265581	11,000–25,000	230	500	300	11	1.350

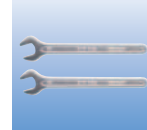
### Collets



Group	For shank dia.				
	3 mm	6 mm	8 mm	1/8 inch	1/4 inch
	EAN 4007220				
11	196236	196281	196304	196335	196328

For dimensions see pages 106–107.

### Keys



Description	EAN 4007220
EM SW 14 mm	206836
EM SW 18 mm	206843

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burrs</b> <b>Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO</b> Dia. 6 to 20 mm  <b>Cut 1, ALU, FVK, FVKS, PLAST, EDGE</b> Dia. 6 to 16 mm  <b>HSS rotary cutters</b> <b>Cut 1, 3 and special cuts</b> Dia. up to 4 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 50 mm Width ≤ 70 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. up to 50 mm  <b>POLICAP®</b> Dia. up to 16 mm  <b>POLIROLL®</b> Dia. roll to 15 mm  <b>Mounted flap wheels</b> Dia. up to 30 mm  <b>Poliflex® fine grinding points</b> Dia. 8 to 25 mm  <b>POLINOX® cross buffs</b> Dia. up to 38 mm  <b>Felt points</b> Dia. up to 15 mm	<b>Diamond grinding points</b> Dia. 6.0 to 25.0 mm  <b>CBN grinding points</b> Dia. 12.0 to 25.0 mm  <b>Diamond cut-off wheels</b> Dia. 22 to 50 mm  matching <b>arbors</b> <b>BO 3/1.7 1</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 to 55 mm  matching <b>arbor</b> <b>BO 6/6 0-4</b>  <b>Ring wheels ER</b> Dia. 50 to 55 mm  matching <b>arbor</b> <b>BO 6/6 3-10</b>	<b>End brushes</b> crimped PBU dia. 10 to 20 mm  knotted PBG dia. 19 to 23 mm  <b>Wheel brushes</b> crimped RBU dia. 20 to 30 mm  knotted RBG dia. 70 mm RBGIT dia. 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



### Special features

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

Accessories included:

3 m power cable, 6 mm collet, 2 keys

### UGER 15/150 SI

Rotational speed: 15,000 RPM / Output: 1,530 watts



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 15/150 SI 230 V	801864	6,800–15,000	230	1,530	1,050	12	3.050

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	12 mm	1/4 inch
	EAN 4007220				
12	195994	196014	196038	196045	196052

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 22 mm	206850

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
<b>TC burs</b> Cut 3, 3 PLUS, 4, 5, STEEL, INOX, NON-FERROUS, CAST, TOUGH, TOUGH-S, MICRO, EDGE Dia. 12 to 20 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 5 to 7 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 50 mm Width ≤ 70 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. 30 to 75 mm  <b>Mounted flap wheels</b> Dia. 25 to 50 mm  <b>POLINOX® mounted grinding wheels</b> Dia. up to 40 mm  <b>POLICLEAN® tools</b> Dia. up to 50 mm  <b>Poliflex® fine grinding points</b> <b>Poliflex® fine grinding discs</b> Dia. 10 to 30 mm  <b>POLIROLL®</b> Dia. up to 18 mm	<b>Diamond grinding points</b> Dia. 10 to 25 mm  <b>CBN grinding points</b> Dia. 20,0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cut-off wheels EHT</b> Dia. 50 to 55 mm  matching <b>arbors</b> <b>BO 6/6 0-4</b> <b>BO 6/10 0-4</b> <b>BO 8/10 0-4</b>  <b>Ring wheels ER</b> Dia. 50 to 55 mm  matching <b>arbors</b> <b>BO 6/6 3-10</b> <b>BO 8/10 6-20</b>	<b>End brushes</b> crimped PBU dia. 10 to 30 mm  knotted PBG dia. 19 to 30 mm  <b>Wheel brushes</b> crimped RBU dia. 20 bis 70 mm  knotted RBG dia. 70 to 100 mm  <b>Shank mounted bevel brushes</b> KBU dia. 50 to 70 mm KBUIT dia. 50 to 70 mm

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





# Electric grinders

## Straight grinders



UGER 5/90 SI

Rotational speed: 9,000 RPM / Output: 500 watts



### Special features

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Particularly suitable for POLINOX® and POLIVLIES® tools

Accessories included:  
3 m power cable, 6 mm collet, 2 keys

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 5/90 SI 230 V	267332	4,000–9,000	230	500	300	11	1.440

### Collets

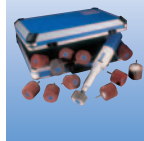
Group	For shank dia.				
	3 mm	6 mm	8 mm	1/8 inch	1/4 inch
	EAN 4007220				
11	196236	196281	196304	196335	196328

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 14 mm	206836
EM SW 18 mm	206843

### POLINOX® set PNL/Z/R 6050 UGER 5/90 230 V



For further information and ordering data on POLINOX® set, please refer to Catalogue 204.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 208	
<b>TC burs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, TOUGH, TOUGH-S, EDGE Dia. 16 to 20 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 7 to 10 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 50 mm Width ≤ 70 mm	<b>Poliflex® fine grinding points</b> Bond: PUR Dia. 15 to 50 mm  <b>Poliflex® mounted texturing points PU-STRUC</b> Dia. up to 32 mm  <b>POLIROLL® grinding rolls</b> Dia. 18 mm  <b>POLISTAR</b> Dia. 30 to 50 mm  <b>POLINOX® mounted grinding wheels</b> <b>POLINOX® unitized wheels PNER</b> Dia. up to 50 mm	<b>Overlap slotted discs</b> Dia. 30 to 50 mm  <b>POLINOX® cross buffs</b> Dia. up to 38 mm  <b>POLICLEAN® mounted tools</b> Dia. up to 50 mm  <b>Felt points</b> <b>Mounted felt flap wheels</b> Dia. 30 to 50 mm  <b>Felt wheels</b> Dia. up to 45 mm  <b>Mounted flap wheels</b> Dia. up to 50 mm	<b>Diamond grinding points</b> Dia. 12.0 to 20.0 mm  <b>CBN grinding points</b> Dia. 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 22 to 50 mm  matching arbors <b>BO 3/1,7 1</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>End brushes</b> crimped PBUR dia. 12 to 25 mm  knotted PBGs dia. 10 to 12 mm  <b>Shank mounted bevel brushes</b> KBU dia. 50 mm  <b>Shank mounted cup brushes</b> TBU dia. 50 mm especially with INOX, brass and SiC filaments  <b>Wheel brushes</b> crimped RBU dia. 50 mm  matching arbor <b>BO 8/12-22.2 5-18</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



### Special features

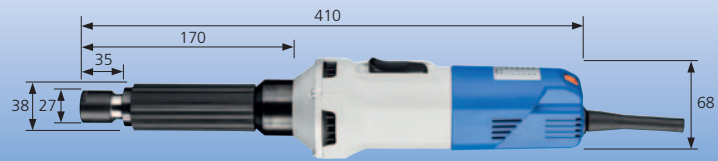
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

Accessories included:

3 m power cable, 6 mm collet, 2 keys

### UGER 11/90 SI

Rotational speed: 9,000 RPM / Output: 1,050 watts



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 11/90 SI 230 V	948842	3,800–9,000	230	1,050	650	12	2.370

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	12 mm	1/4 inch
	EAN 4007220				
12	195994	196014	196038	196045	196052

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 19 mm	956878
EM SW 22 mm	206850

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 208
<b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, TOUGH, TOUGH-S, EDGE Dia. 16 to 25 mm  <b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 7 to 10 mm	<b>Mounted points</b> Dia. 16 mm  Dia. up to 50 mm Width ≤ 70 mm  <b>Catalogue 204*</b>  <b>Abrasive spiral bands and rubber drum holders</b> Dia. 100 mm  <b>Poliflex® fine grinding points</b> Bond: <b>PUR</b> Dia. 15 to 50 mm  <b>Poliflex® mounted texturing points PU-STRUC</b> Dia. 32 mm  <b>POLIROLL® grinding rolls</b> Dia. 18 mm  <b>Unmounted flap wheels</b> Dia. up to 100 mm  <b>POLISTAR</b> Dia. 30 to 50 mm	<b>POLINOX® mounted grinding wheels</b> Dia. up to 80 mm  <b>POLINOX® unitized wheels PNER</b> Dia. up to 75 mm  <b>Overlap slotted discs</b> Dia. 30 to 50 mm  <b>POLINOX® cross buffs</b> Dia. up to 38 mm  <b>POLICLEAN® mounted tools</b> Dia. up to 75 mm  <b>POLICLEAN® wheels</b> Dia. up to 100 mm  <b>Felt points</b> <b>Mounted felt flap wheels</b> Dia. 30 to 50 mm  <b>Felt wheels</b> Dia. up to 60 mm  <b>Mounted flap wheels</b> Dia. up to 80 mm	<b>Diamond grinding points</b> Dia. 20.0 mm  <b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>End brushes</b> crimped PBUR dia. 12 to 25 mm  knotted PBGS dia. 10 to 12 mm  <b>Shank mounted bevel brushes</b> KBU dia. 50 to 100 mm  <b>Shank mounted cup brushes</b> TBU dia. 50 mm especially with INOX, brass and SiC filaments  <b>Shank mounted wheel brushes</b> crimped RBU dia. 50 to 100 mm  <b>Wheel brushes narrow face</b> crimped RBU dia. 100 mm  matching <b>arbor</b> <b>BO 8/12-22.2 5-18</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

# Electric grinders

## Straight grinders



UGER 15/60 SI

Rotational speed: 5,900 RPM / Output: 1,530 watts



### Special features

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

Accessories included:

3 m power cable, 12 mm collet, 2 keys

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 15/60 SI 230 V	777251	2,800–5,900	230	1,530	1,050	12	3.050

### Collets

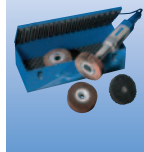
Group	For shank dia.				
	6 mm	8 mm	10 mm	12 mm	1/4 inch
EAN 4007220					
12	195994	196014	196038	196045	196052

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 22 mm	206850

### Flap wheel set FR 15030 UGER 15/60 230 V



For further information and ordering data on flap wheel set, please refer to Catalogue 204.

### Suitable PFERD tools

Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 208
<b>HSS rotary cutters Cut ALU, 1, 2, 3</b> Dia. 10 to 16 mm	<b>Mounted points Hardness D</b> Dia. 16 mm  Dia. up to 40 mm Width ≤ 32 mm	<b>Abrasive spiral bands and rubber drum holders</b> Dia. 75 to 100 mm  <b>Mounted flap wheels</b> Dia. 60 to 80 mm  <b>Unmounted flap wheels</b> Dia. 100 mm  Dia. 150 mm Width 30 mm  <b>Poliflex® mounted texturing points PU-STRUC</b> Dia. 20 to 100 mm	<b>POLINOX® mounted grinding wheels</b> Dia. 50 to 100 mm  <b>POLINOX® unitized wheels PNER</b> Dia. 75 to 100 mm  <b>POLICLEAN® mounted tools</b> Dia. up to 100 mm  <b>POLICLEAN® wheels</b> Dia. up to 100 mm	<b>Diamond cut-off wheels</b> Dia. 30 to 50 mm  matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>  <b>Shank mounted wheel brushes</b> crimped RBU dia. 80 to 100 mm  <b>Wheel brushes</b> crimped RBU narrow face type Dia. 100 to 150 mm  RBU universal type Dia. 100 to 150 mm  matching <b>arbors</b> <b>BO 8/12-22.2 5-18</b> <b>BO 8/22.2 5-10</b> <b>BO 12/22.2 10-30</b>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogues 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

### Special features

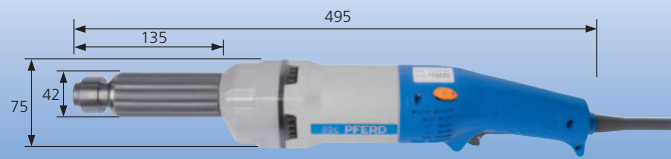
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

Accessories included:

3 m power cable, 12 mm collet, 2 keys

### UGER 15/30 SI

Rotational speed: 3,000 RPM / Output: 1,530 watts



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Collet group	Net weight [kg]
UGER 15/30 SI 230 V	775912	750–3,000	230	1,530	1,050	12	3.050

### Collets

Group	For shank dia.				
	6 mm	8 mm	10 mm	12 mm	1/4 inch
EAN 4007220					
12	195994	196014	196038	196045	196052

For dimensions see pages 106–107.

### Keys

Description	EAN 4007220
EM SW 22 mm	206850

### POLIFLAP® set PFL 17060 UGER 15/30 230 V

For further information and ordering data on POLIFLAP® set, please refer to Catalogue 204.

### Suitable PFERD tools

Catalogue 202	Catalogue 204	Catalogue 204*	Catalogue 205	Catalogue 208
<b>HSS rotary cutters</b> Cut 1, 2, 3 Dia. 16 mm	<b>Unmounted flap wheels</b> Dia. 150 to 165 mm <b>POLINOX® mounted grinding wheels</b> Dia. 100 mm <b>POLINOX® unmounted grinding wheels</b> Dia. 150 mm <b>POLICLEAN® wheels</b> Dia. 100 to 150 mm	<b>POLIFLAP® grinding wheel</b> Dia. 170 mm <b>Cloth rings</b> Dia. 200 mm <b>Mounted felt flap wheels</b> Dia. 50 to 80 mm	<b>Diamond cut-off wheels</b> Dia. 50 mm matching <b>arbors</b> <b>BO 6/10 3</b> <b>BO 8/10 3</b>	<b>Cup brushes</b> crimped TBU dia. 60 mm <b>Wheel brushes</b> crimped RBU dia. 100 mm RBU dia. 150 mm arbor hole dia. 22.2 mm RBU dia. 150 mm arbor hole dia. 12 mm matching <b>arbor</b> <b>BO 8/12-22.2 5-18</b>

If no shank diameter is given, the shank dia. of 6 mm applies.



# Electric grinders

## Angle grinders



UWER 5/200 SI 

Rotational speed: 20,000 RPM / Output: 500 watts



### Special features

- Special spindle for mounting COMBIDISC tools® (use backing pad without shank)
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Very easy-to-handle machine

Accessories included:  
3 m power cable, 1 key

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Spindle thread	Net weight [kg]
UWER 5/200 SI 230 V	598436	9,000–20,000	230	500	300	1/4-20 UNC	1.350

### Keys



Description	EAN 4007220
EM SW 14 mm	206836

### Extension for drive spindle



Description	EAN 4007220	Use for
SPV 20 CD 1/4-20 UNC	333167	COMBIDISC® abrasive disc holder without threaded shank



**COMBIDISC® set  
CD 50 UWER 5/200 230 V**  
For further information and ordering data on COMBIDISC® set, please refer to Catalogue 204.

### Suitable PFERD tools

Catalogue 204		
COMBIDISC® Mini-POLIFAN®	COMBIDISC® non-woven discs	matching
COMBIDISC® abrasive discs	COMBIDISC® TX discs	COMBIDISC® arbor
COMBIDISC® diamond abrasive discs	COMBIDISC® felt discs	
COMBIDISC® POLICLEAN® discs	COMBIDISC® brush	
Dia. 20 to 55 mm	Dia. 20 to 55 mm	


**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



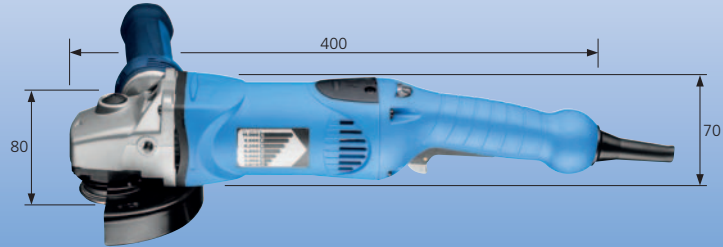
### Special features

- Max. tool diameter 115 mm
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection with anti-kickback function
- Restart protection in case of power failure
- Lateral anti-vibration handle
- Smooth start-up for protection of people, tools and drive
- Lockable on-off switch
- Spindle lock pin
- Quick-mounting nut

Accessories included:  
4 m power cable, 1 key, clamping flanges, guard and lateral handle

UWER 18/120 SI 

Rotational speed: 11,500 RPM / Output: 1,750 watts



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Spindle thread	Tool mounting centre hole dia. [mm]	Net weight [kg]
UWER 18/120 SI 230 V	957110	2,800–11,500	230	1,750	1,150	M14	22.23	2.800

### Clamping flanges

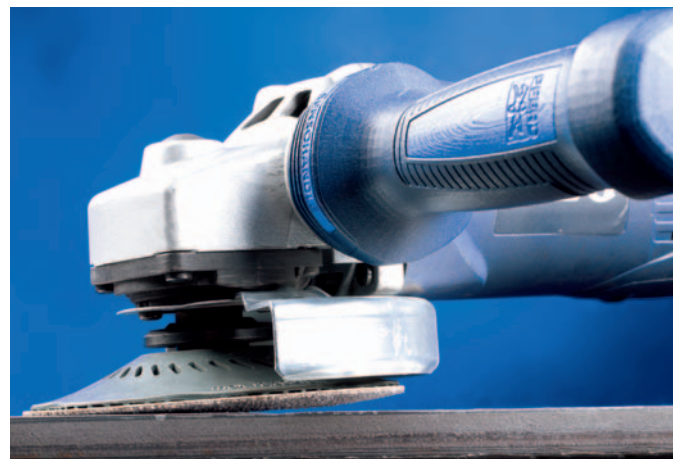
Description	EAN 4007220
SPF 98970043	853115
SSM 98970042	853108

### Keys

Description	EAN 4007220
STL SW 35 x 5 mm	193853

Catalogue 204	Catalogue 205	Catalogue 206	Catalogue 208
<b>Velcro-backed abrasive discs</b> <b>Fibre discs</b> <b>COMBICLICK® tools</b> <b>POLICLEAN® discs</b> <b>Self-adhesive discs</b> <b>Unmounted flap wheels for angle grinders</b> Dia. 115 mm	<b>Diamond cut-off wheels</b> Dia. 115 mm	<b>Reinforced grinding wheels</b> <b>CC-GRIND®-SOLID grinding discs</b> <b>POLIFAN® flap discs</b> <b>Cut-off wheels</b> <b>Diamond cut-off wheels</b> Dia. 115 mm	<b>Wheel brushes</b> crimped RBU dia. 115 mm M14 knotted RBG dia. 115 mm arbor hole dia. 22.2 mm and type M14 <b>Bevel brushes</b> crimped KBU dia. 115 mm M14 knotted KBG dia. 115 mm M14
			<b>Cup brushes</b> crimped TBU dia. 60 to 75 mm M14 knotted TBG dia. 65 bis 80 mm M14 <b>Composite disc brushes</b> DBUR dia. 75 mm

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.





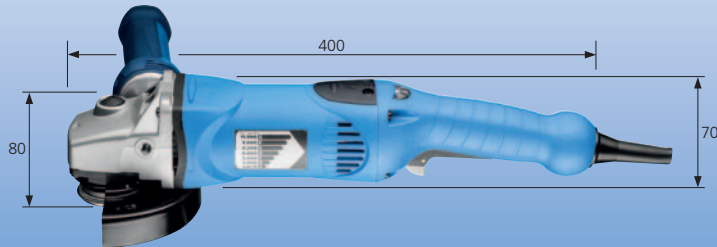
# Electric grinders

## Angle grinders



UWER 18/110 SI

Rotational speed: 11,000 RPM / Output: 1,750 watts



### Special features

- Max. tool diameter 125 mm
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection with anti-kickback function
- Restart protection in case of power failure
- Lateral anti-vibration handle
- Smooth start-up for protection of people, tools and drive
- Lockable on-off switch
- Spindle lock pin
- Quick mounting nut

Accessories included:  
4 m power cable, 1 key, clamping flanges, guard and lateral handle

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Spindle thread	Tool mounting centre hole dia. [mm]	Net weight [kg]
UWER 18/110 SI 230 V	957127	2,700–11,000	230	1,750	1,150	M14	22.23	2.800

### Clamping flanges

Description	EAN 4007220
SPF 98970043	853115
SSM 98970042	853108

### Keys

Description	EAN 4007220
STL SW 35 x 5 mm	193853

Catalogue 204	Catalogue 205	Catalogue 206	Catalogue 208
<b>Velcro-backed abrasive discs</b> <b>Fibre discs</b> <b>COMBICLICK® tools</b> <b>POLICLEAN® discs</b> <b>Self-adhesive discs</b> <b>Unmounted flap wheels for angle grinders</b> Dia. 65 to 125 mm	<b>Diamond cut-off wheels</b> Dia. 125 mm	<b>Reinforced grinding wheels</b> <b>CC-GRIND®-SOLID grinding discs</b> <b>POLIFAN® flap discs</b> <b>Cut-off wheels</b> <b>Diamond cut-off wheels</b> Dia. 125 mm	<b>Wheel brushes</b> crimped RBU dia. 115 to 125 mm M14 knotted RBG dia. 115 to 125 mm arbor hole dia. 22.2 mm and type M14 <b>Bevel brushes</b> crimped KBU dia. 115 mm M14 knotted KBG dia. 125 mm M14
			<b>Cup brushes</b> crimped TBU dia. 60 to 75 mm M14 knotted TBG dia. 65 bis 80 mm M14 <b>Composite disc brushes</b> DBUR dia. 75 mm

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



### Special features

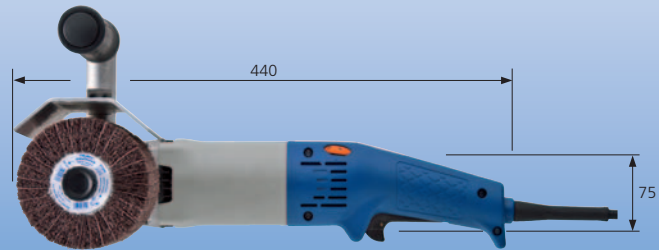
- Low-speed angle grinder/polisher with stepless speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Restart protection in case of power failure
- Smooth start-up for protection of people, tools and drive
- Spindle lock pin
- Drive spindle with two keyways for increased power transmission on drum tools
- M14 drive spindle for mounting drum tools with female thread

Accessories included:

3 m power cable, 1 key, quick mounting screw, hand guard, lateral handle and demountable drive spindle

**UWER 15/40 A-SI D19**

**Rotational speed: 4,000 RPM / Output: 1,530 watts**



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Max. tool dia. [mm]	Tool mounting dia. x width [mm]	Net weight [kg]
UWER 15/40 A-SI D19 230 V	896792	1,000–4,000	230	1,530	1,050	125	19 x 100	3.000

### Keys

Description	EAN 4007220
EM SW 17 mm	204542



Roller set  
FR-W 100100 UWER  
15/40 230 V  
For further information  
and ordering data on roller  
set, please refer to  
Catalogue 204.

