
PFERD
TOOLS
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M1
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PFERD TOOLS
RCK-System
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PFERD
TOOLS
PFERD TOOLS
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PFERD TOOLS

Tool drives

Tool drives
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Highlights from the PFERD TOOLS range

Robot spindle PGAS 4/52 RS

PFERD TOOLS robot spindles are manufactured according to the most stringent quality criteria and the latest technological standards, and are ideal for stationary applications in robot cells and machine tools and for installation in transfer lines. Scan the QR code to find out more about PFERD TOOLS' range of robot spindles.

Advantages:
- High torque due to planetary gear.
- Very high concentricity in continuous use.
- Double spindle bearing for a longer tool life.

Electric straight grinder EGER E

The electric straight grinder with elastic bearing meets the highest technical standards and is tailored to the latest ergonomic requirements. The elastic bearing noticeably reduces vibrations, making day-to-day work more ergonomic. The integrated digital electronics enable users to maintain control of the rotational speed – which remains constant during use. This makes the electric straight grinder ideal for use with burrs. Scan the QR code to find out more about PFERD TOOLS' range of electric straight grinders.

Advantages:
- The elastic bearing reduces vibrations, while the digital electronics keep the rotational speed constant – ideal for burrs.
- The stepless rotational speed regulation allows the use of various types of tools on one single tool drive.
- Smooth start-up to protect people, tools and the drive.

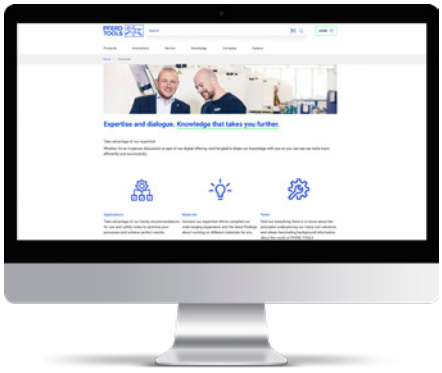
RCK drive system

The RCK drive system with stepless rotational speed regulation is an innovative solution that combines maximum productivity with significant ergonomic benefits. The system produces less noise and lower vibrations than conventional drives. In combination with the mobile control device and various handpieces, the system is particularly light, comfortable and flexible to use for operators. Scan the QR code to find out more about PFERD TOOLS' RCK drive system.

Advantages:
- Boosts productivity by up to 50% thanks to constant rotational speed.
- Comfortable, ergonomic working with fast, optimal results.
- Can be used with a battery for mobile use or a power supply unit, for a variety of industrial applications.

More expert information online

Scan the QR code to find out a wide range of tool and application knowledge relating to PFERD TOOLS' high-quality tools and their huge variety of materials.



Tool drives
General information

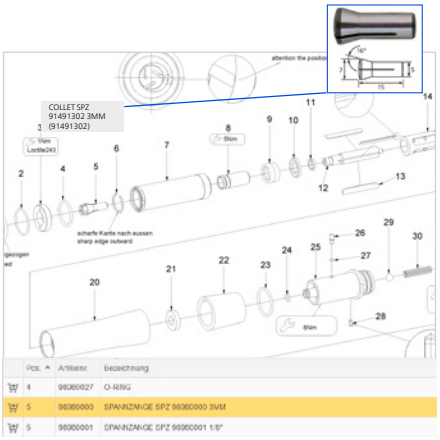
The PFERD TOOLS range includes tool drives for grinding, milling, brushing, cutting and polishing in manual applications as well as in robotic and semi-stationary applications. PFERD TOOLS is one of only a few manufacturers that can offer a wide range of tools for work on surfaces and cutting of materials,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

The wide product range includes air and electric grinders as well as drive systems with DIN 10/DIN 15 and thus offers the best solution for almost any working environment.

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

Spare parts catalogue

In our online spare parts catalogue, we have compiled all the information about every PFERD TOOLS drive. Here you will find exploded drawings and other sketches as well as photos and ordering data for each individual spare part for our drives. With just a few clicks, you can select the required spare parts or spare parts kits, add them to your shopping cart and order them online directly from PFERD TOOLS.



If you ever misplace the operating instructions, you can find them in our spare parts catalogue for download along with other documents such as CE declarations of conformity and illustrated DIY instructions for minor repairs.

You can find our clearly structured online spare parts catalogue at **spareparts.pferd.com**.

In the information area you can see which documents are available for download.

Move your mouse over the different spare parts for your tool drive from PFERD TOOLS to see the exact product specifications. Clicking on the relevant code displays more information and a product image. In the lower section of the image, you have the option of adding the selected spare parts directly to the shopping cart and ordering them.

