



# Maintenance and hydraulic tools for bearings and transmission parts

Smart Maintenance Tools





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# Schaeffler induction heaters

## Mounting & Dismounting

### Why use induction heating?

Induction heating is a superior, fast and controlled method. It is a safe and environmentally-friendly alternative to traditional heating methods such as ovens, oil baths or blow torches. These methods not only generate smoke and fumes, but also cause burning of necessary lubricating greases and damage to rollers due to uncontrolled and localised overheating. This makes them hazardous for your personal safety and a healthy working environment.

It is common knowledge that a correct mounting method extends the bearing life. Controlled stress-free heating prevents unnecessary damage, while retaining the original bearing lubrication. Ideal for sealed

bearings (2RS-ZZ). Bearing manufacturers recommend controlled induction heating as the best practice for bearing mounting.

### Multifunctional, for mounting and dismounting

We offer solutions for Mounting (low-frequency) and Dismounting (medium-frequency). For bearings, gear wheels, bushings, couplings, etc.

### Controlled heating Temperature and/or time

Smart electronics ensure optimum control during the heating process. These automatically regulate the most efficient use of power and ensure even and rapid heating. No extra steps are necessary. Explosive heating is impossible (no discolouration or pitting of material).

### Demagnetization

Reliable demagnetization is very important for bearings and transmission parts. The proven quality of Schaeffler induction heaters guarantees maximum demagnetization ( $<2A/cm$ ). This has a positive impact on the service life of bearings and gears and the like.

### Energy efficient

All Schaeffler induction heaters are energy efficient in comparison with traditional methods.

## New generation with smart technology

The heating process is displayed in a clear graph on a touchscreen. There is a log function to save or export data. A work log can be created as evidence. Thanks to the double temperature sensor it is possible to heat stress-free with preset values ( $\Delta T$ ).

### For more control and stress-free mounting

Thanks to the  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents unnecessary material stress.



## Operating principle

The heater works by inducing a (low-frequency) current in the workpiece to be heated. This is achieved by incorporating the workpiece as a secondary winding in a transformer. The primary winding is connected to the mains power by means of an electronic control. The magnetic field induces a high current (short-circuit current) through the workpiece, which consequently becomes hot. The workpiece is automatically demagnetized after each heating cycle.

### Difference between low- and medium-frequency

- Low-frequency: slow heating, great heat penetration depth
- Medium-frequency: fast heating, shallow heat penetration depth

### Heating times are subject to the relationship between:

- Dimensions and weight
- Temperature and material
- Available power



## Dutch design

Schaeffler develops, manufactures and sells Schaeffler induction heaters for professional use within industry and services sectors. Our induction heaters are used around the world, are reliable and user friendly.



## Advantages of Schaeffler induction heaters

- ✓ Safety for both the user and the component to be heated
- ✓ For mounting and dismantling
- ✓ Environmentally friendly: no smoke, no open flames, no fumes, no oil waste
- ✓ The energy saving alternative to traditional methods
- ✓ Robust design for use in industrial environments
- ✓ For sealed (2RS-ZZ) and pre-lubricated bearings
- ✓ Automatic power reduction
- ✓ Automatic demagnetization to <math>\lt; 2A/cm</math>
- ✓ Automatic reheat mode
- ✓ User-friendly swivel arm construction
- ✓ Designed for MRO and OEM departments
- ✓ 3-year warranty on electronic unit

## Custom made

Schaeffler has realised many projects aimed at optimising production processes and increasing production capacity. For serial heating or heating of non-standard shapes.



### All heaters are supplied with:

- Instruction manual
- Heat-resistant gloves 250°C / 482 °F
- Magnetic temperature probe (240°C / 464 °F)
- Vaseline for maintenance

### Dependable quality

Schaeffler induction heaters are proven to be reliable. Their sturdy styling and user-friendly design guarantees uninterrupted, problem-free operation in an industrial environment.

### Service & Warranty

Our expertise and experience ensure quality, reliability, professional advice and outstanding service. Schaeffler induction heaters are supplied with clear instructions and a 3-year warranty on the electronic components.



# Induction heaters

## Schaeffler MF-IDUCTOR – hand tools



### Supplied with case

Both devices are supplied in a handy plastic case, incl. a 2.0-metre flexible inductor, a 2.5-metre power cord, heat-resistant gloves (250°C) and an instruction manual.

### Schaeffler MF-IDUCTOR

The Schaeffler MF-IDUCTOR is a small-sized professional hand tool for medium-frequency heating technology. This means it is a safe and clean method, free of open flames, that is perfect for use in workshops and on location.

Schaeffler MF-IDUCTOR's are the ultimate precision heating tool to loosen stuck parts (nuts, bolts, bearings). All sorts of metal parts, such as transmission parts, bearing housings, bolts, nuts, pipes and small surfaces can be heated locally. Thanks to the precise heating, the surroundings retain a normal temperature. As a result, stuck parts will expand and loosen, rust and sealants dissolve. The choice in inductors makes it a multipurpose tool which can be used for mounting, dismounting or preheating. Even for removal of decals, coating layers or paint residue from steel.

#### There are two types of MF-IDUCTOR:

- The MF-IDUCTOR-1.2KW has a capacity of 1200 W.
- The more powerful MF-IDUCTOR-2.0KW and MF-IDUCTOR-2.3KW, with outputs of 2000 W and 2300 W, is more suitable for larger and heavier parts.



Read more about iDuctor accessories on page 10.

#### Advantages

- ✓ Heats extremely fast
- ✓ Additional inductors available
- ✓ Ergonomic design
- ✓ Time and Cost saving
- ✓ Can be operated with one hand
- ✓ No open flames
- ✓ Safe to use
- ✓ Multipurpose
- ✓ Suitable for difficult to access locations
- ✓ Maintenance free

Type	MF-IDUCTOR-1.2KW-230V	MF-IDUCTOR-1.2KW-120V-UK	MF-IDUCTOR-2.0KW-120V	MF-IDUCTOR-2.0KW-120V-UK	MF-IDUCTOR-2.0KW-120V-US	MF-IDUCTOR-2.3KW-230V	MF-IDUCTOR-2.3KW-230V-UK
Certification	CE	UKCA	CE	UKCA	c(UL)us	CE	UKCA
Art. no.	2311011	2311211	2313021	2313221	2313031	2313011	2313211
Power	1200W	1200W	2000W	2000W	2000W	2300W	2300W
Voltage/Amp	230V / 6A	230V / 6A	120V / 15A	120V / 15A	120V / 15A	230V / 10A	230V / 10A
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	30-65kHz	30-65kHz	30-65kHz	30-65kHz	30-65kHz	30-65kHz	30-65kHz
Thermal protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Error message	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cooling fan	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Microprocessor controlled, automatic power control in case of overload or overheating	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LED lighting	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weight kg	1,4	1,4	1,4	1,4	1,4	1,4	1,4

# Induction heaters

## Schaeffler MF-IDUCTOR accessories

### Flexible inductors and accessories

Flexible inductors can be placed in or around a workpiece. Therefore, they are ideal for a large variety of parts.

1. Flexible inductor
2. ID-pad for local surface heating for removing decals, coating layers, paint residue etc. from steel.



Type	Art. no.	Wire thickness mm	Length mm	Temp. isolation °C (°F)
MF-INDUCTOR-2.3KW-1.1M-D3.5	2312021	3.5	1100	650 (1202)
MF-INDUCTOR-2.3KW-2M-D3.5	2312031	3.5	2000	650 (1202)
MF-INDUCTOR-2.3KW-2.5M-D3.5	2312171	3.5	2500	650 (1202)
MF-INDUCTOR-2.3KW-3M-D3.5	2312181	3.5	3000	650 (1202)
MF-INDUCTOR-2.3KW-3.5M-D3.5	2312191	3.5	3500	650 (1202)
MF-INDUCTOR-2.3KW-PAD-D3.5	2312051	3.5	-	150 (302)
GLOVES-250C	2799981	-	-	250 (482)
GLOVES-300C	2799921	-	-	300 (572)

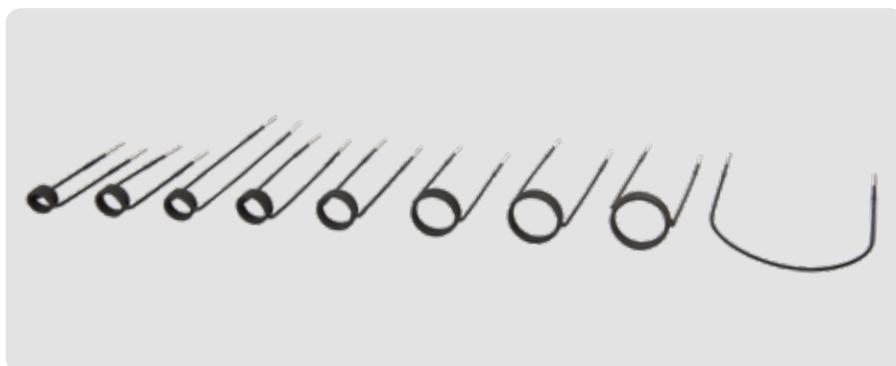
Flexible inductors with a length of more than 2 metres are mainly used for larger and heavier components that require correspondingly higher power. We therefore recommend combining it with the iDuctor 2 variants with an output of 2000 W or 2300 W.



## MF-INDUCTOR-1.2KW-D3.5-SET

Set of nine inductors consisting of different bolt sizes and a flexible U-inductor for the MF-INDUCTOR-1.2kW variants.

Art. no: 2312041

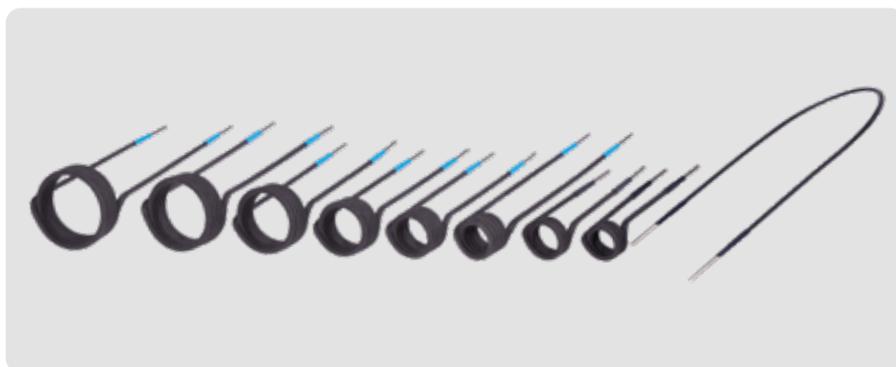


Set of 9 pcs.	Wire thickness mm	Internal diameter mm	Bolt size metric (imperial)	Windings	Length mm	Temp. isolation °C (°F)
52M30-240	3.5	52	M30 (1 1/4")	2,5	240	325 (617)
47M24-240	3.5	47	M24 (1")	2,5	240	325 (617)
40M20-200	3.5	40	M20 (3/4")	3,5	200	325 (617)
32M16-200	3.5	32	M16 (9/16")	3,5	200	325 (617)
26M12-200	3.5	26	M12 (7/16")	3,5	200	325 (617)
23M10-250	3.5	23	M10 (7/16")	3,5	250	325 (617)
23M10-150	3.5	23	M10 (7/16")	3,5	150	325 (617)
18M08-150	3.5	18	M8 (5/16")	3,5	150	325 (617)
U inductor 160-600	3.5	-	-	0,5	600	325 (617)

## MF-INDUCTOR-2.3KW-D3.5-SET

Set of nine inductors consisting of different bolt sizes and a flexible U-inductor for the MF-INDUCTOR-2.0KW and MF-INDUCTOR-2.3KW variants.

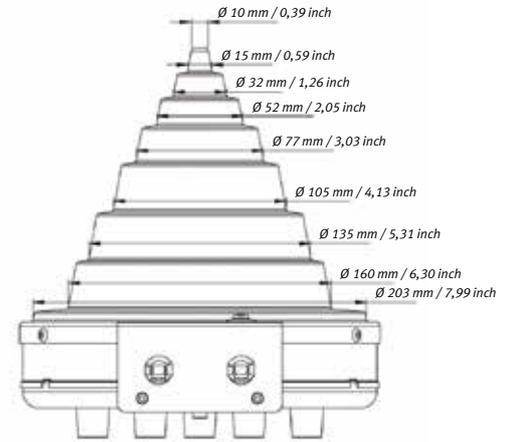
Art. no: 2313041



Set of 9 pcs.	Wire thickness mm	Internal diameter mm	Bolt size metric (imperial)	Windings	Length mm	Temp. isolation °C (°F)
52M30-240P+	3.5	52	M30 (1 1/4")	5,5	240	325 (617)
47M24-240P+	3.5	47	M24 (1")	5,5	240	325 (617)
40M20-200P+	3.5	40	M20 (3/4")	5,5	200	325 (617)
32M16-200P+	3.5	32	M16 (9/16")	5,5	200	325 (617)
26M12-200P+	3.5	26	M12 (7/16")	5,5	200	325 (617)
23M10-250P+	3.5	23	M10 (7/16")	5,5	250	325 (617)
23M10-150	3.5	23	M10 (7/16")	3,5	150	325 (617)
18M08-150	3.5	18	M8 (5/16")	3,5	150	325 (617)
U inductor 160-600	3.5	-	-	0,5	600	325 (617)

# Electric heaters

## BETEX Cone Heater, CH series



### BETEX Cone Heater

**For the heating of bearings, enabling easy mounting by means of shrinkage fitting.** Using the correct mounting method extends the bearing’s service life. Electric heating is a safe alternative to traditional methods such as hammering, oil baths or blow torches. Suitable for the heating of gear wheels, bushings, couplings and other round metal workpieces.

**The affordable alternative!**

If your budget is limited, the BETEX Cone Heater is an affordable alternative to other heating systems. Easy to use and suitable for various sizes. In a lightweight aluminium housing. For quick and even heating.

**Models with thermometer (CHC)**

- Temperature control: with temperature preset to 120°C / 248 °F
- Thermostat feature: the unit will keep the bearing at a preset temperature

**Advantages:**

- ✓ Easy to use, just plug it in and switch it on
- ✓ Lightweight making it easier to move around
- ✓ Reliable and flexible
- ✓ Safe and clean operation
- ✓ Intermediate sizes also fit

Type BETEX Cone Heater	CHU	CHC
Art. no.	360600 - 120V 360610 - 230V	360700 - 120V 360710 - 230V
Power	725W	725W
Voltage/Amp	120V / 6A 230V / 3.2A	120V / 6A 230V / 3.2A
Frequency Hz	50/60	50/60
Max. weight ± kg	5-7	5-7
Min. ID Ø, mm	10	10
Max. ID Ø, mm	203	203
Max. OD Ø, mm	305	305
Temperature check in °C and °F Fixed temperature	-	120 °C / 248 °F
Heat retention function	No	Yes
Dimensions mm/inch (LxWxH)	365x220x240 / 14.4x8.7x9.5	365x220x240 / 14.4x8.7x9.5
Heater weight kg	2.4	2.6

# Induction heaters – portable

## Schaeffler HEATER20-BASIC portable



**10**  
min. ID Ø mm

**240**  
max. OD Ø mm

**120**  
max. width mm

**20**  
max. bearing weight kg



Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

### Schaeffler HEATER20-BASIC

- Portable induction heater
- Single temperature measurement
- Digital display
- Ideal for use in workshops or on-site
- 5 yokes included (See page 34)



Type	Schaeffler HEATER20-BASIC
Temperature check	Yes
Time check	Yes
Automatic demagnetising	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER20-BASIC-120V-US	4200151-C-US	120V / 10A / 1,2kVA	CE
HEATER20-BASIC-230V	4200251-CE	230V / 10A / 2,3kVA	CE
HEATER20-BASIC-120V-US	4200151-C-US	120V / 10A / 1,2kVA	cQPSus
HEATER20-BASIC-240V-US	4200251-C-US	240V / 5A / 1,2kVA	cQPSus
HEATER20-BASIC-230V-UK	4200251-UK	230V / 10A / 2,3kVA	UKCA

See page 30 for detailed technical specifications.

# Induction heaters

## Schaeffler HEATER50-BASIC & HEATER50-SMART



**10/65**  
min. ID Ø mm

**400**  
max. OD Ø mm

**120**  
max. width mm

**50**  
max. bearing weight kg

### Schaeffler HEATER50-BASIC

- Portable induction heater
- Single temperature measurement
- Digital display
- 3 yokes included (See page 34)

Type	Schaeffler HEATER50-BASIC	Schaeffler HEATER50-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature check	Yes	Yes <span style="background-color: red; color: white; padding: 0 2px;">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="background-color: red; color: white; padding: 0 2px;">ΔT</span>
Temperature and speed control	No	Yes <span style="background-color: red; color: white; padding: 0 2px;">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER50-BASIC-230V	4201231-CE	230V / 13A / 3,0kVA	CE
HEATER50-BASIC-120V-US	4201131-C-US	120V / 13A / 1,5kVA	cQPSus
HEATER50-BASIC-240V-US	4201231-C-US	240V / 13A / 3,2kVA	cQPSus
HEATER50-BASIC-230V-UK	4201231-UK	230V / 13A / 3,0kVA	UKCA
HEATER50-SMART-230V	4301231-CE	230V / 13A / 3,0kVA	CE
HEATER50-SMART-120V-US	4301131-C-US	120V / 13A / 1,5kVA	cQPSus
HEATER50-SMART-240V-US	4301231-C-US	240V / 13A / 3,1kVA	cQPSus
HEATER50-SMART-230V-UK	4301231-UK	230V / 13A / 3,0kVA	UKCA

See page 30 for detailed technical specifications.



**10/65**  
min. ID Ø mm

**400**  
max. OD Ø mm

**120**  
max. width mm

**50**  
max. bearing weight kg

**!** Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

**!** Use in combination with “BETEX Impact 33 & 39” starting on page 50.

### Schaeffler HEATER50-SMART

- Portable induction heater
- Double temperature measurement  $\Delta T$
- Touchscreen with clear graph
- Log function and export to USB stick
- Create a proof work report
- Stress-free heating
- 3 yokes included (See page 34)



#### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Log function and export to USB stick (not included)



Heating a hanging workpiece, for small bores



Recommended horizontal heating position

# Induction heaters

## Schaeffler HEATER100-BASIC & HEATER100-SMART



**30/72**

min. ID Ø mm

**500**

max. OD Ø mm

**180**

max. width mm

**100**

max. bearing weight kg

### Schaeffler HEATER100-BASIC

- Benchtop model, heating capacity up to 100 kg
- With swivel arm
- Single temperature measurement
- Digital display
- 2 yokes included (See page 34)

Type	Schaeffler HEATER100-BASIC	Schaeffler HEATER100-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color: red;">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color: red;">ΔT</span>
Temperature and speed control	No	Yes <span style="color: red;">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER100-BASIC-230V	4202221-CE	230V / 16A / 3,7kVA	CE
HEATER100-BASIC-120V-US	4202121-C-US	120V / 15A / 1,8kVA	cQPSus
HEATER100-BASIC-240V-US	4202221-C-US	240V / 16A / 3,8kVA	cQPSus
HEATER100-BASIC-230V-UK	4202221-UK	230V / 13A / 2,9kVA	UKCA
HEATER100-SMART-230V	4302221-CE	230V / 16A / 3,7kVA	CE
HEATER100-SMART-120V-US	4302121-C-US	120V / 15A / 1,8kVA	cQPSus
HEATER100-SMART-240V-US	4302221-C-US	240V / 16A / 3,8kVA	cQPSus
HEATER100-SMART-230V-UK	4302221-UK	230V / 13A / 2,9kVA	UKCA

See page 30 for detailed technical specifications.



**30/72**  
min. ID Ø mm

**500**  
max. OD Ø mm

**180**  
max. width mm

**100**  
max. bearing weight kg

**!** Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

**!** Use in combination with “BETEX Impact 33 & 39” starting on page 50.

**Schaeffler HEATER100-SMART**

- Benchtop model, heating capacity up to 100 kg
- With swivel arm
- Double temperature measurement ΔT
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- 2 yokes included (See page 34)



**For more control and stress-free mounting**

Thanks to the Delta-T ΔT monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Log function and export to USB stick (not included)



Recommended horizontal heating position



Ergonomically designed swivel arm

# Induction heaters

## Schaeffler HEATER150-BASIC & HEATER150-SMART



**45/110**

min. ID Ø mm

**600**

max. OD Ø mm

**210**

max. width mm

**150**

max. bearing weight kg

### Schaeffler HEATER150-BASIC

- Powerful benchtop model, heating capacity up to 150 kg
- With swivel arm
- Single temperature measurement
- Digital display
- 2 yokes included (See page 34)

Type	Schaeffler HEATER150-BASIC	Schaeffler HEATER150-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color: red;">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color: red;">ΔT</span>
Temperature and speed control	No	Yes <span style="color: red;">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER150-BASIC-230V	4203221-CE	230V / 16A / 3,7kVA	CE
HEATER150-BASIC-240V-US	4203221-C-US	240V / 16A / 3,8kVA	cQPSus
HEATER150-BASIC-230V-UK	4203221-UK	230V / 13A / 2,9kVA	UKCA
HEATER150-SMART-230V	4303221-CE	230V / 16A / 3,7kVA	CE
HEATER150-SMART-240V-US	4303221-C-US	240V / 16A / 3,8kVA	cQPSus
HEATER150-SMART-230V-UK	4303221-UK	230V / 13A / 2,9kVA	UKCA

See page 30 for detailed technical specifications.



**45/110**

min. ID Ø mm

**600**

max. OD Ø mm

**210**

max. width mm

**150**

max. bearing weight kg



Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.



Use in combination with “BETEX Impact 33 & 39” starting on page 50.

## Schaeffler HEATER150-SMART

- Powerful benchtop model, heating capacity up to 150 kg
- With swivel arm
- Double temperature measurement  $\Delta T$
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- 2 yokes included (See page 34)

**$\Delta T$**

### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Log function and export to USB stick (not included)



Recommended horizontal heating position



Ergonomically designed swivel arm

# Induction heaters

## Schaeffler HEATER200-BASIC & HEATER200-SMART



**45/110**  
min. ID Ø mm

**600**  
max. OD Ø mm

**210**  
max. width mm

**200**  
max. bearing weight kg

### Schaeffler HEATER200-BASIC

- Powerful benchtop model, heating capacity up to 200 kg
- With swivel arm
- Single temperature measurement
- Digital display
- 2 yokes included (See page 34)

Type	Schaeffler HEATER200-BASIC	Schaeffler HEATER200-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color:red">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color:red">ΔT</span>
Temperature and speed control	No	Yes <span style="color:red">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER200-BASIC-400V	4204421-CE	2 ~ 400V / 20A / 8kVA	CE
HEATER200-BASIC-450V	4204721-CE	2 ~ 450V / 16A / 8kVA	CE
HEATER200-BASIC-500V	4204521-CE	2 ~ 500V / 16A / 8 kVA	CE
HEATER200-BASIC-480V-US	4204521-C-US	2 ~ 480V / 16A / 8kVA	cQPSus
HEATER200-BASIC-600V-US	4204621-C-US	2 ~ 600V / 14A / 8kVA	cQPSus
HEATER200-SMART-400V	4304421-CE	2 ~ 400V / 20A / 8kVA	CE
HEATER200-SMART-450V	4304721-CE	2 ~ 450V / 16A / 8kVA	CE
HEATER200-SMART-500V	4304521-CE	2 ~ 500V / 16A / 8 kVA	CE
HEATER200-SMART-480V-US	4304521-C-US	2 ~ 480V / 16A / 8kVA	cQPSus
HEATER200-SMART-600V-US	4304621-C-US	2 ~ 600V / 14A / 8kVA	cQPSus

See page 32 for detailed technical specifications.



**45/110**  
min. ID Ø mm

**600**  
max. OD Ø mm

**210**  
max. width mm

**200**  
max. bearing weight kg

**!** Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

**!** Use in combination with “BETEX Impact 33 & 39” starting on page 50.

### Schaeffler HEATER200-SMART

- Powerful benchtop model, heating capacity up to 200 kg
- With swivel arm
- Double temperature measurement  $\Delta T$
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- 2 yokes included (See page 34)



#### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Log function and export to USB stick (not included)



Recommended horizontal heating position



Ergonomic swivel arm

# Induction heaters

## Schaeffler HEATER400-BASIC & HEATER400-SMART



**30/135**

min. ID Ø mm

**850**

max. OD Ø mm

**320**

max. width mm

**400**

max. bearing weight kg

### Schaeffler HEATER400-BASIC

- Powerful mobile model, heating capacity of up to 400 kg
- With swivel arm
- Single temperature measurement
- Digital display
- Including 1 yoke (See page 34)

Type	Schaeffler HEATER400-BASIC	Schaeffler HEATER400-BASIC
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color: red;">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color: red;">ΔT</span>
Temperature and speed control	No	Yes <span style="color: red;">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER400-BASIC-400V	4205411-CE	2 ~ 400V / 30A / 12kVA	CE
HEATER400-BASIC-450V	4205711-CE	2 ~ 450V / 25A / 12kVA	CE
HEATER400-BASIC-500V	4205511-CE	2 ~ 500V / 24A / 12kVA	CE
HEATER400-BASIC-480V-US	4205511-C-US	2 ~ 480V / 24A / 12kVA	cQPSus
HEATER400-BASIC-600V-US	4205611-C-US	2 ~ 600V / 20A / 12kVA	cQPSus
HEATER400-SMART-400V	4305411-CE	2 ~ 400V / 30A / 12kVA	CE
HEATER400-SMART-450V	4305711-CE	2 ~ 450V / 25A / 12kVA	CE
HEATER400-SMART-500V	4305511-CE	2 ~ 500V / 24A / 12kVA	CE
HEATER400-SMART-480V-US	4305511-C-US	2 ~ 480V / 24A / 12kVA	cQPSus
HEATER400-SMART-600V-US	4305611-C-US	2 ~ 600V / 20A / 12kVA	cQPSus

See page 32 for detailed technical specifications.



**30/135**  
min. ID Ø mm

**850**  
max. OD Ø mm

**320**  
max. width mm

**400**  
max. bearing weight kg



Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

### Schaeffler HEATER400-SMART

- Powerful mobile model, heating capacity of up to 400 kg
- Double temperature measurement  $\Delta T$
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- Including 1 yoke (See page 34)



#### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Ergonomic swivel arm



# Induction heaters

## Schaeffler HEATER600-BASIC & HEATER600-SMART



**60/150**

min. ID Ø mm

**1050**

max. OD Ø mm

**400**

max. width mm

**600**

max. bearing weight kg

### Schaeffler HEATER600-BASIC

- Powerful mobile model, heating capacity of up to 600 kg
- With swivel arm
- Single temperature measurement
- Digital display
- Including 1 yoke (See page 34)

Type	Schaeffler HEATER600-BASIC	Schaeffler HEATER600-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color: red;">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color: red;">ΔT</span>
Temperature and speed control	No	Yes <span style="color: red;">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER600-BASIC-400V	4206411-CE	2 ~ 400V / 45A / 18kVA	CE
HEATER600-BASIC-450V	4206711-CE	2 ~ 450V / 40A / 18kVA	CE
HEATER600-BASIC-500V	4206511-CE	2 ~ 500V / 36A / 18kVA	CE
HEATER600-BASIC-480V-US	4206511-C-US	2 ~ 480V / 36A / 18kVA	cQPSus
HEATER600-BASIC-600V-US	4206611-C-US	2 ~ 600V / 30A / 18kVA	cQPSus
HEATER600-SMART-400V	4306411-CE	2 ~ 400V / 45A / 18kVA	CE
HEATER600-SMART-450V	4306711-CE	2 ~ 450V / 40A / 18kVA	CE
HEATER600-SMART-500V	4306511-CE	2 ~ 500V / 36A / 18kVA	CE
HEATER600-SMART-480V-US	4306511-C-US	2 ~ 480V / 36A / 18kVA	cQPSus
HEATER600-SMART-600V-US	4306611-C-US	2 ~ 600V / 30A / 18kVA	cQPSus

See page 32 for detailed technical specifications.



**60/150**

min. ID Ø mm

**1050**

max. OD Ø mm

**400**

max. width mm

**600**

max. bearing weight kg



Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

## Schaeffler HEATER600-SMART

- Powerful mobile model, heating capacity of up to 600 kg
- Double temperature measurement  $\Delta T$
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- Including 1 yoke (See page 34)

**ΔT**

### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Ergonomic swivel arm



# Induction heaters

## Schaeffler HEATER800-BASIC & HEATER800-SMART



**260/60**  
min. ID Ø mm

**1150**  
max. OD Ø mm

**430**  
max. width mm

**800**  
max. bearing weight kg

### Schaeffler HEATER800-BASIC

- Powerful model, heating capacity of up to 800 kg
- Single temperature measurement
- Digital display
- Including 1 yoke (See page 34)
- Optional: electric crane for yokes and/or mobile

Type	Schaeffler HEATER800-BASIC	Schaeffler HEATER800-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color: red;">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color: red;">ΔT</span>
Temperature and speed control	No	Yes <span style="color: red;">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER800-BASIC-400V	4207411-CE	2 ~ 400V / 60A / 24kVA	CE
HEATER800-BASIC-450V	4207711-CE	2 ~ 450V / 50A / 24kVA	CE
HEATER800-BASIC-500V	4207511-CE	2 ~ 500V / 48A / 24kVA	CE
HEATER800-BASIC-480V-US	4207511-C-US	2 ~ 480V / 48A / 24kVA	cQPSus
HEATER800-BASIC-600V-US	4207611-C-US	2 ~ 600V / 40A / 24kVA	cQPSus
HEATER800-SMART-400V	4307411-CE	2 ~ 400V / 60A / 24kVA	CE
HEATER800-SMART-450V	4307711-CE	2 ~ 450V / 50A / 24kVA	CE
HEATER800-SMART-500V	4307511-CE	2 ~ 500V / 48A / 24kVA	CE
HEATER800-SMART-480V-US	4307511-C-US	2 ~ 480V / 48A / 24kVA	cQPSus
HEATER800-SMART-600V-US	4307611-C-US	2 ~ 600V / 40A / 24kVA	cQPSus

See page 32 for detailed technical specifications.