### Suitable PFERD tools

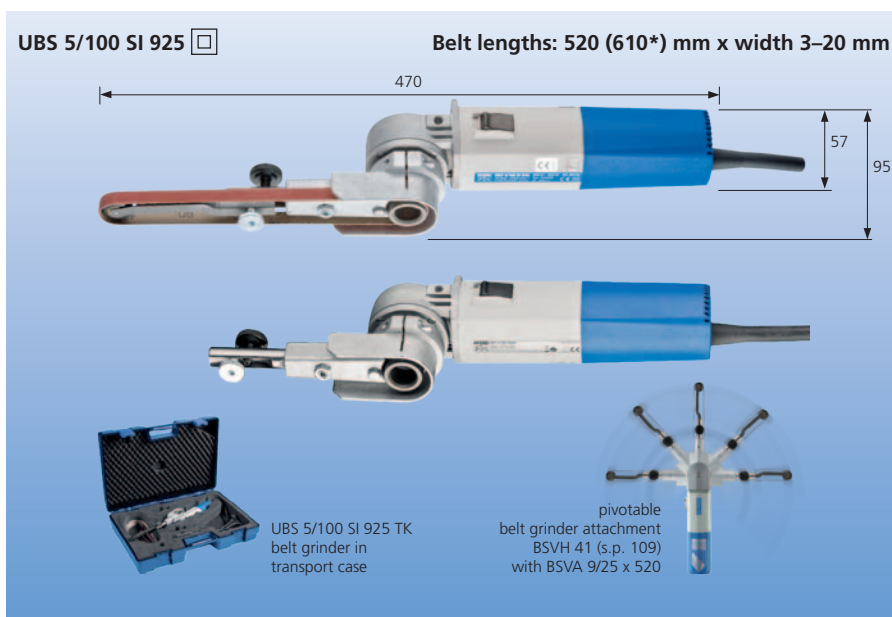
Catalogue 204	Catalogue 208
<b>Flap drums</b> <b>Poliflex® texturing rollers</b> <b>POLINOX® grinding drums</b> Dia. 100 x 100 mm	<b>Wheel brushes</b> crimped WBU dia. 100 mm arbor hole 19.1 mm

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.



# Electric grinders

## Belt grinders



### Special features

- **\*Belt length 610 mm** x width 3–20 mm with **adapter BSAD 41/36 x 610**
- The belt grinder attachment can be pivoted on the drive
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Restart protection in case of power failure
- Lockable on-off switch

### UBS 5/100 SI 925

- Incl. belt grinder attachment arm BSAV 9/25 x 520

### UBS 5/100 SI 925 TK

- Belt grinder in transport case

### UBS 5/100 SI oVA

- Please order belt grinder attachment arm separately (see below)

Accessories included:  
3 m power cable, 1 key

Description	EAN 4007220	Rotational speed [RPM]	Belt speed [m/s]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Net weight [kg]
UBS 5/100 SI 925 230 V	333006	4,000–10,000	6.5–16	230	500	300	1.900
UBS 5/100 SI 925 TK 230 V	957424	4,000–10,000	6.5–16	230	500	300	3.100
UBS 5/100 SI oVA 230 V	948811	4,000–10,000	6.5–16	230	500	300	1.800

### Keys

Description	EAN 4007220
SKS SW 4 mm	204450

### Protective cover

Description	EAN 4007220
SDVH-G	956861

### Adapters

Description	EAN 4007220
BSAD 41/36 x 610	395967

### Belt grinder attachment arms



- Robust steel design
- Use of the full roller width possible
- Extremely slim fixing lugs on the facing roller
- Asymmetrical arms for flush lateral grinding
- Belt arm guide can be fixed
- BSAV 9/25-1 with conical guide roller (width 1 mm)
- For further information and ordering data for abrasive and non-woven short belts, as well as for the belt grinder set BA 6-12/520 UBS 5/100 230 V, please refer to Catalogue 204

Description	EAN 4007220	Width x roll dia. [mm]	Suitable belt width [mm]	Suitable belt length [mm]	Net weight [kg]
BSVA 9/25 x 520	323007	9 x 25	3, 6, 9, 12, 16	520, 610	0.095
BSVA 9/25-1 x 520	494288	9 x 25	3, 6, 9, 12	520, 610	0.095
BSVA 4/16 x 520	322987	4 x 16	6	520, 610	0.060
BSVA 9/16 x 520	322994	9 x 16	12	520, 610	0.096
BSVA 12/19 x 520	323014	12 x 19	12, 16	520, 610	0.107
BSVA 18/23 x 520	349267	18 x 23	20	520, 610	0.150

### Special features


- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Restart protection in case of power failure
- Smooth start-up for protection of people, tools and drive
- Adjustable belt guidance roller to match pipe diameters up to 70 mm
- A surface contact angle on the workpiece of up to 220 degrees is possible

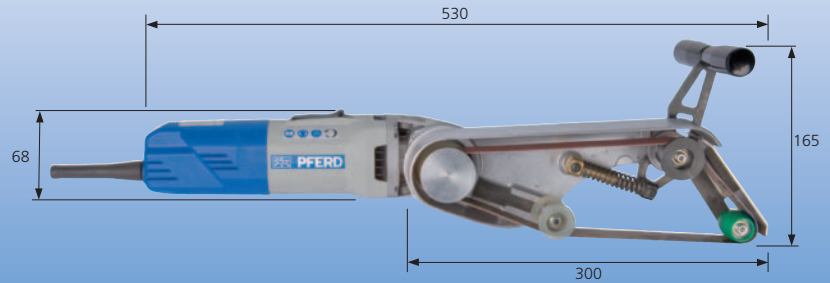
### UBS 11/90 SI-R TK

- Pipe belt grinder in transport case

Accessories included:

3 m power cable, 1 key

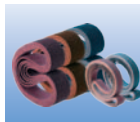
UBS 11/90 SI-R  Output: 1,050 watts, belt length: 610 mm x belt width: 12–30 mm



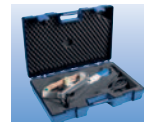
Description	EAN 4007220	Rotational speed [RPM]	Belt speed [m/s]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Net weight [kg]
UBS 11/90 SI-R 230 V	777275	4,000–9,000	7–15.5	230	1,050	650	3.000
UBS 11/90 SI-R TK 230 V	957448	4,000–9,000	7–15.5	230	1,050	650	6.700

### Keys

Description	EAN 4007220
SKS SW 4 mm	204450



For further information and ordering data on abrasive and non-woven short belts, please refer to Catalogue 204.



Pipe belt grinder in transport case  
UBS 11/90 SI R-TK

### Special features

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Restart protection in case of power failure
- Smooth start-up for protection of people, tools and drive
- Adjustable belt guidance roller to match pipe diameters up to 55 mm
- A surface contact angle on the workpiece of up to 180 degrees is possible

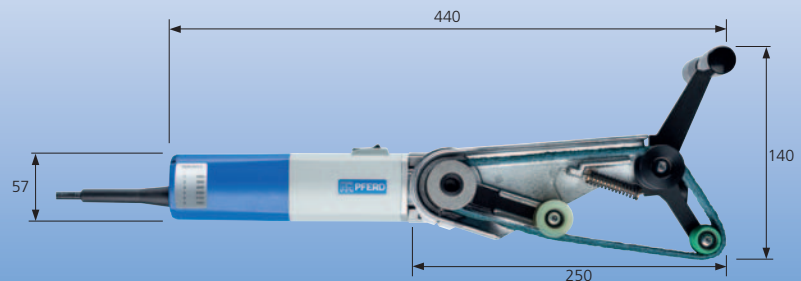
### UBS 5/70 SI-R TK

- Pipe belt grinder in transport case

Accessories included:

3 m power cable, 1 key

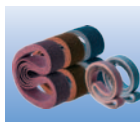
UBS 5/70 SI-R  Output: 1,050 watts, belt length: 533 mm x belt width: 30 mm



Description	EAN 4007220	Rotational speed [RPM]	Belt speed [m/s]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Net weight [kg]
UBS 5/70 SI-R 230 V	561263	3,000–7,000	5–11	230	500	300	2.350
UBS 5/70 SI-R TK 230 V	957431	3,000–7,000	5–11	230	500	300	5.800

### Keys

Description	EAN 4007220
SKS SW 4 mm	204450



For further information and ordering data on abrasive and non-woven short belts, please refer to Catalogue 204.



Pipe belt grinder in transport case  
UBS 5/70 SI-R TK

# Electric grinders

## Special drives



### Special features

- Stepless rotational speed adjustment
- Digital electronics for rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

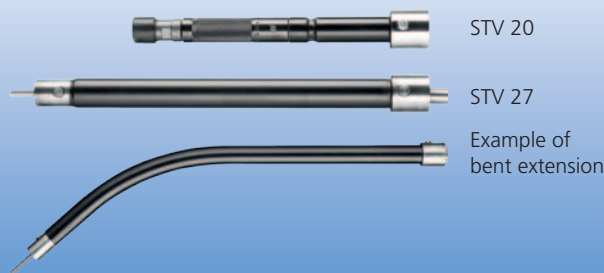
Accessories included:  
3 m power cable, 2 keys

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Matching extension	Net weight [kg]
EMER 5/250 SI 230 V	948859	11,000–25,000	230	500	300	STV 20, STV 27	1.150

### Keys

Description	EAN
ST5 D 4 mm	205020

### Rigid extensions for electric motor



Rigid extensions for electric motors combined with steplessly speed-adjustable electric motors provide the ideal solution for applications in hard-to-access workpieces, e.g. during cleaning or milling work. Rigid extensions are frequently used in series production. They are adapted exactly to the workpiece geometries. Other lengths and bending radii are available to meet customer requirements on request.

Description	EAN 4007220	Connection coupling [DIN]	Sliding coupling [G]	Dia. x length [mm]	Bending radius [mm]	Suitable arbors	Net weight [kg]
STV 20 L 200	272770	10	16/22	20 x 200	150	incl. HA 4 ZGA G16/22	0.400
STV 20 L 400	179604	10	16/22	20 x 400	150	incl. HA 4 ZGA G16/22	0.630
STV 20 L 600	179703	10	16/22	20 x 600	150	incl. HA 4 ZGA G16/22	0.890
STV 27 L 250	282137	10	22	27 x 250	250	HA 7 ZGA G22, WZ 7 B STV G22, WZ 7-45° STV G22	0.550
STV 27 L 500	179499	10	22	27 x 500	250	HA 7 ZGA G22, WZ 7 B STV G22, WZ 7-45° STV G22	0.950

### Handpieces



Description	EAN 4007220	Max. perm. speed [RPM]	Sliding coupling [G]	Dia. x length [mm]	Transmission ratio	Incl. collet dia. [mm]	Collet group	Net weight [kg]
HA 4 ZGA G16/22	247952	25,000	16/22	20 x 110	-	6	11	0.165
HA 7 ZGA G22	181928	25,000	22	27 x 130	-	6	11	0.320
WZ 7 B STV G22	334645	17,100	22	55 x 157	1.3:1	6	6	0.710
WZ 7-45° STV G22	334614	17,100	22	57 x 175	1.3:1	6	6	0.750



**Special features**

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure

Accessories included:  
 3 m power cable, 2 keys

**EMER 11/90 SI**

Rotational speed: 9,000 RPM / Output: 1,050 watts



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50-60 Hz	Power consumption [watts]	Power output [watts]	Matching extension	Net weight [kg]
EMER 11/90 SI 230 V	948866	3,800-8,300	230	1,050	650	STV 33	2.000

**Keys**

Description	EAN 4007220
STS D 4 mm	205020

Rigid extensions combined with electric motors provide the ideal solution for applications on hard-to-access workpieces, e.g. during cleaning or milling work. Rigid extensions are frequently used in series production. They are adapted exactly to the workpiece geometries. Other lengths and bending radii are available to meet customer requirements on request.

**Rigid extensions for electric motor**



Description	EAN 4007220	Connection coupling [DIN]	Sliding coupling [G]	Dia. x length [mm]	Bending radius [mm]	Suitable arbors	Net weight [kg]
STV 33 L 250	179420	10	28	33 x 250	300	HA 10 ZGE, HA 12 ZGA, WZ 10 B STV, WZ 10-45° STV	1.025
STV 33 L 500	179468	10	28	33 x 500	300	HA 10 ZGE, HA 12 ZGA, WZ 10 B STV, WZ 10-45° STV	2.100
STV 33 L 1000	179758	10	28	33 x 1,000	300	HA 10 ZGE, HA 12 ZGA, WZ 10 B STV, WZ 10-45° STV	3.250

**Handpieces**



HA 10 ZGE G28



HA 12 ZGA G28



WZ 10 B STV G28



WZ 10-45° STV G28

Description	EAN 4007220	Max. perm. speed [RPM]	Sliding coupling [G]	Dia. x length [mm]	Transmission ratio	Incl. collet dia. [mm]	Collet group	Net weight [kg]
HA 10 ZGE G28	181966	18,000	28	33 x 170	-	6	11	0.515
HA 12 ZGA G28	181959	18,000	28	33 x 162	-	12	12	0.510
WZ 10 B STV G28	334638	17,100	28	55 x 156	1.3:1	6	6	0.805
WZ 10-45° STV G28	334621	17,100	28	57 x 184	1.3:1	6	6	0.845

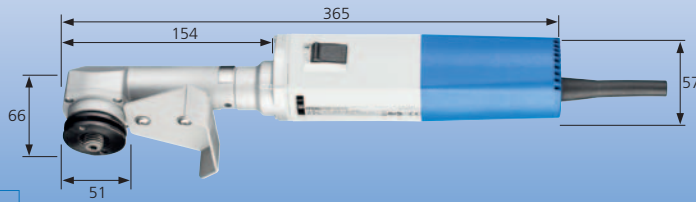
# Electric grinders

## Fillet weld grinder



**KNER 5/34 V-SI**

**Rotational speed: 3,400 RPM / Output: 500 watts**



### Special features

- Max. tool diameter 150 mm
- Arbor 25.4 mm (1") or 22.23 (reversible clamping flange WSPF)
- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Restart protection in case of power failure
- Light, very easy to handle, good power output

Accessories included:

3 m power cable, 3 keys, clamping flanges and hand guard

Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Spindle thread	Tool mounting centre hole dia. [mm]	Net weight [kg]
KNER 5/34 V-SI 230 V	935217	1,500–3,400	230	500	300	M14	25.4 / 22.23	1.600

### Clamping flanges

Description	EAN 4007220
WSPF 96473301	937839
SPM14 96473201	937822

### Keys

Description	EAN 4007220
SKS SW 5 mm	204467
STL SW 35 x 5 mm	193853
STS D 4 mm	205020



### POLINOX® set

**PNER 15002/06 KNER 5/34 230 V**

For further information and ordering data on POLINOX® set, please refer to Catalogue 204.

### Suitable PFERD tools

Catalogue 204	Catalogue 208
<p><b>POLINOX® unitized wheels PNER</b> Dia. up to 150 mm</p> <p><b>POLINOX® unitized discs PNER</b> Dia. up to 125 mm</p> <p><b>POLINOX® discs</b> Dia. up to 150 mm</p> <p><b>POLIVLIES® flap discs</b> Dia. up to 125 mm</p>	<p><b>Wheel brushes</b> crimped RBU 15016/12,0 CO 120 1.10 RBU 15016/12.0 SIC 80 1.00 and matching arbor hole adapter 22.2 mm from adapter set AK 32</p>

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.







# Flexible shaft drives

## General information

Flexible shaft drives are multi-speed machines. They cover a wide rotational speed range and can be adjusted steplessly electronically or via gears to match individual tool requirements. Flexible shaft drives have very high power outputs. They can also be used with compact handpieces or extensions to work in hard-to-reach areas.

### Areas of application


Flexible shaft drives can be used for almost all jobs. They are used successfully in many industrial sectors for different processes. The rotational speed adjustment allows the use of various tools on one single drive.

### Standards, safety, general guidelines

#### Electrical safety


PFERD flexible shaft drives comply with the standard "Safety for Hand-Guided Motor-Driven Electric Tools".

#### 1. Earthed electric drives (protection class I)

This design is indicated by the protective earthing sign :

- Mini-Mammoth Electronic (page 81)
- Mammoth Electronic (page 83)
- Mammoth (page 85)
- Maxi-Mammoth Electronic (page 87)
- Master Grinder (page 89)

#### 2. Insulated electric drives (protection class II)

This design is indicated by the insulation sign  and the supplement "SI":

- RUER 5/250 SI (page 79)
- RUER 10/250 SI (page 79)
- RUG 19/120 SI (page 79)
- RUER 8/180 SI (page 81)

### The PFERD product range

PFERD offers various types of flexible shaft drives, as well as a comprehensive range of matching flexible shafts, handpieces, angle drives, drum drives and special drives.

PFERD flexible shaft drives and their accessories are extremely robust, technically tried and tested and are built according to the latest ergonomic knowledge and specifications. This product range was developed especially for the economic use of grinding, milling, brushing, cut-off and polishing tools and covers a wide rotational speed range (0–40,000 RPM) and power range (500–6,100 watts).

### Advantages

- Very compact and ergonomic handpieces
- Very low weight of the handpieces
- Drives that are very robust and designed for continuous use (Mammoth, Master Grinder)
- Multi-purpose motors (RUER, RUG, MMEW) are less suitable for continuous operation
- Technically tried and tested
- Very high power output
- Highly versatile
- Simple power supply
- Low maintenance
- Easy to service
- Economical

### 3. Safety extra-low voltage/protective separation

When using alternating current voltage in boilers, tanks, pipelines and similar narrow spaces made of electrically conductive materials, a safety extra-low voltage of 42 volts or protective separation must be used.

#### 3.1 Electric motor units for safety extra-low voltage (protection class III)

These drives are operated with no more than 42 volts. The following drives are available in 42-volt designs:

- Mammoth (page 85)
- Master Grinder (page 89)

#### 3.2 Electrically protective separation

For flexible shaft tool drives, one alternative to a safety extra-low voltage is to isolate the drive motor from the mains voltage using a transformer of the same voltage rating.

PFERD electric grinders comply with the

- EC Machinery Directive,
- Low Voltage Directive,
- Electromagnetic compatibility.

PFERD electric grinders bear the CE mark.



Any special (e.g. on the use of safety extra-low voltage) or country-specific regulations must be observed.



### Criteria for selecting the optimum flexible shaft drive

The most important prerequisite for cost-effective work is the selection of the optimum tool. The appropriate tool drive is selected taking the following criteria into consideration:

#### 1. Design, shape and size

Every type of application places specific demands on the shape and size of the tool drive. The different designs can be used for various applications: The ideal tool drive should be selected for the task at hand depending on the dimensions, accessibility, type and frequency of the application.

#### 2. Rotational speed

The tool drive should always be selected according to the rotational speed and cutting speed recommendations for the tool. Please refer to Catalogues 202–208 for these recommendations.

#### 3. Power output

The tool drive's power output is the decisive factor for maintaining the rotational speed under load. The load is determined by the stock removal properties of the material to be machined, the cutting characteristics of the tool, the tool diameter, the contact surface and the contact pressure.

#### 4. Holder requirements

Depending on the PFERD tool selected, different tool holders are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to pages 106–108 for an overview of the collets and drive spindle extensions.

If you have any further questions, your personal PFERD sales representative will be happy to help you.

### Flexible shafts (BW)

Flexible shafts consist of three components which can be combined in different ways:

- Flexible core (SE),
- Flexible casing (SCH),
- Handpiece (HA).

### Flexible core (SE)

The flexible core consists of 4 to 10 layers of wire, conforming to DIN 2076, and is specially designed for high-speed clockwise rotation. The coupling is securely press-fitted to the core. After approximately 100 operating hours, the flexible core must be re-lubricated. The core and casing must be degreased and new, special shaft grease must be applied.

### Flexible casing (SCH)

The flexible casing consists of oil-resistant rubber; the interior being a flat steel spiral and the outside being solid rubber. The connection couplings are pressed on firmly and encased in a rubber sheath as reinforcement.

### Handpiece (HA)

The handpieces are light and easy to handle in relation to their power output transmission, and cover a wide rotational speed range. Because of low noise emission, continuous operation with little fatigue is possible. Replaceable collets or the special shank adapter for Morse cones allow various tools to be mounted. The sliding connection allows quick handpiece changes.

### Repair

It is not possible to repair cores and flexible casings. We recommend replacement with pre-assembled new parts.

### Radius of curvature

When using flexible shafts, please ensure that the shafts are not bent outside the radius of curvature. The smallest possible radius of curvature is given for each flexible shaft.

## How to find the matching flexible shaft to your drive

On the following pages, you will find flexible shaft and handpiece selection tables for the individual drives, each on the opposite page (left). See example below.

Flexible shafts and handpieces/attachments must always be selected according to the required rotational speed and power output. Maximum cost-effectiveness is achieved through the combination of a high-performance tool and an optimal drive.

#### 1 Drive

Selected drive.

#### 2 Flexible shaft (BW)

The flexible shafts suitable for this drive.

#### 3 Catalogue page

Reference to the catalogue page on which the appropriate flexible shaft and handpieces are shown.

#### 4 Rotational speed [RPM] and power output [watts]

Rotational speed and power output ranges for which the flexible shaft is suitable.

#### 5 Connection

Drive and handpiece-side connections.

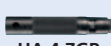

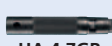

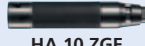
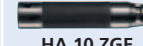
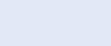

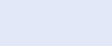









#### 6 Suitable flexible shaft

- Ideally suitable
- Suitable
- Not suitable

#### 7 Handpieces/attachments

Please select your shape and design.