Scan the QR code to access the online spare parts catalogue.

Explanation of pictograms used

General

80.000 RPM	Rotational speed
5 - 11 m/s	Belt speed
500 W	Power output
14 mm	Matching open-ended wrenches
5 mm	Matching hexagon socket wrenches
25 mm	Matching face pin spanners
4 mm	Matching Allen keys

Tool mounting

	Clamping range
6 mm	Collet
M14	Stud bolt
22,23 mm	Centre hole
36 mm	Guard
125 mm	Suitable for disc diameter
19 x 100 mm	Suitable for grinding drum fitting
520/610 x 9 - 12 mm	Belt dimensions

Air grinders

3 Oil /min	Information on use – oil
Oil	Can be used without oil
max. 6,3 bar	Air pressure
12 mm	Air supply hose diameter

Electric grinders and flexible shaft drives

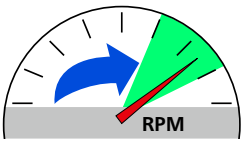
230 V 1~	Voltage
50 Hz	Frequency
	Protectively insulated in accordance with protection class II
	Protectively earthed in accordance with protection class I
	Safety transformer
	Safety extra-low voltage in accordance with protection class III

Flexible shafts

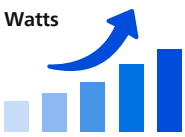
DIN 10	Drive-side shaft connection
G22	Handpiece-side sliding coupling

Criteria for selecting the optimum drive

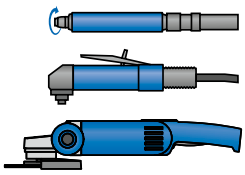
An important prerequisite for cost-effective work is selecting the optimum tool. The appropriate drive is selected taking the following criteria into consideration:



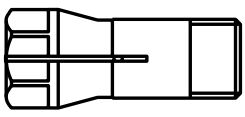
1. Rotational speed
The drive should always be selected according to the rotational speed and cutting speed recommendations for the tool. Refer to catalogue sections 2 to 8 for these recommendations.



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



3. Design, shape and size
Each type of application places specific demands on the design and size of the tool drive. The different designs can be used for various applications,



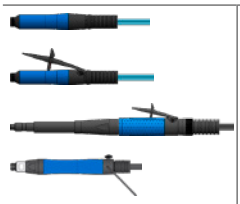
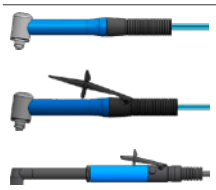
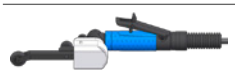
4. Tool mounting
Depending on the selected product from PFERD TOOLS, different tool mountings are available, e.g. collets or threaded spindles. Matching collets are allocated to every drive. Please refer to the accessories for tool drives in this catalogue for an overview of collets and spindle extensions. If you have any further questions, your personal PFERD TOOLS sales representative will be happy to help you.

Tool drives
What the machine designations mean

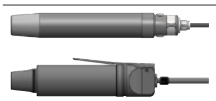
The PFERD TOOLS machine designations are structured to provide information about the drive type, as well as designs, throttle types and tool mountings. They also enable you to quickly and easily select the right rotational speed and performance classes for the various machine types.

The following overview provides a concise summary:

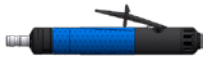
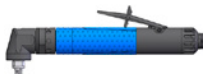
Tool drives
What the machine designations mean

Figure	Description				Performance group	Rotational speed	Designs, throttle types, tool mountings
Robot spindles							
	**P** Pneumatic	**G** Straight grinder	**T** Turbine motor	**S** Collet	**1** x 100 watts	**1000** x 100 RPM	**RS** Robot spindle
	**P** Pneumatic	**G** Straight grinder	**A** Rear exhaust	**S** Collet	**3** x 100 watts	**370** x 100 RPM	**RS** Robot spindle **LL** Linkslauf
	**P** Pneumatic	**W** Rear exhaust	**A** Rear exhaust	**S** Collet	**4** x 100 watts	**180** x 100 RPM	**RS** Robot spindle
Air grinders							
	**P** Pneumatic	**G** Straight grinder	**A** Rear exhaust	**S** Collet	**2** x 100 watts	**800** x 100 RPM	**E** Elastic bearing **Z** Two-handed **M** Medium length **ME** Medium length with elastic bearing **B** Wide extension **V** Extended **DV** Ring throttle **HV** Lever throttle **DS** Instant start
	**P** Pneumatic	**W** Rear exhaust	**A** Rear exhaust	**S** Collet	**1** x 100 watts	**800** x 100 RPM	**DV** Ring throttle **HV** Lever throttle **HEX 3MM** 3 mm hexagonal tool mounting
	**P** Pneumatic	**B** Belt grinder	**A** Rear exhaust		**2** x 100 watts	**200** x 100 RPM	**HV** Lever throttle **oVA** Without attachment arm
	**P** Pneumatic	**H** Hammer	**13** Weight x 100 g	**P** Pistol grip			**EG01** Insertion group 01
	**P** Pneumatic	**H** Hammer	**13** Weight x 100 g	**F** Fist grip			**EG03** Insertion group 03
	**P** Pneumatic	**H** Hammer	**18** Weight x 100 g	**F** Fist grip			**EG03** Insertion group 03
				F-SK Fist grip with screw cap			**EG05** Insertion group 05