**260/60**  
min. ID Ø mm

**1150**  
max. OD Ø mm

**430**  
max. width mm

**800**  
max. bearing weight kg



Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

### Schaeffler HEATER800-SMART

- Powerful model, heating capacity of up to 800 kg
- Double temperature measurement  $\Delta T$
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- Including 1 yoke (See page 34)
- Optional: electric crane for yokes and/or mobile



#### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Optional wheels and push bar



Adjustable support



# Induction heaters

## Schaeffler HEATER1600-BASIC & HEATER1600-SMART



**330/90**  
min. ID Ø mm

**1700**  
max. OD Ø mm

**710**  
max. width mm

**1600**  
max. bearing weight kg

### Schaeffler HEATER1600-BASIC

- Powerful model, heating capacity of up to 1600 kg
- Single temperature measurement
- Digital display
- Including 1 yoke (See page 34)
- Optional: electric crane for yokes and/or mobile

Type	Schaeffler HEATER1600-BASIC	Schaeffler HEATER1600-SMART
Log functionality	No	Yes
Magnetic probe	1	2
Delta-T ΔT	No	Yes
Temperature control	Yes	Yes <span style="color:red">ΔT</span>
Time control	Yes	Yes
Time or temperature control	No	Yes <span style="color:red">ΔT</span>
Temperature and speed control	No	Yes <span style="color:red">ΔT</span>
Automatic demagnetization	<2A/cm	<2A/cm

Type	Art. no.	Voltage/Amp/Power	Certification
HEATER1600-BASIC-400V	4208411-CE	2 ~ 400V / 100A / 40kVA	CE
HEATER1600-BASIC-450V	4208711-CE	2 ~ 450V / 80A / 40kVA	CE
HEATER1600-BASIC-500V	4208511-CE	2 ~ 500V / 80A / 40kVA	CE
HEATER1600-BASIC-480V-US	4208511-C-US	2 ~ 480V / 80A / 40kVA	cQPSus
HEATER1600-BASIC-600V-US	4208611-C-US	2 ~ 600V / 65A / 40kVA	cQPSus
HEATER1600-SMART-400V	4308411-CE	2 ~ 400V / 100A / 40kVA	CE
HEATER1600-SMART-450V	4308711-CE	2 ~ 450V / 80A / 40kVA	CE
HEATER1600-SMART-500V	4308511-CE	2 ~ 500V / 80A / 40kVA	CE
HEATER1600-SMART-480V-US	4308511-C-US	2 ~ 480V / 80A / 40kVA	cQPSus
HEATER1600-SMART-600V-US	4308611-C-US	2 ~ 600V / 65A / 40kVA	cQPSus

See page 32 for detailed technical specifications.



**330/90**  
min. ID Ø mm

**1700**  
max. OD Ø mm

**710**  
max. width mm

**1600**  
max. bearing weight kg

**!** Read more about the benefits of induction heaters in Section “Why use induction heating?” starting on page 7.

### Schaeffler HEATER1600-SMART

- Powerful model, heating capacity of up to 1600 kg
- Double temperature measurement ΔT
- Touchscreen with clear graph
- Log function and export to USB stick
- Stress-free heating
- Including 1 yoke (See page 34)
- Optional: electric crane for yokes and/or mobile



#### For more control and stress-free mounting

Thanks to the Delta-T ΔT monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



**Optional wheels and push bar**



**Adjustable support**



# Technical specifications



Type	HEATER20-BASIC	HEATER50-BASIC	HEATER100-BASIC	HEATER150-BASIC
Voltage/Amp/Power CE	120V / 10A / 1,2kVA 230V / 10A / 2,3kVA	120V / 13A / 1,5kVA 230V / 13A / 3,0kVA	120V / 15A / 1,8kVA 230V / 16A / 3,7kVA	230V / 16A / 3,7kVA
Voltage/Amp/Power cQPSus	120V / 10A / 1,2kVA 240V / 5A / 1,2kVA	120V / 13A / 1,5kVA 240V / 13A / 3,2kVA	120V / 15A / 1,8kVA 240V / 16A / 3,8kVA	240V / 16A / 3,8kVA
Voltage/Amp/Power UKCA	230V / 10A / 2,3kVA	230V / 13A / 3,0kVA	230V / 13A / 2,9kVA	230V / 13A / 2,9kVA
Frequency Hz	50/60	50/60	50/60	50/60
Swivel arm	No	No	Yes	Yes
Max. workpiece weight kg (±)	20	50	100	150
Min. ID Ø mm, vertical/horizontal	10	10/65	30/72	45/110
Max. OD Ø mm workpiece	<b>A</b> 240	400	500	600
Max. width mm	<b>B</b> 120	120	180	210
Pole length mm	<b>C</b> 135	130	185	205
Pole diameter mm	<b>D</b> 40x40	40x50	50x50	70x80
Display	Digital	Digital	Digital	Digital
Log function	No	No	No	No
Magnetic probe	1	1	1	1
Delta-T ΔT	No	No	No	No
Temperature control	Yes	Yes	Yes	Yes
Time control	Yes	Yes	Yes	Yes
Time or temperature control	No	No	No	No
Temperature and speed control	No	No	No	No
Max. temperature °C / °F	150 °C / 302 °F	240 °C / 464 °F	240 °C / 464 °F	240 °C / 464 °F
Max. time range	0-30 min.	0-99 min.	0-99 min.	0-99 min.
Acoustic signal at the end of each heating cycle	Yes	Yes	Yes	Yes
Error message	Message	Message	Message	Message
Temperature hold	Yes	Yes	Yes	Yes
Automatic power reduction	No	Yes	Yes	Yes
Aut. demagnetization, <math>2A/cm^2</math>	Yes	Yes	Yes	Yes
Thermal electronics protection	Yes	Yes	Yes	Yes
Support for horizontal heating	No	Yes	Yes	Yes
Dimensions mm/inch (lxwxh)	460x240x280 / 18x1x9.4x11	600x226x272 / 23.6x8.9x10.7	702x256x392 / 27.6x10.1x15.4	788x315x456 / 31x12.4x18
Heater weight kg excl. yokes	21 (incl. yokes)	21	31	52
Mobile	-	-	-	-

We reserve the right to alter technical specifications without prior notice.



### Heating times are subject to the relationship between:

- Minimum bore and maximum outside diameter, width and weight
- Required temperature and material type
- Available power

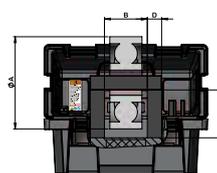


### Induction accessories

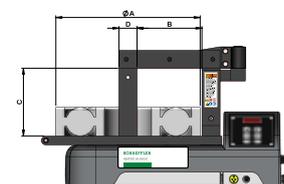
Read more about the (swivel) yokes, magnetic sensors and gloves in Section "Induction heaters accessories" starting on page 34.



Type	HEATER50-SMART <span style="color:red">ΔT</span>	HEATER100-SMART <span style="color:red">ΔT</span>	HEATER150-SMART <span style="color:red">ΔT</span>
Voltage/Amp/Power CE	230V / 13A / 3,0kVA	230V / 16A / 3,7kVA	230V / 16A / 3,7kVA
Voltage/Amp/Power cQPSus	120V / 13A / 1,5kVA 240V / 13A / 3,1kVA	120V / 15A / 1,8kVA 240V / 16A / 3,8kVA	240V / 16A / 3,8kVA
Voltage/Amp/Power UKCA	230V / 13A / 3,0kVA	230V / 13A / 2,9kVA	230V / 13A / 2,9kVA
Frequency Hz	50/60	50/60	50/60
Swivel arm	No	Yes	Yes
Max. workpiece weight kg (±)	50	100	150
Min. ID Ø mm, vertical/horizontal	10/65	30/72	45/110
Max. OD Ø mm workpiece	<span style="color:green">A</span> 400	500	600
Max. width mm	<span style="color:green">B</span> 120	180	210
Pole length mm	<span style="color:green">C</span> 130	185	205
Pole diameter mm	<span style="color:green">D</span> 40x50	50x50	70x80
Display	Touch	Touch	Touch
Log function	Yes	Yes	Yes
Magnetic probe	2	2	2
Delta-T ΔT	Yes	Yes	Yes
Temperature control	Yes	Yes	Yes
Time control	Yes	Yes	Yes
Time or temperature control	Yes	Yes	Yes
Temperature and speed control	Yes	Yes	Yes
Max. temperature °C / °F	240 °C / 464 °F	240 °C / 464 °F	240 °C / 464 °F
Max. time range	0-99 min.	0-99 min.	0-99 min.
Acoustic signal at the end of each heating cycle	Yes	Yes	Yes
Error message	Report	Report	Report
Temperature hold	Yes	Yes	Yes
Automatic power reduction	Only in temp. & speed mode	Only in temp. & speed mode	Only in temp. & speed mode
Aut. demagnetization, <2A/cm <sup>2</sup>	Yes	Yes	Yes
Thermal electronics protection	Yes	Yes	Yes
Support for horizontal heating	Yes	Yes	Yes
Dimensions mm/inch (lxwxh)	600x226x272 / 23.6x8.9x10.7	702x256x392 / 27.6x10.1x15.4	788x315x456 / 31x12.4x18
Heater weight kg excl. yokes	21	31	52
Mobile	-	-	-



HEATER20-BASIC



HEATER50 - 200 BASIC + SMART

# Technical specifications



Type	HEATER200-BASIC	HEATER400-BASIC	HEATER600-BASIC	HEATER800-BASIC	HEATER1600-BASIC
Voltage/Amp/Power CE + UKCA	2 ~ 400V / 20A / 8kVA	2 ~ 400V / 30A / 12kVA	2 ~ 400V / 45A / 18kVA	2 ~ 400V / 60A / 24kVA	2 ~ 400V / 100A / 40kVA
	2 ~ 450V / 16A / 8kVA	2 ~ 450V / 25A / 12kVA	2 ~ 450V / 40A / 18kVA	2 ~ 450V / 50A / 24kVA	2 ~ 450V / 80A / 40kVA
	2 ~ 500V / 16A / 8kVA	2 ~ 500V / 24A / 12kVA	2 ~ 500V / 36A / 18kVA	2 ~ 500V / 48A / 24kVA	2 ~ 500V / 80A / 40kVA
Voltage/Amp/Power cQPSus	2 ~ 480V / 16A / 8kVA	2 ~ 480V / 24A / 12kVA	2 ~ 480V / 36A / 18kVA	2 ~ 480V / 48A / 24kVA	2 ~ 480V / 80A / 40kVA
	2 ~ 600V / 14A / 8kVA	2 ~ 600V / 20A / 12kVA	2 ~ 600V / 30A / 18kVA	2 ~ 600V / 40A / 24kVA	2 ~ 600V / 65A / 40kVA
Frequency Hz	50/60	50/60	50/60	50/60	50/60
Swivel arm	Yes	Yes	Yes	No	No
Max. workpiece weight kg (±)	200	400	600	800	1600
Min. ID Ø mm, vertical/horizontal	45/110	30/135	60/150	260/60	330/90
Max. OD Ø mm workpiece	<b>A</b> 600	850	1050	1150	1700
Max. width mm	<b>B</b> 210	320	400	430	710
Pole length mm	<b>C</b> 205	305	315	515	780
Pole diameter mm	<b>D</b> 70x80	80x100	90x110	180x180	230x230
Display	Digital	Digital	Digital	Digital	Digital
Log function	No	No	No	No	No
Magnetic probe	1	1	1	1	1
Delta-T ΔT	No	No	No	No	No
Temperature control	Yes	Yes	Yes	Yes	Yes
Time control	Yes	Yes	Yes	Yes	Yes
Time or temperature control	No	No	No	No	No
Temperature and speed control	No	No	No	No	No
Max. temperature °C / °F	240 °C / 464 °F	240 °C / 464 °F	240 °C / 464 °F	240 °C / 464 °F	240 °C / 464 °F
Max. time range	0-99 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.
Acoustic signal at the end of each heating cycle	Yes	Yes	Yes	Yes	Yes
Error message	Message	Message	Message	Message	Message
Temperature hold	Yes	Yes	Yes	Yes	Yes
Automatic power reduction	Yes	Yes	Yes	Yes	Yes
Aut. demagnetization, <math>\lt; 2A/cm</math>	Yes	Yes	Yes	Yes	Yes
Thermal electronics protection	Yes	Yes	Yes	Yes	Yes
Support for horizontal heating	Yes	Yes	Yes	Yes	Yes
Dimensions mm/inch (lwxhxh)	788x315x456 / 31x12.4x18	1214x560x990 / 47.8x22x39	1344x560x990 / 52.9x22x39	1080x650x955 / 42.5x25.6x37.6	1520x750x1415 / 59.8x29.5x55.7
Heater weight kg excl. yokes	56	150	170	250	720
Electric crane for yokes	-	-	-	Optional	Optional
Mobile	-	Yes	Yes	Optional (Height + 70mm)	Optional (Height + 70mm)

We reserve the right to alter technical specifications without prior notice.



### Heating times are subject to the relationship between:

- Minimum bore and maximum outside diameter, width and weight
- Required temperature and material type
- Available power

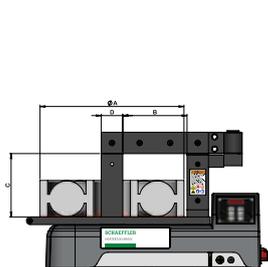


### Induction accessories

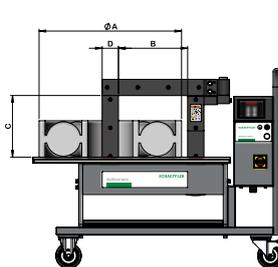
Read more about the (swivel) yokes, magnetic sensors and gloves in Section "Induction heaters accessories" starting on page 34.



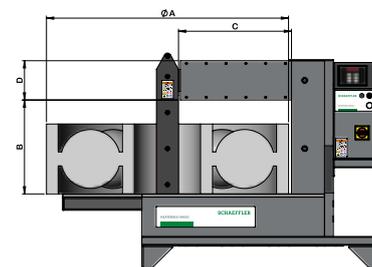
Type	HEATER200-SMART $\Delta T$	HEATER400-SMART $\Delta T$	HEATER600-SMART $\Delta T$	HEATER800-SMART $\Delta T$	HEATER1600-SMART $\Delta T$
Voltage/Amp/Power CE + UKCA	2 ~ 400V / 20A / 8kVA 2 ~ 450V / 16A / 8kVA 2 ~ 500V / 16A / 8kVA	2 ~ 400V / 30A / 12kVA 2 ~ 450V / 25A / 12kVA 2 ~ 500V / 24A / 12kVA	2 ~ 400V / 45A / 18kVA 2 ~ 450V / 40A / 18kVA 2 ~ 500V / 36A / 18kVA	2 ~ 400V / 60A / 24kVA 2 ~ 450V / 50A / 24kVA 2 ~ 500V / 48A / 24kVA	2 ~ 400V / 100A / 40kVA 2 ~ 450V / 80A / 40kVA 2 ~ 500V / 80A / 40kVA
Voltage/Amp/Power cQPSus	2 ~ 480V / 16A / 8kVA 2 ~ 600V / 14A / 8kVA	2 ~ 480V / 24A / 12kVA 2 ~ 600V / 20A / 12kVA	2 ~ 480V / 36A / 18kVA 2 ~ 600V / 30A / 18kVA	2 ~ 480V / 48A / 24kVA 2 ~ 600V / 40A / 24kVA	2 ~ 480V / 80A / 40kVA 2 ~ 600V / 65A / 40kVA
Frequency Hz	50/60	50/60	50/60	50/60	50/60
Swivel arm	Yes	Yes	Yes	No	No
Max. workpiece weight kg ( $\pm$ )	200	400	600	800	1600
Min. ID $\varnothing$ mm, vertical/horizontal	45/110	30/135	60/150	260/60	330/90
Max. OD $\varnothing$ mm workpiece	<b>A</b> 600	850	1050	1150	1700
Max. width mm	<b>B</b> 210	320	400	430	710
Pole length mm	<b>C</b> 205	305	315	515	780
Pole diameter mm	<b>D</b> 70x80	80x100	90x110	180x180	230x230
Display	Touch	Touch	Touch	Touch	Touch
Log function	Yes	Yes	Yes	Yes	Yes
Magnetic probe	2	2	2	2	2
Delta-T $\Delta T$	Yes	Yes	Yes	Yes	Yes
Temperature control	Yes	Yes	Yes	Yes	Yes
Time control	Yes	Yes	Yes	Yes	Yes
Time or temperature control	Yes	Yes	Yes	Yes	Yes
Temperature and speed control	Yes	Yes	Yes	Yes	Yes
Max. temperature $^{\circ}C / ^{\circ}F$	240 $^{\circ}C / 464 ^{\circ}F$	240 $^{\circ}C / 464 ^{\circ}F$	240 $^{\circ}C / 464 ^{\circ}F$	240 $^{\circ}C / 464 ^{\circ}F$	240 $^{\circ}C / 464 ^{\circ}F$
Max. time range	0-99 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.
Acoustic signal at the end of each heating cycle	Yes	Yes	Yes	Yes	Yes
Error message	Report	Report	Report	Report	Report
Temperature hold	Yes	Yes	Yes	Yes	Yes
Automatic power reduction	Only in temp. & speed mode	Only in temp. & speed mode	Only in temp. & speed mode	Only in temp. & speed mode	Only in temp. & speed mode
Aut. demagnetization, $\leq 2A/cm$	Yes	Yes	Yes	Yes	Yes
Thermal electronics protection	Yes	Yes	Yes	Yes	Yes
Support for horizontal heating	Yes	Yes	Yes	Yes	Yes
Dimensions mm/inch (lxwxh)	788x315x456 / 31x12.4x18	1214x560x990 / 47.8x22x39	1344x560x990 / 52.9x22x39	1080x650x955 / 42.5x25.6x37.6	1520x750x1415 / 59.8x29.5x56.7
Heater weight kg excl. yokes	56	150	170	250	720
Electric crane for yokes	-	-	-	Optional	Optional
Mobile	-	Yes	Yes	Optional (Height + 70mm)	Optional (Height + 70mm)



HEATER50 - 200 BASIC + SMART



HEATER400 - 600 BASIC + SMART



HEATER800 - 1600 BASIC + SMART

# Induction heaters accessories

## Yokes, sensors and gloves



**HEATER50.  
YOKE-20**



**HEATER100.  
YOKE-72**



**HEATER200.  
YOKE-45**



**HEATER400.  
YOKE-30**



**HEATER400.  
YOKE-115**



**HEATER1600.  
YOKE-215**

### Yokes HEATER20-BASIC

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Scope of delivery	Optional
HEATER50.YOKE-10	420007071	10	7x7x200	0,1	No	✓	-
HEATER50.YOKE-15	420010101	15	10x10x200	0,2	No	✓	-
HEATER50.YOKE-20	420014141	20	14x14x200	0,3	No	✓	-
HEATER50.YOKE-30	42002021	30	20x20x200	0,6	No	✓	-
HEATER50.YOKE-60	42004041	60	40x40x200	2,4	No	✓	-

### Yokes HEATER50-BASIC / HEATER50-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Scope of delivery	Optional
HEATER50.YOKE-10	420007071	10	7x7x200	0,1	No	✓	-
HEATER50.YOKE-15	420010101	15	10x10x200	0,2	No	-	✓
HEATER50.YOKE-20	420014141	20	14x14x200	0,3	No	✓	-
HEATER50.YOKE-30	42002021	30	20x20x200	0,6	No	-	✓
HEATER50.YOKE-60	42004041	60	40x40x200	2,4	No	-	✓
HEATER50.YOKE-65	42014051	65	40x50x200	3,6	No	✓	-

### Yokes HEATER100-BASIC / HEATER100-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Scope of delivery	Optional
HEATER100.YOKE-15	42021011	15	10x10x280	0,3	No	-	✓
HEATER100.YOKE-20	420214141	20	14x14x280	0,4	No	-	✓
HEATER100.YOKE-30	42022021	30	20x20x280	0,9	No	✓	-
HEATER100.YOKE-45	42023031	45	30x30x280	2,4	Yes	-	✓
HEATER100.YOKE-60	42024041	60	40x40x280	3,9	Yes	-	✓
HEATER100.YOKE-72	42025051	72	50x50x280	5,8	Yes	✓	-

### Yokes HEATER150-BASIC / HEATER150-SMART / HEATER150-SMART / HEATER200-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Scope of delivery	Optional
HEATER200.YOKE-15	42031011	15	10x10x350	0,4	No	-	✓
HEATER200.YOKE-20	420314141	20	14x14x350	0,5	No	-	✓
HEATER200.YOKE-30	42032021	30	20x20x350	1,1	No	-	✓
HEATER200.YOKE-45	42033031	45	30x30x350	3,6	Yes	✓	-
HEATER200.YOKE-60	42034041	60	40x40x350	5,5	Yes	-	✓
HEATER200.YOKE-72	42035051	72	50x50x350	7,9	Yes	-	✓
HEATER200.YOKE-85	42036061	85	60x60x350	10,6	Yes	-	✓
HEATER200.YOKE-100	42037071	100	70x70x350	14,0	Yes	-	✓
HEATER200.YOKE-110	42037081	110	70x80x350	16,0	Yes	✓	-

### Yokes HEATER400-BASIC / HEATER400-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Scope of delivery	Optional
HEATER400.YOKE-30	42052021	30	20x20x500	3,0	Yes	-	✓
HEATER400.YOKE-45	42053031	45	30x30x500	4,9	Yes	-	✓
HEATER400.YOKE-60	42054041	60	40x40x500	7,6	Yes	-	✓
HEATER400.YOKE-85	42056061	85	60x60x500	14,8	Yes	-	✓
HEATER400.YOKE-115	42058081	115	80x80x500	26,0	Yes	✓	-

## Yokes HEATER600-BASIC / HEATER600-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Content of delivery	Optional
HEATER600.YOKE-60	42064041	60	40x40x600	8,6	yes	-	✓
HEATER600.YOKE-85	42066061	85	60x60x600	17,7	yes	-	✓
HEATER600.YOKE-115	42068081	115	80x80x600	29,0	yes	-	✓
HEATER600.YOKE-130	42069090	130	90x90x600	38,0	yes	✓	-

## Yokes HEATER800-BASIC / HEATER800-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Content of delivery	Optional
HEATER800.YOKE-60	42074041	60	40x40x725	9,0	No	-	✓
HEATER800.YOKE-72	42075051	72	50x50x725	14,5	No	-	✓
HEATER800.YOKE-85	42076061	85	60x60x725	20,3	No	-	✓
HEATER800.YOKE-115	42078081	115	80x80x725	36,1	No	-	✓
HEATER800.YOKE-145	4207100101	145	100x100x725	56,4	No	✓	-

## Yokes HEATER1600-BASIC / HEATER1600-SMART

Type	Art. no.	Min. bore mm	Dimensions mm	Weight kg	Swivel arm	Content of delivery	Optional
HEATER1600.YOKE-85	42086061	85	60x60x1140	33,0	No	-	✓
HEATER1600.YOKE-115	42088081	115	80x80x1140	57,0	No	-	✓
HEATER1600.YOKE-145	4208100101	145	100x100x1140	89,0	No	-	✓
HEATER1600.YOKE-215	4208150151	215	150x150x1140	194,0	No	✓	-



**HEATER.  
MPROBE-20-200**



**HEATER.  
MPROBE-400-800**



**GLOVES-250C**

## Magnetic sensors

Type	Art. no.	Max. temperature °C	Length m
HEATER.MPROBE-20-200	2705751	240	2,0
HEATER.MPROBE-1600	2705831	350	2,0
MF-GENERATOR.MPROBE-GREEN	2705841	350	3,5
HEATER.MPROBE-400-800	2705851	240	1,1
MF-GENERATOR.MPROBE-RED	2705881	350	3,5

## Accessories

Type	Art. no.	Max. temperature °C	Weight kg
GLOVES-250C	2799981	250	1,1
GLOVES-300C	2799921	300	2,0

# Induction heaters

## Schaeffler MF-GENERATOR - medium-frequency technology

### Mounting, dismounting and preheating of metal components

Induction generators with medium-frequency technology are suitable not only for thermal assembly, but also for disassembly. Medium-frequency technology effectively transfers energy to the workpiece, allowing it to heat up easily and quickly. The Schaeffler MF-GENERATOR consists of a generator with a fixed or flexible inductor. Its compact dimensions make it easy to move around.

Schaeffler MF-GENERATOR's result in time savings as they can be deployed very rapidly (fewer actions) and heat faster than conventional methods. Energy use is much more efficient thanks to its lower power consumption. One of the major advantages of this type of induction heater is that they are not limited to components with a cylindrical shape: flexible inductors can be wound around any size or shape. This makes it possible to heat very large and heavy components.

### Advantages of Schaeffler MF-GENERATOR

- ✓ For mounting, dismounting and preheating
- ✓ Suitable for steel, cast iron, stainless steel and titanium
- ✓ Temperature and/or time controlled heating
- ✓ Double temperature measurement ( $\Delta T$  monitoring)
- ✓ Low connection power (32/63 Amp)
- ✓ Generators are adjustable from 2.5 to 3.5/10/22/44 kW
- ✓ Easy to use and flexible
- ✓ Suitable for production and maintenance applications
- ✓ No residual magnetism
- ✓ No fire hazard due to open flames
- ✓ No noise, fumes or smoke nuisance
- ✓ Air-cooled: no water cooling needed
- ✓ Because the work is carried out damage-free, expensive components can be reused
- ✓ A flexible or fixed inductor is recommended depending on the application



### To be used for

- Bearings
- Labyrinth rings
- Bearing rings
- Bearing housings
- Gear wheels
- Rollers
- Tubes
- Bushings
- Couplings
- Train wheels/train wheel tyres
- Extruders
- Stator housings

### The Schaeffler MF-GENERATOR

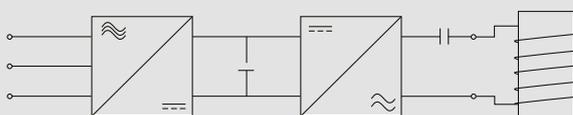
This heater consists of a generator and one or more inductors. The generator is designed for the connection of inductors used for heating ferromagnetic workpieces. Suitable materials include iron, steel, stainless steel, titanium and certain bronze alloys. The maximum capacity workpieces can be subjected to is 3.5, 10, 22 or 44 kW depending on the type of heater.

### Operating principle

The three-phase voltage is rectified and smoothed. This rectified voltage is then converted by means of an inverter into an AC voltage with a frequency between 10 and 25 kHz. The power is then

applied to the workpiece magnetically via a 'resonance capacitor' using an inductor (coil).

Since the frequency is relatively high, the penetration depth of the magnetic field is not too large, so that only the outer layer of the workpiece is heated. This principle makes heating using medium-frequency particularly suitable for dismantling purposes, such as removing bearing rings from shafts.



### Testing

For special applications, we can carry out tests in advance with components that the client provides for this purpose.

### Custom made

If necessary, we can supply a customised application. For standard applications, we have a large database with examples. We also use simulation programmes.

### Savings

By supplying optimum solutions, we achieve significant savings. In fact, measurable savings are guaranteed simply by working damage-free and hence, being able to reuse the parts.

# Induction heaters

## Medium-frequency heating methods

### Fixed inductor around the workpiece

Energy input from outside to inside. For dismounting of, for example, bearing rings, labyrinth rings, pipes and rings.



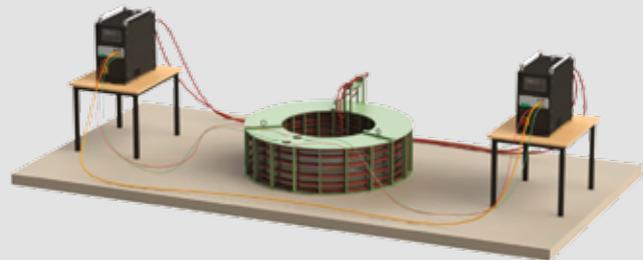
### Fixed inductor in the workpiece

Heating a bore for bearing or shaft mounting.



### Fixed inductor in and around the workpiece

For stress-free mounting of a bearing, two coupled generators are used. Inner and outer ring are heated simultaneously.



### Pin inductor in the workpiece

Heating a bore for example for bearing or shaft mounting.



### Table inductor

Local preheating for laser cladding.



# Induction heaters

## Medium-frequency projects



**Schaeffler MF-GENERATOR3.0-22KW**  
 Mounting of wheels in an elevator plant using pin inductors. For this client, custom inductors were made, with the required lengths and diameters.



**Schaeffler MF-GENERATOR3.0-22KW**  
 Dismounting in a steel plant using a flexible inductor wrapped around a bearing ring.

Temperature: 200°C  
 Time needed: 17 min.



**Schaeffler MF-GENERATOR3.0-44KW**  
 Dismounting of a coupling at a gearbox repair company.

Temperature: 100°C  
 Time needed: 7 min.



**Schaeffler MF-GENERATOR3.0-22KW**  
 Preheating in preparation for laser cladding.

# Induction heaters

## Schaeffler MF-GENERATOR3.0-3.5KW-230V

New



**3.5**  
power kW

**4,3"**  
display inch

**230**  
voltages V

### Schaeffler MF-GENERATOR3.0-3.5KW-230V

- Portable induction heater, weighs only 7.85 kg, ideal for working on site.
- Easy to connect to mains voltage (230V)
- Easy operation with 4,3" touchscreen
- Smart electronics ensure optimal operating frequency
- Dual temperature sensing (monitoring Delta T)
- Choice of flexible inductors: 5m, 7.5m, 10m (not included)
- Can heat according to preset temperature/time curve
- The heating process is displayed in a clear graph
- Log function to save and export data via a USB port



#### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



Flexible inductor 180°C

Type	MF-GENERATOR3.0-3.5KW-230V
Power	3,5kW
Heat curve in display	Yes
Setpoint power	No
Setpoint temperature	Yes, via touchscreen
Setpoint temperature curve	Yes, via touchscreen
Setpoint timer	Yes, via touchscreen
Inductor recognition	No
USB connection	Yes
Network connection	No
Heating log	Yes
Weight generator	7,85 kg



Log function and export to USB stick (USB stick not included)

Type	Art. no.	Voltage/Amp	Certification
MF-GENERATOR3.0-3.5KW-230V	330352301	230V / 13A*	CE

See page 49 for detailed technical specifications.

# Induction heaters

## Schaeffler MF-GENERATOR 2.5 & 3.0 - 10kW



**10**  
power kW

**3.5"**  
display inch

**400/450/  
500/600**  
voltages V

### Schaeffler MF-GENERATOR2.5-10KW

- Compact design with 3.5" display
- User-friendly touchscreen operation
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement ( $\Delta T$  monitoring)
- Choice between fixed and flexible inductors

Type	MF-GENERATOR2.5-10KW	MF-GENERATOR3.0-10KW
Power	10kW	10kW
Heat curve in display	No	Yes
Setpoint power	Yes, via touchscreen	Yes, via touchscreen
Setpoint temperature	Yes, via touchscreen	Yes, via touchscreen
Setpoint temperature curve	No	Yes, via touchscreen
Setpoint timer	Yes, via touchscreen	Yes, via touchscreen
Inductor recognition	Yes	Yes
USB connection	No	Yes
Network connection	No	Yes
Heating log	No	Yes
Weight generator	46 kg	46 kg

Type	Art. no.	Voltage/Amp
MF-GENERATOR2.5-10KW-400V	325104001	3 ~ 400V/16A
MF-GENERATOR2.5-10KW-450V	325104501	3 ~ 450V/14A
MF-GENERATOR2.5-10KW-500V	325105001	3 ~ 500V-12A
MF-GENERATOR2.5-10KW-600V	325106001	3 ~ 600V-10A
MF-GENERATOR3.0-10KW-400V	330104001	3 ~ 400V/16A
MF-GENERATOR3.0-10KW-450V	330104501	3 ~ 450V/14A
MF-GENERATOR3.0-10KW-500V	330105001	3 ~ 500V-12A
MF-GENERATOR3.0-10KW-600V	330106001	3 ~ 600V-10A

See page 48 for detailed technical specifications.



**10**  
power kW

**7"**  
display inch

**400/450/  
500/600**  
voltages V

#### SMART inductor recognition

The desired temperature and desired power do not have to be set if an inductor with SMART identification feature is connected. In this case the generator automatically adopts the settings defined in the program (1, 2 or 3) for the corresponding inductor.