### Example:

		Flexible shaft						
RPM	high							low
Flexible shaft dia.	very flexible (for work in narrow spaces)							rigid
Power transmission	low							high
2 Flexible shaft		BW 4 ZG	BW 6 Z	BW 6 ZG	BW 7 ZG / 7 ZGU	BW 10 ZG	BW 12 ZGA	BW 12 KG
3 Catalogue page		91	93	91	95	97	99	101
4 Rot. Speed [RPM]		24,000–40,000	10,000–25,000	10,000–25,000	12,000–25,000	750–18,000	850–12,000	850–10,000
Power output [watts]		300–500	700–1,400	750–1,500	880–1,760	140–2,450	525–6,280	525–6,280
5 Connection - drive side		DIN 10 G16	DIN 10 DPF/SRF	DIN 10 G16	DIN 10 G22	DIN 10 G28	DIN 10 G28	DIN 10 G35
5 Connection - handpiece side		DIN 10 G16	DIN 10 DPF/SRF	DIN 10 G16	DIN 10 G22	DIN 10 G28	DIN 10 G28	DIN 10 G35
6 Suitability		○	●	●	●	○	○	–
1 Mammoth Electronic drive ME/MEW + ST 103 Rotational Speed 12,000–24,000 RPM Power output 2,200 / 1,500 watts	7 Straight handpieces	 HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM	 HA 10 ZGE max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM	
	7 Angle handpieces	 WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM	
	7 Other attachments		 WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 B max. 17,100 RPM	 WZ 10 B max. 17,100 RPM	 WZ 10 B max. 17,100 RPM	
				 WT 7 E M 14 max. 25,000 RPM				






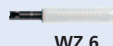





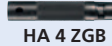


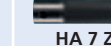
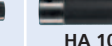

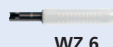




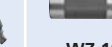








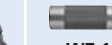





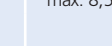
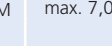
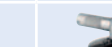
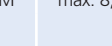

● Ideally suitable    ○ Suitable    – Not suitable



# Flexible shaft drives

## Flexible shafts and handpieces



Flexible shaft	BW 4 ZG	BW 6 Z	BW 6 ZG	BW 7 ZG / 7 ZGU	BW 10 ZG	BW 12 ZGA	BW 12 KG
Catalogue page	91	93	91	95	97	99	101
Rot. speed [RPM] Power output [watts]	24,000–40,000 300–500	10,000–25,000 700–1,400	10,000–25,000 750–1,500	12,000–25,000 880–1,760	750–18,000 140–2,450	850–12,000 525–6,280	850–10,000 525–6,280
Connection - drive side - handpiece side	DIN 10 G16	DIN 10 DPF / SRF	DIN 10 G16	DIN 10 G22	DIN 10 G28	DIN 10 G28	DIN 10 G35
Suitability	●	●	●	○	–	–	–
Drive RUER 5/250 SI Rotational speed 11,000–25,000 RPM Power output 300 watts	Straight handpieces  HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM			
	Angle handpieces  WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM			
	Other attachments  WT 7 E M 14 max. 25,000 RPM						
Suitability	○	○	○	●	○	–	–
Drive RUER 10/250 SI Rotational speed 11,000–25,000 RPM Power output 600 watts	Straight handpieces  HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM	 HA 10 ZGE max. 18,000 RPM		
	Angle handpieces  WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM		
	Other attachments  WT 7 E M 14 max. 25,000 RPM						
Suitability	–	–	–	○	●	●	○
Drive RUG 19/120 SI Rotational speed 3,000 / 6,000 / 12,000 RPM Power output 1,200 watts	Straight handpieces  HA 7 ZGA max. 25,000 RPM			 HA 10 ZGE max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM	 HA 12/15 KG MK I max. 10,000 RPM	
	Angle handpieces  WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM			 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM		
	Other attachments  WT 7 E M 14 max. 25,000 RPM			 WT 10 H max. 8,500 RPM  BSG 10/35 and 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM	 WT 10 H max. 8,500 RPM  BSG 10/35 and 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM		

For detailed information and ordering data on flexible shafts and handpieces, please refer to the stated catalogue pages.

● Ideally suitable

○ Suitable

– Not suitable

### Record Universal Motor RUER 5/250 SI

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Pipe stand protects the drive

Accessories included:  
3 m power cable, 2 allen keys

### Ordering note:

The drive is supplied without flexible shaft, please order separately.  
Drive with foot switch, on request.

RUER 5/250 SI 



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
RUER 5/250 SI 230 V	267325	11,000–25,000	230	500	300	10	285 x 57 x 102	2.140


### Record Universal Motor RUER 10/250 SI

- Stepless rotational speed adjustment
- Digital electronics for constant rotational speed
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Pipe stand protects the drive

Accessories included:  
3 m power cable, 2 allen keys

### Ordering note:

The drive is supplied without flexible shaft, please order separately.

RUER 10/250 SI 



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
RUER 10/250 SI 230 V	348116	11,000–25,000	230	1,050	660	10	300 x 75 x 140	3.110

### Record Universal Motor RUER 19/120 SI

- Speed-adjustable via external gear to 3,000, 6,000 or 12,000 RPM
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Pipe stand protects the drive


Accessories included:  
3 m power cable, 2 allen keys

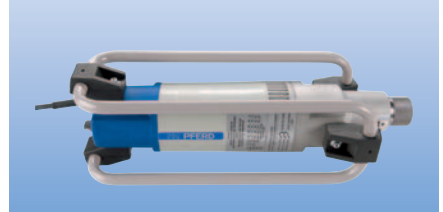
### Recommendations for use:

- For daily, continuous operation in single or two-shift operation, we recommend our 3-phase AC flexible shaft drives (see pages 83, 85, 87 and 89)

### Ordering note:

The drive is supplied without flexible shaft, please order separately.

RUG 19/120 SI 






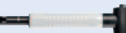





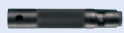




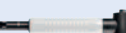






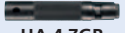
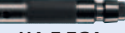


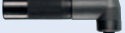





Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
RUG 19/120 SI 230 V	348109	3,000, 6,000, 12,000	230	1,700	1,250	10	530 x 95 x 175	9.200

# Flexible shaft drives

## Flexible shafts and handpieces



Flexible shaft	BW 4 ZG	BW 6 Z	BW 6 ZG	BW 7 ZG / 7 ZGU	BW 10 ZG	BW 12 ZGA	BW 12 KG
Catalogue page	91	93	91	95	97	99	101
Rot. speed [RPM] Power output [watts]	24,000–40,000 300–500	10,000–25,000 700–1,400	10,000–25,000 750–1,500	12,000–25,000 880–1,760	750–18,000 140–2,450	850–12,000 525–6,280	850–10,000 525–6,280
Connection - drive side - handpiece side	DIN 10 G16	DIN 10 DPF / SRF	DIN 10 G16	DIN 10 G22	DIN 10 G28	DIN 10 G28	DIN 10 G35
Suitability	●	●	●	●	–	–	–
Drive RUER 8/180 SI Rotational speed 12,000–18,000 RPM Power output 600 watts	Straight handpieces	 HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM		
	Angle handpieces	 WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM		
	Other attachments				 WT 7 E M 14 max. 25,000 RPM		
Suitability	○	●	●	○	–	–	–
Drive RUER 8/180 SI, MIMIEW 11/120 Rotational speed 6,000–12,000 RPM Power output 600/800 watts	Straight handpieces	 HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM		
	Angle handpieces	 WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM		
	Other attachments				 WT 7 E M 14 max. 25,000 RPM		
Suitability	–	○	○	○	–	–	–
Drive RUER 8/180 SI, MIMIEW 11/120 Rotational speed 500–6,000 RPM Power output 600/800 watts	Straight handpieces		 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM		
	Angle handpieces		 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM		
	Other attachments				 WT 7 E M 14 max. 25,000 RPM		

For detailed information and ordering data on flexible shafts and handpieces, please refer to the stated catalogue pages.

● Ideally suitable

○ Suitable

– Not suitable

### Record universal motor RUER 8/180 SI incl. combi-speed control KDR 8/180 SI

- Stepless rotational speed adjustment
- Electronics for constant rotational speed
- Overload protection
- Restart protection in case of power failure
- The combi-speed control KDR 8/180 SI can be used as a table-top or foot control. In table-top operation the rotational speed can be controlled individually using the potentiometer. For foot-controlled operation, the maximum rotational speed is preset using the potentiometer. Control is then achieved using the foot pedal. Only for use with motor RUER 8/180 SI.
- Very low noise generation
- Particularly suitable for use in tool and mould construction

Accessories included:  
 2.5 m power cable, 2.25 m connection cable,  
 2 allen keys

#### Ordering note:

The drive is supplied without flexible shaft, please order separately.

PFERDERGONOMICS®:



### RUER 8/180 SI incl. combi-speed control



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
RUER 8/180 SI 230 V	807408	0–18,000	230	1,020	600	10	222 x 98 x 98	1.650

**Table stand TS L 1400** with screw clamp can be attached to bench tops up to 65 mm in thickness.

The telescopic system allows individual height adjustment up to maximum 140 cm. Max. 10 kg carrying capacity.

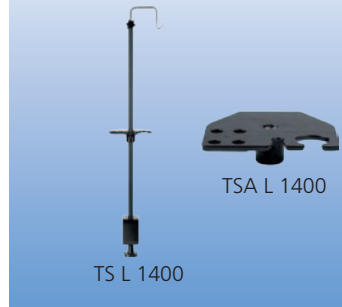
### Handpiece support TSA L 1400

This support matches the table stand and allows optimum placing of the various handpieces, ready for use.

#### Ordering note:

Please order support separately.

### Accessories for tool drives RUER



Description	EAN 4007220	Description	Net weight [kg]
TS L 1400	657683	Table stand	2.170
TSA L 1400	657690	Handpiece support	0.450

### Mini-Mammoth Electronic MMEW

- Protective earthing
- Stepless rotational speed adjustment
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Very low noise generation
- Mounted grinding and polishing tools with diameter  $\geq 60$  mm are not suitable for continuous use with the Mini-Mammoth Electronic

Accessories included:  
 2.5 m power cable, 2 allen keys

#### Ordering note:

The drive is supplied without flexible shaft, please order separately. Hanging brackets and foot switches on request.

PFERDERGONOMICS®:



### MMEW 11/120




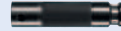




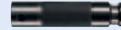
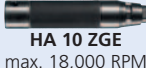
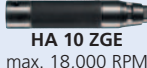
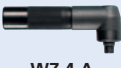
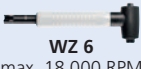
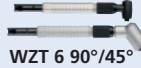
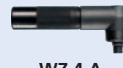
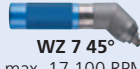
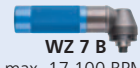

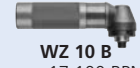
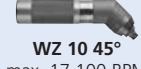
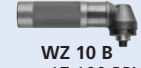


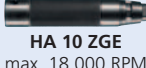
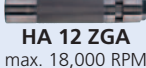
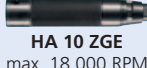
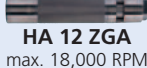

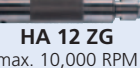
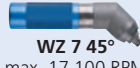
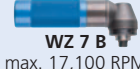

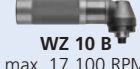

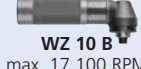







Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
MMEW 11/120 230 V	657478	850–12,000	230	1,100	800	10	270 x 160 x 180	7.900

# Flexible shaft drives

## Flexible shafts and handpieces



Flexible shaft	BW 4 ZG	BW 6 Z	BW 6 ZG	BW 7 ZG / 7 ZGU	BW 10 ZG	BW 12 ZGA	BW 12 KG	
Catalogue page	91	93	91	95	97	99	101	
Rot. speed [RPM] Power output [watts]	24,000–40,000 300–500	10,000–25,000 700–1,400	10,000–25,000 750–1,500	12,000–25,000 880–1,760	750–18,000 140–2,450	850–12,000 525–6,280	850–10,000 525–6,280	
Connection - drive side - handpiece side	DIN 10 G16	DIN 10 DPF / SRF	DIN 10 G16	DIN 10 G22	DIN 10 G28	DIN 10 G28	DIN 10 G35	
Suitability	●	○	○	○	–	–	–	
Drive Mammoth Electronic ME/MEW + ST 103 Rotational speed 24,000–36,000 RPM Power output 2,200 / 1,500 watts	Straight handpieces	 HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM			
	Angle handpieces							
	Other attachments				 WT 7 E M 14 max. 25,000 RPM			
Suitability	○	●	●	●	○	○	–	
Drive Mammoth Electronic ME/MEW + ST 103 Rotational speed 12,000–24,000 RPM Power output 2,200 / 1,500 watts	Straight handpieces	 HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM	 HA 10 ZGE max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM	
	Angle handpieces	 WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	
	Other attachments				 WT 7 E M 14 max. 25,000 RPM			
Suitability	–	–	–	○	●	●	○	
Drive Mammoth Electronic ME/MEW Rotational speed 500–15,000 RPM Power output 2,200 / 1,500 watts	Straight handpieces			 HA 7 ZGA max. 25,000 RPM	 HA 10 ZGE max. 18,000 RPM  HA 12 ZGA max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM  HA 12 ZGA max. 18,000 RPM	 HA 12/15 KG MK I max. 10,000 RPM  HA 12 ZG max. 10,000 RPM	
	Angle handpieces			 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM		
	Other attachments			 WT 7 E M 14 max. 25,000 RPM	 BSG 10/35 a. 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM	 BSG 10/35 a. 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM		

For detailed information and ordering data on flexible shafts and handpieces, please refer to the stated catalogue pages.

● Ideally suitable      ○ Suitable      – Not suitable



### Mammoth Electronic ME/MEW

- Protective earthing ⊕
- Stepless rotational speed adjustment (with overdrive ST 103 up to max. 36,000 RPM)
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Very low noise generation
- Removable operating console with possibility of extension, e.g. hanging design for work in boilers
- High torque, even at low rotational speed
- Easy to service, easy-to-remove housing with four main modules

Accessories included:

**ME 22/150 with 3-phase AC**

4 m power cable without plug, key

**MEW 18/150 with 1-phase AC**

4 m power cable with plug, 2 allen keys

#### Ordering note:

The drive is supplied without flexible shaft, please order separately.

**PFERDERGONOMICS®:**

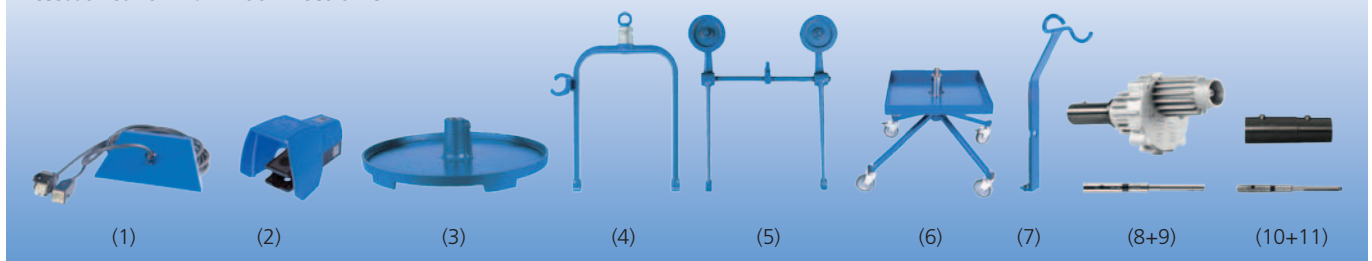


**ME 22/150  
MEW 18/150**



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power con- sumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
ME 22/150 400 V	758694	0–15,000	380–480	2,700	2,200	10	445 x 200 x 320	24.500
MEW 18/150 230 V	788738	0–15,000	200–240	2,000	1,500	10	445 x 200 x 320	24.500

### Accessories for Mammoth Electronic



#### (1) Remote control cable FSTK 22

For extension of the removable operating console with cover plate for protection of the drive (cable length 4 m).

#### (2) Foot switch FSE 22

With protective cover.  
For easy drive switch-on/switch-off (cable length 4 m).

#### (3) Base FME

Stable base with pivot device.

#### (4) Motor hanger B1 ME

Drive can be used in hanging position, shaft support available.

#### (5) Overhead trolley B2 ME

Drive on castors can be used in hanging position.

#### (6) Trolley WA D ME

Trolley with tool tray, 4 steerable wheels of which 2 are lockable.  
Dimensions L x W x H: 500 x 500 x 510 mm.

#### (7) Shaft hanger WAL 4-12

Support for flexible shaft, that can be mounted onto the side of the drive.

#### (8) Overdrive ST 103 DIN 10

Transmits the drive operating speed in the ratio 1:3.

#### Operating speed with Mammoth Electronic

15,000–36,000 RPM

#### Operating speed n max for overdrive:

12,000 RPM

Further information on overdrive ST 103 can be found on page 105.

**(9) Replacement core SE ST 103 DIN 10**  
and 1 socket spanner are included.

**(10) Direct connection DA 33 DIN 10/G28**  
For direct (rigid) connection of the handpiece with sliding coupling G28 on the flexible shaft motor with DIN 10 connection.

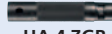


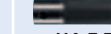
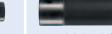

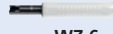


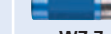

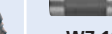





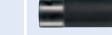
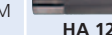
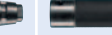
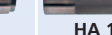

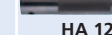










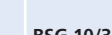
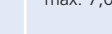
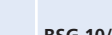
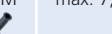

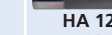

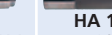

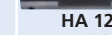
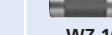
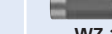
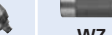
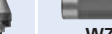
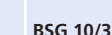
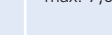
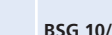
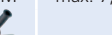
**(11) Ready to install replacement core SE DA 33 DIN 10/G28** for direct connection, please order separately if required.

Description	EAN 4007220	Description	Flexible shaft connection [DIN]	Sliding coupling [G]	Net weight [kg]
FSTK 22	772812	(1) Remote control cable	-	-	0.635
FSE 22	772799	(2) Foot switch	-	-	1.000
FME	617977	(3) Base	-	-	2.000
B1 ME	617984	(4) Motor hanger	-	-	1.200
B2 ME	617991	(5) Overhead trolley	-	-	1.800
WA D ME	618028	(6) Trolley	-	-	14.200
WAL 4-12	618004	(7) Shaft hanger	-	-	0.460
ST 103 DIN 10	182673	(8) Overdrive	-	-	1.600
SE ST 103 DIN 10	190524	(9) Replacement core	-	-	0.070
DA 33 DIN 10/G28	179475	(10) Direct connection	10	28	0.305
SE DA 33 DIN 10 G28	284179	(11) Replacement core	10	28	0.107

# Flexible shaft drives

## Flexible shafts and handpieces



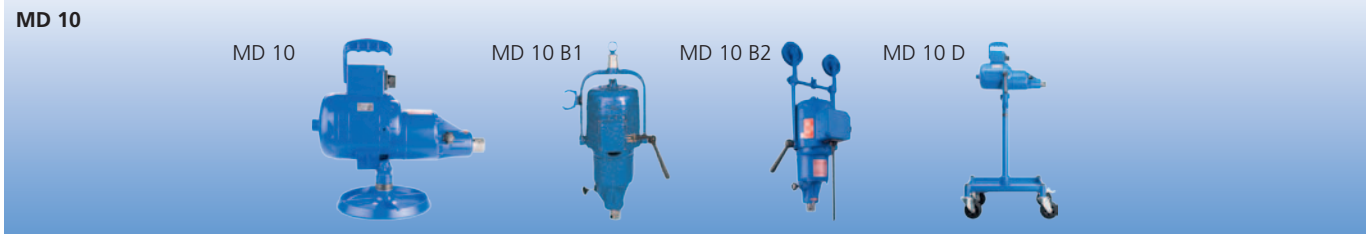
Flexible shaft	BW 4 ZG	BW 6 Z	BW 6 ZG	BW 7 ZG / 7 ZGU	BW 10 ZG	BW 12 ZGA	BW 12 KG	
Catalogue page	91	93	91	95	97	99	101	
Rot. speed [RPM] Power output [watts]	24,000–40,000 300–500	10,000–25,000 700–1,400	10,000–25,000 750–1,500	12,000–25,000 880–1,760	750–18,000 140–2,450	850–12,000 525–6,280	850–10,000 525–6,280	
Connection - drive side - handpiece side	DIN 10 G16	DIN 10 DPF / SRF	DIN 10 G16	DIN 10 G22	DIN 10 G28	DIN 10 G28	DIN 10 G35	
Suitability	●	●	●	●	○	–	–	
Drive Mammoth MD 10 + ST 103 Rot. speed 12,000 / 17,100 / 24,000 / 36,000 RPM Power output 736 watts	Straight handpieces	 HA 4 ZGB max. 40,000 RPM	 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM	 HA 10 ZGE max. 18,000 RPM		
	Angle handpieces	 WZ 4 A max. 20,000 RPM	 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM		
	Other attachments				 WT 7 E M 14 max. 25,000 RPM			
Suitability	–	○	○	○	●	●	●	
Drive Mammoth MD 10 Rotational speed 4,800 / 5,700 / 6,300 / 8,000 / 9,600 RPM Power output 736 watts	Straight handpieces		 HA 6 Z max. 24,000 RPM	 HA 4 ZGB max. 40,000 RPM	 HA 7 ZGA max. 25,000 RPM	 HA 10 ZGE max. 18,000 RPM  HA 12 ZGA max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM  HA 12 ZGA max. 18,000 RPM	 HA 12/15 KG MK I max. 10,000 RPM  HA 12 ZG max. 10,000 RPM
	Angle handpieces		 WZ 6 max. 18,000 RPM  WZT 6 90°/45° max. 18,000 RPM	 WZ 4 A max. 20,000 RPM	 WZ 7 45° max. 17,100 RPM  WZ 7 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	
	Other attachments				 WT 7 E M 14 max. 25,000 RPM	 BSG 10/35 and 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM	 BSG 10/35 and 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM	
Suitability	–	–	–	–	●	●	○	
Drive Mammoth MD 10 Rotational speed 850 / 1,600 / 2,100 / 2,550 / 3,200 RPM Power output 736 watts	Straight handpieces				 HA 10 ZGE max. 18,000 RPM  HA 12 ZGA max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM  HA 12 ZGA max. 18,000 RPM	 HA 12/15 KG MK I max. 10,000 RPM  HA 12 ZG max. 10,000 RPM	
	Angle handpieces				 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM  WZ 10 B max. 17,100 RPM		
	Other attachments				 BSG 10/35 and 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM	 BSG 10/35 and 10/50 max. 7,000 RPM  BSG 3/10/40 max. 5,000 RPM		

For detailed information and ordering data on flexible shafts and handpieces, please refer to the stated catalogue pages.


● Ideally suitable

○ Suitable

– Not suitable



### Mammoth

- Protective earthing 
- Speed-adjustable via external gears:  
850, 1,600, 2,100, 3,200, 5,700, 8,000,  
12,000 RPM
- Restart protection in case of power failure

### Application notes:

- The high-power output Mammoth is suitable for general-purpose milling, grinding and polishing work
- Grinding and polishing tools with diameter  $\geq 100$  mm are not suitable for use with the Mammoth

Accessories included:  
3 m power cable without plug, 2 allen keys

### Ordering note:

If the desired voltage is not specified, we will supply you with a 3-phase AC motor set to 400 volts.  
Other voltages from 42 to 440 volts and a frequency of 60 Hz are available on request at an extra charge.  
The drive motor is supplied without flexible shaft, please order separately.

Description	EAN 4007220	Type	Voltage [volts] 50 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Net weight [kg]
MD 10 230/400 V	181324	with base	400	1,000	736	10	16.500
MD 10 B1 230/400 V	181331	B 1 hanging	400	1,000	736	10	16.000
MD 10 B2 230/400 V	181348	B 2 overhead trolley on castors	400	1,000	736	10	17.000
MD 10 D 230/400 V	181355	D on base trolley	400	1,000	736	10	44.500

**Base Trolley, type D** (without machine).  
4 steerable wheels, 2 with parking brake.  
Dimensions L x W x H: 460 x 460 x 605 mm.



Description	EAN 4007220	Net weight [kg]
WA D	182666	23.000

**Overdrive ST 103 DIN 10** transmits the operating speed in a ratio of 1:3.

Accessories included:  
Drive core and 1 socket spanner

Please refer to page 105 for detailed information regarding overdrive ST 103.