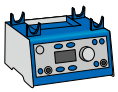
Tool drives
What the machine designations mean

Figure	Description				Performance group	Rotational speed	Designs, throttle types, tool mountings
	**P** Pneumatic	**H** Hammer	**66** Weight x 100 g	**F-SK** Fist grip with screw cap			**EG06** Insertion group 06
	**P** Pneumatic	**H** Hammer (chipping hammer)			**8** stroke length mm	**90** x 100 strokes per minute	**HV** Lever throttle
	**P** Pneumatic	**F** Filing machine			**4** stroke length mm	**84** x 100 strokes per minute	**SV** Push-pull throttle **HV** Lever throttle
	**P** Pneumatic	**N** Needle scaler	**18** Number of needles				**HV** Lever throttle
	**P** Pneumatic	**N** Needle scaler	**28** Number of needles	**P** Pistol grip			
	**MST** Marking pen					**32** x 1000 Hub pro Minute	**DV** Ring throttle **F** Needle gauge: fine

RCK drive system

	**RCK** RCK	**STG** Control device			**10** x 100 watts	**800** x 100 RPM	
Performance class up to 200 watts							
	**RCK** RCK	**G** Straight grinder	**S** Collet		**2** x 100 watts	**800** x 100 RPM	**VS** Extended spindle **SP** Keyless quick-mounting system
	**RCK** RCK	**W** Rear exhaust	**S** Collet		**1** x 100 watts	**300** x 100 RPM	**45°** 45 degree angle handpiece **90°** 90 degree angle handpiece
Performance class 400 watts							
	**RCK** RCK	**G** Straight grinder	**S** Collet		**4** x 100 watts	**400** x 100 RPM	
	**RCK** RCK	**W** Rear exhaust	**S** Collet		**4** x 100 watts	**200** x 100 RPM	**90°** 90 degree angle handpiece
	**RCK** RCK	**B** Belt grinder			**4** x 100 watts	**200** x 100 RPM	

MIM drive system

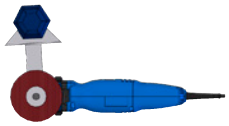
	**MIM** Micro motor	**STG** Control device	**3** Version	**S** with switch	**3** x 100 watts	**800** x 100 RPM	
	**MIM** Micro motor	**HA** Straight handpiece		**S** with switch	**3** x 100 watts	**800** x 100 RPM	**VS** Extended spindle **SP** Keyless quick-mounting system **3** Incl. collet dia. in mm

Tool drives
What the machine designations mean

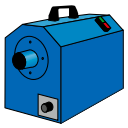
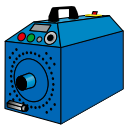
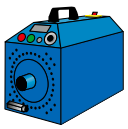
PFERD TOOLS

Figure	Description				Performance group	Rotational speed	Designs, throttle types, tool mountings
	**MIM** Micro motor	**WZ** Angle handpiece		**S** with switch	**3** x 100 watts	**300** x 100 RPM	**90°** 90 degree angle handpiece **S** Collet **3** Incl. collet dia. in mm

Electric grinders

	**E** Electric	**G** Straight grinder	**ER** Electronically regulated		**8** x 100 watts	**280** x 100 RPM	**E** Elastic bearing
	**E** Electric	**B** Belt grinder	**ER** Electronically regulated		**17** x 100 watts	**75** x 100 RPM	
	**E** Electric	**B** Belt grinder	**ER** Electronically regulated		**8** x 100 watts	**280** x 100 RPM	
	**E** Electric	**W** Angle grinder	**ER** Electronically regulated		**12** x 100 watts	**25** x 100 RPM	**R** Pipe belt grinder
	**E** Electric	**S** Burnishing machine	**ER** Electronically regulated		**12** x 100 watts	**25** x 100 RPM	