### Schaeffler MF-GENERATOR3.0-10KW

- Compact design with 7" display
- User-friendly touchscreen operation
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement ( $\Delta T$  monitoring)
- Choice between fixed and flexible inductors
- Can heat according to preset temperature/time curve
- The heating process is displayed in a clear graph
- Log function to save and export data via a USB port

**DT**

#### For more control and stress-free mounting

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



The MF 3.0 features a 7-inch touchscreen



Optional signal tower for MF 2.5 and 3.0

# Induction heaters

## Schaeffler MF-GENERATOR 2.5 & 3.0 - 22kW



**22**  
power kW

**3.5"**  
display inch

**400/450/  
500/600**  
voltages V

### Schaeffler MF-GENERATOR2.5-22KW

- Compact design with 3.5" display
- User-friendly touchscreen operation
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement ( $\Delta T$  monitoring)
- Choice between fixed and flexible inductors

Type	MF-GENERATOR2.5-22KW	MF-GENERATOR3.0-22KW
Power	22kW	22kW
Heat curve in display	No	Yes
Setpoint power	Yes, via touchscreen	Yes, via touchscreen
Setpoint temperature	Yes, via touchscreen	Yes, via touchscreen
Setpoint temperature curve	No	Yes, via touchscreen
Setpoint timer	Yes, via touchscreen	Yes, via touchscreen
Inductor recognition	Yes	Yes
USB connection	No	Yes
Network connection	No	Yes
Heating log	No	Yes
Weight generator	46 kg	46 kg

Type	Art. no.	Voltage/Amp/Power
MF-GENERATOR2.5-22KW-400V	325224001	3 ~ 400V-32A
MF-GENERATOR2.5-22KW-450V	325224501	3 ~ 450V-30A
MF-GENERATOR2.5-22KW-500V	325225001	3 ~ 500V-28A
MF-GENERATOR2.5-22KW-600V	325226001	3 ~ 600V-23A
MF-GENERATOR3.0-22KW-400V	330224001	3 ~ 400V-32A
MF-GENERATOR3.0-22KW-450V	330224501	3 ~ 450V-30A
MF-GENERATOR3.0-22KW-500V	330225001	3 ~ 500V-28A
MF-GENERATOR3.0-22KW-600V	330226001	3 ~ 600V-23A

See page 48 for detailed technical specifications.



**22**  
power kW

**7"**  
display inch

**400/450/  
500/600**  
voltages V

**SMART inductor recognition**  
The desired temperature and desired power do not have to be set if an inductor with SMART identification feature is connected. In this case the generator automatically adopts the settings defined in the program (1, 2 or 3) for the corresponding inductor.

**Schaeffler MF-GENERATOR3.0-22KW**

- Compact design with 7" display
- User-friendly touchscreen operation
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement ( $\Delta T$  monitoring)
- Choice between fixed and flexible inductors
- Can heat according to preset temperature/time curve
- The heating process is displayed in a clear graph
- Log function to save and export data via a USB port



**For more control and stress-free mounting**

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



The MF 3.0 features a 7-inch touchscreen



Optional signal tower for MF 2.5 and 3.0

# Induction heaters

## Schaeffler MF-GENERATOR 2.5 & 3.0 - 44kW



**44**  
power kW

**3.5"**  
display inch

**400/450/  
500/600**  
voltages V

### Schaeffler MF-GENERATOR2.5-44KW

- Compact design with 3.5" display
- User-friendly touchscreen operation
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement ( $\Delta T$  monitoring)
- Choice between fixed and flexible inductors

Type	MF-GENERATOR2.5-44KW	MF-GENERATOR3.0-44KW
Power	44kW	44kW
Heat curve in display	No	Yes
Setpoint power	Yes, via touchscreen	Yes, via touchscreen
Setpoint temperature	Yes, via touchscreen	Yes, via touchscreen
Setpoint temperature curve	No	Yes, via touchscreen
Setpoint timer	Yes, via touchscreen	Yes, via touchscreen
Inductor recognition	Yes	Yes
USB connection	No	Yes
Network connection	No	Yes
Heating log	No	Yes
Weight generator	78 kg	78 kg

Type	Art. no.	Voltage/Amp
MF-GENERATOR2.5-44KW-400V	325444001	3 ~ 400V-63A
MF-GENERATOR2.5-44KW-450V	325444501	3 ~ 450V-59A
MF-GENERATOR2.5-44KW-500V	325445001	3 ~ 500V-55A
MF-GENERATOR2.5-44KW-600V	325446001	3 ~ 600V-45A
MF-GENERATOR3.0-44KW-400V	330444001	3 ~ 400V-63A
MF-GENERATOR3.0-44KW-450V	330444501	3 ~ 450V-59A
MF-GENERATOR3.0-44KW-500V	330445001	3 ~ 500V-55A
MF-GENERATOR3.0-44KW-600V	330446001	3 ~ 600V-45A

See page 48 for detailed technical specifications.



**44**  
power kW

**7"**  
display inch

**400/450/  
500/600**  
voltages V

**SMART inductor recognition**

The desired temperature and desired power do not have to be set if an inductor with SMART identification feature is connected. In this case the generator automatically adopts the settings defined in the program (1, 2 or 3) for the corresponding inductor.

**Schaeffler MF-GENERATOR3.0-44KW**

- Compact design with 7" display
- User-friendly touchscreen operation
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement ( $\Delta T$  monitoring)
- Choice between fixed and flexible inductors
- Can heat according to preset temperature/time curve
- The heating process is displayed in a clear graph
- Log function to save and export data via a USB port



**For more control and stress-free mounting**

Thanks to the Delta-T  $\Delta T$  monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



The MF 3.0 features a 7-inch touchscreen



Optional signal tower for MF 2.5 and 3.0

# Induction heaters

## Fixed inductors

This type is mainly used for workpieces of the same design that occur frequently and need to be heated. It is also frequently used for relatively small workpieces where a flexible inductor is not sufficient. The versions can vary from an inductor that heats the workpiece from inside a bore to a variant that heats the workpiece from the outside.

Fixed inductors are custom-made and basically suitable for 1 type of workpiece. If the dimensions of several workpieces are very similar, it is sometimes possible to use 1 inductor for several workpieces. Fixed inductors are generally equipped with inductor recognition and overheating protection.

### Standard-sized fixed inductors

For specific applications in the rail industry, we have standard fixed inductors in our range. These fit the job perfectly and can be used in repetitive production.

**SMART inductor recognition**  
 The desired temperature and desired power do not have to be set if an inductor with SMART identification feature is connected. In this case the generator automatically adopts the settings defined in the program (1, 2 or 3) for the corresponding inductor.



Fixed inductor



Labyrinth inductors



Sandwich table inductor



Pin inductor



Fixed inductor

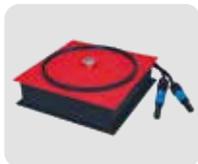


Table inductor



Connection set



Heating bearing rings for dismounting



Heating labyrinth rings for dismounting

Standard railway inductor type	Art. no.	Boring Ø mm	Width mm	Max. power kW	Max. temperature
MF-INDUCTOR-LAB202X50	3502009001	202	90	22	180 °C / 356 °F
MF-INDUCTOR-IN157X145	3502009021	171	150	22	150 °C / 302 °F
MF-INDUCTOR-LAB176X50	3502009031	177	90	22	180 °C / 356 °F

Other sizes can be ordered custom-made.

# Induction heaters

## Flexible inductors

Flexible inductors can be placed in or around a workpiece. Therefore, they are ideal for a large variety of parts. From large inner rings to very large components such as gear wheels and housings.

- Different cable lengths, temperature and power ratings are available. Thanks to their flexibility, a wide range of applications is possible.
- Flexible inductors are used to wrap a number of windings around, inside (bore) or on a workpiece (as a flat coil on a surface).
- Flexible inductors are meant to be used with Schaeffler medium-frequency generators. Make sure the capacity of the inductor corresponds with the capacity of the generator.

### Caged flexible inductors

In this case, a flexible inductor is wrapped in a cage. This provides a lightweight construction that allows serial heating of a repetitive size. Often this solution is a lighter alternative to a comparable fixed inductor.



**Magnetic holder**

Optional: magnetic holders to secure the flexible inductors.



**Heating a bore for bearing or shaft mounting**



**Heating a coupling for dismantling**



**Flexible inductor  
180°C**



**Flexible inductor  
300°C**



**Caged  
flexible inductor**



**Connection set**

Type	Length m	Max. temperature	Diameter cable Ø mm	Min. winding diameter mm
3.5 kW	5, 7.5, 10	180 °C / 356 °F	12	approx. 90
10 kW*	15, 20, 25, 30	180 °C / 356 °F	12	approx. 75
10 kW	15, 20, 25, 30, 35	180 °C / 356 °F	15	approx. 100
10 kW	15, 20, 25, 30	300 °C / 572 °F	20	approx. 120
22 kW*	15, 20, 25, 30	180 °C / 356 °F	12	approx. 75
22 kW	15, 20, 25, 30, 35	180 °C / 356 °F	15	approx. 100
22 kW	15, 20, 25, 30	300 °C / 572 °F	20	approx. 120
44 kW	15, 20, 25, 30, 35	180 °C / 356 °F	19	approx. 140
44 kW	15, 20, 25, 30	300 °C / 572 °F	28	approx. 220

\*Short duration use

# Technical specifications

## MF-GENERATOR2.5



Type	MF-GENERATOR2.5 10KW	MF-GENERATOR2.5 22KW	MF-GENERATOR2.5 44KW
Forced air cooling	Yes	Yes	Yes
Power	10kW	22kW	44kW
Frequency range	10-25 kHz	10-25 kHz	10-25 kHz
Voltage/Amperage	3 ~ 400V/16A 3 ~ 450V/14A 3 ~ 500V/12A 3 ~ 600V/10A	3 ~ 400V/32A 3 ~ 450V/30A 3 ~ 500V/28A 3 ~ 600V/23A	3 ~ 400V/63A 3 ~ 450V/59A 3 ~ 500V/55A 3 ~ 600V/45A
Frequency	50/60Hz	50/60Hz	50/60Hz
Temperature measurement	For type K thermocouple	For type K thermocouple	For type K thermocouple
Max. temperature °C / °F	300 °C / 572 °F	300 °C / 572 °F	300 °C / 572 °F
Accuracy	± 3.5°C / ± 6.3 °F	± 3.5°C / ± 6.3 °F	± 3.5°C / ± 6.3 °F
Inductor recognition	Yes	Yes	Yes
Temperature sensor (2 pieces)	Yes, for max 300°C / 572 °F	Yes, for max 300°C / 572 °F	Yes, for max 300°C / 572 °F
Extra thermocouple input	Yes	Yes	Yes
Dimensions of generator LxWxH	600x300x600 mm / 23.6x11.8x23.6 inch	600x300x600 mm / 23.6x11.8x23.6 inch	600x650x580 mm / 23.6x25.6x22.8 inch
Weight of generator	46 kg	46 kg	78 kg
<b>Operation</b>			
Dimensions display	3.5"	3.5"	3.5"
Heat curve in display	No	No	No
Delta T (ΔT)	Yes	Yes	Yes
Setpoint power	Via touchscreen	Via touchscreen	Via touchscreen
Setpoint temperature	Via touchscreen	Via touchscreen	Via touchscreen
Setpoint temperature curve	No	No	No
Setpoint timer	Via touchscreen	Via touchscreen	Via touchscreen
Selection operating mode	Via touchscreen	Via touchscreen	Via touchscreen
Digital readings temperature	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen
Digital readings time	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen
Digital readings power	Actual value on touchscreen	Actual value on touchscreen	Actual value on touchscreen
Digital readings frequency	Actual value on touchscreen	Actual value on touchscreen	Actual value on touchscreen
USB connection	No	No	No
Network connection	No	No	No
Heating log	No	No	No
<b>Signaling by</b>			
Installation in operational state	Green flash light	Green flash light	Green flash light
Error message	Red continuous light / acoustic signal	Red continuous light / acoustic signal	Red continuous light / acoustic signal
End of heating cycle	Green continuous light / acoustic signal	Green continuous light / acoustic signal	Green continuous light / acoustic signal
Signal tower	Optional	Optional	Optional

We reserve the right to alter technical specifications without prior notice.

# Technical specifications

## MF-GENERATOR3.0



Type	MF-GENERATOR3.0 3,5KW	MF-GENERATOR3.0 10KW	MF-GENERATOR3.0 22KW	MF-GENERATOR3.0 44KW
Forced air cooling	Yes	Yes	Yes	Yes
Power	3,0kW* / 3,5kW**	10kW	22kW	44kW
Frequency range	10-50kHz	10-25 kHz	10-25 kHz	10-25 kHz
Voltage/Amperage	230V / 13A* 230V / 16A**	3 ~ 400V / 16A 3 ~ 450V / 14A 3 ~ 500V / 12A 3 ~ 600V / 10A	3 ~ 400V / 32A 3 ~ 450V / 30A 3 ~ 500V / 28A 3 ~ 600V / 23A	3 ~ 400V / 63A 3 ~ 450V / 59A 3 ~ 500V / 55A 3 ~ 600V / 45A
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Temperature measurement	For type K thermo element	For type K thermocouple	For type K thermocouple	For type K thermocouple
Max. temperature °C / °F	240 °C / 464 °F	300 °C / 572 °F	300 °C / 572 °F	300 °C / 572 °F
Accuracy	± 3.5°C / ± 6.3 °F	± 3.5°C / ± 6.3 °F	± 3.5°C / ± 6.3 °F	± 3.5°C / ± 6.3 °F
Inductor recognition	No	Yes	Yes	Yes
Temperature sensor (2 pieces)	Yes, for max 300°C / 572 °F	Yes, for max 300°C / 572 °F	Yes, for max 300°C / 572 °F	Yes, for max 300°C / 572 °F
Extra thermocouple input	Yes	Yes	Yes	Yes
Dimensions of generator LxWxH	320 x 350 x 150 mm / 12.6x13.8x5.9 inch	600x300x600 mm / 23.6x11.8x23.6 inch	600x300x600 mm / 23.6x11.8x23.6 inch	600x650x580 mm / 23.6x25.6x22.8 inch
Weight of generator	7,85 kg	46 kg	46 kg	78 kg
<b>Operation</b>				
Dimensions display	4,3"	7"	7"	7"
Heat curve in display	Yes	Yes	Yes	Yes
Delta T (ΔT)	Yes	Yes	Yes	Yes
Setpoint power	No	Via touchscreen	Via touchscreen	Via touchscreen
Setpoint temperature	Via touchscreen	Via touchscreen	Via touchscreen	Via touchscreen
Setpoint temperature curve	Via touchscreen	Via touchscreen	Via touchscreen	Via touchscreen
Setpoint timer	Via touchscreen	Via touchscreen	Via touchscreen	Via touchscreen
Selection operating mode	Via touchscreen	Via touchscreen	Via touchscreen	Via touchscreen
Digital readings temperature	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen
Digital readings time	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen	Setpoint and actual value on touchscreen
Digital readings power	No	Actual value on touchscreen	Actual value on touchscreen	Actual value on touchscreen
Digital readings frequency	No	Actual value on touchscreen	Actual value on touchscreen	Actual value on touchscreen
USB connection	Yes	Yes	Yes	Yes
Network connection	No	Yes	Yes	Yes
Heating log	Yes	Yes	Yes	Yes
<b>Signaling by</b>				
Installation in operational state	LED on front	Via touchscreen	Via touchscreen	Via touchscreen
Error message	Acoustic signal	Acoustic signal	Acoustic signal	Acoustic signal
End of heating cycle	Acoustic signal	Acoustic signal	Acoustic signal	Acoustic signal
Signal tower	-	Optional	Optional	Optional

\*UKCA model specifications.

\*\* CE model specifications.

# Fitting tool sets

## BETEX Impact 33 & 39

### Fast and accurate bearing mounting

The use of an Impact fitting tool set is of absolute importance for the safe, precise and fast mounting of bearings.

Specially for bearings it is important that during mechanical mounting the bearing is supported on its inner and outer ring in order to avoid unnecessary damage and premature failure.

When an Impact fitting tool set is used, mounting forces are not transmitted via balls or rollers of the bearings and hence the raceways are not damaged.

By using impact-resistant plastic collets (made of unbreakable sheet material, instead of easily breaking injection moulded collets), metal to metal contact is avoided, and therefore damage to the shaft is prevented.



### IMPACT 33

- With 3 sleeves
- With 33 rings, suitable for  $\pm 375$  different types of bearings.



**Also for other machine components**

The sets can be used for bore diameters from 10 to 60 mm or parts thereof. Mounting of other machine components such as bushings, sealing rings, gear wheels and pulleys can also be carried out safely, precisely and quickly using an Impact fitting tool set.



Use in combination with Schaeffler Induction heaters.

**Your benefits:**

- ✓ Safe, precise and quick mounting
- ✓ No more damage to shafts, bearing housings and bearing sealing rings
- ✓ Extended service life of bearings
- ✓ The impact-resistant plastic collets are made of unbreakable sheet material
- ✓ **The numbers of the collets are clearly engraved and coloured, so mistakes are impossible.**



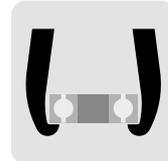
**IMPACT 39**

- With 4 sleeves
- With 39 rings, suitable for ± 600 different types of bearings.

Type	Impact 33	Impact 39
Art. no.	399900-2	399900-4
Collet bore mm	10-50	10-60
Outer diameter	26-110	26-130
Sleeve bore mm	18, 32, 52	18, 32, 52, 62
Dead blow hammer	0.7 kg, absorbs shocks and vibrations	
Weight kg	4.8	6.5

# Mechanical pullers

## BETEX MSP 2/3-arm pullers, self-centering



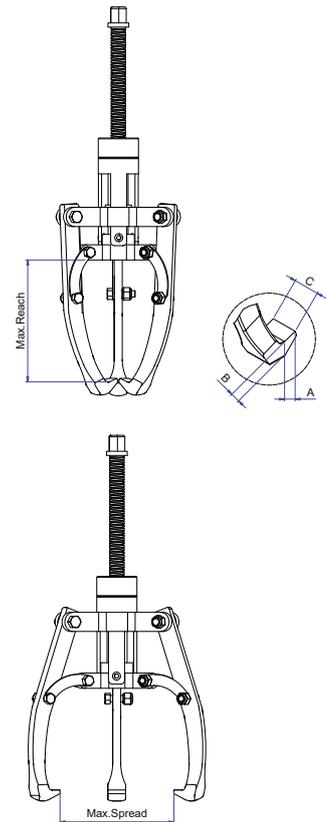
**250**  
Max. shaft length mm

**440**  
Max. spread mm

### BETEX MSP

#### Safe and easy dismounting of bearings, couplings, rings, etc.

- Ergonomic design, easy to operate by one person.
- Practical!  
Self-centering 2-arm or 3-arm puller, including locking. Easy to convert, can be used in any position.
- Safe!  
The arms slide inwards or outwards simultaneously. Bending or deflecting is impossible.
- Economical!  
2-arm or 3-arm puller combination, 2 pullers for the price of one.
- Strong!  
The harder the pulling force, the tighter the jaws grip around the workpiece.



#### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	Art. no.	Cap. tons	Max. shaft length mm	Max. spread mm	Wrench size mm	Max. Torque Nm	A mm	B mm	C mm	Weight kg
MSP 2/3-120	798250	2	80	120	19	23	8	6	15	1.6
MSP 2/3-180	798300	3	120	180	19	34	6	7	15	2.3
MSP 2/3-270	798350	5	160	270	23	79	11	10	25	4.3
MSP 2/3-300	798400	8	210	300	23	139	13	14	27	6.1
MSP 2/3-380	798450	10	250	380	29	206	14	10	29	9.6
MSP 2/3-440	798500	12	250	440	29	243	14	10	29	11.2

# Mechanical pullers

## BETEX MP40 4-arm ball bearing puller



**239**  
Max. arm length mm

**10 - 60**  
Shaft diameter mm

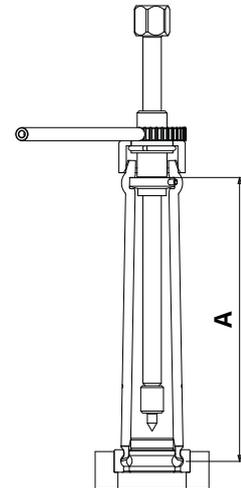


### BETEX MP40

These four-arm bearing pullers have been specially developed to extract ball-bearings from casings and shafts simultaneously. For when there is no free space internally or externally. The arms grip the bearing between the inner- and outer ring. For extra grip and the desired leverage effect, a supplied ring can be used. The blue numbered bearings are dismantled without the ring.

Used for the 6000, 6200, 6300 and 6400 bearing series.

- Internal puller
- 4-arms
- Available as set MP40900 in handy case with 3 sizes: MP40100, MP40200, MP40300



Type / Art. no.	Arm no.	A mm	Bearing	Weight kg
MP40100	11	160	<b>6000 - 6001 - 6002 - 6003 - 6200 - 16002 - 16003 - 16100 - 16101</b>	1,3
	12	160	6004 - 6005 - 6006 - <b>6201</b> - 6202 - 6203 - 6300	1,3
	13	180	6204 - 6205 - 6301 - 6302 - 6303 - 62/22 - <b>63/22</b>	1,3
MP40200	21	196	<b>6007 - 6008 - 6009 - 6010 - 16011</b>	1,9
	22	196	<b>6011 - 6012</b> - 6206 - 6207 - 6304 - 6305 - 6306 - <b>62/28</b>	4,5
MP40300	31	237	<b>6013 - 6014 - 6015</b> - 6208 - 6209 - 6210 - 6307 - 6403 - <b>63/28</b>	4,5
	32	239	<b>6018 - 6019 - 6020 - 6211</b> - 6212 - 6308 - 6309 - 6310 - 6311 - 6404 - 6405	7,5
MP40900 set				

The green numbered bearings are removed without the ring.

# Hydraulic pullers

BETEX HP & HSP 2/3-arm pullers, with integrated pump and cylinder

### Compact pullers for dismounting components such as bearings, bushings, wheels, couplings and pulleys

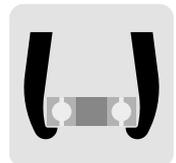
- The self-contained hydraulic pump saves space, as you don't need a separate pump, hose or cylinder.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- 2-arm or 3-arm puller combination, easy to convert.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- The lightweight telescopic handle can be rotated 360°.
- Can be used in any position.
- Includes safety net/blanket, adapter(s) and shaft protector.
- In useful carrying case.
- HSP pullers are self-centering.

**415**

Max. shaft length mm

**620**

Max. spread mm



Use in combination with "BETEX Bearing Splitter".



### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.



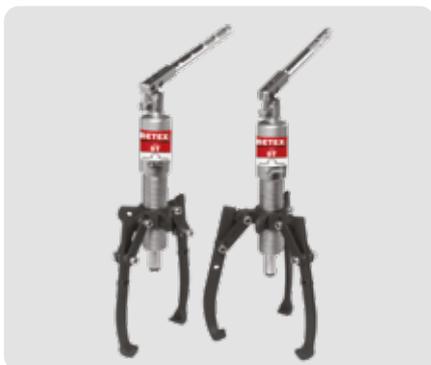
Lightweight telescopic handle



HSP is self-centering



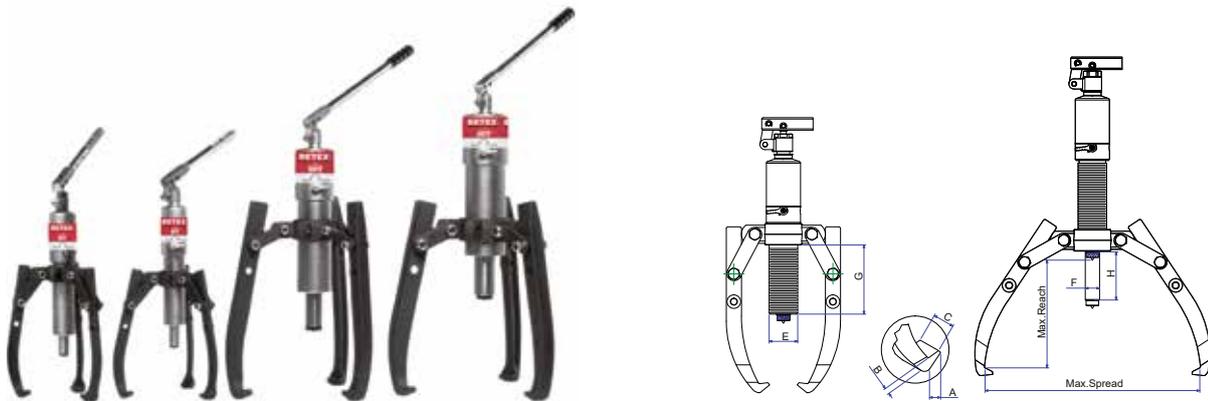
PE carrying case



2-arm or 3-arm puller



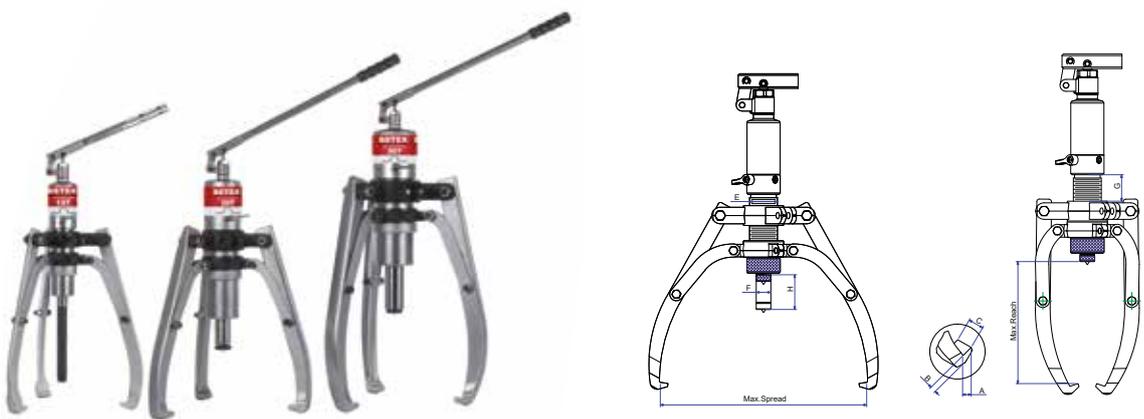
Can be rotated 360°



### BETEX HP 2/3-arm Hydraulic pullers

Type	Art. no.	Cap. tons	Max. shaft length mm	Spread mm		Stroke H mm	A mm	B mm	C mm	E mm	F mm	G mm	Weight kg
				Min.	Max.								
HP 43*	791000	4	185	-	255	60	11	6	22	42	22	84	8,3
HP 63*	792000	6	220	-	330	70	13	10	22	45	23	94	8,5
HP 83*	793000	8	230	-	350	85	11	10	25	50	25	122	12,0
HP 123*	794000	12	270	-	375	85	14	10	29	60	28	118	17,2
HP 203**	796000	20	360	-	520	111	20	27	33	80	40	160	38,2
HP 303**	797000	30	360	-	550	111	20	27	38	98	50	155	50,6

\* incl. safety net \*\* incl. safety blanket



### BETEX HSP 2/3-arm hydraulic self-centering pullers

Type	Art. no.	Cap. tons	Max. shaft length mm	Spread mm		Stroke H mm	A mm	B mm	C mm	E mm	F mm	G mm	Weight kg
				Min.	Max.								
HSP 43*	791500	4	190	83	315	60	13	10	22	42	22	40	9,3
HSP 63*	792500	6	230	90	390	70	13	10	22	45	23	50	9,8
HSP 83*	793500	8	280	110	460	85	13	13	27.5	50	25	70	15,3
HSP 123*	794500	12	300	120	515	85	15	16.5	29	60	28	70	18,4
HSP 203**	796500	20	325	160	520	111	18	20	33	80	40	62	46,0
HSP 303**	797500	30	415	190	620	111	18	20	38	98	50	85	61,8

\* incl. safety net \*\* incl. safety blanket

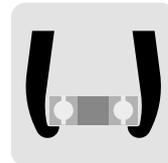
# Hydraulic pullers

## BETEX HXP 2/3-arm pullers, self-centering



**455**  
Max. shaft length mm

**860**  
Max. spread mm



Use in combination with "BETEX Bearing Splitter".



### BETEX HXP

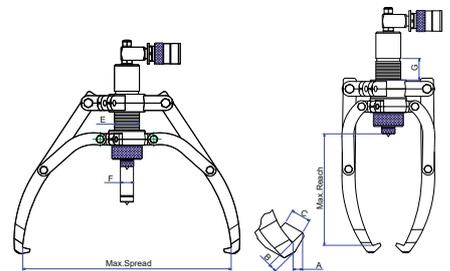
#### Safe and user-friendly dismounting of bearings, couplings, rings, etc.

- Separate 2-stage handpump available.
- Self-centering 2-arm or 3-arm puller, easy to convert.
- The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- HXP503 is also available with mobile crane (HXPC 50T).
- Accessory sets available for the 8- and 12-ton versions.
- In useful carrying case.
- Includes adapter and shaft protector.



#### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

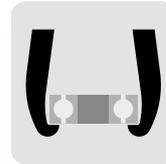


Type	Art. no.	Cap. tons	Oil cap. cm <sup>3</sup>	Max. shaft length mm	Spread mm		Stroke H mm	A mm	B mm	C mm	E mm	F mm	G mm	Weight kg
					Min.	Max.								
HXP 83*	793600	8	100	280	110	460	85	13	10	22	50	25	70	14,0
HXP 123*	794600	12	135	300	120	515	85	13	13	27.5	60	28	70	17,0
HXP 203**	796600	20	315	325	160	520	111	15	16.5	29	80	40	62	36,7
HXP 303**	797600	30	490	415	190	620	111	20	27	33	98	50	85	56,5
HXP 503**	799600	50	1116	455	160	860	159	23	35	60	40	-	127	140,0

\* incl. safetv net    \*\* incl. safetv blanket

# Hydraulic pullers

## BETEX Tri-section Puller set



**284**  
Max. shaft length mm

**340**  
Max. spread mm

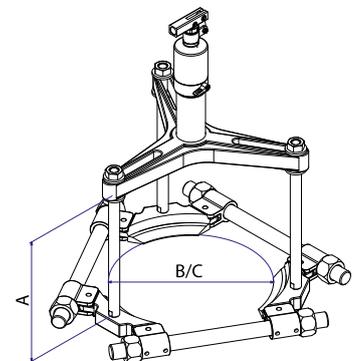


### BETEX Tri-section puller set

- The complete hydraulic tri-section puller set is for safe and easy disassembly.
- The narrow plate edges enable the dismounting of hard-to-grip components.
- The Tri-section Plate is mounted behind the inner and outer bearing ring and prevents the pulling force from being transmitted through the moving parts, so the bearing is not damaged.
- Most parts are forged SCM440 alloy steel, creating a very safe and durable product.