**Operating speeds with Mammoth**  
2,550, 4,800, 6,300, 9,600, 17,100, 24,000  
and 36,000 RPM

**Operating speed n max.**  
12,000 RPM

### Safety notes:

- Employ the highest rotational speed for the core used



Description	EAN 4007220	Net weight [kg]
ST 103 DIN 10	182673	1.600
SE ST 103 DIN 10	190524	0.070

### Direct connection DA 33 G 10/G28

For direct (rigid) connection of handpieces with the sliding coupling G28 to flexible shaft drive motors with DIN 10 connection.

### Ordering note:

Please order pre-assembled replacement core SE DA 33 DIN 10/G28 for direct connection separately, if required.



Description	EAN 4007220	Flexible shaft connection [DIN]	Sliding coupling [G]	Net weight [kg]
DA 33 DIN 10/G28	179475	10	28	0.305
SE DA 33 DIN 10/G28	284179	10	28	0.107

# Flexible shaft drives

## Flexible shafts and handpieces



Flexible shaft	BW 10 ZG	BW 12 ZGA	BW 12 KG	BW 15 KG
Catalogue page	97	99	101	101
Rot. speed [RPM] Power output [watts]	750–18,000 140–2,450	850–12,000 525–6,280	850–10,000 525–6,280	1,000–7,300 735–8,560
Connection - drive side - handpiece side	DIN 15 G28	DIN 15 G28	DIN 15 G35	DIN 15 G35
Suitability	○	●	–	–
Drive MME 40–150 Rotational speed 10,000–15,000 RPM Power output 1,840 watts	Straight handpieces	 HA 10 ZGE max. 18,000 RPM HA 12 ZGA max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM HA 12 ZGA max. 18,000 RPM	
	Angle handpieces	 WZ 10 45° max. 17,100 RPM WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM WZ 10 B max. 17,100 RPM	
	Other attachments			
Suitability	○	●	●	●
Drive MME 40–150 Rotational speed 5,000–10,000 RPM Power output 1,840 watts	Straight handpieces	 HA 10 ZGE max. 18,000 RPM HA 12 ZGA max. 18,000 RPM	 HA 10 ZGE max. 18,000 RPM HA 12 ZGA max. 18,000 RPM	 HA 12/15 KG MK I max. 10,000 RPM HA 12 ZG max. 10,000 RPM
	Angle handpieces	 WZ 10 45° max. 17,100 RPM WZ 10 B max. 17,100 RPM	 WZ 10 45° max. 17,100 RPM WZ 10 B max. 17,100 RPM	
	Other attachments	 BSG 3/10/40 max. 5,000 RPM BSG 10/35 and BSG 10/50 max. 7,000 RPM	 BSG 3/10/40 max. 5,000 RPM WT 10 H max. 8,500 RPM BSG 10/35 and BSG 10/50 max. 7,000 RPM	
Suitability	–	●	●	●
Drive MME 40–150 Rotational speed 500–5,000 RPM Power output 1,840 watts	Straight handpieces		 HA 10 ZGE max. 18,000 RPM HA 12 ZGA max. 18,000 RPM	 HA 12/15 KG MK I max. 10,000 RPM HA 12 ZG max. 10,000 RPM
	Angle handpieces		 WZ 10 45° max. 17,100 RPM WZ 10 B max. 17,100 RPM	
	Other attachments		 BSG 3/10/40 max. 5,000 RPM WT 10 H max. 8,500 RPM WRS 12 ZGA max. 18,000 RPM BSG 10/35 and BSG 10/50 max. 7,000 RPM WRS WT 10 H max. 8,500 RPM	

For detailed information and ordering data on flexible shafts and handpieces, please refer to the stated catalogue pages.

● Ideally suitable

○ Suitable

– Not suitable

### Maxi-Mammoth Electronic MME

- Protective earthing (⊕)
- Stepless speed adjustment 0–15,000 RPM
- MME 40/150 with 3-phase AC
- I/O interface for remote control with safety extra low voltage
- Overload protection
- Smooth start-up for protection of people, tools and drive
- Restart protection in case of power failure
- Very low noise generation
- Removable operating console with possibility of extension, e.g. hanging design for work in boilers
- High torque over the entire rotational speed range
- Base with pivot device for easy guidance of flexible shafts and adherence to the max. permissible bending radius
- Suitable for tools up to diameter 300 mm

- Easy to service, easy-to-remove housing with four main modules

#### Application notes:

- The Maxi-Mammoth Electronic is the most powerful drive motor provided by PFERD. Suitable for use in combination with flexible shafts for grinding and polishing work with high-power output requirements.

#### Accessories included:

4 m power cable without plug, 2 allen keys

#### Ordering note:

The drive motor is supplied without flexible shafts, please order separately.

#### PFERDERGONOMICS®:

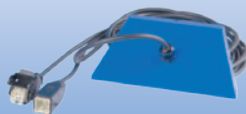


MME 40/150



Description	EAN 4007220	Rotational speed [RPM]	Voltage [volts] 50–60 Hz	Power con- sumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Dimensions L x B x H [mm]	Net weight [kg]
MME 40/150 400 V	832486	0–15,000	340–480	6,100	4,000	15	470 x 220 x 490	36.160

### Accessories for Maxi-Mammoth Electronic



(1)



(2)



(3)

#### (1) Remote control cable FSTK 40

For extension of the removable operating console with cover plate for protection of the motor (cable length 4 m).

#### (2) Foot switch FSE 22

For easy drive switch-on/switch-off (cable length 4 m) via the remote control interface. With protective cover.

#### (3) Base trolley WA D ME

Trolley with tool tray and 4 steerable wheels, 2 with parking brake. Dimensions L x W x H: 500 x 500 x 510 mm.

Description	EAN 4007220	Description	Net weight [kg]
FSTK 40	847053	(1) Remote control cable	0.635
FSE 22	772799	(2) Foot switch	1.000
WA D ME	618028	(3) Trolley	14.200



#### For multi-speed machine Mammoth Electronic

Hanger with operating console whose height is continuously adjustable on request.



# Flexible shaft drives

## Flexible shafts and handpieces



Flexible shaft	BW 10 ZG	BW 12 ZGA	BW 12 KG	BW 15 KG	
Catalogue page	97	99	101	101	
Rot. speed [RPM] Power output [watts]	750–18,000 140–2,450	850–12,000 525–6,280	850–10,000 525–6,280	1,000–7,300 735–8,560	
Connection - drive side - handpiece side	DIN 15 G28	DIN 15 G28	DIN 15 G35	DIN 15 G35	
Suitability	●	●	–	–	
Drive SD 25 Rotational speed 13,500 RPM Power output 1,840 watts	 <b>HA 10 ZGE</b> <b>HA 12 ZGA</b> max. 18,000 RPM   max. 18,000 RPM		 <b>HA 10 ZGE</b> <b>HA 12 ZGA</b> max. 18,000 RPM   max. 18,000 RPM		
	 <b>WZ 10 45°</b> <b>WZ 10 B</b> max. 17,100 RPM   max. 17,100 RPM		 <b>WZ 10 45°</b> <b>WZ 10 B</b> max. 17,100 RPM   max. 17,100 RPM		
Suitability	○	●	●	●	
Drive SD 25 Rotational speed 5,100 / 7,300 RPM Power output 1,840 watts	 <b>HA 10 ZGE</b> <b>HA 12 ZGA</b> max. 18,000 RPM   max. 18,000 RPM		 <b>HA 10 ZGE</b> <b>HA 12 ZGA</b> max. 18,000 RPM   max. 18,000 RPM		 <b>HA 12/15 KG MK I</b> <b>HA 12 ZG</b> max. 10,000 RPM   max. 10,000 RPM
	 <b>WZ 10 45°</b> <b>WZ 10 B</b> max. 17,100 RPM   max. 17,100 RPM		 <b>WZ 10 45°</b> <b>WZ 10 B</b> max. 17,100 RPM   max. 17,100 RPM		
	 <b>BSG 3/10/40</b> max. 5,000 RPM		 <b>BSG 3/10/40</b> max. 5,000 RPM  <b>WT 10 H</b> max. 8,500 RPM		 <b>BSG 10/35 and BSG 10/50</b> max. 7,000 RPM
Suitability	○	●	●	●	
Drive SD 25 Rotational speed 1,000 / 1,700 / 2,700 RPM Power output 1,840 watts	 <b>HA 10 ZGE</b> <b>HA 12 ZGA</b> max. 18,000 RPM   max. 18,000 RPM		 <b>HA 10 ZGE</b> <b>HA 12 ZGA</b> max. 18,000 RPM   max. 18,000 RPM		 <b>HA 12/15 KG MK I</b> <b>HA 12 ZG</b> max. 10,000 RPM   max. 10,000 RPM
	 <b>WZ 10 45°</b> <b>WZ 10 B</b> max. 17,100 RPM   max. 17,100 RPM		 <b>WZ 10 45°</b> <b>WZ 10 B</b> max. 17,100 RPM   max. 17,100 RPM		
	 <b>BSG 3/10/40</b> max. 5,000 RPM		 <b>BSG 3/10/40</b> max. 5,000 RPM  <b>WT 10 H</b> max. 8,500 RPM		 <b>BSG 10/35 and BSG 10/50</b> max. 7,000 RPM

For detailed information and ordering data on flexible shafts and handpieces, please refer to the stated catalogue pages.

● Ideally suitable

○ Suitable

– Not suitable



SD 25-40 D

**Master Grinder**

- Protective earthing ⚡
- Speed-adjustable via excentric gears: 1,000, 1,700, 2,700, 5,100, 7,300, 13,500 RPM

**Application note:**

- The Master Grinder is used for heavy grinding work with ceramic- or fibre-reinforced grinding wheels, flap wheels and industrial power brushes with diameter ≥ 100 mm

**Special designs are available on request:**

- B 1 Hanging
- B 2 Mobile, hanging

Accessories included:  
 3 m power cable without plug, 2 allen keys

**Ordering note:**

If the desired voltage is not specified, we will supply you with a 3-phase AC motor set to 400 volts.  
 Master Grinder in type 3-phase AC 230 volts on request.  
 Other voltages from 42 to 440 volts and a frequency of 60 Hz are available on request at an extra charge.  
 The drive motors are supplied without flexible shaft, please order separately.



SD 25-40

Description	EAN 4007220	Type	Voltage [volts] 50 Hz	Power consumption [watts]	Power output [watts]	Flexible shaft connection [DIN]	Net weight [kg]
SD 25-40 400 V	181416	A with base	400	2,400	1,840	15	30.000
SD 25-40 D 400 V	181447	D on base trolley	400	2,400	1,840	15	57.000

**Base trolley, type D** (without machine).  
 4 steerable wheels, 2 wheels with parking brake.  
 Dimensions L x W x H: 460 x 460 x 605 mm.



Trolley D

Description	EAN 4007220	Net weight [kg]
WA D	182666	23.000



# Flexible shaft drives

## Flexible shafts



Rotational speeds Drives	Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	
36,000 RPM Mammoth + ST 103 Record grinder RUG 19/120 SI + overdrive ST 103	<p><b>TC burrs</b> Cut 3 PLUS, 4, 5, INOX, MICRO Dia. 3 to 5 mm</p> <p><b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 5 to 10 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. up to 3.2 mm</p>	<p><b>Mounted points</b> Dia. up to 13 mm Width up to 13 mm Shank dia. 3 mm</p> <p>Dia. up to 16 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 6 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 10 mm <b>LHR</b> Dia. up to 20 mm</p>	<p><b>POLICAP®</b> Dia. up to 5 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 15 mm</p> <p><b>Mounted flap wheels</b> Dia. 10 mm</p>	<p><b>Diamond grinding points</b> Dia. up to 8.0 mm Shank dia. 3 + 6 mm</p> <p><b>CBN grinding points</b> Dia. up to 10.0 mm Shank dia. 3 + 6 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. 40 mm</p>
33,00 RPM Mammoth Electronic + ST 103	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO Dia. 4 to 6 mm</p> <p><b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 6 to 12 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. up to 3.2 mm</p>	<p><b>Mounted points</b> Dia. up to 13 mm Width up to 13 mm Shank dia. 3 mm</p> <p>Dia. 16 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 10 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 15 mm <b>LHR</b> Dia. up to 20 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 15 mm</p> <p><b>POLICAP®</b> Dia. 7 mm</p> <p><b>Mounted flap wheels</b> Dia. 10 mm</p>	<p><b>Diamond grinding points</b> Dia. up to 8.0 mm Shank dia. 3 + 6 mm</p> <p><b>CBN grinding points</b> Dia. up to 10.0 mm Shank dia. 3 + 6 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. 50 mm</p>
24,000 RPM Mammoth + ST 103 RUER 5/250 SI, RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 5 to 8 mm</p> <p><b>Cut 1, ALU, FVK, FVKS, PLAST</b> Dia. 8 to 12 mm</p> <p><b>HSS rotary cutters</b> Special cuts Dia. up to 4 mm</p>	<p><b>Mounted points</b> Dia. up to 20 mm Width up to 13 mm Shank dia. 3 + 6 mm</p> <p>Dia. 20 mm Width up to 40 mm</p>	<p><b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 10 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 15 mm <b>LHR</b> Dia. up to 25 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 22 mm</p> <p><b>POLIROLL®</b> Dia. up to 6 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 25 mm</p> <p><b>POLICAP®</b> Dia. 10 mm</p> <p><b>Mounted flap wheels</b> Dia. 15 mm</p>	<p><b>Diamond grinding points</b> Dia. up to 12.0 mm</p> <p><b>CBN grinding points</b> Dia. up to 15.0 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. 50 mm</p> <p><b>Ring wheels ER</b> Dia. 30 mm matching <b>arbor</b> <b>BO 6/6 3-10</b> see Catalogue 206</p>
18,000 RPM Record grinder RUER 5/250 SI, RUER 10/250 SI, RUER 8/180 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 7 to 10 mm</p> <p><b>Cut 1, ALU</b> Dia. 10 to 16 mm</p> <p><b>HSS rotary cutters</b> Special cuts Dia. 1.6 to 6 mm</p>	<p><b>Mounted points</b> Dia. up to 20 mm Width up to 40 mm Shank dia. 3 + 6 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 12 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 30 mm</p> <p><b>Poliflex® discs</b> Bond TX Dia. 25 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 25 mm</p>	<p><b>POLICAP®</b> Dia. up to 13 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 20 mm</p> <p><b>COMBIDISC® abrasive discs</b> Dia. 20 to 38 mm</p> <p><b>COMBIDISC®- POLIVLIES® discs</b> hard type VRH 20</p> <p><b>for belt grinder at- tachment holder BSVH</b> short abrasive belts BAVA 3-12/305</p>	<p><b>Catalogue 208</b></p> <p><b>Wheel brushes</b> knotted RBG Dia. 70 mm</p>	
12,000 RPM Mammoth, RUER 8/180 SI, RUG 19/120 SI, RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 10 to 12 mm</p> <p><b>Cut 1, ALU</b> Dia. 16 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5 Dia. 3.2 to 7 mm</p>		<p><b>COMBIDISC® holder</b> SBH 20 to 50</p> <p><b>COMBIDISC® abrasive discs</b> Dia. 20 to 50 mm</p> <p><b>COMBIDISC® TX discs</b> Dia. 50 and 75 mm</p> <p><b>COMBIDISC®- POLIVLIES® discs</b> Dia. 20 to 38 mm</p>		<p><b>Catalogue 208</b></p> <p><b>End brushes</b> crimped PBU Dia. 10 to 20 mm</p> <p>knotted PBG Dia. 19 mm PBG Dia. 23 mm</p> <p><b>Wheel brushes</b> crimped RBU Dia. 20 to 40 mm</p>	

If no shank Dia. is given, the shank dia. of 6 mm applies.

\*Catalogue 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

**Please note:**

- The rotational speed and power output ranges should not be exceeded or under-run
- Special lengths on request

**Flexible Shaft 4 ZG**

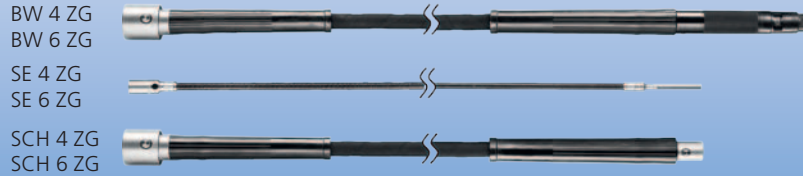
- For low power output requirements, < 300 watts, the rotational speed range can be underrun
- The radius of curvature should not be smaller than 100 mm

**Flexible shaft 6 ZG**

- For low power output requirements, < 660 watts, the rotational speed range can be underrun
- The radius of curvature should not be smaller than 140 mm

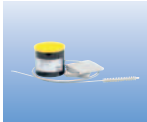
**BW 4 ZG DIN 10**  
**BW 6 ZG DIN 10**

**Rotational speed: 40,000 min<sup>-1</sup> / Output: 500 Watt**  
**Rotational speed: 25,000 min<sup>-1</sup> / Output: 1,460 Watt**



Description	EAN 4007220	Rotational speed range [RPM]	Power out- put range [Watts]	Drive-side coupling DIN / dia. [mm]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	*	Net weight [kg]
<b>Flexible shaft (incl. handpiece 4 ZGB G16)</b>								
BW 4 ZG DIN 10	181751	24,000–40,000	300–500	10 / 30	16 / 16	13 x 1,390	*	0.600
BW 6 ZG DIN 10	658420	11,000–25,000	660–1,460	10 / 30	16 / 16	16 x 1,643	-	1.150
<b>Pre-assembled replacement core</b>								
SE 4 ZG DIN 10/G16	182079	24,000–40,000	300–500	10 / M10	16 / 3.5/2.45	4 x 1,329	*	0.120
SE 6 ZG DIN 10/G16	657829	11,000–25,000	660–1,460	10 / M10	16 / 3.5/2.45	6 x 1,583	-	0.270
<b>Pre-assembled replacement casing</b>								
SCH 4 ZG DIN 10/G16	182291	-	-	10 / 30	16 / 16	13 x 1,300	*	0.330
SCH 6 ZG DIN 10/G16	658390	-	-	10 / 30	16 / 16	16 x 1,553	-	0.740

\* Cores and hoses with double-sided sliding coupling on request.



**Maintenance set** for flexible shafts, see page 110.

**Handpieces**



HA 4 ZGB G16



WZ 4 A G16

**Angle handpiece WZ 4 A G16**

- Maximum permitted speed 15,000 RPM when used with a 6 mm collet

Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Dimensions dia. x length [mm]	Transmission ratio	Collet group	Net weight [kg]
HA 4 ZGB G16	313374	6	40,000	19 x 110	-	9	0.140
WZ 4 A G16	323267	3	20,000	43 x 111	1:1	10	0.270

For all available collets, see pages 106–107.



**Belt grinder attachment holder BSVH 24**

Type with belt grinder attachment see page 109.

# Flexible shaft drives

## Flexible shafts



Rotational speeds Drives	Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 206	Catalogue 208	
24,000 RPM Mammoth + ST 103 RUER 5/250 SI, RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO Dia. 5 to 8 mm</p> <p><b>Cut 1, ALU</b> FVK, PLAST Dia. 8 to 12 mm</p> <p><b>HSS rotary cutters</b> Cut 2, 3, special cuts Dia. up to 4 mm</p>	<p><b>Mounted points</b> Dia. up to 20 mm Width up to 13 mm</p> <p>Dia. up to 25 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 12 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 25 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 25 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 22 mm</p> <p><b>POLICAP®</b> Dia. up to 11 mm</p>	<p><b>POLIROLL®</b> Dia. up to 9 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 25 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. up to 25 mm</p> <p><b>Catalogue 205</b></p> <p><b>Diamond grinding points</b> Dia. up to 12.0 mm</p> <p><b>CBN grinding points</b> Dia. up to 15.0 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm</p> <p><b>Ring wheels ER</b> Dia. 30 mm</p> <p>matching <b>arbor</b> <b>BO 6/6 3-10</b> see Catalogue 206</p>	
18,000 RPM Mammoth + ST 103 RUER 8/180 SI, RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 7 to 10 mm</p> <p><b>Cut 1, ALU</b> Dia. 10 to 16 mm</p> <p><b>HSS rotary cutters</b> Special cuts Dia. 1.6 to 6 mm</p>	<p><b>Mounted points</b> Dia. up to 32 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 12 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 30 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 25 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 30.0 mm</p> <p><b>POLICAP®</b> Dia. up to 13.0 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 40.0 mm</p> <p><b>COMBIDISC® abrasive discs CD 50</b> with holder <b>SBH 50</b></p> <p><b>Felt points</b> Dia. up to 10.0 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm matching <b>arbors</b> <b>BO 6/10 0-4</b> or <b>BO 8/10 0-4</b> see Catalogue 206</p> <p><b>Ring wheels ER</b> Dia. 50 mm matching <b>arbor</b> <b>BO 8/10 6-20</b> see Catalogue 206</p>	<p><b>Wheel brushes</b> knotted RBG Dia. 70 mm</p>
12,000 RPM Mammoth, RUER 8/180 SI RUG 19/120 SI, RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 10 to 12 mm</p> <p><b>Cut 1, ALU</b> Dia. 16 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5 Dia. 3.2 to 7 mm</p>		<p><b>COMBIDISC® holders</b> SBH 20 to 50</p> <p><b>COMBIDISC® abrasive discs</b> Dia. 20 to 50 mm</p> <p><b>COMBIDISC® TX discs</b> Dia. 50 and 75 mm</p> <p><b>COMBIDISC®-POLIVLIES® discs</b> Dia. 20 to 38 mm</p>		<p><b>End brushes</b> crimped PBU Dia. 10 to 20 mm</p> <p>knotted PBG Dia. 19 mm PBG Dia. 23 mm</p> <p><b>Wheel brushes</b> crimped RBU Dia. 20 to 40 mm</p>	
5,000 RPM Mammoth Electronic RUER 8/180 SI	<p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5 Dia. 6 to 14 mm</p>		<p>All <b>Poliflex® fine grinding points</b> and <b>Poliflex® fine grinding discs</b> Dia. up to 75 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 80 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 60 mm</p>	<p><b>POLINOX® cross buffs</b> Dia. 38.0 mm</p> <p><b>POLICLEAN® discs</b> Dia. 50.0 mm</p> <p><b>Felt points and felt wheels</b> Dia. up to 45.0 mm</p>	<p><b>End brushes</b> knotted PBG Dia. 10 to 12 mm PBG SIT Dia. 10 mm</p> <p><b>Wheel brushes</b> crimped RBU Dia. 70 to 80 mm</p>	
3,500 RPM Mammoth Electronic RUER 8/180 SI	<p><b>HSS rotary cutters</b> Cut ALU, 1, 2, 3 Dia. 16 mm</p>		<p>All <b>Poliflex® fine grinding points</b> and <b>Poliflex® fine grinding discs</b> Dia. up to 80 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 80 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 100 mm</p>	<p><b>POLICLEAN® discs</b> Dia. 50.0 and 75.0 mm</p> <p><b>Poliflex® marbling tools</b> PF ZY 5040</p> <p><b>Felt points and felt wheels</b> Dia. up to 45.0 mm</p> <p><b>Cloth rings</b> Dia. 50.0 mm</p>	<p><b>End brushes</b> crimped PBU Dia. 10 mm</p>	

If no shank Dia. is given, the shank dia. of 6 mm applies.