DIN 10/DIN 15 drive systems

	**E** Electric	**M** Motor	**ER** Electronically regulated		**8** x 100 watts	**280** x 100 RPM	**BW** Flexible shaft
	**R** Record	**U** Universal motor	**ER** Electronically regulated		**8** x 100 watts	**180** x 100 RPM	
	**MME** Mini Mammoth electronic		**W** Alternating current		**11** x 100 watts	**120** x 100 RPM	
	**ME** Mammoth electronic		**W** Alternating current		**18** x 100 watts	**240** x 100 RPM	
	**MME** Maxi Mammoth electronic				**40** x 100 watts	**150** x 100 RPM	
	**P** Pneumatic	**M** Motor	**A** Rear exhaust		**10** x 100 watts	**120** x 100 RPM	**HV** Lever throttle
	**E** Electric	**M** Motor	**ER** Electronically regulated		**8** x 100 watts	**280** x 100 RPM	

MST 32 DV

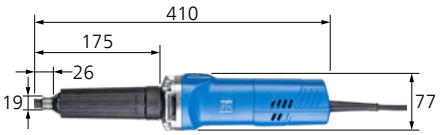
Compressed-air marking pen with exhaust directed to the front, ring throttle version and very high stroke frequency. For applying markings and labels on metal, glass, plastics. Easy guidance thanks to slim design.

Contents:
2.5 m air supply hose with 1/4" male threaded connection and threaded quick coupling (STGI), TC engraving needle.

Special features:
- F type with fine engraving needle suitable for applying markings and labels on hardened tool steel.
- M type with medium engraving needle.
- G type with coarse engraving needle.

Frequency [strokes/min]	Air consumption at idle [m³/min]	Air consumption under load [m³/min]	Air supply hose internal dia. [mm]	Net weight [kg]	Item no.	Designation
32,000	0.03	0.02	4	0.152	80600130	MST 32 DV F
					80600140	MST 32 DV M
					80600150	MST 32 DV G

Electric grinders
Straight grinder



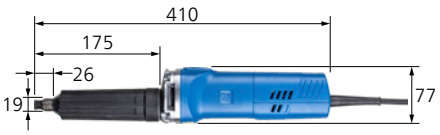
EGER 8/280

Electric straight grinder which meets the highest technical standards and incorporates the latest ergonomic findings and requirements. The digital electronics enable a constant rotational speed to be maintained.

Contents:
4 m power cable with mains connector, 6 mm collet (collet group 22), 2 keys (1x EM SW 13 mm, 1x EM SW 17 mm).

Special features:
- Stepless rotational speed regulation.
- Overload protection.
- Smooth start-up to protect people, tools and the drive.

Rotational speed range [RPM]	Power consumption [watts]	Power output [watts]	Voltage [volts] 50–60 Hz	Net weight [kg]	Item no.	Designation
28,000 – 8,500	750	410	230	1.800	83108280	EGER 8/280



EGER 8/90

Electric straight grinder which meets the highest technical standards and incorporates the latest ergonomic findings and requirements. The digital electronics enable a constant rotational speed to be maintained.

Contents:
4 m power cable with mains connector, 6 mm collet (collet group 22), 2 keys (1x EM SW 13 mm, 1x EM SW 17 mm).

Special features:
- Stepless rotational speed regulation.
- Overload protection.
- Smooth start-up to protect people, tools and the drive.

Rotational speed range [RPM]	Power consumption [watts]	Power output [watts]	Voltage [volts] 50–60 Hz	Net weight [kg]	Item no.	Designation
9,000 – 2,500	710	410	230	1.800	83108090	EGER 8/90

Pipe belt grinder

EBER 17/75 R

Electric pipe belt grinder with a **belt length of 610 – 820 mm x width 12 – 40 mm**. The lockable guide roller ensures greater contact pressure or a large surface contact angle.

Contents:
4 m power cable with mains connector, 1 key (SKHS SW 5 mm), 4 rolls.

Special features:
- With spindle lock pin, overload protection, stepless rotational speed control and digital electronics for a constant rotational speed.
- With telescopic arm for using different belt lengths and fixed side plates to protect the workpiece.
- Smooth start-up to protect people, tools and the drive.

Belt speed [m/s]	Power consumption [watts]	Power output [watts]	Voltage [volts] 50–60 Hz	Net weight [kg]	Item no.	Designation
8.2 – 22.8	1,700	1,000	230	4.027	*83200250*	EBER 17/75 R

Discontinued product

Drive systems with DIN 10/DIN 15
General information

How to find the matching flexible shaft to your drive

Here you will find a selection of flexible shafts for the individual drives in line with the explanation 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**
Alternative drives with DIN 10 connection (exceptions: DIN 15).