#### This complete puller set is available in 4 capacities and consists of:

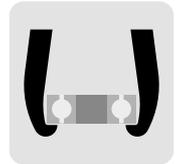
- Integrated pump and cylinder
- 360° adjustable handle
- Tri-section Plate
- Puller block
- Connection rods
- Steel storage case



Type	Art. no.	Cap. tons	Max. shaft length A mm	Min. spread B mm	Max. spread C mm	Weight in kg
Tri-section set 4t	792160	4	211	30	160	19
Tri-section set 6t	792210	6	243	50	210	29
Tri-section set 8t	792340	8	243	50	270	32
Tri-section set 12t	792495	12	284	90	340	65

# Accessory sets

## BETEX Bearing Splitter



### BETEX Bearing Splitter

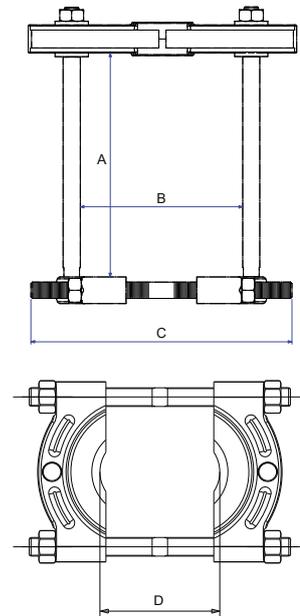
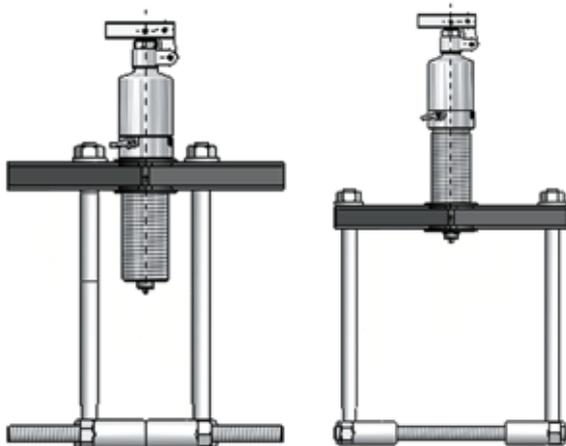
Accessory sets for 4, 6, 8, 12 ton pullers HP, HSP, HXP, HPP.

**This accessory set comprises:**

- 1 Puller block
- 2 Sets of connection rods
- 2 Plates for min./max. Ø 12-225 mm

**Use the pump/cylinder unit of the HP/HSP/HXP puller.**

For the dismounting of hard-to-reach bearings and other parts, where there is insufficient space for grip with a puller. Suitable for multiple applications.



Type	Art. no.	Cap. tons	Shaft length A mm	B mm		C mm	Spread Ø D mm		Weight kg
				Min.	Max.		Min.	Max.	
Acc. set HP 43 HSP 43	791100	4	224	100	145	163	12	70	6.5
Acc. set HP 63 HSP 63	792100	6	255	115	220	260	28	150	10.5
Acc. set HP 83 HSP 83 HXP 83	793100	8	255	110	230	260	28	150	10,5
Acc. set HP 123 HSP 123 HXP 123 HPP 123	794100	12	298	140	310	360	20	200	11,5

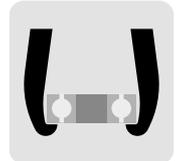
# Accessory sets

## BETEX Tri-Section Plates



**Use in combination with:**

- Tri-Section 160: HP/HSP 43, 63
- Tri-Section 210: HP/HSP 63, 83
- Tri-Section 340: HP/HSP/HXP 83, 123, 203, HPP 123
- Tri-Section 495: HP/HSP/HXP 203, 303



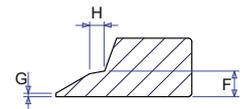
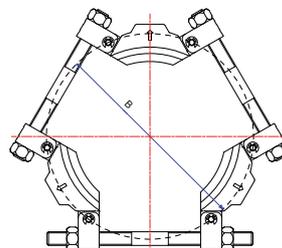
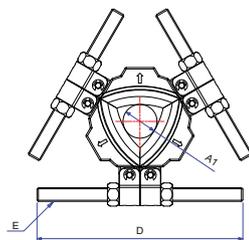
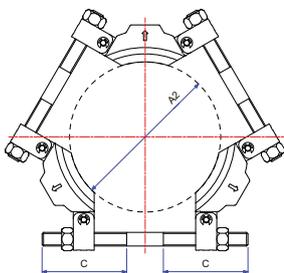
### BETEX Tri-Section Plate

The Tri-Section Plate is specially designed for 3-arm (hydraulic) pullers.

The unique and patented design creates maximum spread and applies even force. The Tri-Section Plate can be mounted behind the inner and outer bearing ring. This prevents the pulling force from being transmitted through the moving parts, so the bearing is not damaged.

**User friendly**

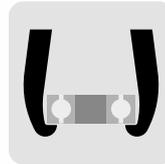
- The unique design with hinge mechanism ensures maximum spread.
- Thanks to the Tri-Section Plate, the force is distributed evenly, so the bearing cannot bend or deform.
- Suitable for all 3-arm pullers.
- Available in a wide range, covering the most common shaft sizes.
- The Tri-section Plate consists of 4 different models suitable for shaft-mounted bearings from 26 to 495 mm.



Type	Art. no.	Cap. tons	Spread mm		B mm	C mm	D mm	E	F mm	G mm	H mm	Weight kg
			Min. A1	Max. A2								
Tri-section 160	791160	6	26	160	216	105	240	5/8"-11UNC	8	2	6.5	3.5
Tri-section 210	791210	8	50	210	280	117	285	7/8"-14UNF	10	2	9	5.5
Tri-section 340	791340	20	90	340	460	175	430	1 1/4"-12UNF	14	2	8	18
Tri-section 495	791495	30	140	495	660	235	610	1 1/4"-12UNF	20	2	12	45

# Mobile hydraulic pullers

BETEX Mobipuller, hydraulic mobile puller



**25**  
tons

**50**  
tons



Double-acting electrical



Single-acting electrical



Single-acting manual



Option: adapters for inner rings, etc.

## BETEX Mobipullers

### For heavy-duty dismounting jobs. One person can do the job!

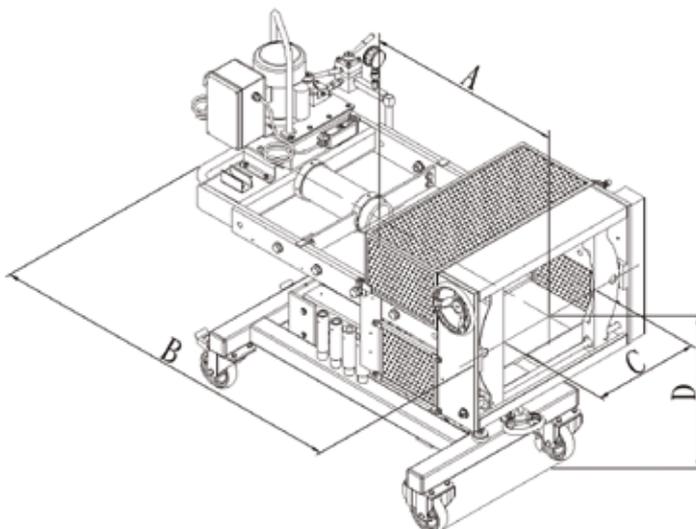
BETEX mobile hydraulic pulley puller quickly and easily removes machine parts such as bearings, couplings, bushings, gears, etc. The Mobipuller excels in functional and ergonomic handling. It is stable, mobile and adjustable in height. An operating pressure of up to 25 and 50 tons can be applied, at an opening of 430 mm. To ensure safe and easy operation, the electrical versions are supplied with remote control.

### All models are equipped as standard with:

- Overload protection.
- Oil-filled pressure gauge.
- 4 adapters (extensions): 2 x Ø40 mm and 2 x Ø50 mm.
- 4 stable wheels with polyurethane tyres.
- 2 castor wheels with double-functioning brake.
- Safety cage.
- Dimensions LxWxH: 1570x990x1510 mm.
- The press frame can be extended in 2 steps of 190 mm each

### Advantages

- ✓ Mobile
- ✓ Can be used when there is little space behind the workpiece
- ✓ One person can do the job
- ✓ Extra safe thanks to the safety cage



Type	Art. no.	Cap. tons	Cylinder stroke	Pump	A mm	B mm	C mm	D mm	Weight kg
25 HV 430 S 260	700001	25	260	single acting manual	770	1560	430	900/1430	415
25 EVA 430 S 260*	700002	25	260	single acting electrical, BETEX EP18S 230V**	770	1560	430	900/1430	430
50 HV 430 S 260	700003	50	260	single acting manual	740	1560	430	900/1430	435
50 EVA 430 S 260*	700004	50	260	single acting electrical, BETEX EP18S 230V**	740	1560	430	900/1430	450
50 EVA 430 S 340*	700005	50	340	single acting electrical, BETEX EP18S 230V**	660	1560	430	900/1430	455
50 EVAD 430 S 340*	700006	50	340	double acting electrical, BETEX EP18D 230V**	615	1560	430	900/1430	470
50 EVAD 430 S 460*	700007	50	460	double acting electrical, BETEX EP18D 230V**	470	1560	430	900/1430	485

\* incl. remote control \*\*optional 120V

# Mobile hydraulic puller

BETEX HXPC 2/3-arm puller, self-centering, with crane



Valve block



Adapters

## BETEX HXPC 50 2/3-arm

**For dismounting of all kinds of transmission parts such as bearings, couplings, gear wheels, wheels, etc.**

- The puller is self-centering, easy to manoeuvre and adjustable in height. The puller is easy to convert into a 2- or 3-arm version. The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- Can be used in any position.
- Remote control included.
- Safety blanket included.

### Operation

- An electrohydraulic 230V-700 bar pump operates the cylinder and the crane. This is a 2-stage pump with an output of 2.8 litres per minute at 7 bar counter pressure.
- The design prevents the puller arms from slipping or deflecting from behind the workpiece.
- The crane has 2 castor wheels and 2 fixed wheels.
- A hydraulic single-acting cylinder with max. operating pressure of 700 bar (50 tons).
- The total stroke is 159 mm. Two adapters (extensions) are included, with a total length of 310 mm.



Also available without crane, HXP503.



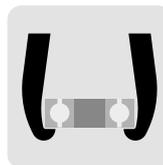
### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	HXPC 50
Art. no.	700016
Capacity tons	50
Max. stroke mm	159
Max. spread mm	860
Min. spread mm	160
Max. shaft length mm	455
Operation	Electrical, BETEX EP18S, 230V
Operation of self-centering jaws	manual
2 adapters, total length: 310 mm	1 x Ø 40: length 155, 1 x Ø 50: length 155
Min. height from centre mm	210
Max. height from centre mm	1550
Pressure gauge bar	700
Dimensions mm LxWxH	1850 x 970 x 1550
Weight kg	280

# Mobile hydraulic puller

BETEX HXPM 50, 2-arm puller, self-centering



Valve block



Adapters

## BETEX HXPM 50 2-arm

**For dismounting of all kinds of transmission parts such as bearings, couplings, gear wheels, wheels, etc.**

- The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- Remote control included.
- 4 adapters included.
- Safety blanket included.

### Operation

- Double-acting cylinder for clamping, opening and closing the arms, for a safe and secure grip on the workpiece.
- An electrohydraulic 230V-700 bar pump operates the cylinder and the height adjustment. This is a 2-stage pump with an output of 2.8 litres/minute at 7 bar counter pressure.
- The design prevents the puller arms from slipping or deflecting.
- The mobile frame has 2 castor wheels (with brake) and 2 fixed wheels.
- The hydraulic single-acting cylinder has max. operating pressure of 700 bar (50 tons).
- The total stroke is 330 mm. Four adapters (extensions) are included, with a total length of 620 mm.



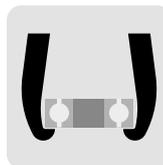
#### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	HXPM 50 2-jaw
Art. no.	700019
Capacity tons	50
Max. stroke mm	330
Max. spread mm	1250
Min. spread mm	200
Max. shaft length mm	780
Operation	Electrical, BETEX EP18S, 230V
Operation of self-centering jaws	hand pump, double acting
4 adapters, total length: 620 mm	2 x Ø 40: length 155, 2 x Ø 50: length 155
Min. height from centre mm	310
Max. height from centre mm	1045
Pressure gauge bar	700
Dimensions mm LxWxH	2700 x 655 x 900
Weight kg	315

# Mobile hydraulic pullers

## BETEX HXPM 50, 2/3-arm puller, self-centering



**50**  
tons



Valve block



Adapters



HXPM 50 2/3-arm SHORT



HXPM 50 2/3-arm LONG

## BETEX HXPM 50 2/3-arm

**For dismounting of all kinds of transmission parts such as bearings, couplings, gear wheels, wheels, etc.**

- The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- Remote control included.
- Safety blanket included.

### Operation

- Double-acting cylinder for clamping, opening and closing the arms, for a safe and secure grip on the workpiece.
- An electrohydraulic 230V-700 bar pump operates the cylinder and the height adjustment. This is a 2-stage pump with an output of 4.2 litres/minute at 7 bar counter pressure.
- The design prevents the puller arms from slipping or deflecting from behind the workpiece.
- The puller is easy to convert into a 2-arm or 3-arm version.
- The puller is vertically adjustable by 5°.
- The mobile frame has 2 castor wheels (with brake) and 2 fixed wheels.
- A hydraulic single-acting cylinder with max. operating pressure of 700 bar (50 tons).
- The total stroke is 330 mm. Four adapters (extensions) are included, with a total length of 620 mm.



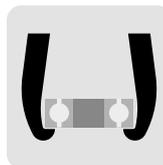
#### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	HXPM 50 2/3-arm SHORT	HXPM 50 2/3-arm LONG
Art. no.	700017	700014
Capacity tons	50	50
Max. stroke mm	330	330
Max. spread mm	950	1250
Min. spread mm	200	200
Max. shaft length mm	500	780
Operation	Electrical, BETEX EP18S, 230V	Electrical, BETEX EP18S, 230V
Operation of self-centering jaws	Hand pump, double acting	Hand pump, double acting
4 adapters, total length: 620 mm	2 x Ø 40: length 155, 2 x Ø 50: length 155	2 x Ø 40: length 155, 2 x Ø 50: length 155
Min. height from centre mm	820	820
Max. height from centre mm	1370	1370
Pressure gauge bar	700	700
Dimensions mm LxWxH	2245 x 800 x 1155	2545 x 800 x 1155
Weight kg	385	400

# Mobile hydraulic puller

BETEX HXPM 100, 2-arm puller, self-centering



**100**  
tons



Valve block



Adapters



Adjustable jaw tips for more grip

## BETEX HXPM 100 2-arm

**For dismantling of all kinds of transmission parts such as bearings, couplings, gear wheels, wheels, etc.**

- The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- Remote control included.
- Blanket included.

### Operation

- Double-acting cylinder for clamping, opening and closing the arms, for a safe and secure grip on the workpiece.
- An electrohydraulic 400V-700 bar pump operates the cylinder, height adjustment and arms. This is a 2-stage pump with an output of 9.5 litres/minute at 7 bar counter pressure.
- The design prevents the puller arms from slipping or deflecting.
- The mobile frame has 2 castor wheels (with brake) and 2 fixed wheels.
- A hydraulic single-acting cylinder with max. operating pressure of 700 bar (100 tons).
- The total stroke is 270 mm. Seven adapters (extensions) are included, with a total length of 1125 mm.
- Adjustable jaw tips for optimum grip.



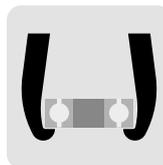
#### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	HXPM 100 2-jaw
Art. no.	700021
Capacity tons	100
Max. stroke mm	270
Max. spread mm	1500
Min. spread mm	300
Max. shaft length mm	1220
Operation	Electrical, BETEX EP420D, 400V
7 adapters, total length: 1125 mm	2 x Ø 70: length 300, 2 x Ø 70: length 150, 1 x Ø 70: length 100, 1 x Ø 70: length 75, 1 x Ø 70: length 50
Min. height from centre mm	320
Max. height from centre mm	790
Pressure gauge bar	700
Dimensions mm LxWxH	2915 x 1035 x 1350
Weight kg	870

# Mobile hydraulic puller

BETEX HXPM 100, 2/3-arm puller, self-centering



**100**  
tons



Valve block



Pump detail



Adjustable jaw tips for more grip

## BETEX HXPM 100 2/3-arm

**For dismounting of all kinds of transmission parts such as bearings, couplings, gear wheels, wheels, etc.**

- The puller is self-centering, easy to manoeuvre and adjustable in height. The puller is easy to convert into a 2- or 3-arm version. The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- Remote control included.

### Operation

- Double-acting cylinder for clamping, opening and closing the arms for a steady grip on the workpiece.
- An electrohydraulic 400V-700 bar pump operates the cylinder. This is a 2-stage pump with an output of 9.5 litres per minute at 7 bar counter pressure.
- The design prevents the puller arms from slipping or deflecting from behind the workpiece.
- The puller is vertically adjustable by 5°.
- The mobile frame has 2 castor wheels (with brake) and 2 fixed wheels.
- A hydraulic single-acting cylinder with max. operating pressure of 700 bar (100 tons).
- The total stroke is 270 mm. Seven adapters (extensions) are included, with a total length of 1125 mm.
- Adjustable jaw tips for optimum grip.



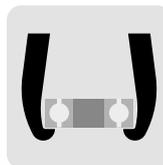
### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	HXPM 100 - 2/3-jaw
Art. no.	700015
Capacity tons	100
Max. stroke mm	270
Max. spread mm	1500
Min. spread mm	300
Max. shaft length mm	1220
Operation	Electrical, BETEX EP420D, 400V
7 adapters, total length: 1125 mm	2 x Ø 70: length 300, 2 x Ø 70: length 150, 1 x Ø 70: length 100, 1 x Ø 70: length 75, 1 x Ø 70: length 50
Min. height from centre mm	820
Max. height from centre mm	1320
Pressure gauge bar	700
Dimensions mm LxWxH	2915 x 1035 x 1350
Weight kg	1120

# Mobile hydraulic puller

BETEX HXPM 150, 3-arm puller, self-centering



**150**  
tons



Valve block



Pump block



Adapters



Adjustable jaw tips for more grip

## BETEX HXPM 150 3-arm

**For dismounting of all kinds of transmission parts such as bearings, couplings, gear wheels, wheels, etc.**

- The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- The stronger the pulling force, the tighter the jaws grip around the workpiece. Bending or deflecting is impossible.
- Integral safety release valve prevents overload and ensures that you never exceed the maximum force.
- Remote control included.

### Operation

- Double-acting cylinder for claspings, opening and closing the arms, for a safe and secure grip on the workpiece.
- An electrohydraulic 400V-700 bar pump operates the cylinder. This is a 2-stage pump with an output of 9.5 litres/minute at 7 bar counter pressure.
- The design prevents the puller arms from slipping or deflecting.
- The mobile frame has 2 castor wheels (with brake) and 2 fixed wheels.
- A hydraulic double-acting cylinder with max. operating pressure of 700 bar (150 tons).
- The total stroke is 330 mm. Seven adapters (extensions) are included, with a total length of 1125 mm.
- Adjustable jaw tips for extra grip.



### Advantages of unique self-centering pullers:

- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

Type	HXPM 150 - 3-arm
Art. no	700025
Capacity tons	150
Max. stroke mm	330
Max. spread mm	1650
Min. spread mm	300
Max. shaft length mm	1175
Operation	Electrical, BETEX EP420D, 400V
7 adapters, total length: 1125mm	2 x Ø 70: length 300, 2 x Ø 70: length 150 1 x Ø 70: length 100, 1 x Ø 70: length 75, 1 x Ø 70: length 50
Min. height from centre mm	830
Max. height from centre mm	1330
Pressure gauge bar	700
Dimensions mm LxWxH	2990 x 1030 x 1390
Weight kg	1223

# Mobile hydraulic pullers

BETEX BPP & BPPS Side Shift Bearing Puller Pusher



Step-by-step disassembly of TBU / SP / TAROL bearing sets



Step-by-step assembly of TBU / SP / TAROL bearing set

## BETEX BPP & BPPS Side Shift

### For mounting and dismounting of rail and metro bearing sets.

Specially for rail and metro workshops. Use the right equipment to remove or install tapered roller bearings. This hydraulic aid will allow you to save valuable time and help you work safely and efficiently. Easy to use roll-around model for both mounting and dismounting.

### BETEX BPP & BPPS Side-Shift Bearing Puller Pusher

- Mobile and easy to use by one person
- Suitable for locomotives, passenger and freight cars.
- For safe, simple and fast mounting and dismounting of e.g. TBU, SP and TAROL bearing sets.
- Wide range of accessories available. The accessory sets are available in various sizes, metric and inch versions (housing-type locomotives and passenger cars).
- Pulling capacity (dismounting) 100 t max.
- BBP: Pushing capacity (mounting) adjustable to 68 t max.
- BBPS Side-Shift: Pushing capacity (mounting) adjustable to 100 t max.
- BPPS Side-Shift: Compact and easy to manoeuvre thanks to the 4 caster wheels.
- BPPS Side-Shift: For the different applications (mounting or dismounting) the BPPS must be converted.



## Accessory set

### Request our questionnaire for sound advice and price estimates.

To order the correct accessory set for bearings (housing-type locomotives and passenger cars), please provide us with the following information:

- Bearing number and manufacturer number
- Drawing of bearing and shaft

### Pump

You can choose from 2 models, which are equipped with a manual valve (BETEX EP211D) or a solenoid valve (BETEX EP211DS).



Type	BPP 100	BPPS 100 Side-Shift
Art. no.	700018: incl. manual valve / excl. acc. 700020: incl. solenoid valve / excl. acc.	700023: incl. manual valve / excl. acc. 700024: incl. solenoid valve / excl. acc.
Pulling capacity, dismantling tons	max. 100 t	max. 100 t
Pushing capacity, mounting tons	adjustable to 68 t max.	max. 100 t
Max. stroke mm	392	255
Max. shaft diameter mm	Depending on acc.	Depending on acc.
Min. shaft diameter mm	Depending on acc.	Depending on acc.
Main cylinder operation & height adjustment	electro-hydraulic pump BETEX EP211D / EP211DS, 230V, 12A, 50Hz with remote control	electro-hydraulic pump BETEX EP211D / EP211DS, 230V, 12A, 50Hz with remote control
Min. height from centre to floor mm	370	384
Max. height from centre to floor mm	1050	731
Gauge bar	700	700
4 wheels	2 fixed wheels, 2 castor wheels	4 castor wheels
Dimensions mm LxWxH	2210 x 652 x 900	1299 x 627 x 909
Weight kg	560	400

# Put together the right hydraulic set

## Selecting the right cylinder, pump and accessories

A hydraulic set always comprises a cylinder, pump and accessories. By answering a few questions, we will put together the right combination for you. Depending on the desired application and use, many combinations are possible.



### Step 1

**Choose a hydraulic cylinder that suits the application best. What you need to consider:**

- How many cylinders are required for this application?  
What push or pull tonnage is required per cylinder?  
- Note: always choose a cylinder with a capacity at least 20% more than what is needed.
- Does the cylinder need to be massive or hollow?
- Which stroke is required?
- Does the cylinder need to fit within limited-clearance work areas? What are the installation dimensions?
- Must the cylinder push, pull or both?  
- Single acting cylinders push  
- Double acting cylinders push and pull
- Is the weight of the cylinder important and affecting material choice: steel or aluminium?

#### Good to know

- Cylinders with swivel caps are available if the cylinder needs to withstand off-center loads. (JLLC series, NSSS 10, 25 ton)
- Locking collars are available if the lifted load needs to be supported for longer periods of time.



### Step 2

**Choose a hydraulic pump, that matches the selected cylinder, consider:**

- Do you prefer a hand, foot, air, or electric powered pump?
- How much oil capacity is needed? (= oil capacity X number of cylinders)
- How fast must the pump be?
- What is the frequency of the application?
- Single-acting or double-acting?
- Is the weight of the pump important?
- Available air or electric supply?



### Step 3

**Choose necessary hydraulic accessories, consider:**

- Required hose length and number
- Coupling sets for coupling and uncoupling
- Pressure gauge with T-adaptor
- Manifolds
- Extra hydraulic oil

# Put together the right hydraulic kit

## Finding the right pump and cylinder combination

When looking for a suitable pump for a cylinder, the (usable) oil capacity should be considered. The usable oil capacity should always exceed the capacity of the cylinder.

Four scenarios are depicted below to explain the principle.

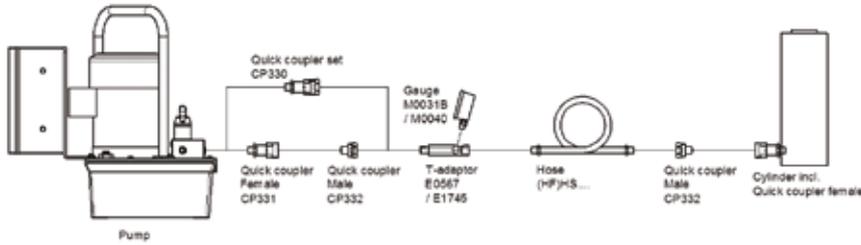
<p><b>Suitable combination</b></p> <p>Because the usable oil capacity of the pump is <b>GREATER</b> than the total oil capacity of the cylinder, this combination <b>CAN</b> be used.</p>	<p><b>BETEX AHP 702</b> Usable oil cap.: 750 cm<sup>3</sup></p> 	<p><b>BETEX NSHS 603</b> Total oil cap.: 680 cm<sup>3</sup></p> 
<p><b>Unsuitable combination</b></p> <p>Because the usable oil capacity of the pump is <b>LESS</b> than the total oil capacity of the two cylinders, this combination can <b>NOT</b> be used.</p>	<p><b>BETEX AHP 702</b> Usable oil cap.: 750 cm<sup>3</sup></p> 	<p><b>2x BETEX NSHS 603</b> Total oil cap.: 1360 cm<sup>3</sup></p> 
<p><b>Suitable combination</b></p> <p>Because the usable oil capacity of the pump is <b>GREATER</b> than the total oil capacity of the two cylinders, this combination <b>CAN</b> be used.</p>	<p><b>BETEX HC 2000</b> Usable oil cap.: 1800 cm<sup>3</sup></p> 	<p><b>2x BETEX NSCS 502</b> Total oil cap.: 858 cm<sup>3</sup></p> 
<p><b>Unsuitable combination</b></p> <p>Because the usable oil capacity of the pump is <b>LESS</b> than the total oil capacity of the cylinder, this combination can <b>NOT</b> be used.</p>	<p><b>BETEX AHP 701</b> Usable oil cap.: 350 cm<sup>3</sup></p> 	<p><b>BETEX NSCS 502</b> Total oil cap.: 429 cm<sup>3</sup></p> 

# Put together the right hydraulic kit

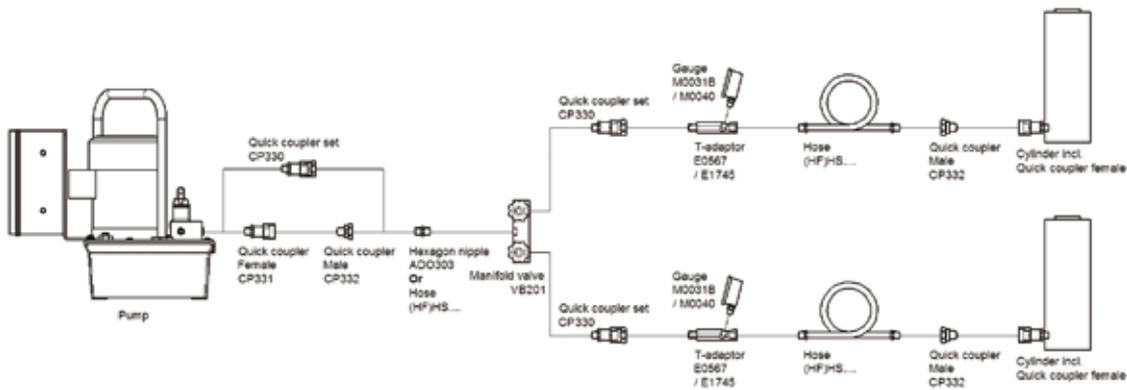
## Examples of configurations

In every situation, a certain configuration is required to ensure that the hydraulic oil is used properly and safely. A number of configurations are shown below for different pump-cylinder combinations.