\*Catalogue 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

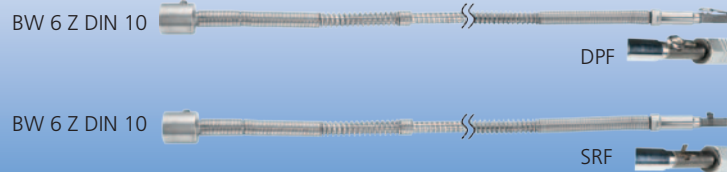


**Please note:**

- The rotational speed and power output ranges should not be exceeded or under-run
- For low power output requirements, < 660 watts, the rotational speed range can be under-run
- The radius of curvature should not be smaller than 140 mm
- Special lengths available on request

**Flexible shaft 6 Z**

Rotational speed: 24,000 RPM / 1,460 watts

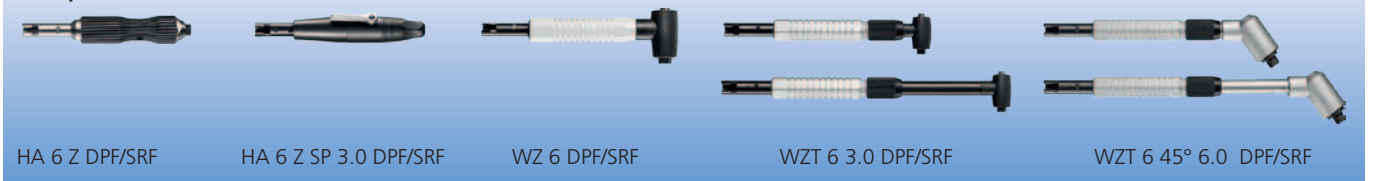


Description	EAN 4007220	Rotational speed range [RPM]	Power out- put range [Watts]	Drive-side coupling DIN / dia. [mm]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	Net weight [kg]
<b>Flexible shaft (without handpiece having duplex spring coupling)</b>							
BW 6 Z DIN 10/DPF oH	657720	11,000–24,000	600–1,460	10 / 30	DPF / 10	12 x 1,250	0.800
<b>Flexible shaft (without handpiece having expansion ring coupling)</b>							
BW 6 Z DIN 10/SRF oH	657737	11,000–24,000	660–1,460	10 / 30	SRF / 10	12 x 1,250	0.800



**Maintenance set** for flexible shafts, see page 110.

**Handpieces**



All handpieces are suitable for use with the handpiece-side couplings DPF and SRF.

**Handpiece 6 Z SP 3.0**

- Handpiece with quick-coupling system
- Handpiece with 2.34 mm collet on request

**Angle handpiece with telescopic system  
Telescope is fixed to maximum length**

- WZT 6 3.0 – Dimensions 35 x 255 mm
- WZH 6 45° 6.0 – Dimensions 45 x 260 mm

Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	Transmis- sion ratio	Collet group	Net weight [kg]
HA 6 Z DPF/SRF	657751	6	24,000	DPF/SRF / 10	24 x 140	-	13	0.131
HA 6 Z SP 3.0 DPF/SRF	657768	3	24,000	DPF/SRF / 10	22 x 139	-	-	0.109
WZ 6 DPF/SRF	657775	6	18,000	DPF/SRF / 10	50 x 170	1.25:1	13	0.225
WZT 6 3.0 DPF/SRF	657782	3	18,000	DPF/SRF / 10	35 x 170	1.38:1	14	0.170
WZT 6 45° 6.0 DPF/SRF	657799	6	18,000	DPF/SRF / 10	45 x 200	1.53:1	13	0.210

For all available collets, see pages 106–107.



# Flexible shaft drives

## Flexible shafts



Rotational speeds Drives	Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 205	Catalogue 206	Catalogue 208
24,000 RPM Mammoth + ST 103 RUER 5/250 SI + RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO Dia. 5 to 8 mm</p> <p><b>Cut 1, ALU, FVK, PLAST</b> Dia. 8 to 12 mm</p> <p><b>HSS rotary cutters</b> Cut 2, 3, special cuts Dia. up to 4 mm</p>	<p><b>Mounted points</b> Dia. up to 20 mm Width up to 13 mm Shank dia. 3mm</p> <p>Dia. up to 25 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Shank dia. 3 + 6 mm Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 12 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 25 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 25 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 22 mm</p> <p><b>POLICAP®</b> Dia. up to 11 mm</p> <p><b>POLIROLL®</b> Dia. up to 9 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 25 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 25 mm</p>	<p><b>Diamond grinding points</b> Dia. up to 12.0 mm</p> <p><b>CBN grinding points</b> Dia. up to 15.0 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm matching</p> <p><b>Ring wheels ER</b> Dia. 30 mm matching <b>arbor BO 6/6 3-10</b> see Catalogue 206</p>
20,000 RPM Record grinder RUER 5/250 SI RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 6 to 10 mm</p> <p><b>HSS rotary cutters</b> Cut 2, 3, special cuts Dia. 1.6 to 5 mm</p>	<p><b>Mounted points</b> Dia. up to 40 mm Width up to 20 mm</p>	<p><b>POLICAP®</b> Dia. up to 11 mm</p> <p><b>Mounted flap wheels</b> Dia. 25 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 25 mm</p> <p><b>POLIROLL® + POLICO®</b> Dia. up to 10 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 25 mm</p>	<p><b>Diamond grinding points</b> Dia. up to 12.0 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm</p> <p><b>Ring wheels ER</b> Dia. 40 mm matching <b>arbor BO 6/6 3-10</b> see Catalogue 206</p>	
17,100 RPM Mammoth + ST 103 RUER 8/180 SI Record grinder RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 7 to 10 mm</p> <p><b>Cut 1, ALU</b> Dia. 10 to 16 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 6 mm</p>	<p><b>Mounted points</b> Dia. up to 32 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 12 mm <b>GHR, LR</b> and <b>TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 30 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 25 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 30 mm</p> <p><b>POLICAP®</b> Dia. up to 13 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 40 mm</p> <p><b>COMBIDISC® abrasive discs CD 75</b> with holder <b>SBH 75</b></p> <p><b>Felt points</b> Dia. up to 10 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm matching <b>arbors BO 6/10 0-4</b> or <b>BO 8/10 0-4</b> see Catalogue 206</p> <p><b>Ring wheels ER</b> Dia. 50 mm matching <b>arbors BO 8/10 6-20</b> or <b>BO 6/6 3-10</b> see Catalogue 206</p>	<p><b>Wheel brushes</b> knotted RBG Dia. 70 mm</p>
12,000 RPM Mammoth, RUER 8/180 SI RUG 19/120 SI / RUER 10/250 SI	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 10 to 16 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 7 mm</p>		<p><b>COMBIDISC® abrasive discs</b> Dia. 20 to 75 mm</p> <p><b>COMBIDISC® TX discs</b> Dia. 50 and 75 mm</p> <p><b>COMBIDISC®-POLIVLIES® discs</b> Dia. 20 to 75 mm</p> <p><b>COMBIDISC®-POLICLEAN® discs</b> Dia. 50 mm</p>	<p><b>COMBIDISC® holders SBH 20 to 75</b></p> <p><b>Fibre discs and backing pads</b> Dia. up to 115 mm</p> <p>for <b>belt grinder attachment holder BSVH</b> <b>short abrasive belts</b> BA/VB 3-20/520</p>	<p><b>Cut-off and reinforced grinding wheels</b></p> <p><b>POLIFAN® flap discs</b></p> <p><b>Diamond cut-off wheels</b> Dia. up to 115 mm</p>	<p><b>End brushes</b> crimped PBU Dia. 10 to 20 mm</p> <p>knotted PBG Dia. 19 mm PBG Dia. 23 mm</p> <p><b>Wheel brushes</b> crimped RBU Dia. 20 to 40 mm</p> <p>knotted RBG Dia. 70 to 100 mm</p> <p>with <b>angle drive WT 7 E M14</b></p> <p>knotted RBG Dia. 115 mm arbor hole Dia. 22.2 mm</p>

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogue 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

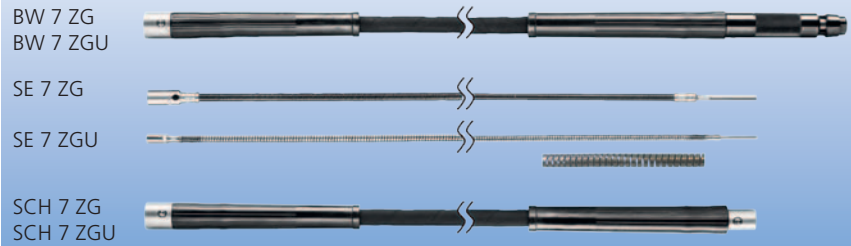
Note: Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

**Please note:**

- The rotational speed and power output ranges should not be exceeded or under-run
- For low power output requirements, < 800 watts, the rotational speed range can be under-run
- The radius of curvature should not be smaller than 140 mm
- Special lengths available on request
- The spiral added to core SE 7 ZGU provides very smooth running for flexible shaft BW 7 ZGU (2 m), particularly in the upper rotational speed range

**Flexible shaft 7 ZG/ZGU**

Rotational speed: 25,000 RPM / Output: 1,760 watts



Description	EAN 4007220	Rotational speed range [RPM]	Power output range [Watts]	Drive-side coupling DIN / dia. [mm]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	*	Net weight [kg]
<b>Flexible shaft (incl. handpiece 7 ZGA G22)</b>								
BW 7 ZG DIN 10	181768	11,000–25,000	800–1,760	10 / 30	22 / 22	18 x 1,654	*	1.510
BW 7 ZGU DIN 10 2 m	181775	11,000–25,000	800–1,760	10 / 30	22 / 22	18 x 2,154	-	2.000
<b>Pre-assembled replacement core</b>								
SE 7 ZG DIN 10/G22	182086	11,000–25,000	800–1,760	10 / M10	22 / 5/3,85	7 x 1,589	*	0.400
SE 7 ZGU DIN 10/G22 2 m	182093	11,000–25,000	800–1,760	10 / M10	22 / 5/3,85	7 x 2,089	-	0.600
<b>Pre-assembled replacement casing</b>								
SCH 7 ZG DIN 10/G22	182307	-	-	10 / 30	22 / 22	18 x 1,553	*	0.850
SCH 7 ZGU DIN 10/G22 2 m	182314	-	-	10 / 30	22 / 22	18 x 2,053	-	1.100

\* Cores and hoses with double-sided sliding coupling on request.

**Flexible shaft adapter BWA G22/DIN 10**  
(EAN 4007220918944)  
For coupling flexible shafts or as connector for rigid extensions STV.

**Flexible shaft 7 ZG DIN 10 with rigid extension**  
Dimensions according to customer's requirements. Information about curvature radii on request.

**Maintenance set** for flexible shafts, see page 110.

**Handpieces**



Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Dimensions dia. x length [mm]	Transmission ratio	Collet group	Net weight [kg]
HA 7 ZGA G22	181928	6	25,000	27 x 130	-	11	0.320
WZ 7 45° G22	303900	6	17,100	57 x 175	1.3:1	6	0.665
WZ 7 B G22	323250	6	17,100	55 x 157	1.3:1	6	0.600

For all available collets, see pages 106–107.

The **angle drive** reduces the operating speed from 25,000 to 9,300 RPM.

- For fibre discs, reinforced grinding wheels and cut-off wheels up to diameter 115 mm (80 m/s)
- For further information, please see page 105

**Angle drive WT 7 E M 14 G22 version with belt grinder attachment holder BSVH 41**

For belt grinder attachment holders, see page 109.

**Angle drive WT 7 E M14 G22**



Description	EAN 4007220	Max. perm. speed [RPM]	Dimensions dia. x length [mm]	Transmission ratio	Drive spindle thread	Tool mounting [mm]	Net weight [kg]
WT 7 E M14 G22	301708	25,000	67 x 178	2.7:1	M14	22.23	0.660

# Flexible shaft drives

## Flexible shafts



Rotational speeds Drives	Catalogue 202	Catalogue 203*	Catalogue 204*	Catalogue 206	Catalogue 208	
17,100 RPM Mammoth + ST 103	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>NON-FERROUS, STEEL,</b> <b>INOX, CAST, MICRO</b> Dia. 7 to 10 mm</p> <p><b>Cut 1, ALU</b> Dia. 10 to 16 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 2.3 to 6 mm</p>	<p><b>Mounted points</b> Dia. up to 32 mm Width up to 32 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR and PUR</b> Dia. up to 12 mm <b>GHR, LR and TX</b> Dia. up to 20 mm <b>LHR</b> Dia. up to 30 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 25 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 30 mm</p>	<p><b>POLICAP®</b> Dia. up to 13 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 40 mm</p> <p><b>COMBIDISC® abrasive discs</b> up to CD 75 With holder <b>SBH 75</b></p> <p><b>Felt points</b> Dia. up to 10 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm matching <b>arbors</b> <b>BO 6/10 0-4</b> or <b>BO 8/10 0-4</b> see Catalogue 206</p> <p><b>Ring wheels ER</b> Dia. 50 mm matching <b>arbor</b> <b>BO 8/10 6-20</b> see Catalogue 206</p>	<p><b>Wheel brushes</b> knotted RBG Dia. 70 mm</p>
12,000 RPM Mammoth, Record Grinder RUG 19/120 SI Master Grinder	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>NON-FERROUS, STEEL,</b> <b>INOX, CAST, MICRO,</b> <b>TOUGH, TOUGH-S</b> Dia. 10 to 16 mm</p> <p><b>Cut 1, ALU</b> Dia. 16 mm</p> <p><b>HSS rotary cutters</b> Cut 2, 3, special cuts Dia. 3.2 to 7 mm</p>	<p><b>Mounted points</b> Dia. up to 50 mm Width up to 13 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR and TX</b> Dia. up to 25 mm <b>GHR, LR and LHR</b> Dia. up to 40 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 45 mm</p> <p><b>POLICAP®</b> Dia. up to 23 mm</p> <p><b>POLIROLL®</b> Dia. up to 18 mm</p>	<p><b>Mounted flap wheels</b> Dia. up to 60 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 50 mm</p> <p><b>COMBIDISC® tools</b> Dia. up to 75 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm matching <b>arbors</b> <b>BO 6/10 0-4</b> or <b>BO 8/10 0-4</b> see Catalogue 206</p> <p><b>Ring wheels ER</b> Dia. 50 mm matching <b>arbor</b> <b>BO 8/10 6-20</b> see Catalogue 206</p>	<p><b>Wheel brushes</b> knotted RBG Dia. 115 mm arbor hole Dia. 22.2 mm</p> <p><b>End brushes</b> crimped PBU Dia. 10 to 20 mm knotted PBG Dia. 19 mm PBG Dia. 23 mm</p> <p><b>Wheel brushes</b> crimped RBU Dia. 20 to 40 mm knotted RBG Dia. 70 to 100 mm</p>
9,600 RPM Mammoth + ST 103	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>NON-FERROUS, STEEL,</b> <b>INOX, CAST, MICRO,</b> <b>TOUGH, TOUGH-S</b> Dia. 12 to 20 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 10 mm</p>	<p><b>Mounted points, hardness D</b> Dia. up to 40 mm</p> <p><b>Mounted points</b> Dia. up to 50 mm Width up to 13 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR and PUR</b> Dia. up to 25 mm <b>GHR, LR and TX</b> Dia. up to 40 mm <b>LHR</b> Dia. up to 40 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 40 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 60 mm</p> <p><b>POLICAP®</b> Dia. up to 21 mm</p>	<p><b>Mounted flap wheels</b> Dia. up to 60 mm</p> <p><b>POLIROLL®</b> Dia. up to 18 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 50 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 50 mm</p> <p><b>POLINOX® cross buffs</b> Dia. 25 mm</p> <p><b>Felt points</b> Dia. up to 20 mm</p>	<p><b>End brushes</b> crimped PBU Dia. 10 to 30 mm knotted Dia. 30 mm encapsulated PBV Dia. 22 to 30 mm</p> <p><b>Wheel brushes</b> crimped RBU Dia. 20 to 70 mm encapsulated RBV Dia. 63 mm</p> <p><b>Bevel brushes</b> crimped KBU Dia. 50 to 95 mm</p>	
8,000 RPM Mammoth ME 22/150	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>NON-FERROUS, STEEL,</b> <b>INOX, CAST, MICRO,</b> <b>TOUGH, TOUGH-S</b> Dia. 15 to 25 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 4 to 12 mm</p>	<p>Catalogue 204*</p> <p><b>Poliflex® fine grinding points</b> Bonds: <b>GR, PUR and TX</b> Dia. up to 30 mm <b>GHR, LR and LHR</b> Dia. up to 40 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 50 mm</p>	<p><b>POLINOX® unitized wheels PNER</b> Dia. 75 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 75 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 60 mm</p> <p><b>Felt points</b> Dia. up to 30 mm</p> <p><b>Fibre discs</b> Dia. up to 178 mm with matching backing pad</p>	<p>Catalogue 206</p> <p><b>Reinforced grinding and cut-off wheels</b></p> <p><b>POLIFAN® flap discs</b></p> <p><b>Diamond cut-off wheels</b> Dia. up to 178 mm</p>	<p>Catalogue 208</p> <p><b>End brushes</b> crimped PBU Dia. 30 mm PBUR Dia. 20 to 25 mm knotted PBG Dia. 30 mm encapsulated PBV Dia. 22 to 30 mm</p>	<p><b>Wheel brushes</b> crimped with shank RBU Dia. 50 to 100 mm knotted RBG Dia. 115 to 150 mm encapsulated RBV Dia. 63 mm</p> <p><b>Bevel brushes</b> crimped KBU Dia. 50 to 90 mm</p>
7,300 RPM Master Grinder SD 25-40	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, <b>TOUGH, TOUGH-S</b> Dia. 15 to 25 mm</p> <p><b>HSS rotary cutters</b> Cut ALU, 1, 2, 3, 5 Dia. 4 to 12 mm</p>	<p>Catalogue 204*</p> <p><b>Poliflex® fine grinding points</b> Dia. up to 40 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 60 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 75 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 75 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 80 mm</p> <p><b>Unmounted flap wheels</b> <b>FR 10050</b> matching <b>arbor</b> <b>BO 12-1/18</b></p>	<p>Catalogue 208</p> <p><b>End brushes</b> crimped PBUR Dia. 20 to 25 mm encapsulated PBV Dia. 22 to 30 mm</p>	<p><b>Wheel brushes</b> crimped with shank RBU Dia. 50 to 80 mm knotted RBG Dia. 115 to 178 mm</p> <p><b>Cup brushes</b> crimped TBU Dia. 60 to 75 mm</p> <p><b>Bevel brushes</b> crimped with shank KBU Dia. 50 to 95 mm crimped M14 KBU Dia. 100 to 115 mm</p>	

Tools for the rotational speed range 1,600–9,600 RPM can be found on page 98.

If no shank diameter is given, the shank Dia. of 6 mm applies.

\*Catalogue 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

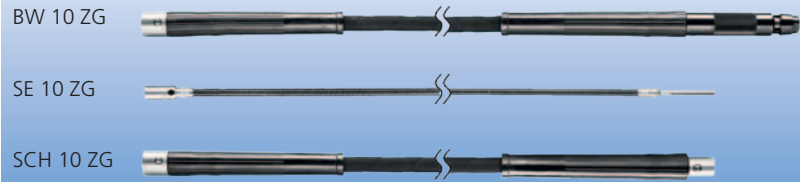
**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

**Please note:**

- The rotational speed and power output ranges should not be exceeded or under-run
- The radius of curvature should not be smaller than 170 mm
- Special lengths available on request

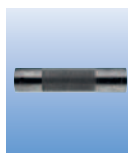
**Flexible shaft 10 ZG**

Rotational speed: 18,000 RPM / Output: 2,450 watts




Description	EAN 4007220	Rotational speed range [RPM]	Power output range [Watts]	Drive-side coupling DIN / dia. [mm]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	*	Net weight [kg]
<b>Flexible shaft (incl. handpiece 10 ZGE G28)</b>								
BW 10 ZG DIN 10	181782	750–18,000	140–2,450	10 / 30	28 / 28	22 x 1,683	*	2.500
BW 10 ZG DIN 10 2 m	181850	750–18,000	140–2,450	10 / 30	28 / 28	22 x 2,173	*	2.950
BW 10 ZG DIN 15	181874	750–18,000	140–2,450	15 / 40	28 / 28	22 x 1,700	-	2.550
<b>Pre-assembled replacement core</b>								
SE 10 ZG DIN 10/G28	182109	750–18,000	140–2,450	10 / M10	28 / 7.5/5.85	10 x 1,600	*	0.650
SE 10 ZG DIN 10/G28 2 m	182116	750–18,000	140–2,450	10 / M10	28 / 7.5/5.85	10 x 2,100	*	0.950
SE 10 ZG DIN 15/G28	182406	750–18,000	140–2,450	15 / M14	28 / 7.5/5.85	10 x 1,611	-	0.700
<b>Pre-assembled replacement casing</b>								
SCH 10 ZG DIN 10/G28	182321	-	-	10 / 30	28 / 28	22 x 1,553	*	1.400
SCH 10 ZG DIN 10/G28 2 m	182338	-	-	10 / 30	28 / 28	22 x 2,053	*	1.550
SCH 10 ZG DIN 15/G28	182444	-	-	15 / 40	28 / 28	22 x 1,570	-	1.400


\* Cores and hoses with double-sided sliding coupling on request.



**Flexible shaft adapter BWA G28/DIN 10**  
(EAN 4007220912515)  
For coupling flexible shafts or as connector for rigid extensions STV.

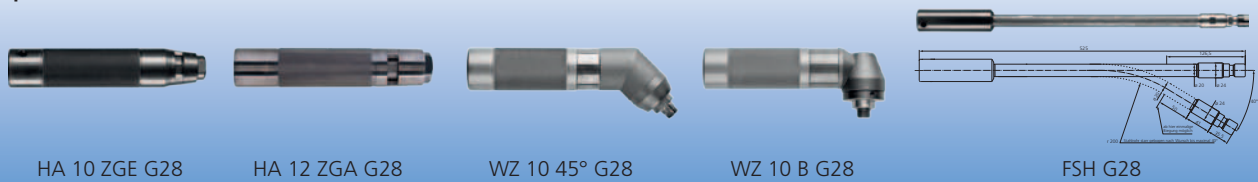


**Flexible shaft 10 ZG with rigid extension**  
Dimensions according to customer's requirements. Information about curvature radii on request.



**Maintenance set** for flexible shafts, see page 110.

**Handpieces**



**Handpiece 10 ZGE E**

- Elastic spindle bearing

**Flexible Special Handpiece FSH G28**

- This handpiece can be bent once up to a bending radius of 200 mm (as per customer specification)
- Special lengths available on request

Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Dimensions dia. x length [mm]	Transmission ratio	Collet group	Net weight [kg]
HA 10 ZGE G28	181966	6	18,000	33 x 170	-	11	0.515
HA 12 ZGA G28	181959	12	18,000	33 x 162	-	12	0.510
WZ 10 45° G28	303917	6	17,100	57 x 184	1.3:1	6	0.638
WZ 10 B G28	323243	6	17,100	55 x 166	1.3:1	6	0.760
FSH G28	182062	6	12,000	24 x 525	-	11	1.000

For all available collets, see pages 106–107.