② **Flexible shaft (BW)**
Possible flexible shafts.

③ **Rotational speed [RPM]**
Rotational speed range of the drive system.

④ **Rotational speed range** for flexible shafts and handpieces

⑤ **Connection**
Drive-side connection DIN 10 / DIN 15 and handpiece-side connections (G16 to G28 and DPF, SRF).

⑥ **Suitable flexible shaft**
● ideally suitable
○ suitable
– unsuitable

① Drive motor ▶		EMER 8/280 BW	EMER 8/90 BW	RUER 8/180 SI	MMEW 11/120	MEW 18/240 ME 22/240	MEW 18/150 ME 22/150	MME 40/150 DIN 15
③ Rotational speed range [RPM] ▶		28,000–8,500	9,000–2,500	18,000–500	12,000–800	24,000–100	15,000–100	15,000–100
② Flexible shafts ▼	④ Drive [RPM] ▼							
BW 4 DIN 10/G16	40,000– 15,000	⑥ ○	–	○	–	○	○	–
BW 4 PST-T DIN 10 ⑤	7,650– 1,500	–	●	●	●	○	○	–
BW 6 DIN 10/G16	25,000– 11,000	●	–	●	○	●	○	–
BW 6 Z DIN 10/DPF BW 6 Z DIN 10/SRF	18,000– 9,000	○	–	●	○	○	○	–
BW 7 DIN 10/G22	25,000– 11,000	●	–	○	○	●	○	–
BW 7 PST-T DIN 10	4,250– 1,500	–	○	○	●	○	○	–
BW 10 SE 11 DIN 10/G28	18,000– 750	○	○	–	○	●	●	–
BW 10 SE 11 DIN 15/G28	18,000– 750	–	–	–	–	–	–	●
BW 12 DIN 10/G28	12,000– 850	–	–	–	–	●	●	–
BW 12 DIN 15/G28	12,000– 850	–	–	–	–	–	–	●
FS-BW 7 DIN 10/G22	25,000– 11,000	●	–	○	○	●	○	–
FS-BW 10 DIN 10/G28	18,000– 750	○	○	–	○	●	●	–
FS-BW 12 DIN 10/G28	12,000– 850	–	–	–	–	●	●	–

All data is also valid for flexible shaft versions without handpieces and 2-metre versions.

Drive systems with DIN 10/DIN 15

Flexible shaft drives for Mammoth Electronic and accessories

ME 22/150

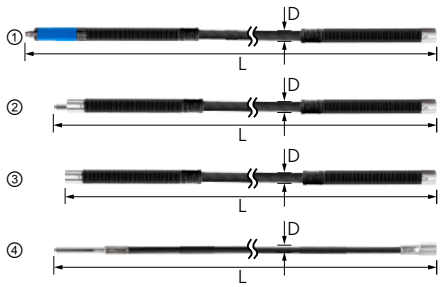
Electronic flexible shaft drive with DIN 10 flexible shaft connection, 3-phase alternating current and high torque over the entire rotational speed range.

Contents:
4 m power cable without plug, 2 keys (STS D 4 mm).

Special features:
- Most powerful and stable torque with overload protection and stepless rotational speed control (with overdrive ST 103 DIN 10 up to max. 40,000 RPM).
- Removable operating console with possibility of extension, e.g. hanging design for work in boilers.
- Frequency inverter for maintaining constant rotational speed.

Rotational speed range [RPM]	Power consumption [watts]	Power output [watts]	Voltage [volts] 50–60 Hz	Net weight [kg]	Item no.	Designation
15,000 – 100	2,700	2,200	380 – 480	24.500	85202040	ME 22/150 400 V

Flexible shaft 10 and handpieces



Flexible shaft 10 SE 11

The rotational speed should not fall below or exceed the specified range. The **radius of curvature must not be less than 170 mm.** After approximately 100 operating hours, the core of the flexible shaft must be re-lubricated.

Special features:
- Special lengths available on request.
- Cores and hoses with double-sided sliding coupling on request.

Image	Drive-side coupling DIN / dia. [mm]	Handpiece-side coupling G / dia. [mm]	Dimensions D x L [mm]	Net weight [kg]	Item no.	Designation
Replacement casing						
③	10 / 30	28 / 28	22 x 1,553	1.430	86200630	SCH 10 DIN10/G28

①

②

Reducing collets and adapter

Reducing collets fit into an existing collet for 6 mm shank tools and are used as adapters for shank tools.

Image	Reducing shank holder	Net weight [kg]	Item no.	Designation
①	from 6 mm to 3 mm diameter	0.004	87100162	RZH 63