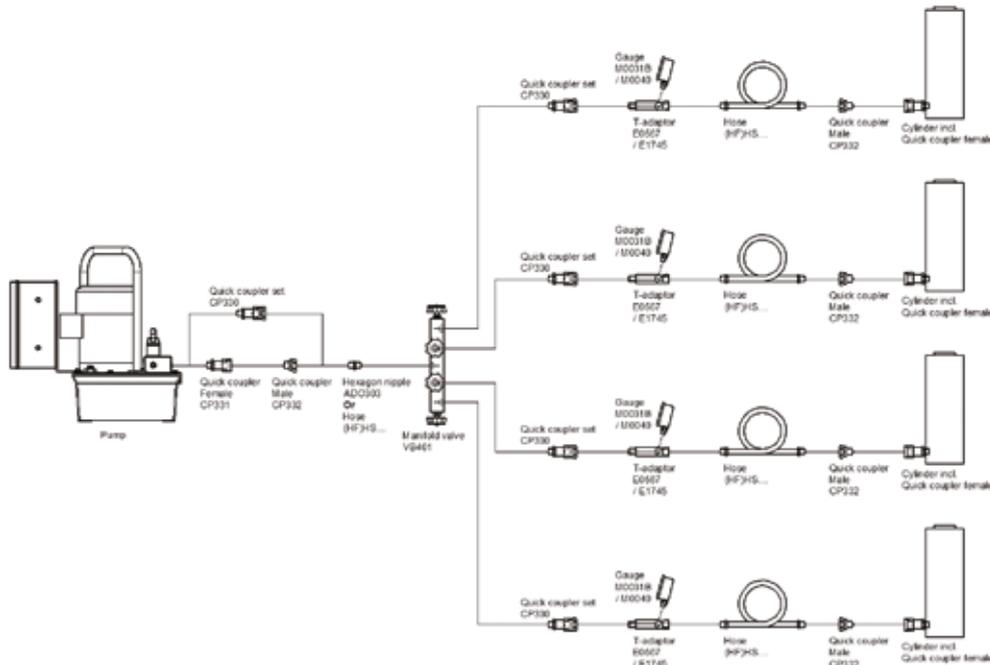
### BETEX EP 18S + single-acting cylinder



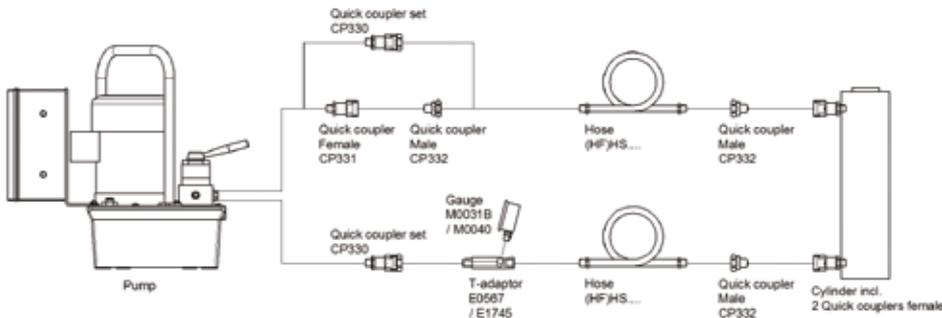
### BETEX EP 18S + VB 201 + 2 single-acting cylinders



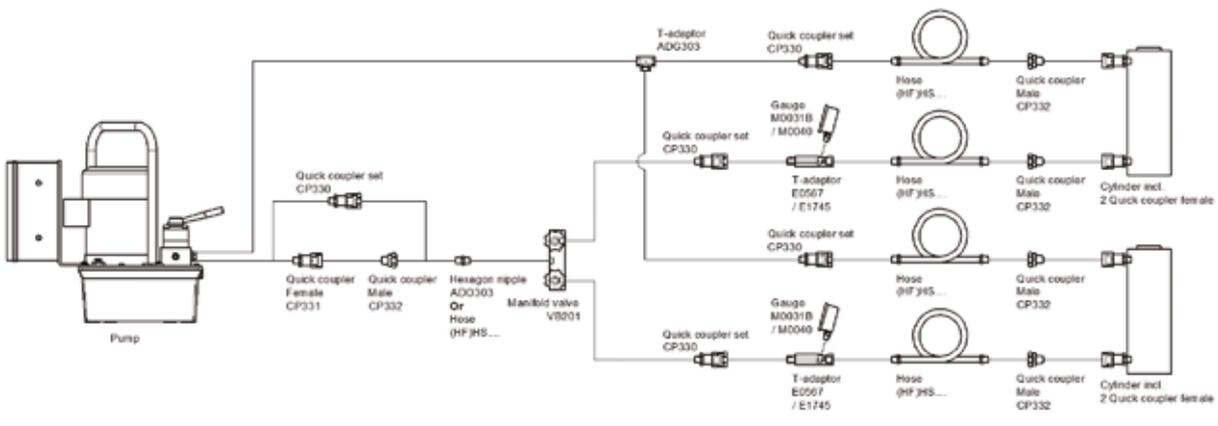
### BETEX EP 18S + VB 401 + 4 single-acting cylinders



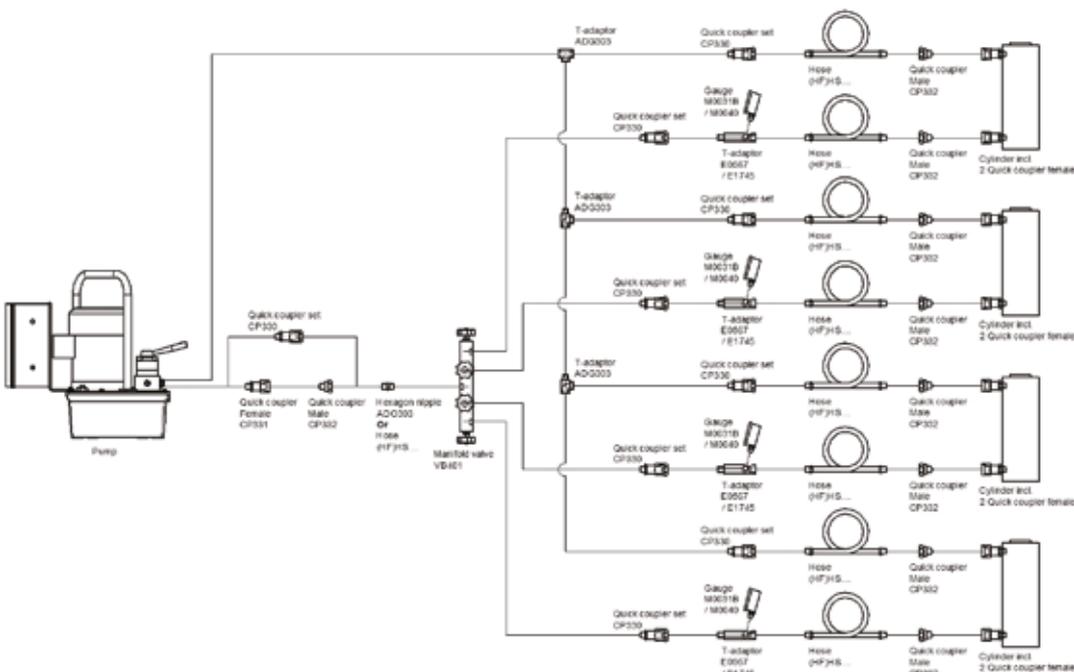
### BETEX EP 18D + 1 double-acting cylinder



### BETEX EP 18D + VB 201 + 2 double-acting cylinders



### BETEX EP 18D + VB 401 + 4 double-acting cylinders



# Safety tips

## 1. Choose the right cylinder

You must know the weight of what you intend to lift and choose a cylinder with at least 20% more capacity. Be aware of possible load shift requiring more capacity at any particular lifting point.



## 2. Check each component

Check each component before you set up your hydraulic system. Do not use damaged or worn components. Hand them in for repair or replacement.



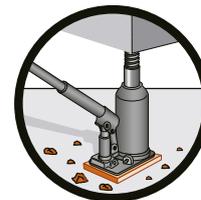
## 3. Safety instructions

Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.



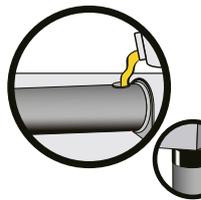
## 4. Properly and fully support each cylinder at its base

Every cylinder, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.



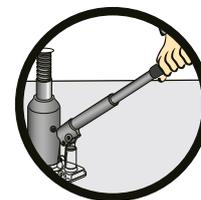
## 5. Fill oil reservoirs with cylinder retracted

Fill pump to the recommended level. Only fill the reservoir when the connected cylinder is fully retracted.



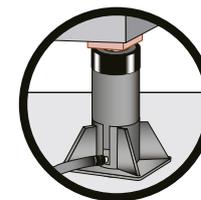
## 6. Know how your hydraulics work

Do not place any additional weight on the hydraulic cylinder or the hand pump to be able to increase the load.



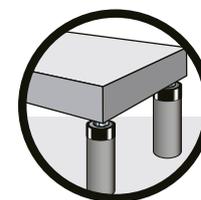
## 7. Center the load on the lifting point

The load must be centred on the cylinder, or equally distributed to multiple cylinders. Off-center loading can result in the load slipping and being lost.



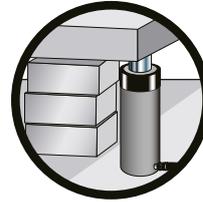
## 8. Distribute the load evenly when using multiple cylinders

For multiple cylinder lifts, you must be able to determine the location and number of lifting points that will allow the load to be evenly distributed to all the cylinders. This is called load balance. Size, center of gravity and load geometry must be considered in order to correctly determine load balance.



**9. Support the load**

Place blocking or cribbing under the load as you raise it. Insert more blocks as you raise the load. Position yourself in a manner that will keep you clear of the load and will prevent your hands or other body parts from being crushed between the load and blocks.



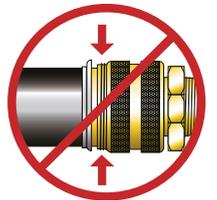
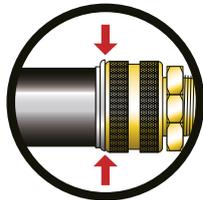
**10. Do not use cylinders as permanent supports**

Hydraulic cylinders are not meant to be used as permanent supports, but are designed to lift and lower a load. Blocks or BETEX cylinders with locknut should be used if the lifted load needs to be supported for longer periods of time.



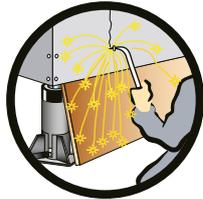
**11. Connecting the hydraulics**

When making connections with quick couplers, make sure the couplings are fully engaged. Threaded connections, such as fittings, gauges, etc., must be securely tightened and leak free. Never use excessive tightening force. This may distort the fittings or strip the thread profile.



**12. Avoid extreme heat or weld splatter**

Weld splatter will damage plunger rods and hoses. Hydraulic fluid can ignite if vaporized or exposed to high temperatures.



**13. Disconnecting the hydraulics**

Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the cylinder, open the release screw on the hand pump and operate all hydraulic controls several times. If the system includes a pressure gauge, double-check the gauge to ensure pressure has been completely released



**14. Do not move the pump by pulling at the hose**

Dragging or carrying the pumps by a connected hose can damage the couplers and hoses. Using damaged couplers and hoses can be dangerous.



**15. Keep hydraulic hoses free of obstructions**

Do not drop sharp or heavy objects on the hose. Keep the hose out of heavy traffic areas. Avoid internal damage to hoses. Applying pressure to a damaged hose may cause it to rupture. Avoid sharp bends and kinks when routing hydraulic hoses.



# Explanation of cylinders

**Features:**

- ✓ BETEX® offers a wide selection of cylinder designs, capacities and strokes to match your day-to-day requirements.
- ✓ Built for heavy-duty industrial use. All BETEX® cylinders meet worldwide safety standards.
- ✓ Stop rings, plated pistons and heavy-duty construction provide trouble-free operation and a long service life.
- ✓ Heavy-duty, wound steel-plated springs provide fast and complete retraction, cycle after cycle, and retain their tension longer. Long-lasting springs contribute substantially to the cylinder's service life.
- ✓ Threaded collars and internal plunger threads withstand full loading for maximum flexibility in mounting.
- ✓ All BETEX® cylinders incorporate a positive piston stop to limit piston travel at the end of the stroke, allowing the cylinder to be operated at full stroke. Piston stops add strength and safety.
- ✓ Rod wiper cleans the rod surface during retraction, protecting the inner cylinder assembly from dirt, moisture and other contaminants.
- ✓ BETEX® steel cylinders have a black nitride coating that provides the cylinder with durable protection against dirt, moisture and other contaminants. All aluminium cylinders have a hard anodized finish.



# Standard cylinders

BETEX NSSS series, spring-return, single-acting



**4.5 - 100**

capacity ton

**25.4 - 406**

stroke mm

**700**

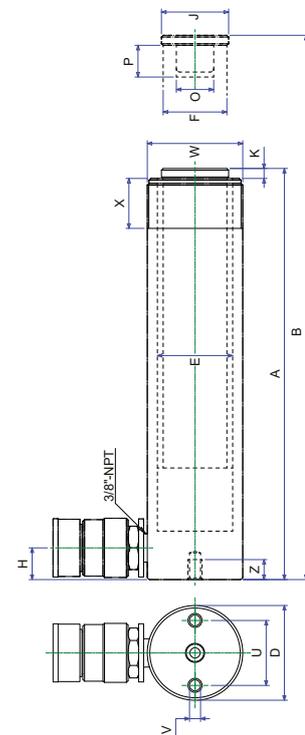
max. operating pressure bar



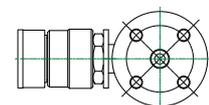
Use in combination with our hydraulic pumps and accessories.

## BETEX NSSS series

- All cylinders are single-acting with spring-return.
- Pistons are hard chromed.
- Ram inside roll-polished.
- Exterior blasted with black nitride coating.
- Female coupler and dust cap included with all models.



NSSS 51 - NSSS 7513



NSSS 1006 - NSSS 10010

Type	Art. no.	Cap. ton	Stroke mm	Oil cap. cm <sup>3</sup>	Install. height mm		D mm	E ø mm	F ø mm	H mm	J mm	K mm	O ø un	P mm	U mm	V ø unc	W ø unc	X mm	Z mm	Weight kg
					A	B														
					Min.	Max.														
NSSS 51	8230051	4.5	26	17	110	136	38	28.6	25.4	19	25	6	3/4"-16	14	25	1/4"-20	1 1/2"-16	28	14	1
NSSS 53	8230053	5	76	54	165	241	38	30	25.4	19	25	6	3/4"-16	14	25	1/4"-20	1 1/2"-16	28	14	1.5
NSSS 55	8230055	5	127	90	216	343	38	30	25.4	19	25	6	3/4"-16	14	25	1/4"-20	1 1/2"-16	28	14	1.9
NSSS 57	8230057	5	183	129	273	456	38	30	25.4	19	25	6	3/4"-16	16	25	1/4"-20	1 1/2"-16	28	14	2.4
NSSS 59	8230059	5	232	164	324	556	38	30	25.4	19	25	6	3/4"-16	16	25	1/4"-20	1 1/2"-16	28	14	2.8
NSSS 101	8230101	10	25.4	36.5	90	115.4	57	42.8	38	19	-	-	10-24	6.5	39	5/16"-18	2 1/4"-14	30	13	1.8
NSSS 102	8230102	10	51	73	121	172	57	42.8	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	2.3
NSSS 104	8230104	10	101	145	171	272	57	42.8	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	3.3
NSSS 106	8230106	10	152.5	242	247	399.5	57	45	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	4.4
NSSS 108	8230108	10	203.5	323	298	501.5	57	45	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	5.4
NSSS 1010	8231010	10	255.5	406	350	605.5	57	45	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	6.4
NSSS 1012	8231012	10	305.5	486	400	705.5	57	45	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	6.8
NSSS 1014	8231014	10	356.5	567	451	807.5	57	45	38	19	40	6	1"-8	19	39	5/16"-18	2 1/4"-14	30	13	8.2
NSSS 151	8230151	15	26.5	63	124	150.5	73	55	40	19	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	3.3
NSSS 152	8230152	15	52.5	125	149.6	202.1	73	55	40	19	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	4.1
NSSS 154	8230154	15	102.5	243	200	302.5	73	55	40	19	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	5.0
NSSS 156	8230156	15	153	363	271.6	424.6	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	6.8
NSSS 158	8230158	15	203.5	483	322	525.5	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	8.2
NSSS 1510	8231510	15	254.5	604	373	627.5	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	9.5
NSSS 1512	8231512	15	305	724	424	729	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	10.9
NSSS 1514	8231514	15	355.7	845	474.6	830.3	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	11.8
NSSS 1516	8231516	15	406	824	523	929	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16	2 3/4"-16	30	13	12.8
NSSS 251	8230251	25	25.5	98	139.5	165	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	5.9
NSSS 252	8230252	25	51	196	165	216	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	6.4
NSSS 254	8230254	25	102	392	216	318	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	8.2
NSSS 256	8230256	25	158.5	610	273	431.5	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	10
NSSS 258	8230258	25	209.5	806	324	533.5	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	12.2
NSSS 2510	8232510	25	260.5	1002	375	636.5	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	14.1
NSSS 2512	8232512	25	311	1196	425.5	736.5	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	16.3
NSSS 2514	8232414	25	361.5	1390.5	476	837.5	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13	3 5/16"-12	50	19	17.7
NSSS 308	8230308	30	209.5	925	387.5	597	103	75	60	57	50	10.5	1 1/2"-16	25.4	-	-	4"-12	50	-	18.1
NSSS 502	8230502	50	51	361	177	228	127	95	80	33	70	3	-	-	95	1/2"-13	5"-12	55	19	15
NSSS 504	8230504	50	101.5	719	229	330.5	127	95	80	33	70	3	-	-	95	1/2"-13	5"-12	55	19	19.1
NSSS 506	8230506	50	157.5	1116	283	440.5	127	95	80	33	70	3	-	-	95	1/2"-13	5"-12	55	19	23.1
NSSS 508	8230508	50	203	1446	349	552	127	95	80	33	70	3	-	-	95	1/2"-13	5"-12	55	19	27.1
NSSS 5010	8235010	50	260	1853	385	645	127	95	80	33	70	3	-	-	95	1/2"-13	5"-12	55	19	30.4
NSSS 5013	8235013	50	335.5	2377	461	796.5	127	95	80	33	70	3	-	-	95	1/2"-13	5"-12	55	19	37.6
NSSS 756	8230756	75	155	1752	285	440	152	120	95	30	70	3	-	-	-	-	5 3/4"-12	45	-	29.5
NSSS 7513	8237513	75	333.5	3770	491	824.5	152	120	95	30	70	3	-	-	-	-	5 3/4"-12	45	-	59
NSSS 1006	8231006	100	170	2432	358	528	177	135	105	40	70	3	-	-	139	3/4"-10	6 7/8"-12	45	25	59
NSSS 10010	82310010	100	260	3720	448	708	177	135	105	40	70	3	-	-	139	3/4"-10	6 7/8"-12	45	25	72.6

# Flat cylinders

BETEX NSLS series, flat, low height, spring-return, single-acting



**5 - 150**

capacity ton

**6 - 17**

stroke mm

**700**

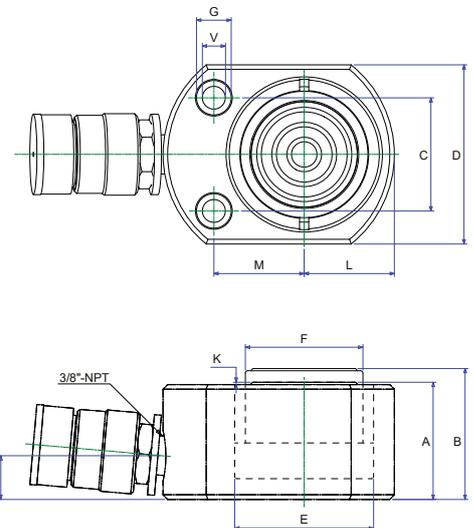
max. operating pressure bar



Use in combination with our hydraulic pumps and accessories.

## BETEX NSLS series

- Suitable in confined spaces in combination with a long stroke.
- All cylinders are single-acting with spring-return.
- Pistons are hard chromed.
- Ram inside roll-polished.
- Exterior blasted with black nitride coating.
- Female coupler and dust cap included with all models.



Type	Art. no.	Cap. ton	Stroke mm	Oil cap. cm <sup>3</sup>	Install. height mm		C mm	D1 mm	D2 mm	E ø mm	F ø mm	G ø mm	H mm	K mm	L mm	M mm	V ø mm	Weight kg	
					A	B													
					Min.	Max.													
NSLS 50	8210050	5	6	4.5	33	39	28.5	58.5	44	31	25.4	9.5	16	1	22	22	5.3	1.0	
NSLS 100	8210100	10	12	18.0	42	54	36.5	82.5	60	44	38	11	19	1	30	34	7.5	1.4	
NSLS 200	8210200	20	12	34.0	51	63	49.3	100	78	60	50.8	15	19	1	39	39	10	3.1	
NSLS 300	8210300	30	13	54.0	58	71	52.3	117.5	95	73	63.5	16	19	2	47.5	47.5	10	4.5	
NSLS 500	8210500	50	16	113.0	66	82	66.5	145	115	95	70	19	19	2	57.5	58	11	6.8	
NSLS 750	8210750	75	16	180.0	79	95	76.2	170	145	120	82.5	20.5	19	2	72.5	70	13.5	11.3	
NSLS 1000	8211000	100	16	229.0	85	101	76.2	185	160	135	92	20.5	19	2	80	78	13.5	14.5	
NSLS 1500	8211500	150	17	363.0	100	117	117	225	195	165	115	20.5	23	2	97.5	85	13.5	26.3	

# Hollow cylinders

## BETEX NSHS series, spring-return, single-acting



**12 - 100**  
capacity ton

**8 - 160**  
stroke mm

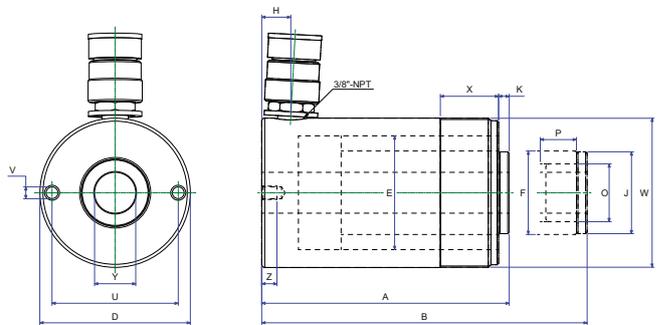
**700**  
max. operating pressure bar



Use in combination with our hydraulic pumps and accessories.

### BETEX NSHS series

- All cylinders are single-acting with spring-return.
- Pistons are hard chromed.
- Ram inside roll-polished.
- Exterior blasted with black nitride coating.
- Female coupler and dust cap included with all models.



Cylinder bore

Type	Art. no.	Cap. ton	Stroke mm	Oil cap. cm <sup>3</sup>	Install. height mm		D ø mm	E ø mm	F ø mm	H mm	J mm	K mm	O ø mm	P mm	U mm	V ø mm	W ø mm	X mm	Y ø mm	Z mm	Weight kg				
					A	B																			
					Min.	Max.																			
NSHS 120	8240120	12	8	14.8	60	68	73	54.1	35	12.5	-	-	3/4"-16	16	50.8	5/16"-18	2 3/4"-16	33	19.5	9	1.5				
NSHS 121	8240121	12	42	79	120	162	73	55	35	19	-	-	-	-	50.8	5/16"-18	2 3/4"-16	33	19.5	12.7	3				
NSHS 123	8240123	12	76	143.2	184	260	73	55	35	19	-	-	-	-	50.8	5/16"-18	2 3/4"-16	33	19.5	12.7	4.2				
NSHS 202	8240202	20	51	173	162	213	98.5	75	55	19	54	7	1 9/16"-16	25	82.6	3/8"-16	3 7/8"-12	38	27	9.4	7.5				
NSHS 206	8240206	20	155	527	306	461	98.5	75	55	19	54	7	1 9/16"-16	25	82.6	3/8"-16	3 7/8"-12	38	27	9.4	13.5				
NSHS 302	8240302	30	65	310	178.5	243.5	117	90	65	21.5	59.9	0.5	1 7/8"-16	25	92	3/8"-16	4 1/2"-12	42	34	14	11				
NSHS 306	8240306	30	160	763	330	490	117	90	65	21.5	59.9	0.5	1 7/8"-16	25	92	3/8"-16	4 1/2"-12	42	34	14	20.4				
NSHS 603	8240603	60	76	680	247.5	323.5	158.6	125	90	32	89	12.5	2 3/4"-16	25	130	1/2"-13	6 1/4"-12	50	54	14	26.4				
NSHS 606	8240606	60	152	1360	323.5	475.5	158.6	125	90	32	89	12.5	2 3/4"-16	25	130	1/2"-13	6 1/4"-12	50	54	14	34				
NSHS 1003	8241003	100	76	1085	254	330	213	165	125	38	125	12	4"-16	30	178	5/8"-11	8 3/8"-12	60	79	19	50.1				

# Aluminium hand pumps

BETEX AHP sets, lightweight



**350 - 1620**  
usable oil-capacity cm<sup>3</sup>

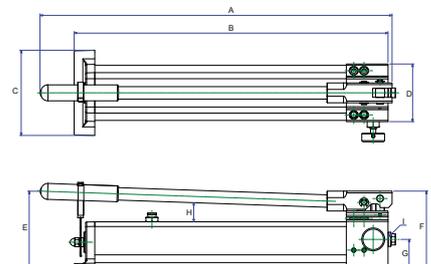
**700**  
bar

## BETEX AHP sets

- The aluminium alloy and handy release knobs with locking mechanism make these pumps particularly suitable for industrial applications and day-to-day operations.
- Lightweight, so easy to carry and move.
- Two-stage pumps provide rapid pumping to load the cylinder quickly.
- AHP703D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.

**All hand pump sets are pre-mounted, you can get started right away! The sets contain:**

- Pump
- Pressure gauge, T-adapter
- Hose (Polyurethane)
- Couplings
- Steel storage case



Type	Art. no.	Operating pressure bar		Oil cap. cm <sup>3</sup>	Usable oil capacity cm <sup>3</sup>	Oil volume per stroke cm <sup>3</sup>		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I	Weight kg
		1st stage	2nd stage			1st stage	2nd stage										
AHP 701 set	7265501	20	700	500	350	12.9	1.65	391	361	110	77	140	127	42.5	37	3/8"-NPT	2.3
AHP 702 set	7265701	20	700	1000	750	12.9	1.65	542	513	110	77	130	127	42.5	37	3/8"-NPT	3.5
AHP 703 set	7265751	20	700	2000	1620	12.9	2.3	623	556	150	102	135	135	50	37	3/8"-NPT	6
AHP 703D set	7265761	20	700	2000	1620	12.9	2.3	623	556	150	102	135	135	24/37	37	3/8"-NPT	7

# Electric pumps

## BETEX EP 13 series



**2.4**

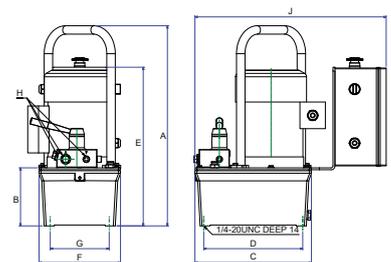
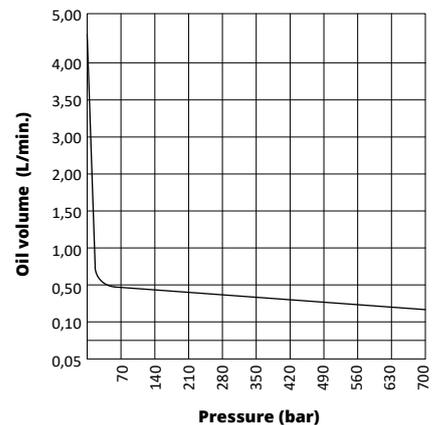
usable oil capacity litres

**700**

bar

### BETEX EP 13 series

- Electrohydraulic pump, 120/230V, 50/60Hz universal motor, thermal protection.
- Very quiet (about. 80 dBA at 700 bar).
- Remote control incl. cord (3 mtr).
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The EP 13D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



Type	EP 13S	EP 13S	EP 13D	EP 13D
Art. no.	8300010	8300012	8300011	8300013
Valve type	2 pos. / 2-way	2 pos. / 2-way	3 pos. / 4-way	3 pos. / 4-way
Valve function	Hold / return	Hold / return	Advance / hold / return	Advance / hold / return
Voltage	120V / 10A	230V / 5A	120V / 10A	230V / 5A
Motor	0.45kW, 50/60Hz, single phase			

Type	Operation	Reservoir volume l	Usable oil capacity l	Max. pressure bar	Oil volume (cm <sup>3</sup> /min.@60Hz) in bar				A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	Weight kg
					0	7	350	700										
EP 13S	single	3	2.4	700	4000	2800	330	280	511.5	148.5	295.5	251	406	206.5	149.4	3/8" NPT	485	25.8
EP 13D	double	3	2.4	700	4000	2800	330	280	511.5	148.5	295.5	251	406	206.5	149.4	3/8" NPT	485	26.6

# Electric pumps

## BETEX EP 18 series

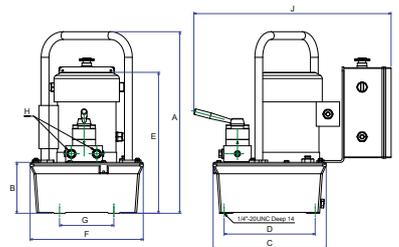
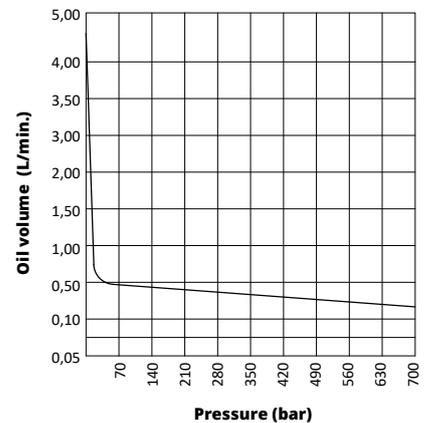


**6**  
usable oil capacity litres

**700**  
bar

### BETEX EP 18 series

- Electrohydraulic pump, 120/230V, 50/60Hz universal motor, thermal protection.
- Very quiet (about 80dBA at 700 bar).
- Remote control incl. cord (3 mtr).
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The EP 18D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- The EP 18SS and EP 18DS types are fitted with a solenoid valve.



Type	EP 18S	EP 18S	EP 18D	EP 18D	EP 18SS	EP 18SS	EP 18DS	EP 18DS
Art. no.	8300021	8300031	8300023	8300033	8300022	8300032	8300024	8300034
Valve type	2 pos. / 2-way	2 pos. / 2-way	3 pos. / 4-way	3 pos. / 4-way	2 pos. / 2-way	2 pos. / 2-way	3 pos. / 4-way	3 pos. / 4-way
Valve function	Hold / return	Hold / return	Advance / hold / return	Advance / hold / return	Hold / return	Hold / return	Advance / hold / return	Advance / hold / return
Voltage	120V / 10A	230V / 5A	120V / 10A	230V / 5A	120V / 10A	230V / 5A	120V / 10A	230V / 5A
Motor	0.45kW, 50/60Hz, single phase							

Type	Operation	Reservoir volume l	Usable oil capacity l	Max. pressure bar	Oil volume (cm <sup>3</sup> /min.@60Hz) in bar				A	B	C	D	E	F	G	H	J	Weight kg
					0	7	350	700	mm	mm	mm	mm	mm	mm	mm	mm		
EP 18S	single	8	6	700	4000	2800	330	280	504	141.5	311.6	251	391.5	311.6	149.4	3/8" NPT	543.5	31.7
EP 18D	double	8	6	700	4000	2800	330	280	504	141.5	311.6	251	391.5	311.6	149.4	3/8" NPT	543.5	32.5
EP 18SS*	single	8	6	700	4000	2800	330	280	504	141.5	311.6	251	391.5	311.6	149.4	3/8" NPT	543.5	32.2
EP 18DS*	double	8	6	700	4000	2800	330	280	504	141.5	311.6	251	391.5	311.6	149.4	3/8" NPT	543.5	32.9

\* Model with solenoid valve

# Electric pumps

## BETEX EP 211 series

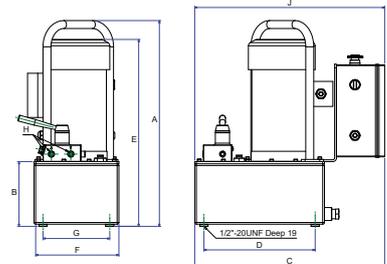
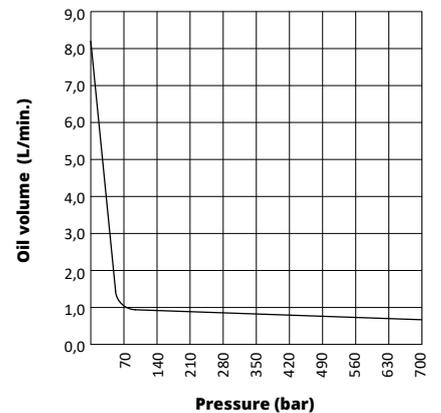


**9.5**  
usable oil capacity litres

**700**  
bar

### BETEX EP 211 series

- Electrohydraulic pump, 120/230V, 50/60Hz universal motor, thermal protection.
- Very quiet (about 80dBA at 700 bar).
- Remote control incl. cord (3 mtr).
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The EP 211D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- The EP 211SS and EP 211DS types are fitted with a solenoid valve.