**Belt sander BSG**  
For further information, see page 104.



**Angle drive WT 10 H G28**  
For further information, see page 105.



# Flexible shaft drives

## Flexible shafts



Rotational speeds Drives	Catalogue 202	Catalogue 203*/204*		Catalogue 206	Catalogue 208	
12,000 RPM Mammoth, Master Grinder ME 22/150	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 10 to 16 mm</p> <p><b>Cut 1, ALU</b> Dia. 16 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 7 mm</p>	<p><b>Catalogue 203*</b> <b>Mounted points</b> Dia. up to 50 mm Width up to 40 mm</p> <p><b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Bonds: GR, PUR and TX Dia. up to 25 mm GHR, LR and LHR Dia. up to 40 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 45 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 60 mm</p> <p><b>Felt points</b> Dia. up to 20 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 50 mm</p> <p><b>COMBIDISC® tools</b> Dia. up to 75 mm</p>	<p><b>Cut-off wheels EHT</b> Dia. up to 55 mm matching arbors <b>BO 6/6 0-4</b> or <b>BO 8/10 0-4</b> see Catalogue 206</p> <p><b>Ring wheels ER</b> Dia. 55 mm matching arbor <b>BO 8/10 6-20</b> see Catalogue 206</p>	<p><b>End brushes</b> crimped PBU Dia. 10 to 20 mm knotted PBG Dia. 19 mm PBG Dia. 23 mm</p>	<p><b>Wheel brushes</b> crimped with shank RBU Dia. 20 to 40 mm knotted with shank RBG Dia. 70 to 100 mm knotted RBG Dia. 115 mm arbor hole Dia. 22.2 mm</p>
9,600 RPM Mammoth + ST 103 ME 22/150	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 12 to 20 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 10 mm</p>	<p><b>Catalogue 203*</b> <b>Mounted points, hardness D</b> Dia. up to 40 mm</p> <p><b>Mounted points</b> Dia. up to 50 mm Width up to 13 mm</p>	<p><b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Bonds: GR and PUR Dia. up to 25 mm GHR, LR, TX and LHR Dia. up to 40 mm</p> <p><b>Poliflex® discs</b> Bond TX Dia. 40 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 60 mm</p>	<p><b>Mounted flap wheels</b> Dia. up to 60 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 50 and 75 mm</p> <p><b>POLINOX® cross buffs</b> Dia. 25 and 38 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 50 mm</p> <p><b>Felt points</b> Dia. up to 15 mm</p>	<p><b>End brushes</b> crimped PBU Dia. 10 to 30 mm knotted PBG Dia. 30 mm encapsulated PBV Dia. 22 to 30 mm</p>	<p><b>Wheel brushes</b> crimped with shank RBU Dia. 20 to 70 mm encapsulated RBV Dia. 63 mm</p> <p><b>Bevel brushes</b> crimped KBU Dia. 50 to 95 mm</p>
8,000 RPM Mammoth ME 22/150	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 15 to 25 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 4 to 12 mm</p>	<p><b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Bonds: GR, PUR and TX Dia. up to 30 mm GHR, LR and LHR Dia. up to 40 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 50 mm</p>	<p><b>POLINOX® unitized wheels PNER</b> Dia. 75 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 75 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 60 mm</p> <p><b>Felt points</b> Dia. up to 30 mm</p> <p><b>Fibre discs</b> Dia. up to 178 mm with matching backing pad</p>	<p><b>Cut-off and reinforced grinding wheels</b></p> <p><b>POLIFAN® flap discs</b></p> <p><b>Diamond cut-off wheels</b> up to Dia. 178 mm</p>	<p><b>End brushes</b> crimped PBU Dia. 30 mm PBUR Dia. 20 to 25 mm knotted PBG Dia. 30 mm encapsulated PBV Dia. 22 to 30 mm</p>	<p><b>Wheel brushes</b> crimped with shank RBU Dia. 50 to 100 mm knotted RBG Dia. 115 to 150 mm encapsulated RBV Dia. 63 mm</p> <p><b>Bevel brushes</b> crimped KBU Dia. 50 to 90 mm</p>
7,300 RPM Master Grinder ME 22/150	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, TOUGH, TOUGH-S Dia. 15 to 25 mm</p> <p><b>HSS rotary cutters</b> Cut ALU, 1, 2, 3, 5 Dia. 4 to 12 mm</p>	<p><b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Dia. up to 40 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 60 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 75 mm</p>	<p><b>Abrasive spiral bands</b> Dia. up to 75 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 80 mm</p> <p><b>Unmounted flap wheels</b> <b>FR 10050</b> matching arbor <b>BO 12-1/18</b></p>		<p><b>End brushes</b> crimped PBUR Dia. 20 to 25 mm encapsulated PBV Dia. 22 to 30 mm</p> <p><b>Wheel brushes</b> crimped with shank RBU Dia. 50 to 80 mm knotted RBG Dia. 115 to 178 mm</p>	<p><b>Cup brushes</b> crimped TBU Dia. 60 to 75 mm</p> <p><b>Bevel brushes</b> crimped with shank KBU Dia. 50 to 95 mm crimped M14 KBU Dia. 100 to 115 mm</p>
5,100 RPM Master Grinder ME 22/150	<p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 6 to 14 mm</p>	<p><b>Catalogue 204*</b> <b>Poliflex® fine grinding points</b> Dia. up to 75 mm</p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 80 mm</p> <p><b>POLINOX® cross buffs</b> Dia. 38 mm</p>	<p><b>POLICLEAN® discs</b> Dia. 50 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 100 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 80 mm</p>	<p><b>Unmounted flap wheels</b> <b>FR 15050,</b> <b>FR 16530 + 16550</b> matching arbor <b>BO 12-2/18</b></p>	<p><b>End brushes</b> knotted PBG Dia. 10 to 12 mm PBG SIT Dia. 10 mm</p> <p><b>Wheel brushes</b> Narrow face, multi-purpose and industrial RBU Dia. 100 to 125 mm</p>	<p><b>Cup brushes</b> crimped TBU Dia. 50 to 100 M14</p>
3,000 RPM Mammoth, Master Grinder ME 22/150	<p><b>HSS rotary cutters</b> Cut ALU, 1, 2, 3 Dia. 16 mm</p>	<p><b>Catalogue 204*</b> <b>Poliflex® discs</b> Bonds: GR and PUR Dia. up to 80 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 100 mm</p>	<p><b>POLINOX® unmounted grinding wheels</b> Dia. up to 150 mm matching arbor <b>BO 12/20 14-50</b></p> <p><b>POLICLEAN® discs</b> Dia. 100 mm</p>	<p><b>Mounted flap wheels</b> Dia. up to 80 mm</p> <p><b>Unmounted flap wheels FR 25050</b> matching arbor <b>BO 12-3/18</b></p>	<p><b>End brushes</b> knotted PBG Dia. 10 to 12 mm PBG SIT Dia. 10 mm</p>	<p><b>Wheel brushes</b> crimped Types narrow face, multi-purpose and industrial RBU Dia. 150 mm</p>
1,600 RPM Mammoth, Master Grinder ME 22/150		<p><b>Catalogue 204*</b> <b>Poliflex® discs</b> Bonds: GR and PUR Dia. up to 125 mm</p> <p><b>Felt wheels</b> Dia. up to 125 mm</p>	<p><b>POLINOX® unmounted grinding wheels</b> Dia. up to 200 mm</p> <p><b>POLICLEAN® discs</b> Dia. 150 mm</p> <p><b>POLIVLIES® discs</b> Dia. 150 mm</p>	<p><b>Marbling holders</b> Dia. up to 50 mm matching arbor <b>BO 6/8</b></p> <p><b>Cloth rings</b> <b>TR 12510</b></p>	<p><b>Wheel brushes</b> crimped Type <b>POLISCRATCH</b> <b>POS RBU 10020/M14</b></p>	

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogue 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

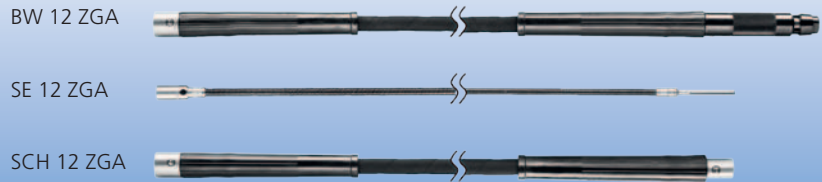
Note: Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

**Please note:**

- The rotational speed and power output ranges should not be exceeded or under-run
- The radius of curvature should not be smaller than 240 mm
- Special lengths available on request

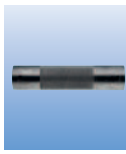
**Flexible shaft 12 ZGA**

Rotational speed: 12,000 RPM / Output: 6,280 watts




Description	EAN 4007220	Rotational speed range [RPM]	Power output range [Watts]	Drive-side coupling DIN / dia. [mm]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	*	Net weight [kg]
<b>Flexible shaft (incl. handpiece 12 ZGA G28)</b>								
BW 12 ZGA DIN 10	181799	850–12,000	525–6,280	10 / 30	28 / 28	25 x 2,173	*	4.250
BW 12 ZGA DIN 15	181881	850–12,000	525–6,280	15 / 40	28 / 28	25 x 2,187	-	4.300
<b>Pre-assembled replacement core</b>								
SE 12 ZGA DIN 10/G28	182130	850–12,000	525–6,280	10 / M10	28 / 7.5/5.85	12 x 2,102	*	1.300
SE 12 ZGA DIN 15/G28	182420	850–12,000	525–6,280	15 / M14	28 / 7.5/5.85	12 x 2,112	-	1.300
<b>Pre-assembled replacement casing</b>								
SCH 12 ZGA DIN 10/G28	182352	-	-	10 / 30	28 / 28	25 x 2,045	*	2.450
SCH 12 ZGA DIN 15/G28	182468	-	-	15 / 40	28 / 28	25 x 2,059	-	2.500


\* Cores and hoses with double-sided sliding coupling on request.



**Flexible shaft adapter BWA G28/DIN 10**  
(EAN 4007220912515)  
For coupling flexible shafts or as connector for rigid extensions STV.

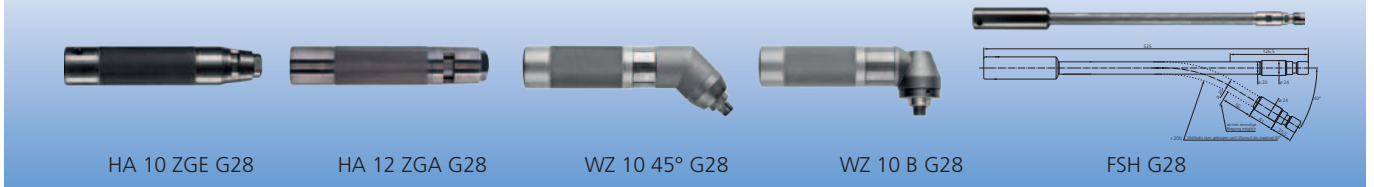


**Flexible shaft 12 ZGA with rigid extension**  
Dimensions according to customer's requirements. Information about curvature radii on request



**Maintenance set for flexible shafts**, see page 110.

**Handpieces**



**Handpiece 10 ZGE E**

- Elastic spindle bearing

**Flexible Special Handpiece FSH G 28**

- This handpiece can be bending once up to a bending radius of 200 mm (as per customer specification)
- Special lengths available on request

Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Dimensions dia. x length [mm]	Transmission ratio	Collet group	Net weight [kg]
HA 10 ZGE G28	181966	6	18,000	33 x 170	-	11	0.510
HA 12 ZGA G28	181959	12	18,000	33 x 162	-	12	0.515
WZ 10 45° G28	303917	6	17,000	57 x 184	1.3:1	6	0.630
WZ 10 B G28	323243	6	17,100	55 x 166	1.3:1	6	0.575
FSH G28	182062	6	12,000	24 x 525	-	11	1.000

For all available collets, see pages 106–107.



**Belt sanders BSG**  
Further information see page 104.



**Angle drive WT 10 H G28**  
Further information see page 105.

# Flexible shaft drives

## Flexible shafts



Rotational speeds Drives	Catalogue 202	Catalogue 204*		Catalogue 206	Catalogue 208	
9,600 RPM Mammoth + ST 103 ME 22/150	<p><b>TC burrs</b> Cut 3, 3 PLUS, 4, 5, NON-FERROUS, STEEL, INOX, CAST, MICRO, TOUGH, TOUGH-S Dia. 12 to 20 mm</p> <p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5, special cuts Dia. 3.2 to 10 mm</p>	<p><b>Poliflex® fine grinding points</b> Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 25 mm <b>GHR, LR, TX</b> and <b>LHR</b> Dia. up to 40 mm</p> <p><b>Poliflex® discs</b> Bond <b>TX</b> Dia. 40 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 60 mm</p>	<p><b>POLINOX® mounted grinding wheels</b> Dia. up to 50 mm</p> <p><b>Felt points</b> Dia. up to 15 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 60 mm</p> <p><b>POLINOX® unitized wheels PNER</b> Dia. 50 and 75 mm</p> <p><b>POLINOX® cross buffs</b> Dia. 25 and 38 mm</p>		<p><b>End brushes</b> crimped PBU Dia. 10 to 30 mm only <b>INOX, SiC, brass</b></p> <p>knotted PBG Dia. 30 mm</p> <p>encapsulated PBV Dia. 22 to 30 mm</p>	<p><b>Wheel brushes</b> crimped RBU Dia. 20 to 70 mm</p> <p>encapsulated RBV Dia. 63 mm</p> <p><b>Bevel brushes</b> crimped Dia. 50 to 70 mm</p>
6,500 RPM Mammoth, Master Grinder ME 22/150	<p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5 Dia. 5 to 14 mm</p>	<p><b>Unmounted flap wheels</b> <b>FR 10050</b></p> <p>matching <b>arbors</b> <b>MK 1-1/18</b> or <b>FR/VR 12/25.4 100-165</b></p> <p><b>Fibre discs</b> Dia. up to 230 mm with matching backing pad</p>		<p><b>Cut-off and reinforced grinding wheels</b></p> <p><b>POLIFAN® flap discs</b></p> <p><b>Diamond cut-off wheels</b> Dia. up to 230 mm</p> <p><b>ETT cup wheels</b> Dia. up to 125 mm</p>	<p><b>End brushes</b> knotted PBG Dia. 10 to 12 mm</p> <p><b>Wheel brushes</b> knotted, arbor hole Dia. 22.2 mm</p> <p>RBG Dia. 115 to 178 mm crimped, M 14 RBU Dia. 115 to 125 mm crimped with shank RBU Dia. 80 to 100 mm</p>	<p><b>Cup brushes</b> knotted, M14 TBG Dia. 65 to 100 mm crimped, M14 TBU Dia. 60 to 75 mm crimped with shank TBU Dia. 50 to 60 mm</p> <p><b>Bevel brushes</b> crimped, M14 KBU Dia. 100 to 115 mm crimped with shank KBU Dia. 80 to 95 mm</p>
5,100 RPM Master Grinder ME 22/150	<p><b>HSS rotary cutters</b> Cut 1, 2, 3, 5 Dia. 6 to 14 mm</p>	<p><b>Unmounted flap wheels</b> <b>FR 15050, FR 16530</b> <b>FR 16550</b></p> <p>matching <b>arbors</b> <b>MK 1-2/18</b> or <b>FR/VR</b> <b>12/25.4 100-165</b></p> <p><b>POLINOX® mounted grinding wheels</b> Dia. up to 80 mm</p>	<p><b>POLICLEAN® discs</b> Dia. 50 mm</p> <p><b>Abrasive spiral bands</b> Dia. up to 100 mm</p> <p><b>Mounted flap wheels</b> Dia. up to 80 mm</p>		<p><b>End brushes</b> knotted PBG Dia. 10 to 12 mm PBG SIT Dia. 10 mm</p> <p><b>Wheel brushes</b> crimped narrow face RBU Dia. 100 to 125 mm</p> <p>matching <b>arbor</b> <b>BO 8/12 - 22.2 5-18</b></p>	<p><b>wide face</b> RBU Dia. 100 to 125 mm</p> <p>matching <b>arbors</b> <b>BO 8/12 - 22.2 5-18</b> <b>BO 8/22.2 5-10</b></p> <p><b>Cup brushes</b> crimped, M14 TBU Dia. 50 to 100 mm</p>
3,000 RPM Master Grinder ME 22/150		<p><b>POLINOX® unmounted grinding wheels</b> Dia. 150 mm</p> <p>matching <b>arbor</b> <b>MK 1-20 14-50</b></p>	<p><b>Unmounted flap wheels</b> <b>FR 25050</b></p> <p>matching <b>arbors</b> <b>MK 1-3/18</b> or <b>FR/VR 12/44.0 200-250</b></p> <p><b>POLICLEAN® discs</b> Dia. 100 mm</p>		<p><b>Wheel brushes</b> crimped narrow face RBU Dia. 150 mm</p> <p>matching <b>arbor</b> <b>BO 8/12 - 22.2 5-18</b></p> <p>wide face RBU Dia. 150 mm</p> <p>matching <b>arbor</b> <b>BO 12/22 10-30</b></p>	<p>Type <b>POLISCRATCH</b> <b>POS RBU 10020/M14</b> <b>SC ST 0.60</b></p> <p>matching <b>arbor</b> <b>BO 8/M14</b></p> <p><b>Cup brushes</b> crimped, M14 TBU Dia. 60 to 100 mm only <b>SiC</b> type</p>
1,700 RPM Master Grinder ME 22/150		<p><b>Poliflex® discs</b> Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 125 mm</p> <p><b>Felt wheels</b> Dia. up to 125 mm</p> <p><b>POLINOX® unmounted grinding wheels</b> Dia. up to 200 mm matching <b>arbor</b> <b>MK 1/20 14-50</b></p>	<p><b>Cloth rings</b> TR 12510</p> <p><b>POLICLEAN® discs</b> Dia. 150 mm</p> <p><b>POLIVLIES® discs</b> Dia. 150 mm</p>			<p><b>Wheel brushes</b> Type <b>POLISCRATCH</b> <b>POS RBU 10020/M14</b> <b>SC ST 0.60</b></p> <p>matching <b>arbor</b> <b>BO 8/M14</b></p>
1,000 RPM Master Grinder ME 22/150		<p><b>Poliflex® discs</b> Bonds: <b>GR</b> and <b>PUR</b> Dia. up to 200 mm</p> <p><b>Felt wheels</b> Dia. up to 125 mm</p> <p><b>POLINOX® unmounted grinding wheels</b> Dia. up to 200 mm matching <b>arbor</b> <b>MK 1/20 14-50</b></p>	<p><b>Cloth rings</b> TR 20010</p> <p><b>POLICLEAN® discs</b> Dia. 150 mm</p> <p><b>POLIVLIES® discs</b> Dia. 150 mm</p>			

If no shank diameter is given, the shank dia. of 6 mm applies.

\*Catalogue 203/204: This data applies to an unsupported shank length of 10 mm and the stated max. mounted point dimensions.

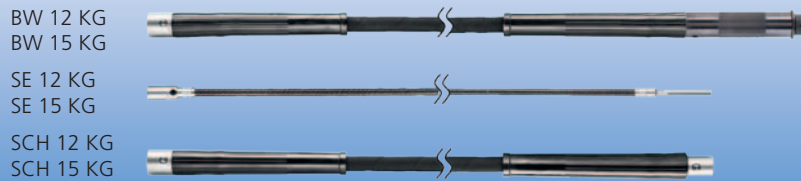
**Note:** Please observe the recommended cutting speeds and the max. permitted rotational speeds in Catalogues 202–208.

**Please note:**

- The rotational speed and power output ranges should not be exceeded or under-run
- Flexible shaft 12 KG – the radius of curvature should not be smaller than 240 mm
- Flexible shaft 15 KG – the radius of curvature should not be smaller than 300 mm
- Special lengths available on request

**Flexible shaft 12 KG, 15 KG**

Rotational speed: 7,300/10,000 RPM  
Output: 5,860/6,280 watts



Description	EAN 4007220	Rotational speed range [RPM]	Power output range [Watts]	Drive-side coupling DIN / dia. [mm]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	Net weight [kg]
<b>Flexible shaft (incl. handpiece 12/15 KG MK1 G35)</b>							
BW 12 KG DIN 10	181812	850–10,000	525–6,280	10 / 30	35 / 35	25 x 2,205	5.150
BW 12 KG DIN 15	181904	850–10,000	525–6,280	15 / 40	35 / 35	25 x 2,205	5.200
BW 15 KG DIN 15	181829	1,000–7,300	735–5,860	15 / 40	35 / 35	30 x 2,205	6.500
<b>Pre-assembled replacement core</b>							
SE 12 ZG/KG DIN 10/G35	182123	850–10,000	525–6,280	10 / M10	35 / 11/8,85	12 x 2,102	1.300
SE 12 ZG/KG DIN 15/G35	182413	850–10,000	525–6,280	15 / M14	35 / 11/8,85	12 x 2,108	1.350
SE 15 KG DIN 15/G35	182147	1,000–7,300	735–5,860	15 / M14	35 / 11/8,85	15 x 2,108	2.000
<b>Pre-assembled replacement casing</b>							
SCH 12 ZG/KG DIN 10/G35	182345	-	-	10 / 30	35 / 35	25 x 2,060	2.450
SCH 12 ZG/KG DIN 15/G35	182451	-	-	15 / 40	35 / 35	25 x 2,060	2.500
SCH 15 KG DIN 15/G35	182369	-	-	15 / 40	35 / 35	30 x 2,060	3.750

\* Cores and hoses with double-sided sliding coupling on request.

**Handpieces**

HA 12/15 KG MK1 G35



HA 12 ZG G35



Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Dimensions dia. x length [mm]	Collet group	Safety thread	Tool mounting [mm]	Net weight [kg]
HA 12/15 KG MK1 G35	181973	-	10,000	42 x 143	-	M16 x 1r.	MK1	1.100
HA 12 ZG G35	181942	12	10,000	42 x 215	12	-	-	1.280

**Collets**

Group	For shank dia.				
	6 mm	8 mm	10 mm	12 mm	1/4 inch
EAN 4007220					
12	195994	196014	196038	196045	196052

For dimensions see pages 106–107.



Maintenance set for flexible shafts, see page 110.

**Arbors**

BO MK1/18 15-35



BO 12/14 1-30

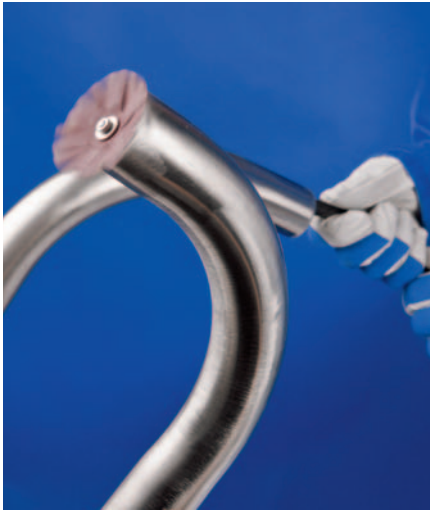


Please refer to Catalogue 204 and Catalogue 208 for more arbors.

Description	EAN 4007220	Shank holder	Tool mounting [mm]	Suitable for	Net weight [kg]
BO MK1/18 15-35	182734	MK1	dia. 18 x 15-35	Handpiece 12/15 KG	0.800
BO 12/14 1-30	182819	dia. 12 mm	dia. 14 x 1-30	Handpiece, holder requirements 12 mm shank	0.200

# Flexible shaft drives

## Special flexible shafts for inner grinding of pipes



### Flexible shaft PST-T for pipe grinding

These special flexible shafts do not have a handpiece for holding the tool and are particularly flexible in the front section.

The POLISTAR-TUBE grinding tools are attached directly to the core of the flexible shaft with screws (INOX type). POLINOX® cross buffs are screwed on with adapter AD M4 or AD M5.

This combination is highly suitable for gradual fine grinding and cleaning of inner surfaces of pipes and pipe bends. Both pipe bend ends can be deburred from the entry side.

Flexible shaft motors with stepless speed regulation are recommended as tool drives.

Special lengths on request.

### Recommendations for use:

- Before the POLISTAR-TUBE and the shaft are introduced into the pipe, the tool should be preformed and adjusted to the pipe diameter.
- At the moment of introduction, it is recommended to reduce the respective operating speed of the POLISTAR-TUBE.
- The grinding of pipes with more than three bends should be performed from both ends whenever possible.
- When the tool flaps emerge at the end of the pipe, they can be withdrawn under rotation. This way, the rear side of the POLISTAR-TUBE deburrs the pipe end and at the same time polishes the inside of the tube during the reverse motion.
- All flexible shaft drives with rotational speed range 1,500–7,650 RPM and flexible shaft connection DIN 10 can be used.

### Flexible shaft 4 PST-T, 7 PST-T

Rotational speed: 4,250/7,650 RPM

BW 4 PST-T  
BW 7 PST-T



SE 4 PST-T  
SE 7 PST-T



SCH 4 PST-T  
SCH 7 PST-T



### Flexible shaft 4 PST-T DIN 10/M4 (1.5 m)

This flexible shaft is exclusively for use with POLISTAR-TUBE PST dia. 50, 60, 70 and 80 mm. Maintenance set 4 ZG for flexible shafts, EAN 4007220182970.

### Flexible shaft 7 PST-T DIN 10/M5 (2.0 m)

This flexible shaft is exclusively for use with POLISTAR-TUBE PST dia. 90 and 100 mm. Maintenance set 7 ZG for flexible shafts, EAN 4007220182994.

Description	EAN 4007220	Rotational speed range [RPM]	Drive-side coupling DIN / dia. [mm]	Dimensions dia. x length [mm]	Fastening threads	Tool mounting [mm]	Net weight [kg]
<b>Flexible Shaft</b>							
BW 4 PST-T DIN 10/M4	810804	1,500–7,650	10 / 30	13 x 1,550	M4	4	0.480
BW 7 PST-T DIN 10/M5	811191	1,500–4,250	10 / 30	18 x 2,052	M5	5	1.320
<b>Pre-assembled replacement core</b>							
SE 4 PST-T DIN 10/M4	835685	1,500–7,650	10 / M10	4 x 1,540	M4	4	0.124
SE 7 PST-T DIN 10/M5	835692	1,500–4,250	10 / M10	7 x 2,042	M5	5	0.447
<b>Pre-assembled replacement casing</b>							
SCH 4 PST-T DIN 10/M4	835715	-	10 / 30	13 x 1,550	-	-	0.353
SCH 7 PST-T DIN 10/M5	835722	-	10 / 30	18 x 2,052	-	-	0.871

### Accessories for flexible shafts BW 4 PST-T, 7 PST-T

AD M4/8-32 UNC  
AD M5/8-32 UNC



FLS M4  
FLS M5



EM SW 7 mm  
EM SW 8 mm G



Description	EAN 4007220	Tool mounting [mm]	Suitable for	Net weight [kg]
AD M4/8-32 UNC	922750	8-32 UNC	BW 4 PST-T	0.002
AD M5/8-32 UNC	922767	8-32 UNC	BW 7 PST-T	0.003
FLS M4	833667	4 mm	BW 4 PST-T	0.002
FLS M5	833674	5 mm	BW 7 PST-T	0.003
EM SW 7 mm	592885	-	BW 4 PST-T	0.008
EM SW 8 mm G	206867	-	BW 7 PST-T	0.014

### Suitable PFERD tools

#### Catalogue 204

#### POLISTAR-TUBE

dia. 50 mm for inside pipe dia. 35 to 40 mm  
dia. 60 mm for inside pipe dia. 40 to 45 mm  
dia. 70 mm for inside pipe dia. 45 to 50 mm

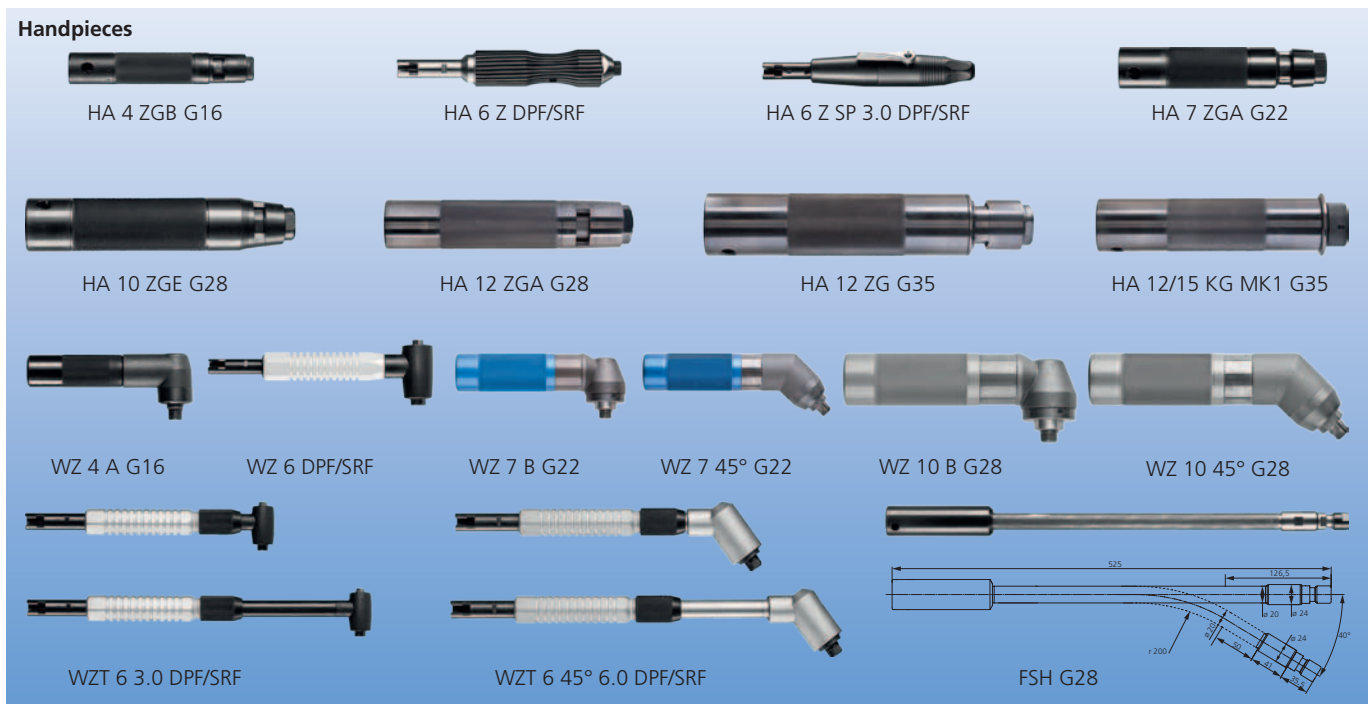
dia. 80 mm for inside pipe dia. 50 to 55 mm  
dia. 90 mm for inside pipe dia. 55 to 60 mm  
dia. 100 mm for inside pipe dia. 60 to 65 mm

#### POLINOX® cross buffs

Dia. up to 50 mm

Observe the recommended and maximum permitted rotational speed of the tool for the rotational speed setting of the motor.





**Handpiece HA 6 Z SP 3.0 DPF/SRF**  
Handpiece with 2.34 mm collet on request

**Angle handpiece WZ 4 A G16**  
■ When used with a 6 mm collet, the maximum permitted rotational speed is 15,000 RPM  
■ For type with belt grinder attachment BSVH 24, see page 109

**Angle handpieces WZ 7 B G22 and WZ 10 B G28**  
■ For version with belt grinder attachment BSVH 36, see page 109

**Angle handpieces with telescopic system Telescoping fixed to maximum length**  
■ WZT 6 3.0 DPF/SRF – Dimensions 35 x 255 mm

■ WZH 6 45° 6.0 DPF/SRF – Dimensions 45 x 260 mm

**Flexible special handpiece FSH G28**  
■ This handpiece can be bent once up to a bending radius of 200 mm (as per customer specification)  
■ Special lengths available on request

Description	EAN 4007220	Incl. collet dia. [mm]	Max. perm. speed [RPM]	Handpiece side coupling G / dia. [mm]	Dimensions dia. x length [mm]	Transmission ratio	Collet group	Net weight [kg]
<b>Straight Handpieces</b>								
HA 4 ZGB G16	313374	6	40,000	16 / 16	19 x 110	-	9	0.140
HA 6 Z DPF/SRF	657751	6	24,000	DPF/SRF / 10	24 x 140	-	13	0.131
HA 6 Z SP 3.0 DPF/SRF	657768	3	24,000	DPF/SRF / 10	22 x 139	-	-	0.270
HA 7 ZGA G22	181928	6	25,000	22 / 22	27 x 130	-	11	0.320
HA 10 ZGE G28	181966	6	18,000	28 / 28	33 x 170	-	11	0.515
HA 12 ZGA G28	181959	12	18,000	28 / 28	33 x 162	-	12	0.510
HA 12 ZG G35	181942	12	10,000	35 / 35	42 x 215	-	12	1.280
HA 12/15 KG MK1 G35	181973	-	10,000	35 / 35	42 x 143	-	-	1.100
<b>Angle handpieces</b>								
WZ 4 A G16	323267	3	20,000	16 / 16	43 x 111	1:1	10	0.270
WZ 6 DPF/SRF	657775	6	18,000	DPF/SRF / 10	50 x 170	1.25:1	13	0.225
WZ 7 B G22	323250	6	17,100	22 / 22	55 x 157	1.3:1	6	0.600
WZ 7 45° G22	303900	6	17,100	22 / 22	57 x 175	1.3:1	6	0.665
WZ 10 B G28	323243	6	17,100	28 / 28	55 x 166	1.3:1	6	0.760
WZ 10 45° G28	303917	6	17,100	28 / 28	57 x 184	1.3:1	6	0.638
<b>Angle handpiece with telescopic system</b>								
WZT 6 3.0 DPF/SRF	657782	3	18,000	DPF/SRF / 10	35 x 170	1.38:1	14	0.170
WZT 6 45° 6.0 DPF/SRF	657799	6	18,000	DPF/SRF / 10	45 x 200	1.53:1	13	0.210
<b>Flexible special handpiece</b>								
FSH G28	182062	6	12,000	28 / 28	24 x 525	-	11	1.000

# Tool drive accessories

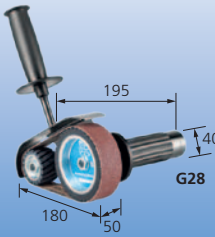
## Belt sanders, belt sanding attachment

### Belt sanders

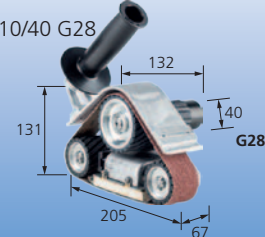
BSG 10/35 E G28



BSG 10/50 E G28



BSG 3/10/40 G28



Types "E" with elastic spindle bearing. Can be connected to flexible shafts without hand-piece.

#### Ordering note:

More detailed information and ordering data for grinding belts and non-woven belts can be

found in Catalogue 204.

Description	EAN 4007220	Max. perm. speed [RPM]	Matches flexible shafts of type	Matches handpiece side flexible shaft coupling G/dia. [mm]	Matching belts	dimension T x L [mm]	Net weight [kg]
BSG 10/35 E G28	183212	7,000	BW 10 ZG, BW 12 ZGA	28 / 28	VB 35/450, BA 35/450	35 x 450	1.500
BSG 10/50 E G28	183199	7,000	BW 10 ZG, BW 12 ZGA	28 / 28	VB 50/450, BA 50/450	50 x 450	1.580
BSG 3/10/40 G28	183014	5,000	BW 10 ZG, BW 12 ZGA	28 / 28	BA 40/505	40 x 505	2.220

### Replacement rollers for belt sanders

ATR



ULR

#### Recommendations for use:

##### Soft drive roll

For seamless fine grinding on stainless steel (INOX), we recommend the soft type drive roll (approx. 25 Shore).

#### Ordering note:

Guide roller ULR BSG 3/10/40 – 2 rollers are required here.

Description	EAN 4007220	Description	D x T [mm]	Suitable for belt sanders	Net weight [kg]
ULR BSG 10/35 E	183229	Guide roller	50 x 30	BSG 10/35 E	0.125
ATR BSG 10/35 E	183236	Drive roller	100 x 30	BSG 10/35 E	0.250
ATR-W BSG 10/35 E	801826	Drive roller soft	100 x 30	BSG 10/35 E	0.250
ULR BSG 10/50 E	183205	Guide roller	50 x 40	BSG 10/50 E	0.145
ATR BSG 10/50 E	183090	Drive roller	100 x 40	BSG 10/50 E	0.300
ATR-W BSG 10/50 E	746424	Drive roller soft	100 x 40	BSG 10/50 E	0.300
ATR BSG 3/10/40	183021	Drive roller	70 x 40	BSG 3/10/40	0.180
ULR BSG 3/10/40	183038	Guide roller	50 x 40	BSG 3/10/40	0.088

## Drum grinders for flexible shafts

### Drum equipment sets for handpieces



WRS 12 ZGA



WRS WT 10 H

#### Drum equipment set WRS 12 ZGA

Using this set, the straight flexible shaft hand-piece 12 ZGA can be adapted for use with grinding drums.

#### Drum equipment set WRS WT 10 H

Using this set, the angle drive WT 10 H can be adapted for use with grinding drums.

Please refer to Catalogues 204 and 208 for information regarding drum tools (flap drums, POLINOX® grinding drums, Poliflex® texturing rollers, drum brushes) and rotational speeds.

#### Note:

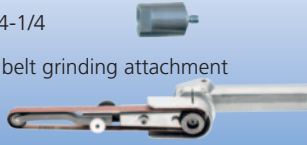
■ Drive spindle with 2 keyways for higher power transmission on the drum tools

Description	EAN 4007220	Spindle dia. [mm]	Max. tool dia. [mm]	Contents	Net weight [kg]
WRS 12 ZGA	485859	19	125 x 100	Mounting adapter, guard with handle, spindle extension	1.285
WRS WT 10 H	649602	19	125 x 100	Guard with handle, spindle extension	1.150

**Accessories WT 7 E M14 G22**

AF 14-1/4

with belt grinding attachment



Connectable to flexible shafts 7 ZG/7 ZGU G22 (without handpiece).

Connection to flexible shaft can be pivoted 360°.

Accessories included:  
 Key, lateral handle, clamping flange and guard diameter 150 mm.

**Accessories:**

(please order separately)

Arbor:

AF 14-1/4 for COMBIDISC®

backing pad:

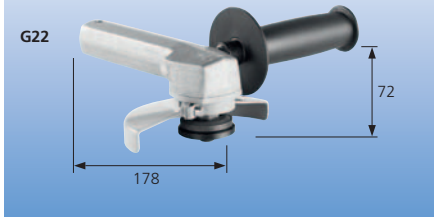
GT 115 MF M14,

H-GT 115 MF M14,

CC-GT 115-125 M14 (see Catalogue 204).

For belt grinder attachment holder with arm, see page 109.

**Angle drive WT 7 E M14 G22**



Description	EAN 4007220	Input speed n max. [RPM]	Transmission ratio	Output speed n max. [RPM]	Drive spindle thread	Tool mounting [mm]	Net weight [kg]
WT 7 E M14 G22	301708	25,000	2.7:1	9,300	M14	22.23	0.660
AF 14-1/4	302026	-	-	-	M14	1/4"-20 UNC	0.064

Connectable to flexible shafts 10 ZG/12 ZGA (without handpiece).

Connection to flexible shaft can be pivoted 360°.

Accessories included:

Key, lateral handle, clamping flange and guard diameter 178 mm.

**Accessories:**

(please order separately)

Backing pad:

GT 178 MF M14,

CC-GT 180 M14,

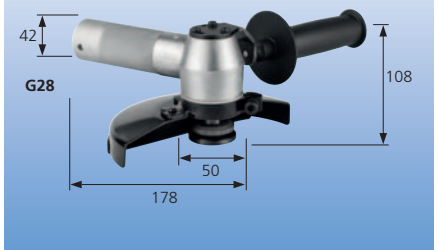
H-GT 178 MF M14 (see Catalogue 204).

**Suitable tools:**

- POLIVLIES® grinding discs
- POLIVLIES® self-adhesive discs
- Fibre discs
- Reinforced grinding wheels
- Cup wheels
- POLIFAN® flap discs
- Wheel brushes
- Cup brushes

Please refer to Catalogues 204, 206 and 208 for further information and ordering data.

**Angle drive WT 10 H G28**



Description	EAN 4007220	Input speed n max. [RPM]	Transmission ratio	Output speed n max. [RPM]	Drive spindle thread	Tool mounting [mm]	Net weight [kg]
WT 10 H G28	349250	8,500	1.2:1	7,100	M14	22.23	1.240

Transmits the operating speed in the ratio 1:3. The rotational speed is dependent on the machine speed and the diameter of the flexible shaft. Please note that the torque to be transmitted increases as the RPM increases. The power output is limited by the shaft diameter.

**Safety note:**

- The drive speed must not exceed 12,000 RPM

**Maximum rotational speeds:**

- 36,000 RPM for shaft 4 ZG
- 25,000 RPM for shaft 7 ZG/ZGU
- 18,000 RPM for shaft 10 ZG

Accessories included:

Drive core

**Ordering note:**

Please order pre-assembled replacement core SE ST 103 DIN 10 separately, if required. DIN 15 type, on request.

**Overdrive for flexible shaft drives**



Replacement core

Description	EAN 4007220	Motor coupling dia.	Flexible shaft coupling dia.	Suitable for machine types	Net weight [kg]
ST 103 DIN 10	182673	DIN 10, dia. 30 mm	DIN 10, dia. 30 mm	Mammoth, Mammoth Electronic, RUG 19/120 SI	1.600
SE ST 103 DIN 10	190524	DIN 10	DIN 10	Overdrive unit ST 103	0.070

# Tool drive accessories

## Collets



### The fast way to the best collet

- ❶ To find the collet group for the selected tool drive, please refer to the overview below
- ❷ Based on the collet group, determine the first part of the description and EAN

- ❸ Using the required diameter, determine the second part of the description and EAN
- ❹ By joining together the description and EAN you will obtain the full details that you need to order







### Ordering example:

Collet group 6  
**SPZ 950325 03 = Collet 3 mm for air grinder PGAS 5/180 HV:**

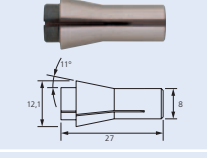
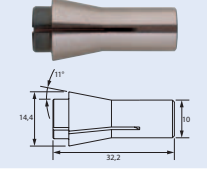
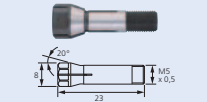
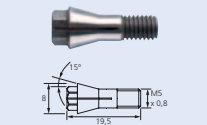
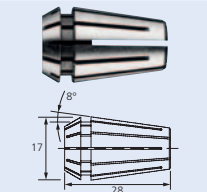
The full **description** is **SPZ 950325 03** and the full **EAN** is **4007220 212875**.