Type	EP 211S	EP 211S	EP 211D	EP 211D	EP 211SS	EP 211SS	EP 211DS	EP 211DS
Art. no.	8300041	8300051	8300043	8300053	8300042	8300052	8300044	8300054
Valve type	2 pos. / 2-way	2 pos. / 2-way	3 pos. / 4-way	3 pos. / 4-way	2 pos. / 2-way	2 pos. / 2-way	3 pos. / 4-way	3 pos. / 4-way
Valve function	Hold / return	Hold / return	Advance / hold / return	Advance / hold / return	Hold / return	Hold / return	Advance / hold / return	Advance / hold / return
Voltage	120V / 23A	230V / 12A	120V / 23A	230V / 12A	120V / 23A	230V / 12A	120V / 23A	230V / 12A
Motor	1.12kW, 50/60Hz, single phase							

Type	Operation	Reservoir volume l	Usable oil capacity l	Max. pressure bar	Oil volume (cm <sup>3</sup> /min.@60Hz) in bar				A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	Weight kg
					0	7	350	700										
EP 211S	single	11	9.5	700	8200	7400	840	750	559	176	515.5	300	391.5	224.4	180	3/8" NPT	515.5	35.6
EP 211D	double	11	9.5	700	8200	7400	840	750	559	176	515.5	300	391.5	224.4	180	3/8" NPT	515.5	36.4
EP 211SS*	single	11	9.5	700	8200	7400	840	750	559	176	515.5	300	391.5	224.4	180	3/8" NPT	515.5	36.1
EP 211DS*	double	11	9.5	700	8200	7400	840	750	559	176	515.5	300	391.5	224.4	180	3/8" NPT	515.5	36.8

\* Model with solenoid valve

# Electric pumps

## BETEX EP 320 series

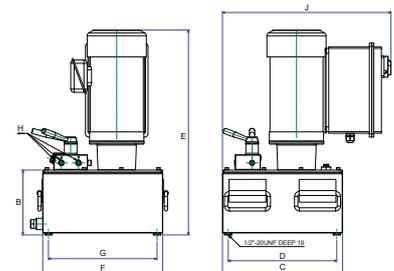
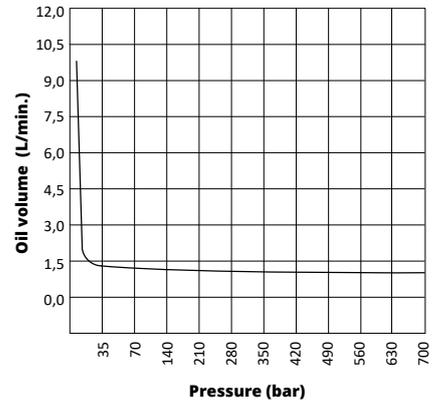


**18**  
usable oil capacity litres

**700**  
bar

### BETEX EP 320 series

- Electric hydraulic pump, 230/400V, 50/60Hz universal motor, thermally protected.
- Very quiet (about 80dBA at 700 bar).
- Remote control incl. cord (3 mtr).
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The EP 320D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- Types EP 320SS and EP 320DS are equipped with a solenoid valve.



Type	EP 320S	EP 320D	EP 320SS	EP 320DS
Art. no.	8300061	8300063	8300062	8300064
Valve type	2 pos. / 2-way	3 pos. / 4-way	2 pos. / 2-way	3 pos. / 4-way
Valve function	Hold / return	Advance / hold / return	Hold / return	Advance / hold / return
Voltage	230V / 7.5A**, 400V / 5A			
Motor	1.48kW, 50/60Hz, 3 phase			

Type	Operation	Reservoir volume l	Usable oil capacity l	Max. pressure bar	Oil volume (cm <sup>3</sup> /min.@60Hz) in bar				B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	Weight kg
					7	70	350	700									
EP 320S	single	20	18	700	9500	1020	980	900	198.5	365	330	627.5	365	330	3/8" NPT	512	56
EP 320D	double	20	18	700	9500	1020	980	900	198.5	365	330	627.5	365	330	3/8" NPT	512	56.8
EP 320SS*	single	20	18	700	9500	1020	980	900	198,5	365	330	627,5	365	330	3/8" NPT	512	56.5
EP 320DS*	double	20	18	700	9500	1020	980	900	198,5	365	330	627,5	365	330	3/8" NPT	512	57.2

\*Model with solenoid valve \*\*Pumps use 3-phase 400V as standard. It is possible to convert this to 3-phase 230V.

# Electric pumps

## BETEX EP 420 series

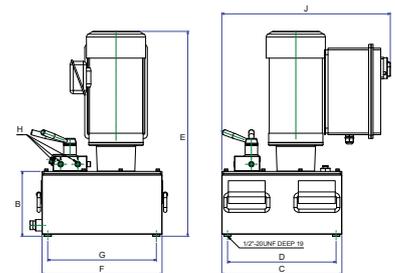
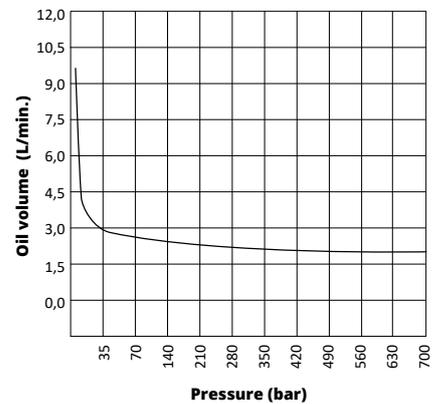


**18**  
usable oil capacity litres

**700**  
bar

### BETEX EP 420 series

- Electric hydraulic pump, 230/400V, 50/60Hz universal motor, thermally protected.
- Very quiet (about 80dBA at 700 bar).
- Remote control incl. cord (3 mtr).
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The EP 420D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- Types EP 420SS and EP 420DS are equipped with a solenoid valve.



Type	EP 420S	EP 420D	EP 420SS	EP 420DS
Art. no.	8300081	8300083	8300082	8300084
Valve type	2 pos. / 2-way	3 pos. / 4-way	2 pos. / 2-way	3 pos. / 4-way
Valve function	Hold / return	Advance / hold / return	Hold / return	Advance / hold / return
Voltage	230V / 10A**, 400V/6A	230V / 10A**, 400V/6A	230V / 10A**, 400V/6A	230V / 10A**, 400V/6A
Motor	2.24kW, 50/60Hz, 3 phase			

Type	Operation	Reservoir volume l	Usable oil capacity l	Max. pressure bar	Oil volume (cm <sup>3</sup> /min.@60Hz) in bar				B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	Weight kg
					7	70	350	700									
EP 420S	single	20	18	700	9500	2450	1950	1800	199	365	330	627.5	365	330	3/8" NPT	512	57.6
EP 420D	double	20	18	700	9500	2450	1950	1800	199	365	330	627.5	365	330	3/8" NPT	512	63.2
EP 420SS*	single	20	18	700	9500	2450	1950	1800	199	365	330	627.5	365	330	3/8" NPT	512	63
EP 420DS*	double	20	18	700	9500	2450	1950	1800	199	365	330	627.5	365	330	3/8" NPT	512	62

\*Model with solenoid valve \*\*Pumps use 3-phase 400V as standard. It is possible to convert this to 3-phase 230V.

# Ultra-high pressure pumps

## BETEX UHAP series, aluminium air pumps



**5**  
litre - reservoir capacity

**2800**  
bar



### BETEX UHAP series

General purpose air driven ultra-high pressure hydraulic pump. Suitable for pumping oil up to an operating pressure of 2800 bar.

- Portable, compact.
- Single-acting.
- Max. air pressure: 7 bar.
- Max. output pressure: 2800 bar.
- With easy to connect bayonet coupler and flexible hose (3 mtr).
- Automatic overload-relief valve.
- Air filter and pressure gauge included.
- Optional: trolley.
- Excl. oil.

#### Both pumps include:

- Pressure gauge (0-3000 bar scale)
- HD hose (3 mtr, incl extra coupler set 1/4")
- Nipple

Type	Art. no.	Air pressure bar	Max. pressure bar	Oil capacity cm3	Oil volume cm3/min. at 700 bar	Weight in kg
UHAP 2800	7292803	7	2800	5000	430	29
UHAP 2800 ULTRA	7292802	7	2800	5000	750	32

# Hydraulic nuts

## Schaeffler HYDNUT-E

New



**M50 - M200 /  
Tr205 - Tr1180**  
inner diameter M / Tr

**214 - 6296**  
Max. drive-up force kN

**700**  
max. operating pressure bar



Use in combination with our "Pump sets for Schaeffler HYDNUT".

### Schaeffler HYDNUT-E

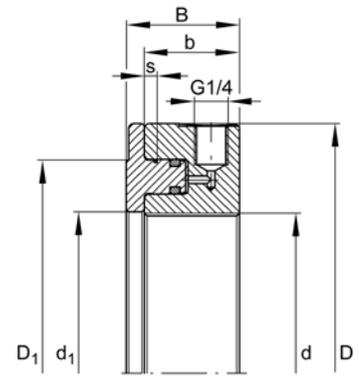
Schaeffler Hydraulic nuts are used to mount bearings with metric or trapezoidal threads on workpieces. The bearings can be mounted directly on a tapered shaft, on an adapter sleeve or on a retraction sleeve. Disassembly is also possible if the bearing is placed on a retraction sleeve or adapter sleeve. The hydraulic nut is suitable for small bearings to very large bearings that require a high drive-up force. These include ship propellers, rudder blades, shaft couplings and gears.

The range of metric nuts are suitable for threads based on DIN sizes M50 to M200. After M200, these nuts are Tr Threaded and available up to a thread diameter of 1,180 mm.

- To be used in combination with special pump sets.
- The maximum pressure and available threads are indicated on the pressure ring.
- All hydraulic nuts have a red O-ring showing max. stroke.
- Digital (Art. No. 7499920) and analogue (Art. No. 7499910) dials for accurate measurement of floating clearance when mounting bearings are available as accessories.

Description	Designation
Thread type	d
Piston surface area cm <sup>2</sup>	H
Driving force max. kN	I

Type	Art. no.	d	D mm	B mm	b mm	D <sub>1</sub> mm	d <sub>1</sub> mm	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar	I kN	Weight kg
HYDNUT50-E	7410050	M50x1,5	110	40	36	88	51	4	30,6	16	700	214	2,4
HYDNUT55-E	7410055	M55x2	118	40	36	92	56	4	31,2	16	700	219	2,8
HYDNUT60-E	7410060	M60x2	125	40	36	96	61	4	31,7	16	700	222	3,0
HYDNUT65-E	7410065	M65x2	132	40	36	103	66	4	35,5	18	700	249	3,3
HYDNUT70-E	7410070	M70x2	140	40	36	110	71	4	40,9	21	700	286	3,7
HYDNUT75-E	7410075	M75x2	145	40	36	116	76	4	44,9	23	700	314	3,9
HYDNUT80-E	7410080	M80x2	150	40	36	122	81	4	49,0	25	700	343	4,0
HYDNUT85-E	7410085	M85x2	155	40	36	126	86	4	49,3	25	700	345	4,2



Type	Art. no.	d	D mm	B mm	b mm	D <sub>1</sub> mm	d <sub>1</sub> mm	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar	l kN	Weight kg
HYDNUT90-E	7410090	M90x2	160	41	37	130	91	5	49,4	30	700	346	4,5
HYDNUT95-E	7410095	M95x2	165	41	37	136	96	5	52,0	32	700	364	4,7
HYDNUT100-E	7410100	M100x2	170	41	37	142	101	5	54,5	33	700	381	4,9
HYDNUT105-E	7410105	M105x2	175	43	37	147	106	5	56,6	34	600	340	5,3
HYDNUT110-E	7410110	M110x2	180	43	37	152	111	5	58,7	36	600	352	5,5
HYDNUT115-E	7410115	M115x2	185	43	37	157	116	5	60,9	37	600	365	5,6
HYDNUT120-E	7410120	M120x2	190	43	37	162	121	5	63,0	38	600	378	5,8
HYDNUT125-E	7410125	M125x2	195	44	37	167	126	5	65,1	40	600	391	6,2
HYDNUT130-E	7410130	M130x2	200	44	37	171	131	5	64,5	39	600	387	6,4
HYDNUT135-E	7410135	M135x2	205	44	37	176	136	5	66,6	40	600	399	6,5
HYDNUT140-E	7410140	M140x2	210	44	37	182	141	5	69,0	42	600	414	6,7
HYDNUT145-E	7410145	M145x2	215	44	37	186	146	5	70,7	43	600	424	6,9
HYDNUT150-E	7410150	M150x2	220	44	37	191	151	5	75,3	46	600	452	7,1
HYDNUT155-E	7410155	M155x3	225	44	37	200	156	5	81,8	50	600	491	7,3
HYDNUT160-E	7410160	M160x3	235	47	40	206	161	6	87,2	62	600	523	8,7
HYDNUT165-E	7410165	M165x3	240	47	40	211	166	6	92,4	65	600	554	8,9
HYDNUT170-E	7410170	M170x3	245	47	40	216	171	6	94,7	67	600	568	9,1
HYDNUT180-E	7410180	M180x3	255	47	40	227	181	6	103,0	73	600	618	9,6
HYDNUT190-E	7410190	M190x3	270	50	42	240	191	8	115,9	105	600	695	11,5
HYDNUT200-E	7410200	M200x3	280	50	42	251	201	8	125,0	113	600	750	12,0
HYDNUT205-E	7410205	Tr205x4	290	50	42	258	207	8	132,2	119	500	661	13,0
HYDNUT210-E	7410210	Tr210x4	295	52	43	263	212	9	135,0	135	500	675	13,8
HYDNUT215-E	7410215	Tr215x4	300	52	43	268	217	9	137,7	138	500	689	14,1
HYDNUT220-E	7410220	Tr220x4	305	52	43	273	222	9	144,2	145	500	721	14,5
HYDNUT225-E	7410225	Tr225x4	315	53	44	282	227	10	153,1	169	500	766	16,0
HYDNUT230-E	7410230	Tr230x4	320	53	44	287	232	10	160,0	176	500	800	16,3
HYDNUT235-E	7410235	Tr235x4	325	53	44	290	237	10	161,8	178	500	809	16,6
HYDNUT240-E	7410240	Tr240x4	330	53	44	296	242	10	165,3	182	500	827	17,0
HYDNUT250-E	7410250	Tr250x4	345	54	44	310	252	10	182,2	201	500	911	18,9
HYDNUT260-E	7410260	Tr260x4	355	55	45	319	262	11	187,9	226	500	939	19,9
HYDNUT270-E	7410270	Tr270x4	370	56	46	332	272	12	196,0	255	500	980	22,3
HYDNUT275-E	7410275	Tr275x4	375	56	46	337	277	12	203,8	265	500	1019	22,6
HYDNUT280-E	7410280	Tr280x4	380	56	46	342	282	12	211,8	276	500	1059	23,0
HYDNUT290-E	7410290	Tr290x4	390	57	47	352	292	13	218,4	306	500	1092	24,1
HYDNUT295-E	7410295	Tr295x4	400	57	47	362	297	13	230,0	322	500	1150	25,9
HYDNUT300-E	7410300	Tr300x4	405	62	52	365	302	13	237,1	332	500	1185	28,5
HYDNUT310-E	7410310	Tr310x5	415	62	52	375	312	13	249,2	349	500	1246	29,3
HYDNUT315-E	7410315	Tr315x5	420	62	52	380	317	13	252,7	354	500	1264	29,7
HYDNUT320-E	7410320	Tr320x5	430	63	53	389	322	14	264,5	397	500	1322	32,3
HYDNUT330-E	7410330	Tr330x5	440	63	53	398	332	14	271,0	407	500	1355	33,7
HYDNUT335-E	7410335	Tr335x5	445	64	53	403	337	14	274,6	412	500	1373	34,2
HYDNUT340-E	7410340	Tr340x5	450	64	53	408	342	14	283,9	426	500	1419	34,6
HYDNUT345-E	7410345	Tr345x5	455	64	53	413	347	14	287,6	432	500	1438	35,0
HYDNUT350-E	7410350	Tr350x5	465	64	53	422	352	14	306,0	459	500	1530	37,3
HYDNUT355-E	7410355	Tr355x5	470	65	54	427	357	15	303,9	487	500	1519	38,4
HYDNUT360-E	7410360	Tr360x5	475	65	54	431	362	15	312,9	501	500	1564	38,9
HYDNUT365-E	7410365	Tr365x5	482	65	54	436	367	15	316,7	507	500	1584	40,1
HYDNUT370-E	7410370	Tr370x5	490	66	55	444	372	16	322,9	549	500	1614	42,4
HYDNUT375-E	7410375	Tr375x5	495	66	55	450	377	16	333,8	568	500	1669	42,9
HYDNUT380-E	7410380	Tr380x5	500	66	55	454	382	16	336,9	573	500	1685	43,4
HYDNUT385-E	7410385	Tr385x5	505	66	55	460	387	16	348,1	592	500	1740	43,9

Type	Art. no.	d	D mm	B mm	b mm	D <sub>1</sub> mm	d <sub>1</sub> mm	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar	l kN	Weight kg
HYDNUT395-E	7410395	Tr395x5	512	67	56	470	397	17	356,1	641	500	1780	44,3
HYDNUT400-E	7410400	Tr400x5	525	69	58	477	402	17	368,4	664	500	1842	49,7
HYDNUT410-E	7410410	Tr410x5	535	69	58	485	412	17	381,7	688	400	1527	50,8
HYDNUT415-E	7410415	Tr415x5	540	69	58	490	417	17	385,9	695	400	1543	51,3
HYDNUT420-E	7410420	Tr420x5	545	70	58	495	422	17	390,0	702	400	1560	52,2
HYDNUT430-E	7410430	Tr430x5	555	75	63	505	432	17	398,4	718	400	1593	57,5
HYDNUT435-E	7410435	Tr435x5	560	75	63	510	437	17	402,5	725	400	1610	58,1
HYDNUT440-E	7410440	Tr440x5	565	75	63	519	442	17	424,6	765	400	1699	58,7
HYDNUT450-E	7410450	Tr450x5	580	75	63	530	452	17	441,6	795	400	1766	62,6
HYDNUT460-E	7410460	Tr460x5	590	76	64	540	462	18	450,4	856	400	1802	64,3
HYDNUT470-E	7410470	Tr470x5	600	76	64	550	472	18	459,2	873	400	1837	65,9
HYDNUT480-E	7410480	Tr480x5	612	77	65	560	482	19	460,0	920	400	1840	69,2
HYDNUT490-E	7410490	Tr490x5	625	78	65	575	492	19	505,6	1.012	400	2022	73,2
HYDNUT500-E	7410500	Tr500x5	635	79	66	585	502	20	523,1	1.099	400	2092	75,5
HYDNUT510-E	7410510	Tr510x6	645	79	66	595	512	20	532,5	1.119	400	2130	76,8
HYDNUT520-E	7410520	Tr520x6	657	80	67	605	522	21	541,9	1.193	400	2168	80,5
HYDNUT530-E	7410530	Tr530x6	670	81	68	617	532	22	562,0	1.293	400	2248	84,9
HYDNUT540-E	7410540	Tr540x6	680	81	68	628	542	22	581,4	1.338	400	2326	86,3
HYDNUT550-E	7410550	Tr550x6	692	81	68	639	552	22	592,1	1.362	400	2369	89,1
HYDNUT560-E	7410560	Tr560x6	705	81	68	650	562	22	612,1	1.408	400	2448	92,3
HYDNUT570-E	7410570	Tr570x6	715	87	74	660	572	23	631,3	1.516	400	2525	101,2
HYDNUT580-E	7410580	Tr580x6	725	87	74	670	582	23	641,4	1.540	400	2566	102,8
HYDNUT590-E	7410590	Tr590x6	740	87	74	685	592	23	666,2	1.599	400	2665	108,4
HYDNUT600-E	7410600	Tr600x6	750	87	74	695	603	23	676,4	1.624	400	2706	109,3
HYDNUT610-E	7410610	Tr610x6	760	89	75	705	613	24	686,6	1.717	400	2747	113,5
HYDNUT625-E	7410625	Tr625x6	775	89	75	720	628	24	701,9	1.755	400	2808	116,0
HYDNUT630-E	7410630	Tr630x6	780	89	75	725	633	24	727,8	1.820	400	2911	116,8
HYDNUT650-E	7410650	Tr650x6	805	89	75	748	653	24	762,7	1.907	300	2288	124,6
HYDNUT655-E	7410655	Tr655x6	810	89	75	753	658	24	768,0	1.920	300	2304	125,5
HYDNUT670-E	7410670	Tr670x6	825	89	75	768	673	24	795,0	1.988	300	2385	128,1
HYDNUT680-E	7410680	Tr680x6	837	89	75	780	683	24	819,2	2.048	300	2458	131,6
HYDNUT690-E	7410690	Tr690x6	850	90	76	792	693	25	843,7	2.194	300	2531	137,8
HYDNUT695-E	7410695	Tr695x6	855	90	76	798	698	25	861,8	2.241	300	2585	138,7
HYDNUT710-E	7410710	Tr710x7	870	90	76	812	713	25	877,6	2.282	300	2633	141,6
HYDNUT720-E	7410720	Tr720x7	883	91	76	825	723	25	927,8	2.413	300	2783	147,8
HYDNUT740-E	7410740	Tr740x7	910	91	76	848	743	25	991,2	2.578	300	2974	158,7
HYDNUT750-E	7410750	Tr750x7	922	97	82	862	753	26	1033,0	2.790	300	3099	173,5
HYDNUT760-E	7410760	Tr760x7	935	97	82	872	763	26	1045,5	2.823	300	3137	179,0
HYDNUT780-E	7410780	Tr780x7	955	99	84	890	783	28	1068,1	3.098	300	3204	187,0
HYDNUT800-E	7410800	Tr800x7	970	100	84	909	803	28	1079,0	3.130	300	3237	183,1
HYDNUT830-E	7410830	Tr830x7	1000	101	85	938	833	29	1101,5	3.305	300	3304	195,4
HYDNUT850-E	7410850	Tr850x7	1020	101	85	960	853	29	1156,1	3.469	300	3468	199,6
HYDNUT880-E	7410880	Tr880x7	1050	101	85	988	883	29	1148,4	3.446	300	3445	206,0
HYDNUT900-E	7410900	Tr900x7	1070	101	85	1012	903	29	1250,7	3.753	300	3752	210,3
HYDNUT930-E	7410930	Tr930x8	1100	102	86	1042	933	30	1289,3	3.997	300	3868	218,8
HYDNUT950-E	7410950	Tr950x8	1185	102	86	1065	953	30	1319,0	4.089	300	3957	230,9
HYDNUT1000-E	7411000	Tr1000x8	1185	102	86	1123	1003	30	1491,5	4.624	300	4475	256,7
HYDNUT1060-E	7411060	Tr1060x8	1255	106	88	1185	1063	32	1611,6	5.319	300	4835	298,1
HYDNUT1080-E	7411080	Tr1080x8	1280	107	89	1207	1083	33	1677,8	5.705	300	5033	314,8
HYDNUT1120-E	7411120	Tr1120x8	1340	111	92	1260	1123	36	1900,7	7.033	300	5702	373,2
HYDNUT1180-E	7411180	Tr1180x8	1430	117	95	1325	1183	39	2098,8	8.396	300	6296	473,4

# Hydraulic nuts

## Schaeffler HYDNUT-E-INCH

New



**49.9 - 950.2 / 1.9 - 37.4**  
inner diameter Ø mm / inch

**214 - 3957**  
max. drive-up force kN

**700**  
max. operating pressure bar



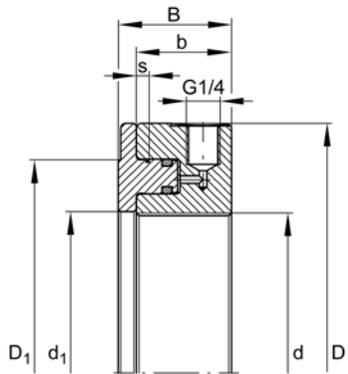
Use in combination with our "Pump sets for Schaeffler HYDNUT".

### Schaeffler HYDNUT-E-INCH

Schaeffler Hydraulic nuts are used to mount bearings with a UN or ACME thread on workpieces. The bearings can be mounted directly on a tapered shaft, on an adapter sleeve or on a retraction sleeve. Disassembly is also possible if the bearing is placed on a retraction sleeve or adapter sleeve. The hydraulic nut is suitable for small bearings to very large bearings that require a high drive-up force. These include ship propellers, rudder blades, shaft couplings and gears.

The range of Inch nuts are suitable for threads based on Inch sizes corresponding to M50 to Tr950. After UN320, these nuts are Tr Threaded and available up to a thread diameter of 950 mm.

- To be used in combination with special pump sets.
- The maximum pressure and available threads are indicated on the pressure ring.
- All hydraulic nuts have a red O-ring showing max. stroke.
- Digital (Art. No. 7499920) and analogue (Art. No. 7499910) dials for accurate measurement of floating clearance when mounting bearings are available as accessories.



Description	Designation
Thread type	F
Number of thread turns per inch	G
Piston surface cm <sup>2</sup>	H
Drive up force max. kN	I

Type	Art. no.	d mm / inch	F	G	D mm	B mm	b mm	D <sub>1</sub> mm	d <sub>1</sub> mm	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar/psi	I kN	Weight kg
HYDNUT50-E-INCH	7420050	49,962 / 1,967	UN	18	110	40	36	88	51	4	30,6	15,3	700 / 10150	214	2,4
HYDNUT55-E-INCH	7420055	54,788 / 2,157	UN	18	118	40	36	92	56	4	31,2	15,6	700 / 10150	219	2,7
HYDNUT60-E-INCH	7420060	59,944 / 2,360	UN	18	125	40	36	96	61	4	31,7	15,8	700 / 10150	222	3,0
HYDNUT65-E-INCH	7420065	64,719 / 2,548	UN	18	132	40	36	103	66	4	35,5	17,8	700 / 10150	249	3,3
HYDNUT70-E-INCH	7420070	69,873 / 2,751	UN	18	140	40	36	110	71	4	40,9	20,5	700 / 10150	286	3,7

Type	Art. no.	d mm / inch	F	G	D mm	B mm	b mm	D <sub>1</sub> mm	d <sub>1</sub> mm	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar/psi	I kN	Weight kg
HYDNUT75-E-INCH	7420075	74,498 / 2,933	UN	12	145	40	36	116	76	4	44,9	22,4	700 / 10150	314	3,9
HYDNUT80-E-INCH	7420080	79,68 / 3,137	UN	12	150	40	36	122	81	4	49,0	24,5	700 / 10150	343	4,0
HYDNUT85-E-INCH	7420085	84,836 / 3,340	UN	12	155	40	36	126	86	4	49,3	24,6	700 / 10150	345	4,2
HYDNUT90-E-INCH	7420090	89,586 / 3,527	UN	12	160	41	37	130	91	5	49,4	29,6	700 / 10150	346	4,5
HYDNUT95-E-INCH	7420095	94,742 / 3,730	UN	12	165	41	37	136	96	5	52,0	31,2	700 / 10150	364	4,7
HYDNUT100-E-INCH	7420100	99,517 / 3,918	UN	12	170	41	37	142	101	5	54,5	32,7	700 / 10150	381	4,8
HYDNUT105-E-INCH	7420105	104,669 / 4,121	UN	12	175	43	37	147	106	5	56,6	34	600 / 8700	340	5,3
HYDNUT110-E-INCH	7420110	109,855 / 4,325	UN	12	180	43	37	152	111	5	58,7	35,2	600 / 8700	352	5,5
HYDNUT120-E-INCH	7420120	119,786 / 4,716	UN	12	190	43	37	162	121	5	63,0	37,8	600 / 8700	378	5,8
HYDNUT130-E-INCH	7420130	129,692 / 5,106	UN	12	200	44	37	171	131	5	64,5	38,7	600 / 8700	387	6,4
HYDNUT140-E-INCH	7420140	139,642 / 5,489	UN	12	210	44	37	182	141	5	69,0	41,4	600 / 8700	414	6,7
HYDNUT150-E-INCH	7420150	149,555 / 5,888	UN	12	220	44	37	191	151	5	75,3	45,2	600 / 8700	452	7,1
HYDNUT160-E-INCH	7420160	159,614 / 6,284	UN	8	235	47	40	206	161	6	87,2	61,1	600 / 8700	523	8,7
HYDNUT170-E-INCH	7420170	169,139 / 6,659	UN	8	245	47	40	216	171	6	94,7	66,3	600 / 8700	568	9,1
HYDNUT180-E-INCH	7420180	179,476 / 7,066	UN	8	255	47	40	227	181	6	103,0	72,1	600 / 8700	618	9,6
HYDNUT190-E-INCH	7420190	189,789 / 7,472	UN	8	270	50	42	240	191	8	115,9	104,3	600 / 8700	695	11,5
HYDNUT200-E-INCH	7420200	199,314 / 7,847	UN	8	280	50	42	251	201	8	125,0	112,5	600 / 8700	750	12,0
HYDNUT220-E-INCH	7420220	219,151 / 8,628	UN	8	305	52	43	273	222	9	144,2	144,2	500 / 7250	721	14,5
HYDNUT240-E-INCH	7420240	239,827 / 9,442	UN	6	330	53	44	296	242	10	165,3	181,9	500 / 7250	827	17,0
HYDNUT260-E-INCH	7420260	258,877 / 10,192	UN	6	355	55	45	319	262	11	187,9	225,4	500 / 7250	939	20,1
HYDNUT280-E-INCH	7420280	279,502 / 11,004	UN	6	380	56	46	342	282	12	211,8	275,3	500 / 7250	1059	23,1
HYDNUT300-E-INCH	7420300	299,339 / 11,785	UN	6	405	62	52	365	302	13	237,1	331,9	500 / 7250	1185	28,7
HYDNUT320-E-INCH	7420320	319,075 / 12,562	UN	6	430	63	53	389	322	14	264,5	396,7	500 / 7250	1322	32,5
HYDNUT340-E-INCH	7420340	338,811 / 13,339	ACME	5	450	64	53	408	342	14	283,9	425,8	500 / 7250	1419	34,8
HYDNUT360-E-INCH	7420360	359,918 / 14,170	ACME	5	475	65	54	431	362	15	312,9	500,6	500 / 7250	1564	39,0
HYDNUT380-E-INCH	7420380	379,908 / 14,957	ACME	5	500	66	55	454	382	16	336,9	572,8	500 / 7250	1685	43,6
HYDNUT400-E-INCH	7420400	399,923 / 15,745	ACME	5	525	69	58	477	402	17	368,4	663,1	500 / 7250	1842	49,9
HYDNUT420-E-INCH	7420420	419,913 / 16,532	ACME	5	545	70	58	495	422	17	390,0	702,1	400 / 5800	1560	52,8
HYDNUT440-E-INCH	7420440	439,903 / 17,319	ACME	5	565	75	63	519	442	17	424,6	764,3	400 / 5800	1699	58,9
HYDNUT460-E-INCH	7420460	459,918 / 18,107	ACME	5	590	77	64	540	462	18	450,4	855,7	400 / 5800	1802	64,9
HYDNUT480-E-INCH	7420480	479,908 / 18,894	ACME	5	612	79	65	560	482	19	460,0	920,1	400 / 5800	1840	69,4
HYDNUT500-E-INCH	7420500	499,923 / 19,682	ACME	5	635	81	66	585	502	20	523,1	1098,5	400 / 5800	2092	75,7
HYDNUT530-E-INCH	7420530	530,022 / 20,867	ACME	4	670	81	68	617	532	22	562,0	1292,5	400 / 5800	2248	85,1
HYDNUT560-E-INCH	7420560	560,019 / 22,048	ACME	4	705	87	68	650	562	22	612,1	1407,8	400 / 5800	2448	92,9
HYDNUT600-E-INCH	7420600	600,024 / 23,623	ACME	4	750	89	74	695	603	23	676,4	1623,4	400 / 5800	2706	110,1
HYDNUT630-E-INCH	7420630	630,022 / 24,804	ACME	4	780	89	75	725	633	24	727,8	1819,4	400 / 5800	2911	117,7
HYDNUT670-E-INCH	7420670	670,027 / 26,379	ACME	4	825	90	75	768	673	24	795,0	1987,5	300 / 4350	2385	128,9
HYDNUT710-E-INCH	7420710	710,209 / 27,961	ACME	3	870	97	76	812	713	25	877,6	2281,9	300 / 4350	2633	142,2
HYDNUT750-E-INCH	7420750	750,214 / 29,536	ACME	3	922	100	82	862	753	26	1033,0	2789	300 / 4350	3099	174,4
HYDNUT800-E-INCH	7420800	800,202 / 31,504	ACME	3	970	101	84	909	803	28	1079,0	3129,1	300 / 4350	3237	188,1
HYDNUT850-E-INCH	7420850	850,214 / 33,473	ACME	3	1020	101	85	960	853	29	1156,1	3468,3	300 / 4350	3468	200,7
HYDNUT900-E-INCH	7420900	900,201 / 35,441	ACME	3	1070	102	85	1012	903	29	1250,7	3752,1	300 / 4350	3752	211,5
HYDNUT950-E-INCH	7420950	950,214 / 37,410	ACME	3	1125	103	86	1065	953	30	1319,0	4088,8	300 / 4350	3957	231,8

# Hydraulic nuts

## Schaeffler HYDNUT-HEAVY

New



**100 - 900**  
inner diameter Ø mm

**920 - 12210**  
max. drive-up force kN

**700**  
max. operating pressure bar



Use in combination with our "Pump sets for Schaeffler HYDNUT".