### Overview of collet groups

Page	Drives/handpieces	❶ Collet group	Page	Drives/handpieces	❶ Collet group	Page	Drives/handpieces	❶ Collet group
9	PGT 1/1000	1	27	PGAS 5/180 VE-HV	6	60	UGER 5/250 SI	11
10	PGAS 2/800 E	1	28	PGAS 9/180 V-HV	8	61	UGER 15/150 SI	12
11	PGAS 1/750	1	29	PG 8/160 HV	7	62	UGER 5/90 SI	11
12	PGAS 1/700	15	29	PGAS 8/160 VM-HV	7	63	UGER 11/90 SI	12
13	PGTA 3/700	4	30	PGAS 10/160 V-HV	8	64	UGER 15/60 SI	12
14	PGAS 1/600	1	31	PGAS 9/120 V-HV	8	65	UGER 15/30 SI	12
15	PGAS 1/550	15	32	PGAS 12/120 V-HV	8	103	Handpiece HA 4 ZGB G16	9
16	PG 3/500 S	5	33	PG 8/100 HV	7	103	Angle handpiece WZ 4 A G16	10
16	PGAS 3/500 HV	5	33	PGAS 8/100 HV	7	103	Handpiece HA 6 Z DPF/SRF	13
17	PGAS 3/440 DH	6	33	PG 8/100 V-HV	7	103	Angle handpiece WZ 6 DPF/SRF	13
17	PGZA 3/440 SU	6	33	PGAS 8/100 V-HV	7	103	Angle handpiece WZT 6 3.0 DPF/SRF	14
17	PGZA 3/440	6	33	PGAS 8/100 VM-HV	7	103	Angle handpiece WZT 6 45° 6.0 DPF/SRF	13
18	PG 3/380 DH	6	34	PGAS 12/70 V-HV	8	103	Handpiece HA 7 ZGA G22	11
19	PGAS 4/350 E	6	35	PG 8/50 V-HV	7	103	Angle handpiece WZ 7 45° G22	6
20	PGAS 5/280 HV	6	36	PGAS 10/40 V-HV	8	103	Angle handpiece WZ 7 B G22	6
21	PG 3/250 S	5	37	PWS 1/800	2	103	Handpiece HA 10 ZGE G28	11
22	PGAS 7/250 E-HV	16	38	PWSA 1/250	3	103	Angle handpiece WZ 10 45° G28	6
23	PGAS 5/230 HV	6	39	PWSA 5/210 HV	6	103	Angle handpiece WZ 10 B G28	6
23	PGAS 5/230 VE-HV	6	40	PWS 3/200 DH	6	103	Flexible special handpiece FSH G28	11
24	PG 8/220 HV	7	40	PWSA 3/220 DH	6	103	Handpiece HA 12 ZGA G28	12
24	PGAS 8/220 HV	7	41	PWSA 4/200 HV	5	103	Handpiece HA 12 ZG G35	12
24	PG 8/220 V-HV	7	42	PWSA 5/170-45 HV	6	108	Spindle extension SPV 50-3 S8	2
24	PGAS 8/220 VS-HV	5	43	PWSA 5/160 HV	6	108	Spindle extension SPV 75-6 SPG 6	10
25	PG 3/210 DH	6	44	PWSA 5/130 HV	6	108	Spindle extension SPV 75-6 S8	10
26	PGAS 10/200 V-HV	8	48	PWSA 4/45 HV	6	108	Spindle extension SPV 100-6 SPG 6	10
27	PGAS 5/180 HV	6	59	UGER 11/330 SI	8	108	Spindle extension SPV 100-6 S8	10

Collet group	❷ Description EAN	❸ Description and EAN completion											
		Dia. [mm]								Dia. [inch]			
		2.34	3	5	6	8	10	12	3/32	1/8	1/4	3/8	
1	 SPZ 914913.. 4007220	01	02							07	03		
		196342	196359							196373	196366		
2	 SPZ 947016.. 4007220	04	01							03	02		
		851999	207840							207864	207857		
3	 SPZ 900002.. 4007220		73							85	82		
			188262							188378	188354		
4	 SPZ 957717.. 4007220		03		01						04	02	
			349311		349298						349328	349304	
5	 SPZ 900003.. 4007220		39		40						39	01	
			299944		299951						299944	606032	
6	 SPZ 950325.. 4007220		03	06	01	17					16	04	02
			212875	212899	212851	212936					234969	212882	212868

Continued on next page

Collet group	Description EAN	Description and EAN completion											
		Dia. [mm]								Dia. [inch]			
		2.34	3	5	6	8	10	12	3/32	1/8	1/4	3/8	
7	 SPZ 900001.. 4007220		45 187074		23 186855	43 187050					45 187074	44 187067	00 186633
8	 SPZ 952034.. 4007220				02 213674	05 213704	07 213711					03 213681	09 213728
9	 SPZ 914900.. 4007220	09 195864	11 195888	16 195925	18 195932					09 195864	19 195949	20 195956	
10	 SPZ 957663.. 4007220		01 331279	04 398647	03 331262						02 331286	51 738719	
11	 SPZ 914909.. 4007220	09 196212	12 196236	17 196274	19 196281	23 196304				09 196212	27 196335	26 196328	
12	 SPZ 914902.. 4007220			03 195987	04 195994	06 196014	08 196038	09 196045				10 196052	11 196069
13	 SPZ 901018.. 4007220	23 668252	30 668269	50 668306	60 668313					23 668252	18 668320	14 668337	
14	 SPZ 901104.. 4007220	23 668382	30 668399							23 668382	18 668405		
15	 SPZ 989800.. 4007220		00 851814							02 851838	01 851821		
16	 SPZ 989801.. 4007220				63 956984	64 957004	65 957028					66 957035	



# Tool drive accessories

## Collets, extensions

### Reducing collets

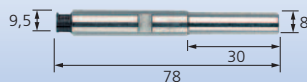


These reducing collets fit into an existing 6 mm collet and serve as adapters for 3 mm or 2.34 mm shank tools.

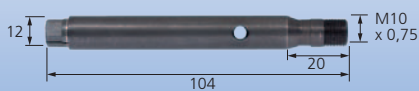
Description	EAN 4007220	Reducing shank mounting	Net weight [kg]
RZH 63	355862	from 6 mm on 3 mm diameter	0.004
RZH 6234	184486	from 6 mm on 2.34 mm diameter	0.004

### Drive spindle extensions

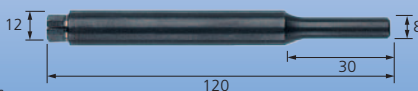
SPV 50-3 S8



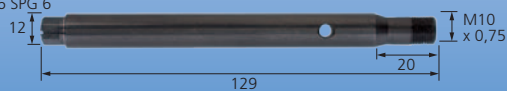
SPV 75-6 SPG 6



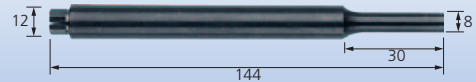
SPV 75-6 S8



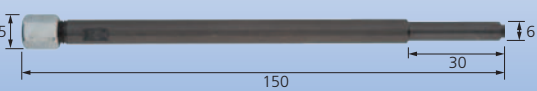
SPV 100-6 SPG 6



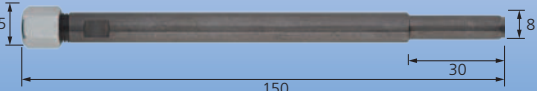
SPV 100-6 S8



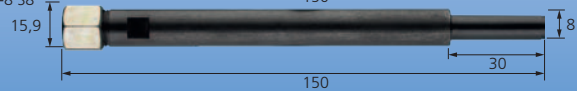
SPV 150-3 S6



SPV 150-6 S8



SPV 150-8 S8



With drive spindle extensions, shafts of grinding and milling tools can be extended. They allow access to difficult-to-reach areas. The extensions are clamped into the collet of the machine (air- or electric-powered) or into the flexible shaft handpiece.

Drive spindle extensions are a cost effective alternative to special made-to-order burrs and mounted points with long shanks.

#### Safety note:

**Caution! When using spindle extensions, please observe the valid safety regulations and the accident prevention regulations.**

When working with long shank lengths, it is vital that the tool is inserted into the workpiece (e.g. cores, pipes, ducts or keyways) before the tool drive is switched on. The extension must not run free with the tool outside the workpiece.

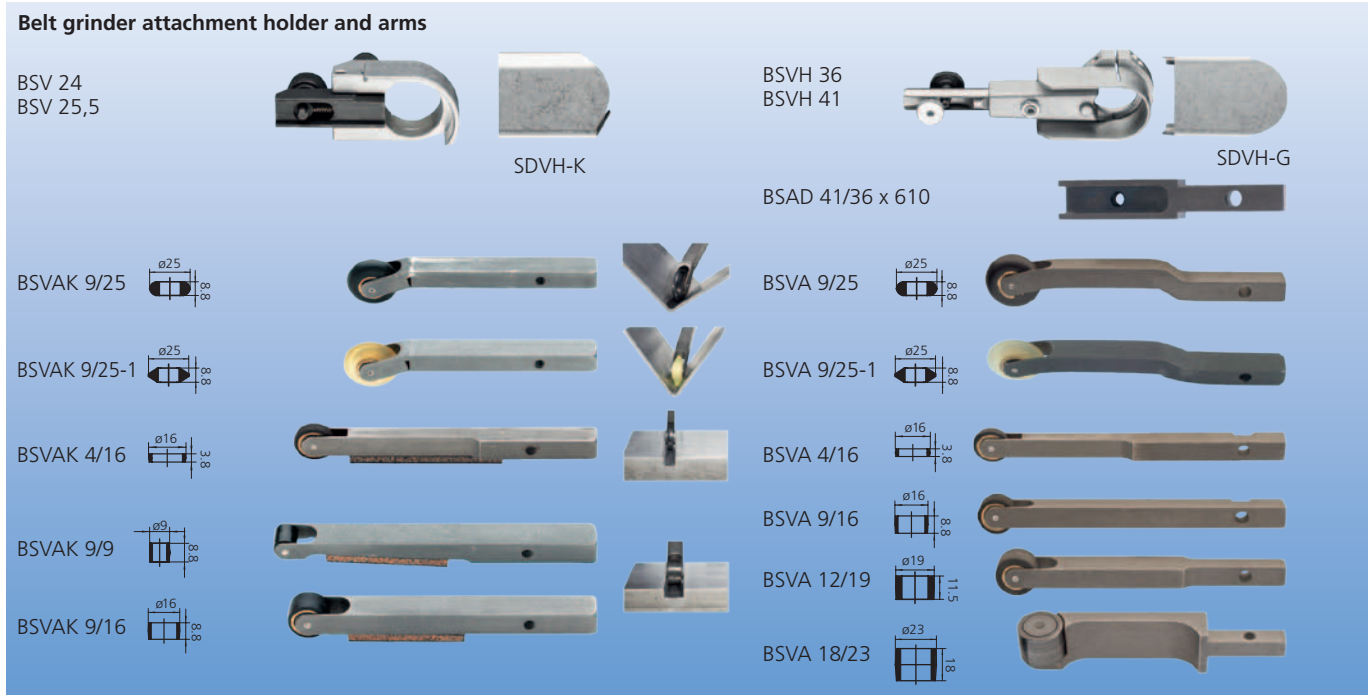
**If this rule is not observed, there is an increased risk of accidents!** If the given conditions are unfavourable, the extension with

the tool clamped in it may buckle. **The extensions are only intended for manual use** in connection with suitable air grinders, electric grinders or flexible shaft handpieces for tools with standard shanks. The extension and a tool permitted for use at the appropriate rotational speed are clamped into an impact-free collet. Do not clamp on the shoulder radius.

**Clamping of a second extension or of tools with excessive length shanks is not permitted.**

Description	EAN 4007220	Max. perm. speed [RPM]	Dia. mounting pin (drive/handpiece) [mm]	Tool mounting [mm]	Overall length [mm]	Length mounting pin [mm]	Max. spindle dia. [mm]	Incl. collet dia. [mm]	Collet group	Net weight [kg]
SPV 50-3 S8	185254	44,000	8	3	78	30	9.5	3	2	0.035
SPV 75-6 SPG 6	333143	20,000	SPG 6	6	104	Special	12	6	10	0.073
SPV 75-6 S8	185278	20,000	8	6	120	30	12	6	10	0.076
SPV 100-6 SPG 6	656051	20,000	SPG 6	6	129	Special	12	6	10	0.096
SPV 100-6 S8	185261	20,000	8	6	144	30	12	6	10	0.098
SPV 150-3 S6	185308	10,000	6	3	150	30	11.5	-	-	0.055
SPV 150-6 S8	185315	10,000	8	6	150	30	13.5	-	-	0.082
SPV 150-8 S8	184400	10,000	8	8	150	30	15.9	-	-	0.110

For all available collets, see pages 106–107.



Small belt grinder attachments BSVH 25.5 and BSVH 24 for belt length 305 mm. Large belt grinder attachments BSVH 36 and BSVH 41 for belt lengths 520 and 610 mm.

■ The belt grinder attachment can be pivoted on the respective tool drive or handpiece and therefore allows flexible adaptation to each work situation

■ Highly precise belt guidance due to adjustable belt clamping force and fixable belt arms  
 ■ Easy, quick belt replacement due to spring clamping

Description	EAN 4007220	Mounting dia. [mm]	Drive roll [mm]	Suitable for machine types	Net weight [kg]
BSVH 24	544877	24	20	WZ 4 A G16	0.155
BSVH 25,5	544860	25.5	20	PWS 3/200 DH, PWSA 3/220 DH, PBS 3/200 DH 99	0.175
BSVH 36	322970	36	30	WZ 7 B G22, WZ 10 B G28, PWSA 5/130 HV, PWSA 5/160 HV, PWSA 5/210 HV, PBSA 5/160 HV	0.420
BSVH 41	322963	41	30	WT 7 E M14 G22, PWAS 9/120 HV, UBS 5/100 SI 925	0.315
SDVH-K	544938	-	-	BSVH 25,5, BSVH 24	0.027
SDVH-G	956861	-	-	BSVH 36, BSVH 41	0.040

Description	EAN 4007220	Width x roll dia. [mm]	Suitable belt width [mm]	Suitable belt length [mm]	Net weight [kg]
<b>Adapters</b>					
BSAD 41/36 x 610	395967	-	-	610	0.080
<b>matches BSVH 36 and BSVH 41</b>					
BSVA 9/25 x 520	323007	9 x 25	3, 6, 9, 12, 16	520, 610	0.095
BSVA 9/25-1 x 520	494288	9 x 25	3, 6, 9, 12	520, 610	0.095
BSVA 4/16 x 520	322987	4 x 16	3, 6, 9	520, 610	0.060
BSVA 9/16 x 520	322994	9 x 16	9, 12	520, 610	0.096
BSVA 12/19 x 520	323014	12 x 19	12, 16	520, 610	0.107
BSVA 18/23 x 520	349267	18 x 23	20	520, 610	0.150
<b>matches BSVH 25.5 and BSVH 24</b>					
BSVAK 9/25 x 305	544914	9 x 25	3, 6, 9, 12, 16	305	0.083
BSVAK 9/25-1 x 305	544921	9 x 25	3, 6, 9, 12	305	0.082
BSVAK 4/16 x 305	544884	4 x 16	3, 6, 9	305	0.052
BSVAK 9/9 x 305	544891	9 x 9	9, 12	305	0.075
BSVAK 9/16 x 305	544907	9 x 16	9, 12	305	0.088

\* Belt length 610 mm only in conjunction with Adapter BSAD 41/36 x 610.

# Tool drive accessories

## Anti-vibration handle for angle grinders

### Anti-vibration handle SENSOHANDLE



Vibration-damping, ergonomically optimized handle for use on all common angle grinders with M8, M10 or M14 female threads.

#### Accessories included:

- 1 handle
- 3 adapters (M8, M10 and M14)

**Adapter M8** matches all common angle grinders with an M8 female thread.

Matching PFERD tool drives:

- PWAS 9/120 HV
- PWAS 13/120 AVH
- UWER 18/110 SI
- UWER 18/120 SI
- WT 7 E M14 G22
- WT 10 H/G28

**Adapters M10 and M14** match all common angle grinders with M10 or M14 female threads.

#### Advantages:

- Significant reduction in vibration transmission, because vibration source and handgrip surface are decoupled
- Moreover, the vibration energy is absorbed/reduced by the special rubber mixture
- Safe and comfortable working, because of ergonomically optimized shape and dimensions
- Secure hold due to the structured surface of the handle

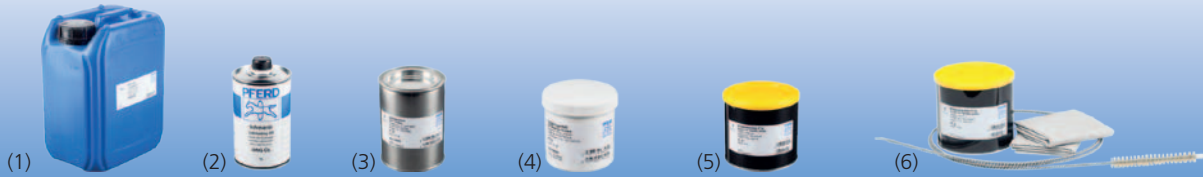
#### PFERDERGONOMICS®:



Description	EAN 4007220	Net weight [kg]
SENSOHANDLE	901649	0.500

## Maintenance products

### Lubricants



#### (1+2) Lubricating oil

For air-powered devices with oil mist lubrication. Protects against icing up.

#### Advantages:

- Good spray qualities.
- Good lubrication qualities
- Low viscosity
- Protects against corrosion
- Highly water-resistant

#### (3) Gear grease FT 3

For gears on flexible shaft machines, angle drives and angle handpieces.

#### (4) Ball bearing grease FT 5

For all ball bearings. Light moistening of grease slingers to protect them against dust.

#### (5) Flexible shaft grease FT 4

Grease with special lubrication and adhesive properties for flexible shafts 4 ZG to 15 KG.


After approx. 100 operating hours, the core of a flexible shaft has to be re-lubricated. Degrease the core and hose and reapply the special shaft grease to the core.

#### (6) Maintenance set consists of:

Hose brush for removing the old grease from the flexible casing.  
2 non-linting cleaning cloths (400 x 330 mm)  
Degrease the core with a degreasing agent and a cleaning cloth (do not use cotton waste!). Apply new grease onto a second cloth and pull the core through.

#### Ordering note:

Hose brushes can be re-ordered if required.

Description	EAN 4007220	Contents	Use for		Net weight [kg]
5 L ONG OEL	179321	(1L) Special lubricating oil 5 L	Maintenance unit	1	4.900
1 L ONG OEL	179338	(2) Special lubricating oil 1 L	Maintenance unit	1	0.990
FT 3	182956	(3) Gear grease 450 g	Gears	1	0.450
FT 5	181249	(4) Ball bearing grease 100 g	Ball bearing	1	0.100
FT 4 (500 g)	182963	(5) Flexible shaft grease 500 g	Flexible shafts	1	0.500
P-SET 4 ZG	182970	2 cloths, flexible shaft grease FT 4, hose brush 4 ZG	BW 4 ZG, BW 6 Z, BW 6 ZG	1	0.770
P-SET 7 ZG	182994	2 cloths, flexible shaft grease FT 4, hose brush 7 ZG	BW 7 ZG	1	0.770
P-SET 10/12 ZG	182987	2 cloths, flexible shaft grease FT 4, hose brush 10/12 ZG	BW 10 ZG, BW 12 KG	1	0.770

Transparent, very light safety glasses which allow a clear view in all directions.


Optimum protection through highly impact-proof plastic lenses (polycarbonate). The Ultradura coating gives the lens a high scratch-resistance.

**Advantages:**

- Lies tightly against the face
- Good protection against mechanical hazards
- Distortion-free and low-fatigue visual quality
- 100% UV protection

**Safety glasses SB-5**



Description	EAN 4007220	Lens coating		Net weight [kg]
SB-5	808665	Ultradura	5	0.335

Transparent, light and very comfortable safety glasses which allow a clear view in all directions. Arm and lens inclination can be fitted precisely to the individual field of vision.


Optimum protection through highly impact-proof plastic lenses (polycarbonate). Due to the Supravisión coating HC-AF, the outside of the lens is extremely scratch-resistant, and the inside is permanently fog-free.

**Advantages:**

- Soft contact surfaces protect the nose, forehead and ears
- Four comfort pads for pressure-free and comfortable-fit of the frame
- Good protection against mechanical hazards
- Chemical-resistant
- Distortion-free and low-fatigue visual quality
- Fog-free and anti-static coated
- 100% UV protection

**Safety glasses SB V 5**



Description	EAN 4007220	Lens coating		Net weight [kg]
SB V-5	808672	Supravisión HC/AF	5	0.365

Transparent, very light and comfortable safety glasses, which allow a clear view in all directions. Perfectly suited, in particular, to people already wearing glasses.


Optimum protection through highly impact-proof and extremely scratch-resistant plastic lenses (polycarbonate). The Optidur NC coating provides high resistance against chemicals. Due to the anti-static coating, water and oil-based contamination can easily be removed.

**Advantages:**

- No contact between frame and existing glasses
- Quick and easy frame adaptation
- Particularly soft and flexible arms
- Good protection against mechanical hazards
- Chemical-resistant
- Distortion-free and low-fatigue visual quality
- Fog-free and anti-static coated
- 100% UV protection

**Safety glasses SB BT 5**



Description	EAN 4007220	Lens coating		Net weight [kg]
SB BT-5	808689	Optidur NC	5	0.385

Comfortable, transparent full-view safety glasses with panoramic vision. Also perfectly suitable for people already wearing glasses. Pressure-free wear with comprehensive side protection.


Optimum protection through highly impact-proof plastic lenses (polycarbonate). Due to the Supravisión NC coating, the lens is extremely scratch-resistant both inside and outside as well as fog-free inside.

**Advantages:**

- Soft, flexible seal adapts perfectly to the individual field of vision
- Excellent ventilation
- Good protection against mechanical hazards
- Chemical-resistant
- Distortion-free and low-fatigue visual quality
- Fog-free and anti-static coated
- 100% UV protection

**Safety glasses SB M2**



Description	EAN 4007220	Lens coating		Net weight [kg]
SB M-2	808696	Supravisión NC	2	0.346

# Personal protection equipment (PPE)

## Safety glasses, protective gloves, ear and breathing protection

### SensoGrip protective gloves

HFS



HS



SensoGrip protective gloves provide optimum protection with maximum comfort and best finger flexibility. Viscoelastic pads on the contact surfaces damp vibrations by 30% and allow longer working times (according to ISO 5349 parts 1 and 2).

SensoGrip protective gloves are made from robust special nappa leather. They have heat- and spark-resistant aramid seams and provide protection from mechanical injuries caused by stabs, splinters or abrasion. Suitable for those allergic to chrome since they contain no hexavalent chrome. The elasticated wrist closes the glove firmly.

#### Advantages:

##### SensoGrip HFS

- Optimum hand/finger protection
- Ideal for grinding, cut-off and welding work
- Available in 3 sizes: M, L and XL

##### SensoGrip HS

- Optimum hand protection
- Ideal for light grinding and polishing work, e.g. when using air-powered filing machines and smaller straight grinders
- Available in 3 sizes: M, L and XL

#### Ordering note:


Protective gloves are supplied in pairs.

#### Ordering example:

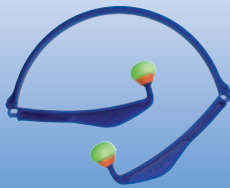
EAN 4007220**809273**

HFS 9 (M)

Please specify the desired glove size.

Description	Glove size				Net weight [kg]
	9 (M)	10 (L)	11 (XL)		
	EAN 4007220				
HFS	809273	809280	809297	1	0.250
HS	809303	809310	809327	1	0.150


### BGS ear protection



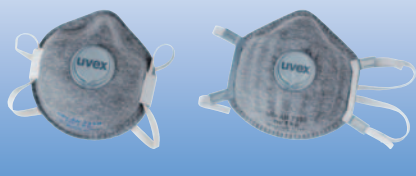
Fold-away ear protection. Extremely low weight and comfortable fit due to oval shaped, soft foam plugs. A hygienic product, as the ear protection need not be touched while it is being put in.

#### Advantages:

- Can be used for a continuous noise level of up to 95 dB(A) or up to 100 dB(A) impulse noise
- Reduces the noise level by 23 dB(A) to normal conversation levels
- Can be used several times

Description	EAN 4007220		Noise reduction value SNR [dB(A)]	Net weight [kg]
BGS	808702	1	23	0.016

### Breathing protection ASM FFP



Secure and comfortable breathing protection masks of protection classes 2 and 3. Can be used for welding, in particular for aluminium, for casting, soldering and when working on very dusty materials and asbestos.

They provide optimum protection against dust. The respiratory air valve minimizes congestion of respiratory heat and moisture.

#### Advantages:

##### ASM FFP 2-10


- Comfortable fit due to broad headband strap
- Protects against dust **up to 10 times** the MAC and TRK limit values

##### ASM FFP 3-5

- Comfortable fit via 4-point headband
- Safe fit due to circumferential comfort sealing lip
- The integrated nosepiece is flexible, thus ensuring that the mask fits securely, even across the nose
- Protects against dust **up to 30 times** the MAC and TRK limit values

MAC = Maximum allowable workplace concentration

TRK = Technical reference concentration limit for carcinogenic substances

Description	Protection class			Net weight [kg]
	2	3		
	EAN 4007220			
ASM FFP 2-10	808719	-	10	0.290
ASM FFP 3-5	-	808726	5	0.265

Printed in Germany.

Subject to technical modifications.

02/2014

831 109