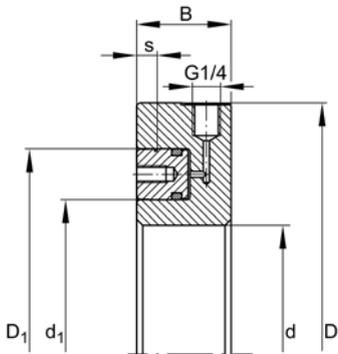
### Schaeffler HYDNUT-HEAVY

Schaeffler Hydraulic nuts are used to mount bearings with a tapered bore or thread on workpieces. The bearings can be mounted directly on a tapered shaft, on an adapter sleeve or on a retraction sleeve. Disassembly is also possible if the bearing is placed on a retraction sleeve or adapter sleeve. The hydraulic nut is suitable for small bearings to very large bearings that require a high drive-up force. These include ship propellers, rudder blades, shaft couplings and gears.

The range of Heavy nuts are threadless, and available with internal diameters up to 900 mm.

- To be used in combination with special pump sets.
- The maximum pressure and available threads are indicated on the pressure ring.
- All hydraulic nuts have a red O-ring showing max. stroke.
- Digital (Art. No. 7499920) and analogue (Art. No. 7499910) dials for accurate measurement of floating clearance when mounting bearings are available as accessories.

Description	Designation
Inside diameter Ø mm	d
Outside diameter Ø mm	D
Width mm	B
Stroke max. mm	s
Piston surface cm <sup>2</sup>	H
Drive up force max. kN	I



Type	Art. no.	d mm	D mm	B mm	D1	d1	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar	I kN	Weight kg
HYDNUT100-HEAVY	7430100	100	225	46	180	125	10	132	145	700	920	11,3
HYDNUT125-HEAVY	7430125	125	245	46	200	150	10	137	151	600	820	12,4
HYDNUT150-HEAVY	7430150	150	270	46	226	180	10	147	161	600	880	14,1
HYDNUT175-HEAVY	7430175	175	305	47	250	205	11	161	193	600	960	17,8

Type	Art. no.	d mm	D mm	B mm	D1	d1	s mm	H cm <sup>2</sup>	Oil cap. cm <sup>3</sup>	Pressure max. bar	I kN	Weight kg
HYDNUT200-HEAVY	7430200	200	330	48	280	230	12	200	260	600	1200	20,1
HYDNUT225-HEAVY	7430225	225	365	48	313	255	12	259	336	500	1290	24,0
HYDNUT250-HEAVY	7430250	250	390	48	345	280	12	319	415	500	1600	26,1
HYDNUT275-HEAVY	7430275	275	430	48	380	305	12	403	525	500	2020	31,8
HYDNUT300-HEAVY	7430300	300	470	54	410	335	13	439	614	500	2190	42,9
HYDNUT325-HEAVY	7430325	325	500	54	440	360	13	503	704	500	2510	47,3
HYDNUT350-HEAVY	7430350	350	540	54	475	385	13	608	851	500	3040	55,4
HYDNUT375-HEAVY	7430375	375	575	54	510	410	13	723	1012	500	3610	62,2
HYDNUT400-HEAVY	7430400	400	620	56	545	440	15	812	1300	500	4060	76,2
HYDNUT425-HEAVY	7430425	425	650	56	575	465	15	898	1438	400	3590	82,1
HYDNUT450-HEAVY	7430450	450	690	63	610	490	17	1037	1866	400	4150	104,5
HYDNUT475-HEAVY	7430475	475	725	63	642	515	17	1154	2077	400	4620	114,6
HYDNUT500-HEAVY	7430500	500	760	66	675	540	20	1288	2705	400	5150	131,1
HYDNUT525-HEAVY	7430525	525	800	66	710	565	20	1452	3049	400	5810	145,9
HYDNUT550-HEAVY	7430550	550	835	68	742	590	22	1590	3657	400	6360	162,8
HYDNUT575-HEAVY	7430575	575	870	68	775	615	22	1747	4018	400	6990	175,8
HYDNUT600-HEAVY	7430600	600	910	76	808	645	25	1860	4836	400	7440	215,8
HYDNUT625-HEAVY	7430625	625	945	76	840	670	25	2016	5242	400	8060	231,6
HYDNUT650-HEAVY	7430650	650	980	84	875	695	28	2220	6437	300	6660	274,0
HYDNUT675-HEAVY	7430675	675	1020	84	906	720	28	2375	6889	300	7130	297,9
HYDNUT700-HEAVY	7430700	700	1060	86	940	750	30	2522	7818	300	7570	330,5
HYDNUT750-HEAVY	7430750	750	1130	88	1007	800	32	2938	9695	300	8810	381,3
HYDNUT800-HEAVY	7430800	800	1205	92	1070	855	35	3251	11702	300	9750	453,1
HYDNUT850-HEAVY	7430850	850	1275	95	1135	905	38	3685	14372	300	11060	520,3
HYDNUT900-HEAVY	7430900	900	1350	97	1200	960	40	4072	16693	300	12210	595,6

# Pump sets for Schaeffler HYDNUT

BETEX AHP / AP / EP

New



**2500 - 18000**  
usable oil-capacity cm<sup>3</sup>

**700/1000**  
max. operating pressure bar

**!** Use in combination with our "Hydraulic nuts".

- The sets contain:**
- Pump
  - Pressure gauge, T-adapter
  - Hose
  - Couplings
  - Steel storage box or wooden crate (EP320S)

## BETEX pump sets for Schaeffler HYDNUT

Ready-to-use pump sets have been put together specifically for hydraulic nuts. Depending on the required oil capacity, a suitable pump set is always available. They are very easy to use and come pre-assembled. You can get started right away!

- The AHP 801 and AHP 802 hydraulic hand pumps feature a two-stage device for quick manual pressurisation. These pumps are suitable for hydraulic nuts with a required oil capacity of up to 2 litres.
- The AP 3000 and AP 8000 air-operated hydraulic foot pumps are suitable for hydraulic nuts with a required oil capacity of up to 3 and 8 litres, respectively. Foot controls mean you always have two hands free.
- The EP 320S electric hydraulic pump is suitable for all hydraulic nuts. A remote control allows operation from up to 3 metres away.

Type	Art. no.	Pressure bar		Max. pressure bar	Operation	Oil cap. cm <sup>3</sup>	Usable oil capacity cm <sup>3</sup>	Oil volume per stroke cm <sup>3</sup>		Oil volume (cm <sup>3</sup> /min.@60Hz) in bar				Coupler	Weight kg
		1e stage	2e stage					1e stage	2e stage	7	70	350	700		
AHP 801 HN-SET	7265781	20	700	-	-	3000	2500	12,9	1,65	-	-	-	-	CEJN	11,5
AHP 802 HN-SET	7265782	20	1000	-	-	3000	2500	12,9	1,65	-	-	-	-	CEJN	11,5
AP 3000S HN-SET	720006221	-	-	700	Single	3000	2500	1250	195	-	-	-	-	CEJN	11,2
AP 8000S HN-SET	720006241	-	-	700	Single	8000	7200	1250	195	-	-	-	-	CEJN	21,2
EP 320S HN-SET	8300067	-	-	700	Single	20000	18000	-	-	9500	1020	980	900	CEJN	67,1

# Portable power kits

## BETEX PPK series



**4**  
tons

**10**  
tons



Use in combination with "BETEX stainless steel shims".

### BETEX PPK series

- 'Snap-on' design for quick and easy assembly and disassembly.
- Extra thick extensions designed for strength prevent bending.
- Single-acting pump, 700 bar with safety valve to prevent overloading.
- Flexible hydraulic hose, 1.8 mtr with spring guards at both ends.
- Versatile thanks to the wide range of accessories!
- All parts are made of forged steel.

#### Set PPK 4

Incl. 4-ton cylinder, 100 mm stroke, in handy carrying case.

#### Set PPK 10

Incl. 10-ton cylinder, 150 mm stroke, in handy carrying case on wheels.

Type	PPK 4
Art. no.	7560804
PA350	Heavy duty hydraulic hand pump
HS236	HD hose, 1.8 mtr
RA404	4-ton cylinder with 101.6 mm stroke length
SR05A	Spreader 0.5 ton
B0523	Extension 406.4 mm
B0524	Extension 304.8 mm
B0525	Extension 203.3 mm
B0526	Extension 101.6 mm
B0467	Adapter
F0180	Flat foot
F0181	90 degrees V foot
F0182	Wedge head
F0183	Plunjer toe
F0184	Ram toe
B0013	Flexible rubber cap
F0179	Serrated saddle
G0026	Transport case

Type	PPK 10
Art. no.	7560810
PA600	Heavy duty hydraulic hand pump
HS236	HD hose, 1.8 mtr
RA106L	10-ton cylinder with 152.4 mm stroke length
SR05E	Spreader 0.5 ton
B0711	Extension 482.6 mm
B0712	Extension 355.6 mm
B0713	Extension 254.0 mm
B0714	Extension 127.0 mm
B0406	Adapter
F0174	Flat foot
F0175	90 degrees V foot
F0176	Wedge head
F0177	Plunjer toe
F0178	Ram toe
B0083	Flexible rubber cap
F0173	Serrated saddle
G0021	Transport case on wheels

# Hydraulic spreaders & lifting wedges

BETEX 15 TL / 15 TLS / 25 TLS series



**15**  
tons

**25**  
tons



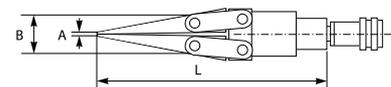
Use in combination with "BETEX stainless steel shims".



## BETEX 15 TL / 15 TLS / 25 TLS series

These tools are easy to use and designed to spread or lift loads such as motors, gearboxes and flanges with ease and superior accuracy.

- Loads are lifted perpendicularly.
- Ideal for numerous industrial maintenance repair jobs.
- Accurate height adjustments (shaft alignment) can easily be executed by one person.
- Easy, light and very practical to use.
- Can be placed in gaps of 5-43 mm.
- Due to the reduced thickness of the jaws, made of high-quality hardened steel, these wedges can be used for jobs where working space is extremely limited.
- Including safety block to secure the load and remove the lifting wedge/spreader.
- Available separately and as a complete (duo) set in steel case.



Type	Art. no.	Max. cap. tons	Pump type	Max. operating pressure bar	A mm	B mm	L mm	Weight kg
15 TL	789170	15	single-acting	700	5	40	235	4
15 TL set	789180	15	single-acting	700	5	40	235	16
15 TL duo set	789181	2 x 15	single-acting	700	5	40	235	28
15 TLS	789150	15	single-acting	700	5	40	235	4
15 TLS set	789160	15	single-acting	700	5	40	235	16
15 TLS duo set	789162	2 x 15	single-acting	700	5	40	235	28
25 TLS	789250	25	single-acting	700	8	43	342	8
25 TLS set	789260	25	single-acting	700	8	43	342	20
25 TLS duo set	789261	2 x 25	single-acting	700	8	43	342	36

# Hydraulic flange spreaders

## BETEX PFS 10T series



**10**  
tons



Safety block

### BETEX PFS 10T series

- Spreading flanges safely and easily
- No more use of hammer and chisel, so less strenuous, time saving and most of all safe working
- Use flange spreaders in sets for an even higher spreading force
- Adjustable jaw tip widths from 104 to 216 mm for a wide range of applications
- Special wedge for larger spread
- Suitable up to a max. flange width of 2 x 92 mm. The flange bolt has a min. diameter of 31.75 mm

#### Sets

Various combination sets available in carrying case. All sets are pre-mounted, you can get started right away!

#### Duo-sets

For more working accuracy, we supply duo-sets with two flange spreaders and a pump with manifold for separate oil flow.

- ✓ You double the spreading capacity
- ✓ Force is distributed more evenly and accurately, preventing warping

Type	Art. no.	Max. cap. tons	Bolt size	Standard wedge mm	Claw width mm	Pump type	Weight kg
PFS 10T	789410	10	M33	3.3 - 28.7	104 - 216	single-acting	15
PFS 10T set (case included)	789411	10	M33	3.3 - 28.7	104 - 216	single-acting	25.2
PFS 10T duo set (case included)	789412	2 x 10	M33	3.3 - 28.7	104 - 216	single-acting	46.6
PFS 10TI Integrated pump (case included)	789413	10	M33	3.3 - 28.7	104 - 216	single-acting	17.5

## Sets & duo-sets

Hydraulic spreaders and wedges/spines for lifting, 700 bar

### The set always contains:

- 2-stage hand pump
- Pressure gauge, T-adapter
- Male (hose) half coupler, complete quick coupler
- Multi-stage safety block
- Case



### 15 TL set

- Hydraulic spreader or lifting wedge
- Hose, 1.5 mtr
- Art. no: 789180

### The duo-set always contains:

- Pump with manifold for separated oil flows
- 2 Pressure gauges, T-adapters
- 2 Male (hose) half couplers and 2 complete quick couplers
- 2 Multi-stage safety blocks
- Case



### 15 TLS Duo-set

- 2 hydraulic spreaders
- 2 hoses, 1.5 mtr
- Art. no: 789162

All sets are pre-mounted, you can get started right away!

### Duo-sets

- For more precise lifting/spreading.
- The lifting force is divided evenly, thus preventing loads to be pressed askew or lopsided burdening.
- Safe: Perfect straight lifting movement prevents the load from tilting.
- The lifting and spreading capacity is doubled.



### PFS 10T set

- Hydraulic flange spreader
- Hose, 1.5 mtr
- Art. no: 789411



### PFS 10T Duo-set

- 2 hydraulic spreaders
- 2 hoses, 1.5 mtr
- Art. no: 789412



### PFS 10T set

- Hydraulic flange spreader with integrated pump
- Case
- Type PFS 10TI has a built-in hydraulic system for which a separate hose, coupler and hand pump are not necessary. Not available as duo-set.
- Art. no: 789413

# Nut splitters

## BETEX HNS series



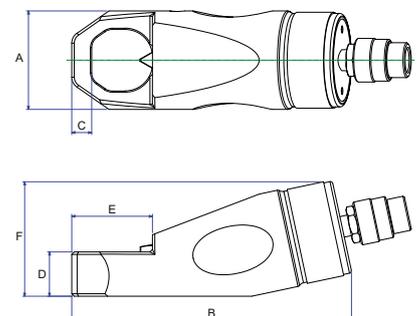
**10 - 50**  
tons



Use in combination with hydraulic hand pumps.

### BETEX HNS series

- Compact design used in confined space with enough force to split rusted nuts.
- All models feature a rugged one-piece cutting frame coupled to a heavy-duty hydraulic cylinder
- Specially designed 'tool steel' cutter blade cuts the nut to the precise point where it cracks.
- Unique angled head design to keep full contact with the nut being penetrated.
- Unique angled cutter blade with radius to have greater resistance to cutting and breaking nuts.
- 5 current models suitable up to and including nut class 12.9



Type	Art. no.	Bolt size mm	Thread diameter mm	Cap. tons	Oil cap. cm <sup>3</sup>	A mm	B mm	C mm	D mm	E mm	F mm	Weight kg
HNS 1924	781924	19-24	M12-M16	10	18	60	167.2	10	25	40	68	2.6
HNS 2432	782432	24-32	M16-M22	15	40	70	178	13	30	52	76	3.6
HNS 3241	783241	32-41	M22-M27	20	68	80	226	15	36	65	93	5.5
HNS 4150	784150	41-50	M27-M33	35	150	95	244	21	45	76	106	11.2
HNS 5060	785060	50-60	M33-M39	50	250	106	269	24	55	92	125	15.1

# Tapered roller bearing press

## BETEX TOOL-RAILWAY-SEALCAP-PRESS2

New



**10**  
tons

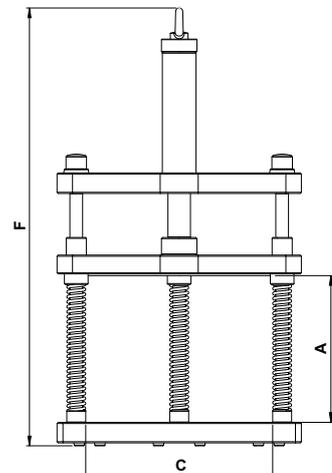
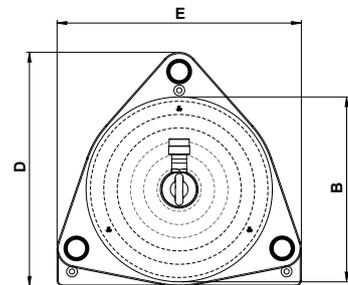


Use in combination with our hydraulic pumps and accessories.

### BETEX TOOL RAILWAY SEALCAP PRESS2

The hydraulic press is used to assemble and disassemble seals on tapered roller bearing units, also known as TAROL units. Suitable for all common sizes of TAROL units in rail applications.

- The base plate has rubber feet at the corners and countersunk holes (M8) for mounting on a workbench or trolley.
- The TOOL RAILWAY SEALCAP PRESS2 is driven using the NSSS 106 cylinder (Capacity: 10 tons / Stroke: 152.2mm).
- The round stainless steel plate can be reordered as a spare part.
- Bearing-specific sealing cap tool kits are required for use and are tested and offered if required.



Type	Art. nr.	Cap. ton	Stroke mm	A mm		B ø mm	C mm	D mm	E mm	F mm	Max. operating pressure bar	Weight kg
				min.	max.							
TOOL RAILWAY SEALCAP PRESS2	7550100	10	152,5	172,5	325	315	316	398,5	413	746	700	45

# Peel-off Shims

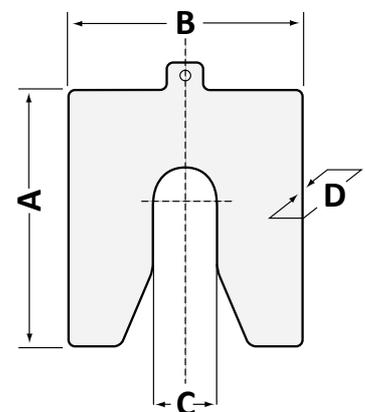
BETEX stainless steel shims



Use in combination with: jacks, spreaders and alignment equipment.

## BETEX peel-off shims

- Laminated pre-cut peel-off shims.
- Made of high-quality stainless steel to prevent corrosion.
- Available in 4 sizes.
- 12 peel-off layers (8 x 0.1 mm and 4 x 0.05 mm).
- Burr-free with specially rounded corners.
- They always fit! Simply peel off until the right thickness is obtained.



Art. no.	Material	Items	A mm	B mm	C mm	D mm	Bolt size
8125505	Stainless steel	10	35	30	9	1	M8
812552	Stainless steel	10	50	50	13	1	M12
812553	Stainless steel	10	75	75	21	1	M20
812554	Stainless steel	10	100	100	32	1	M30

# Solid Shims

## BETEX stainless steel shims



Use in combination with: jacks, spreaders and alignment equipment.



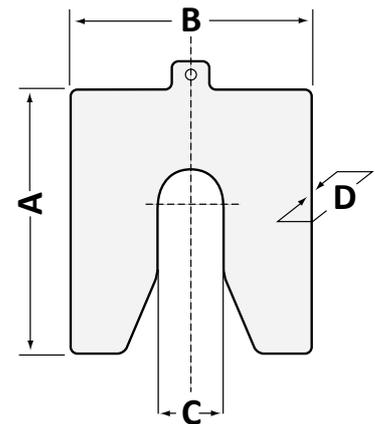
### BETEX stainless steel shims

**Precut stainless steel shims for fast, simple and precise machine alignment.**

- Available in 6 difference sizes and 12 thicknesses.
- Packed in sets of 10 shims.
- High-quality, non-corroding material.
- The shim's thickness is etched on each shim.
- 24 standard combinations in handy cases.
- Suitable for reuse.

**Your benefits:**

- ✓ You have the right size available for immediate use.
- ✓ The shims have been smoothed and have no burrs.
- ✓ Precise machine alignment helps you get the best machine performance.
- ✓ Stock control. This is now simpler and easier to verify.
- ✓ Now also available in 2 and 3 mm thickness!



Shims Mini 35		Art. no.	D mm
A	35 mm	B035005Mn	0,05
		B035010Mp	0,10
B	30 mm	B035015Mq	0,15
		B035020Mr	0,20
C	9 mm	B035025Ms	0,25
		B035040Mt	0,40
M8		B035050Mu	0,50
		B035070Mv	0,70
		B035100Mw	1,00

Shims A 50		Art. no.	D mm
A	50 mm	B0500025Ak	0,025
		B050005An	0,05
B	50 mm	B050010Ap	0,10
		B050015Aq	0,15
C	13 mm	B050020Ar	0,20
		B050025As	0,25
M12		B050040At	0,40
		B050050Au	0,50
		B050070Av	0,70
		B050100Aw	1,00
		B050200Ax	2,00
		B050300Ay	3,00

Shims B 75		Art. no.	D mm
A	75 mm	B0750025Bk	0,025
		B075005Bn	0,05
B	75 mm	B075010Bp	0,10
		B075015Bq	0,15
C	21 mm	B075020Br	0,20
		B075025Bs	0,25
M20		B075040Bt	0,40
		B075050Bu	0,50
		B075070Bv	0,70
		B075100Bw	1,00
		B075200Bx	2,00
		B075300By	3,00

Shims C 100		Art. no.	D mm
A	100 mm	B1000025Ck	0,025
		B100005Cn	0,05
B	100 mm	B100010Cp	0,10
		B100015Cq	0,15
C	32 mm	B100020Cr	0,20
		B100025Cs	0,25
M30		B100040Ct	0,40
		B100050Cu	0,50
		B100070Cv	0,70
		B100100Cw	1,00
		B100200Cx	2,00
		B100300Cy	3,00

Shims D 125		Art. no.	D mm
A	125 mm	B1250025Dk	0,025
		B125005Dn	0,05
B	125 mm	B125010Dp	0,10
		B125015Dq	0,15
C	45 mm	B125020Dr	0,20
		B125025Ds	0,25
M42		B125040Dt	0,40
		B125050Du	0,50
		B125070Dv	0,70
		B125100Dw	1,00
		B125200Dx	2,00
		B125300Dy	3,00

Shims E 200		Art. no.	D mm
A	200 mm	B2000025Ek	0,025
		B200005En	0,05
B	200 mm	B200010Ep	0,10
		B200015Eq	0,15
C	55 mm	B200020Er	0,20
		B200025Es	0,25
M52		B200040Et	0,40
		B200050Eu	0,50
		B200070Ev	0,70
		B200100Ew	1,00
		B200200Ex	2,00
		B200300Ey	3,00

# Solid Shims

## BETEX Shim cases

- BETEX shims - solid stainless steel (AISI 304, DIN 1.4301) in robust carrying cases with convenient storage compartments. The ABCD & E cases have wheels.
- The cases contain various shims up to 5 dimensions (HxW): A 50mm, B 75mm, C 100mm, D 125mm and E 200mm.
- The shims are available in 12 different thicknesses from 0.025 to 3.00 mm.
- There are 24 standard combinations, other combinations are available on request.
- To refill the cases, the BETEX shims are supplied in packs of 10.



Use in combination with: jacks, spreaders and alignment equipment.



**Case ABC**  
42x33x18 cm



**Case ABCD & E**  
55x34x24 cm



**Handy carrying case with 2 wheels**

Art. no.	Case type	Number of shims per series / case in the given thicknesses in mm												Number per case	Weight kg
		0.025	0.05	0.10	0.15	0.20	0.25	0.40	0.50	0.70	1.00	2.00	3.00		
B020210	AB 10/9	-	10	10	-	10	10	10	10	10	10	10	-	180	5
B020230	AB 10/10	-	10	10	-	10	10	10	10	10	10	10	10	200	7
B020240	AB 10/11	10	10	10	-	10	10	10	10	10	10	10	10	220	7
B020270	AB 10/12	10	10	10	10	10	10	10	10	10	10	10	10	240	7
B020310	BC 10/9	-	10	10	-	10	10	10	10	10	10	10	-	180	8
B020330	BC 10/10	-	10	10	-	10	10	10	10	10	10	10	10	200	11
B020340	BC 10/11	10	10	10	-	10	10	10	10	10	10	10	10	220	11
B020370	BC 10/12	10	10	10	10	10	10	10	10	10	10	10	10	240	11
B020410	CD 10/9	-	10	10	-	10	10	10	10	10	10	10	-	180	13
B020430	CD 10/10	-	10	10	-	10	10	10	10	10	10	10	10	200	18
B020440	CD 10/11	10	10	10	-	10	10	10	10	10	10	10	10	220	18
B020470	CD 10/12	10	10	10	10	10	10	10	10	10	10	10	10	240	19
B020110	ABC 10/9	-	10	10	-	10	10	10	10	10	10	10	-	270	9
B020100	ABC 10/10	-	10	10	-	10	10	10	10	10	10	10	10	300	12
B020140	ABC 10/11	10	10	10	-	10	10	10	10	10	10	10	10	330	12
B020160	ABC 10/12	10	10	10	10	10	10	10	10	10	10	10	10	360	13
B020019	ABCD 10/9	-	10	10	-	10	10	10	10	10	10	10	-	360	16
B020030	ABCD 10/10	-	10	10	-	10	10	10	10	10	10	10	10	400	23
B020040	ABCD 10/11	10	10	10	-	10	10	10	10	10	10	10	10	440	23
B020060	ABCD 10/12	10	10	10	10	10	10	10	10	10	10	10	10	480	23
B020590	E 10/9	-	10	10	-	10	10	10	10	10	10	10	-	90	18
B020600	E 10/10	-	10	10	-	10	10	10	10	10	10	10	10	100	26
B020620	E 10/11	10	10	10	-	10	10	10	10	10	10	10	10	110	26
B020660	E 10/12	10	10	10	10	10	10	10	10	10	10	10	10	120	26

Height and width of shim: A shims 50 mm, B shims 75 mm, C shims 100 mm, D shims 125 mm, E shims 200 mm.

# Shaft alignment system

## Schaeffler LASER-EQUILIGN2

The accurate alignment of rotary shafts is essential for cost-effective production in any industry. This reduces energy consumption, increases machine availability and extends machine service life. LASER-EQUILIGN2, the new generation of laser alignment systems for horizontal applications, features maximum precision, extreme efficiency, and convenient operation. Single laser technology enables accurate measurements in any situation.

LASER-EQUILIGN2 can be installed quickly and easily. The portable tablet simplifies operation by guiding users step by step through the alignment process.

- Maximum precision thanks to single laser technology
- Economical solution for horizontal alignment
- Quick and easy to install
- User-friendly operation with non-verbal user interface
- Large 8-inch display with touchscreen



### Complete system

- 1 handheld tablet
- 1 shaft brackets for laser/sensor unit and reflector
- 1 laser/sensor
- 1 reflector with roof prism
- Various cables for data transfer or charging sensor/tablet
- 1 tape measure
- 1 hex wrench, SW 4
- 1 carrying case



Use in combination with "BETEX stainless steel shims".

Type	Schaeffler LASER-EQUILIGN2
Art. no.	780500
Weight incl. all parts	7.8 kg
Dimensions LxWxH	500 x 410 x 140 mm
<b>Display unit</b>	
Weight	0.71 kg
Dimensions LxWxH	256 x 149 x 35 mm
Protection class	IP68
Display	8" (203 mm) diagonal
Operating time	Up to 11 hours
<b>Sensor / units</b>	
Weight	210 g with dust cap
Dimensions LxWxH	105 x 96 x 55 mm
Protection class	IP65
Measuring distance	Up to 30 m
<b>Detector</b>	
Detector reach / resolution	Unlimited / 1 µm
Measurement accuracy	> 98%
Operating time	10 hours continuous



# Pulley alignment system

## Schaeffler LASER-SMARTY3

The LASER-SMARTY3 is an extremely affordable and universally applicable disc and pulley alignment system for aligning V-belts, toothed belts, flat belts and chain drives.

The LASER-SMARTY3 is applicable to both magnetic and non-magnetic discs. It has two magnetic aligning blocks with offset control to allow, if necessary, thickness differences of the pulley discs. This allows you to measure the parallel and angular errors between both pulleys directly in relation to the belt position in the groove. The magnetic straighteners and device can be mounted within seconds. A visible laser appears on the target blocks. If the laser line shines exactly through the slots of the alignment blocks, the discs are aligned. The result is a fast and accurate alignment.

- Displays parallel error and angular error between pulley discs.
- Works faster and more accurately.
- For both horizontal- and vertical-mounted machines.
- Can also be used with non-ferrous discs.
- Can be operated by 1 person.
- Measuring distance 0.04 - 3 metres. (LOW power mode)
- Measuring distance 0.5 - 10 metres. (HIGH power mode)



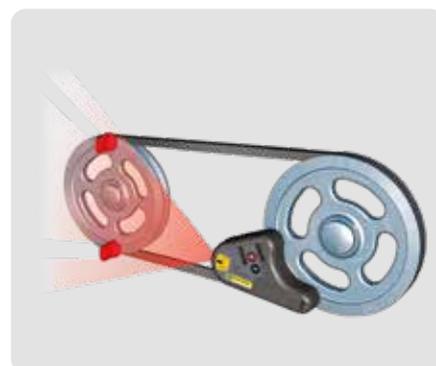
### Complete system

- 1 laser
- 2 targets
- 2 magnetic straighteners
- 1 nylon carrying bag + instructions for use



Use in combination with "BETEX stainless steel shims".

Type	Schaeffler LASER-SMARTY3
Art. no.	7803105
<b>Laser transmitter</b>	
Disc diameters	Ø60mm and larger
Laser class	2
Laser wave length / radiation angle	635-670 nm / 60°
Accuracy	Laser plane – Reference plane Parallelity: <0.05°, Offset <0.2 mm
Power / Operating time	1x (AA) 1.5 V / 12 hours
Casing material	ABS plastic / hard anodised alu
Weight	265 g
Dimensions LxWxH	145 x 86 x 30 mm



# Pulley alignment system

## Schaeffler LASER-TRUMMY2

Proper belt tensioning is an essential prerequisite for maximum service life of the belt drive and drivetrain components.

The LASER-TRUMMY2 is a sturdy optical-electronic hand-held measuring instrument for measuring belt tension. The measuring instrument is equipped with a wireless measuring probe for direct connection and a wired measuring probe for hard-to-reach places. Measurement is carried out while the machine is stationary. The device displays two readings. The frequency in Hz and the belt tension in N. The corresponding measured value can be compared with the target value specified by the belt-drive manufacturers.

Maximum performance and optimum belt-drive service life depend on proper alignment.

### Proper belt tension:

- Prevents damage to bearings
- Reduction of drive-component wear
- Reduction of running noise
- Lowers energy costs
- Simple operation and very user-friendly



### Complete system

- 1 measuring instrument
- 1 measuring sensor with cable
- 1 plug-in sensor
- 1 battery 9V
- 1 carrying case



Use in combination with "BETEX stainless steel shims".

Typ	Schaeffler LASER-TRUMMY2
Art. no.	780703
Dimensions case LxWxH mm	255 x 210 x 60
<b>Sensor / units</b>	
Weight kg	0,98
Dimensions LxWxH mm	80 x 126 x 37
Operating temperature	+10°C ... +50°C
Measuring range	10 Hz – 800 Hz
Display	2 lines LCD, 16 characters
Power	Battery (9V)
Casing material	Plastic (ABS)
Minimum free belt strand	> 150 mm
Display error	± 1 Hz
Total error	< 5%
Available languages	10
Input limit free strand length	≤ 9,99 m
Input limit belt mass	≤ 9,999 kg/m
Calibration (recommended)	max. 2 years (periodic)





# Cross Reference List

From article number to SAP-material number.

## BETEX Cone Heater

Type	Art. no.	SAP material no.
CONE-HEATER-CHU-120V-US	360600	304048623-0000-10
CONE-HEATER-CHU-230V	360610	304048100-0000-10
CONE-HEATER-CHU-230V-UK	360610-GB	304048119-0000-10
CONE-HEATER-CHC-120V-US	360700	304048631-0000-10
CONE-HEATER-CHC-230V	360710	304048666-0000-10

## Schaeffler MF-IDUCTOR

Type	Art. no.	SAP material no.
MF-IDUCTOR-1.2KW-230V	2311011	300229917-0000-01
MF-IDUCTOR-1.2KW-230V-UK	2311211	300483740-0000-10
MF-IDUCTOR-2.3KW-230V	2313011	300276893-0000-01
MF-IDUCTOR-2.0KW-120V	2313021	300230010-0000-10
MF-IDUCTOR-2.0KW-120V-US	2313031	300230290-0000-01
MF-IDUCTOR-2.3KW-230V-UK	2313211	300483759-0000-10
MF-IDUCTOR-2.0KW-120V-UK	2313221	300483767-0000-10

## Schaeffler HEATER-BASIC

Type	Art. no.	SAP material no.
HEATER20-BASIC-120V-US	4200151-C-US	096657685-0000-10
HEATER20-BASIC-230V	4200251-CE	096657669-0000-10
HEATER20-BASIC-240V-US	4200251-C-US	096657707-0000-10
HEATER20-BASIC-230V-UK	4200251-UK	300431139-0000-10
HEATER50-BASIC-120V-US	4201131-C-US	096657944-0000-10
HEATER50-BASIC-230V	4201231-CE	096657928-0000-10
HEATER50-BASIC-240V-US	4201231-C-US	096657960-0000-10
HEATER50-BASIC-230V-UK	4201231-UK	300431163-0000-10
HEATER100-BASIC-120V-US	4202121-C-US	096660112-0000-10
HEATER100-BASIC-230V	4202221-CE	096658703-0000-10
HEATER100-BASIC-240V-US	4202221-C-US	096660120-0000-10
HEATER100-BASIC-230V-UK	4202221-UK	300431147-0000-10
HEATER150-BASIC-230V	4203221-CE	096660511-0000-10
HEATER150-BASIC-240V-US	4203221-C-US	096660520-0000-10
HEATER150-BASIC-230V-UK	4203221-UK	300431155-0000-10
HEATER200-BASIC-400V	4204421-CE	096660538-0000-10
HEATER200-BASIC-500V	4204521-CE	096660554-0000-10
HEATER200-BASIC-480V-US	4204521-C-US	096660562-0000-10
HEATER200-BASIC-600V-US	4204621-C-US	096660570-0000-10
HEATER200-BASIC-450V	4204721-CE	096660546-0000-10
HEATER400-BASIC-400V	4205411-CE	096663308-0000-10
HEATER400-BASIC-500V	4205511-CE	096663529-0000-10
HEATER400-BASIC-480V-US	4205511-C-US	096663537-0000-10
HEATER400-BASIC-600V-US	4205611-C-US	096663545-0000-10
HEATER400-BASIC-450V	4205711-CE	096663510-0000-10
HEATER600-BASIC-400V	4206411-CE	096663553-0000-10
HEATER600-BASIC-500V	4206511-CE	096663570-0000-10
HEATER600-BASIC-480V-US	4206511-C-US	096663596-0000-10
HEATER600-BASIC-600V-US	4206611-C-US	096663812-0000-10
HEATER600-BASIC-450V	4206711-CE	096663561-0000-10
HEATER800-BASIC-400V	4207411-CE	096663820-0000-10
HEATER800-BASIC-500V	4207511-CE	096663847-0000-10
HEATER800-BASIC-480V-US	4207511-C-US	096663855-0000-10
HEATER800-BASIC-600V-US	4207611-C-US	096663863-0000-10
HEATER800-BASIC-450V	4207711-CE	096663839-0000-10

Type	Art. no.	SAP material no.
HEATER1600-BASIC-400V	4208411-CE	096663871-0000-10
HEATER1600-BASIC-500V	4208511-CE	096663898-0000-10
HEATER1600-BASIC-480V-US	4208511-C-US	096663901-0000-10
HEATER1600-BASIC-600V-US	4208611-C-US	096664118-0000-10
HEATER1600-BASIC-450V	4208711-CE	096663880-0000-10

## Schaeffler HEATER-SMART

Type	Art. no.	SAP material no.
HEATER50-SMART-120V-US	4301131-C-US	096664150-0000-10
HEATER50-SMART-230V	4301231-CE	096664126-0000-10
HEATER50-SMART-240V-US	4301231-C-US	096664169-0000-10
HEATER50-SMART-230V-UK	4301231-UK	300430183-0000-10
HEATER100-SMART-120V-US	4302121-C-US	096664584-0000-10
HEATER100-SMART-230V	4302221-CE	096664576-0000-10
HEATER100-SMART-240V-US	4302221-C-US	096664592-0000-10
HEATER100-SMART-230V-UK	4302221-UK	300430191-0000-10
HEATER150-SMART-230V	4303221-CE	096664614-0000-10
HEATER150-SMART-240V-US	4303221-C-US	096664622-0000-10
HEATER150-SMART-230V-UK	4303221-UK	300430205-0000-10
HEATER200-SMART-400V	4304421-CE	096664681-0000-10
HEATER200-SMART-500V	4304521-CE	096665050-0000-10
HEATER200-SMART-480V-US	4304521-C-US	096665068-0000-10
HEATER200-SMART-600V-US	4304621-C-US	096665076-0000-10
HEATER200-SMART-450V	4304721-CE	096664908-0000-10
HEATER400-SMART-400V	4305411-CE	096677228-0000-10
HEATER400-SMART-500V	4305511-CE	096677252-0000-10
HEATER400-SMART-480V-US	4305511-C-US	096677260-0000-10
HEATER400-SMART-600V-US	4305611-C-US	096677279-0000-10
HEATER400-SMART-450V	4305711-CE	096677236-0000-10
HEATER600-SMART-400V	4306411-CE	096676973-0000-10
HEATER600-SMART-500V	4306511-CE	096676990-0000-10
HEATER600-SMART-480V-US	4306511-C-US	096677716-0000-10
HEATER600-SMART-600V-US	4306611-C-US	096677724-0000-10
HEATER600-SMART-450V	4306711-CE	096676981-0000-10
HEATER800-SMART-400V	4307411-CE	096677767-0000-10
HEATER800-SMART-500V	4307511-CE	096678038-0000-10
HEATER800-SMART-480V-US	4307511-C-US	096678062-0000-10
HEATER800-SMART-600V-US	4307611-C-US	096678208-0000-10
HEATER800-SMART-450V	4307711-CE	096677805-0000-10
HEATER1600-SMART-400V	4308411-CE	096678445-0000-10
HEATER1600-SMART-500V	4308511-CE	096678615-0000-10
HEATER1600-SMART-480V-US	4308511-C-US	096678917-0000-10
HEATER1600-SMART-600V-US	4308611-C-US	096679000-0000-10
HEATER1600-SMART-450V	4308711-CE	096678496-0000-10

## Induction accessories

Type	Art. no.	SAP material no.
MF-GENERATOR.MPROBE-5M-EXT-GREEN	2705611	301572674-0000-10
HEATER.MPROBE-20-200	2705751	097406554-0000-10
HEATER.MPROBE-1600	2705831	097406716-0000-10
MF-GENERATOR.MPROBE-GREEN	2705841	097334561-0000-01
HEATER.MPROBE-400-800	2705851	097406562-0000-10
MF-GENERATOR.MPROBE-RED	2705881	097335029-0000-01
GLOVES-300C	2799921	300966911-0000-10

Type	Art. no.	SAP material no.
GLOVES-250C	2799981	300966903-0000-10
HEATER50.YOKE-10	420007071	096987162-0000-10
HEATER50.YOKE-15	42001011	096987740-0000-10
HEATER50.YOKE-20	420014141	096987766-0000-10
HEATER50.YOKE-30	42002021	096987774-0000-10
HEATER50.YOKE-60	42004041	096987782-0000-10
HEATER50.YOKE-65	42014051	096987790-0000-10
HEATER100.YOKE-15	42021011	096987804-0000-10
HEATER100.YOKE-20	420214141	096988223-0000-10
HEATER100.YOKE-30	42022021	096988240-0000-10
HEATER100.YOKE-45	42023031	096988266-0000-10
HEATER100.YOKE-60	42024041	096988290-0000-10
HEATER100.YOKE-72	42025051	096988304-0000-10
HEATER100.YOKE-85	42026061	096988711-0000-10
HEATER200.YOKE-15	42031011	096996293-0000-10
HEATER200.YOKE-20	420314141	096996307-0000-10
HEATER200.YOKE-30	42032021	096997214-0000-10
HEATER200.YOKE-45	42033031	096997222-0000-10
HEATER200.YOKE-60	42034041	096997249-0000-10
HEATER200.YOKE-72	42035051	096997257-0000-10
HEATER200.YOKE-85	42036061	096997281-0000-10
HEATER200.YOKE-100	42037071	096997796-0000-10
HEATER200.YOKE-110	42037081	096998610-0000-10
HEATER400.YOKE-30	42052021	096998628-0000-10
HEATER400.YOKE-45	42053031	096998636-0000-10
HEATER400.YOKE-60	42054041	096998644-0000-10
HEATER400.YOKE-85	42056061	096998652-0000-10
HEATER400.YOKE-115	42058081	096998660-0000-10
HEATER600.YOKE-60	42064041	096998679-0000-10
HEATER600.YOKE-85	42066061	096998687-0000-10
HEATER600.YOKE-115	42068081	096998695-0000-10
HEATER600.YOKE-130	42069091	096998709-0000-10
HEATER800.YOKE-145	4207100101	097165158-0000-10
HEATER800.YOKE-60	42074041	097165115-0000-10
HEATER800.YOKE-72	42075051	097165123-0000-10
HEATER800.YOKE-85	42076061	097165131-0000-10
HEATER800.YOKE-115	42078081	097165140-0000-10
HEATER1600.YOKE-145	4208100101	097165182-0000-10
HEATER1600.YOKE-215	4208150151	097165204-0000-10
HEATER1600.YOKE-85	42086061	097165166-0000-10
HEATER1600.YOKE-115	42088081	097165174-0000-10

Schaeffler MF-GENERATOR

Type	Art. no.	SAP material no.
MF-GENERATOR3.0-3.5KW-230V	330352301	097975176-0000-10
MF-GENERATOR2.5-10KW-400V	325104001	097046906-0000-01
MF-GENERATOR2.5-10KW-450V	325104501	097112798-0000-01
MF-GENERATOR2.5-10KW-500V	325105001	097331120-0000-01
MF-GENERATOR2.5-10KW-600V	325106001	097331139-0000-01
MF-GENERATOR2.5-22KW-400V	325224001	097331147-0000-01
MF-GENERATOR2.5-22KW-450V	325224501	097331155-0000-01
MF-GENERATOR2.5-22KW-500V	325225001	097331740-0000-01
MF-GENERATOR2.5-22KW-600V	325226001	097331759-0000-01
MF-GENERATOR2.5-44KW-400V	325444001	097332925-0000-01
MF-GENERATOR2.5-44KW-450V	325444501	097332933-0000-01
MF-GENERATOR2.5-44KW-500V	325445001	097332941-0000-01
MF-GENERATOR2.5-44KW-600V	325446001	097332950-0000-01
MF-GENERATOR3.0-10KW-400V	330104001	097332968-0000-01
MF-GENERATOR3.0-10KW-450V	330104501	097333247-0000-01
MF-GENERATOR3.0-10KW-500V	330105001	097333220-0000-01

Type	Art. no.	SAP material no.
MF-GENERATOR3.0-10KW-600V	330106001	097333212-0000-01
MF-GENERATOR3.0-22KW-400V	330224001	097332003-0000-01
MF-GENERATOR3.0-22KW-450V	330224501	097331996-0000-01
MF-GENERATOR3.0-22KW-500V	330225001	097333050-0000-01
MF-GENERATOR3.0-22KW-600V	330226001	097333034-0000-01
MF-GENERATOR3.0-44KW-400V	330444001	097247456-0000-01
MF-GENERATOR3.0-44KW-450V	330444501	097333026-0000-01
MF-GENERATOR3.0-44KW-500V	330445001	097331872-0000-01
MF-GENERATOR3.0-44KW-600V	330446001	097331473-0000-01

Schaeffler MF-GENERATOR accessories

Type	Art. no.	SAP material no.
MF-GENERATOR.CONNECT-22KW-3M	3502009801	097335037-0000-01
MF-GENERATOR.CONNECT-22KW-3M-IR	3502009831	302109706-0000-10
MF-GENERATOR.CONNECT-44KW-3M	3502009851	097292885-0000-01
MF-GENERATOR.CONNECT-44KW-3M-IR	3502009861	302110160-0000-10
MF-GENERATOR.CONNECT-44KW-5M	3502009871	301572682-0000-10

Schaeffler MF-GENERATOR inductors

Type	Art. no.	SAP material no.
MF-INDUCTOR-LAB202X50	3502009001	300343787-0000-10
MF-INDUCTOR-IN157X145	3502009021	300313527-0000-01
MF-INDUCTOR-LAB176X50	3502009031	300313543-0000-01

BETEX Impact

Type	Art. no.	SAP material no.
IMPACT-33	399900-2	300430469-0000-10
IMPACT-39	399900-4	300430477-0000-10

BETEX MSP

Type	Art. no.	SAP material no.
MSP-2/3-120	798250	300438923-0000-10
MSP-2/3-180	798300	300438931-0000-10
MSP-2/3-270	798350	300438940-0000-10
MSP-2/3-300	798400	300438958-0000-10
MSP-2/3-380	798450	300438966-0000-10
MSP-2/3-440	798500	300438974-0000-10

BETEX MP40

Type	Art. no.	SAP material no.
MP-40100	MP40100	304345059-0000-10
MP-40200	MP40200	304345075-0000-10
MP-40300	MP40300	304345083-0000-10
MP-40900-SET	MP40900	304345091-0000-10

BETEX HP

Type	Art. no.	SAP material no.
HP-43	791000	300504489-0000-10
HP-63	792000	300504497-0000-10
HP-83	793000	300504519-0000-10
HP-123	794000	300504683-0000-10
HP-203	796000	300504926-0000-10
HP-303	797000	300504934-0000-10

BETEX HSP

Type	Art. no.	SAP material no.
HSP-43	791500	300511388-0000-10
HSP-63	792500	300511396-0000-10
HSP-83	793500	300511400-0000-10
HSP-123	794500	300511418-0000-10
HSP-203	796500	300511620-0000-10
HSP-303	797500	300511639-0000-10

## BETEX HXP

Type	Art. no.	SAP material no.
HXP-83	793600	300513437-0000-10
HXP-123	794600	300513445-0000-10
HXP-203	796600	300513453-0000-10
HXP-303	797600	300513461-0000-10
HXP-503	799600	300513470-0000-10

## BETEX Tri-section puller

Type	Art. no.	SAP material no.
TRI-SECTION-SET-4T	792160	300690371-0000-10
TRI-SECTION-SET-6T	792210	300690380-0000-10
TRI-SECTION-SET-8T	792340	300690398-0000-10
TRI-SECTION-SET-12T	792495	300690401-0000-10

## BETEX Bearing splitter

Type	Art. no.	SAP material no.
ACC-SET-HP43-HSP43	791100	300690118-0000-10
ACC-SET-HP63-HSP63	792100	300690100-0000-10
ACC-SET-HP83-HSP83-HXP83	793100	300691025-0000-10
ACC-SET-HP123-HSP123-HXP123	794100	300691033-0000-10

## BETEX Tri-section plate

Type	Art. no.	SAP material no.
TRI-SECTION-PLATE-160	791160	300687710-0000-10
TRI-SECTION-PLATE-210	791210	300688628-0000-10
TRI-SECTION-PLATE-340	791340	300688636-0000-10
TRI-SECTION-PLATE-495	791495	300688644-0000-10

## BETEX Mobipuller

Type	Art. no.	SAP material no.
MOBI-PULLER-25T-HV430/S260	700001	301337209-0000-10
MOBI-PULLER-25T-EVA430/S260	700002	301337195-0000-10
MOBI-PULLER-50T-HV430/S260	700003	301337187-0000-10
MOBI-PULLER-50T-EVA430/S260	700004	301337179-0000-10
MOBI-PULLER-50T-EVA430/S340	700005	301337160-0000-10
MOBI-PULLER-50T-EVAD430/S340	700006	301337152-0000-10
MOBI-PULLER-50T-EVAD430/S460	700007	301337144-0000-10

## BETEX HXPC

Type	Art. no.	SAP material no.
HXPC-50T	700016	302294350-0000-10

## BETEX HXPM

Type	Art. no.	SAP material no.
HXPM-50T-2-ARM	700019	301257949-0000-10
HXPM-50T-2/3-ARM-LONG	700014	301257965-0000-10
HXPM-50T-2/3-ARM-SHORT	700017	301257957-0000-10
HXPM-100T-2-ARM	700021	301257973-0000-10
HXPM-100T-2/3-ARM	700015	301257981-0000-10
HXPM-150T-3-ARM	700025	301257990-0000-10

## BETEX BPP &amp; BPPS Side Shift

Type	Art. no.	SAP material no.
BPP-100T-MANUAL-VALVE	700018	301275882-0000-10
BPP-100T-SOLENOID-VALVE	700020	301276927-0000-10
BPPS-100T-MANUAL-VALVE	700023	301276951-0000-10
BPPS-100T-SOLENOID-VALVE	700024	301276960-0000-10

## BETEX NSSS

Type	Art. no.	SAP material no.
NSSS-51	8230051	302295232-0000-10
NSSS-53	8230053	302295259-0000-10

Type	Art. no.	SAP material no.
NSSS-55	8230055	302295267-0000-10
NSSS-57	8230057	302295275-0000-10
NSSS-59	8230059	302295291-0000-10
NSSS-101	8230101	302294937-0000-10
NSSS-102	8230102	302294970-0000-10
NSSS-104	8230104	302294988-0000-10
NSSS-106	8230106	302294996-0000-10
NSSS-108	8230108	302295003-0000-10
NSSS-151	8230151	302295020-0000-10
NSSS-152	8230152	302295038-0000-10
NSSS-154	8230154	302295054-0000-10
NSSS-156	8230156	302295062-0000-10
NSSS-158	8230158	302295070-0000-10
NSSS-251	8230251	302295739-0000-10
NSSS-252	8230252	302295755-0000-10
NSSS-254	8230254	302295771-0000-10
NSSS-256	8230256	302295798-0000-10
NSSS-258	8230258	302295801-0000-10
NSSS-308	8230308	302299491-0000-10
NSSS-502	8230502	302299505-0000-10
NSSS-504	8230504	302299513-0000-10
NSSS-506	8230506	302299823-0000-10
NSSS-508	8230508	302299831-0000-10
NSSS-756	8230756	302299912-0000-10
NSSS-10010	82310010	302302417-0000-10
NSSS-1006	8231006	302299254-0000-10
NSSS-1010	8231010	302295011-0000-10
NSSS-1012	8231012	302295321-0000-10
NSSS-1014	8231014	302295330-0000-10
NSSS-1510	8231510	302295089-0000-10
NSSS-1512	8231512	302295097-0000-10
NSSS-1514	8231514	302295100-0000-10
NSSS-1516	8231515	302295119-0000-10
NSSS-2510	8232510	302296034-0000-10
NSSS-2512	8232512	302296042-0000-10
NSSS-2514	8232514	302296069-0000-10
NSSS-5010	8235010	302299840-0000-10
NSSS-5013	8235013	302299858-0000-10
NSSS-7513	8237513	302300023-0000-10

## BETEX NSLS

Type	Art. no.	SAP material no.
NSLS-50	8210050	303648511-0000-10
NSLS-100	8210100	303649720-0000-10
NSLS-200	8210200	303649739-0000-10
NSLS-300	8210300	303649747-0000-10
NSLS-500	8210500	303649755-0000-10
NSLS-750	8210750	303649763-0000-10
NSLS-1000	8211000	303649771-0000-10
NSLS-1500	8211500	303649780-0000-10

## BETEX NSHS

Type	Art. no.	SAP material no.
NSHS 120	8240120	Upon request
NSHS 121	8240121	Upon request
NSHS 123	8240123	Upon request
NSHS 202	8240202	Upon request
NSHS 206	8240206	Upon request
NSHS 302	8240302	Upon request
NSHS 306	8240306	Upon request
NSHS 603	8240603	Upon request

Cross Reference List

Type	Art. no.	SAP material no.
NSHS 606	8240606	Upon request
NSHS 1003	8241003	Upon request

BETEX AHP sets

Type	Art. no.	SAP material no.
AHP-701-SET	7265501	300824173-0000-10
AHP-702-SET	7265701	300824181-0000-10
AHP-703-SET	7265751	300824190-0000-10
AHP-803-SET	7265832	302041630-0000-10

BETEX EP

Type	Art. no.	SAP material no.
EP-13S-120V	8300010	303973994-0000-10
EP-13D-120V	8300011	303974001-0000-10
EP-13S-230V	8300012	303973978-0000-10
EP-13D-230V	8300013	303973986-0000-10
EP-18S-120V	8300021	303974036-0000-10
EP-18D-120V	8300023	303974044-0000-10
EP-18SS-120V	8300022	Upon request
EP-18DS-120V	8300024	Upon request
EP-18S-230V	8300031	303974010-0000-10
EP-18D-230V	8300033	303974028-0000-10
EP-18SS-230V	8300032	Upon request
EP-18DS-230V	8300034	Upon request
EP-211S-120V	8300041	303974079-0000-10
EP-211SS-120V	8300042	304251771-0000-10
EP-211D-120V	8300043	303974087-0000-10
EP-211DS-120V	8300044	304251763-0000-10
EP-211S-230V	8300051	303974052-0000-10
EP-211SS-230V	8300052	304251755-0000-10
EP-211D-230V	8300053	303974060-0000-10
EP-211DS-230V	8300054	304251739-0000-10
EP-320S-400V	8300061	303974095-0000-10
EP-320SS-400V	8300062	Upon request
EP-320D-400V	8300063	303974109-0000-10
EP-320DS-400V	8300064	Upon request
EP-420S-400V	8300081	303974117-0000-10
EP-420SS-400V	8300082	Upon request
EP-420D-400V	8300083	303974320-0000-10
EP-420DS-400V	8300084	Upon request

BETEX UHAP

Type	Art. no.	SAP material no.
UHAP-2800-ULTRA	7292802	303641282-0000-10
UHAP-2800	7292803	303641266-0000-10

Schaeffler HYDNU-T-E

Type	Art. no.	SAP material no.
HYDNU50-E	7410050	092186300-0000-10
HYDNU55-E	7410055	089705254-0000-10
HYDNU60-E	7410060	092186521-0000-10
HYDNU65-E	7410065	092186505-0000-10
HYDNU70-E	7410070	092186483-0000-10
HYDNU75-E	7410075	086435205-0000-10
HYDNU80-E	7410080	092186440-0000-10
HYDNU85-E	7410085	092186416-0000-10
HYDNU90-E	7410090	089903218-0000-10
HYDNU95-E	7410095	092186394-0000-10
HYDNU100-E	7410100	089705297-0000-10
HYDNU105-E	7410105	092192475-0000-10
HYDNU110-E	7410110	092192343-0000-10

Type	Art. no.	SAP material no.
HYDNU115-E	7410115	092192220-0000-10
HYDNU120-E	7410120	089961072-0000-10
HYDNU125-E	7410125	092192181-0000-10
HYDNU130-E	7410130	092192092-0000-10
HYDNU135-E	7410135	092191932-0000-10
HYDNU140-E	7410140	089961137-0000-10
HYDNU145-E	7410145	092191894-0000-10
HYDNU150-E	7410150	089705319-0000-10
HYDNU155-E	7410155	092191843-0000-10
HYDNU160-E	7410160	089961170-0000-10
HYDNU165-E	7410165	092191797-0000-10
HYDNU170-E	7410170	089961234-0000-10
HYDNU180-E	7410180	089907507-0000-10
HYDNU190-E	7410190	092191509-0000-10
HYDNU200-E	7410200	089961340-0000-10
HYDNU205-E	7410205	092194370-0000-10
HYDNU210-E	7410210	092194362-0000-10
HYDNU215-E	7410215	092194346-0000-10
HYDNU220-E	7410220	089705335-0000-10
HYDNU225-E	7410225	092193935-0000-10
HYDNU230-E	7410230	086435361-0000-10
HYDNU235-E	7410235	092205712-0000-10
HYDNU240-E	7410240	089907710-0000-10
HYDNU250-E	7410250	092205704-0000-10
HYDNU260-E	7410260	089961390-0000-10
HYDNU270-E	7410270	092205690-0000-10
HYDNU275-E	7410275	092205682-0000-10
HYDNU280-E	7410280	089961420-0000-10
HYDNU290-E	7410290	092205674-0000-10
HYDNU295-E	7410295	092205666-0000-10
HYDNU300-E	7410300	089705351-0000-10
HYDNU310-E	7410310	092205658-0000-10
HYDNU315-E	7410315	092205640-0000-10
HYDNU320-E	7410320	092205631-0000-10
HYDNU330-E	7410330	092205623-0000-10
HYDNU335-E	7410335	092205615-0000-10
HYDNU340-E	7410340	092205836-0000-10
HYDNU345-E	7410345	092205828-0000-10
HYDNU350-E	7410350	092205810-0000-10
HYDNU355-E	7410355	092205801-0000-10
HYDNU360-E	7410360	089907817-0000-10
HYDNU365-E	7410365	092205798-0000-10
HYDNU370-E	7410370	092205780-0000-10
HYDNU375-E	7410375	092205771-0000-10
HYDNU380-E	7410380	089961471-0000-10
HYDNU385-E	7410385	092205755-0000-10
HYDNU395-E	7410395	092205720-0000-10
HYDNU400-E	7410400	089961536-0000-10
HYDNU410-E	7410410	092217427-0000-10
HYDNU415-E	7410415	092217419-0000-10
HYDNU420-E	7410420	089907850-0000-10
HYDNU430-E	7410430	092217400-0000-10
HYDNU435-E	7410435	092217389-0000-10
HYDNU440-E	7410440	092217362-0000-10
HYDNU450-E	7410450	092217354-0000-10
HYDNU460-E	7410460	089705483-0000-10
HYDNU470-E	7410470	092217338-0000-10
HYDNU480-E	7410480	089961676-0000-10
HYDNU490-E	7410490	092217273-0000-10
HYDNU500-E	7410500	089961846-0000-10

Type	Art. no.	SAP material no.
HYDNUT510-E	7410510	092217265-0000-10
HYDNUT520-E	7410520	092217133-0000-10
HYDNUT530-E	7410530	089961919-0000-10
HYDNUT540-E	7410540	092217109-0000-10
HYDNUT550-E	7410550	092217095-0000-10
HYDNUT560-E	7410560	089705513-0000-10
HYDNUT570-E	7410570	092217079-0000-10
HYDNUT580-E	7410580	092223233-0000-10
HYDNUT590-E	7410590	09222315-0000-10
HYDNUT600-E	7410600	09222307-0000-10
HYDNUT610-E	7410610	09222293-0000-10
HYDNUT625-E	7410625	09222285-0000-10
HYDNUT630-E	7410630	09222277-0000-10
HYDNUT650-E	7410650	089907892-0000-10
HYDNUT655-E	7410655	092222145-0000-10
HYDNUT670-E	7410670	092222137-0000-10
HYDNUT680-E	7410680	092222129-0000-10
HYDNUT690-E	7410690	092222110-0000-10
HYDNUT695-E	7410695	092230075-0000-10
HYDNUT710-E	7410710	089865979-0000-10
HYDNUT720-E	7410720	092232965-0000-10
HYDNUT740-E	7410740	092232930-0000-10
HYDNUT750-E	7410750	092232922-0000-10
HYDNUT760-E	7410760	092232914-0000-10
HYDNUT780-E	7410780	092232892-0000-10
HYDNUT800-E	7410800	092232876-0000-10
HYDNUT830-E	7410830	092232868-0000-10
HYDNUT850-E	7410850	089705521-0000-10
HYDNUT880-E	7410880	092237746-0000-10
HYDNUT900-E	7410900	092237738-0000-10
HYDNUT930-E	7410930	092237720-0000-10
HYDNUT950-E	7410950	089907930-0000-10
HYDNUT1000-E	7411000	092237703-0000-10
HYDNUT1060-E	7411060	092237690-0000-10
HYDNUT1080-E	7411080	092237681-0000-10
HYDNUT1120-E	7411120	089705556-0000-10
HYDNUT1180-E	7411180	089866118-0000-10

## Schaeffler HYDNUT-E-INCH

Type	Art. no.	SAP material no.
HYDNUT50-E-INCH	7420050	093932677-0000-10
HYDNUT55-E-INCH	7420055	093934165-0000-10
HYDNUT60-E-INCH	7420060	093934998-0000-10
HYDNUT65-E-INCH	7420065	093935633-0000-10
HYDNUT70-E-INCH	7420070	093936907-0000-10
HYDNUT75-E-INCH	7420075	093937199-0000-10
HYDNUT80-E-INCH	7420080	093997965-0000-10
HYDNUT85-E-INCH	7420085	094000638-0000-10
HYDNUT90-E-INCH	7420090	092427022-0000-10
HYDNUT95-E-INCH	7420095	092524397-0000-10
HYDNUT100-E-INCH	7420100	092400760-0000-10
HYDNUT105-E-INCH	7420105	092418341-0000-10
HYDNUT110-E-INCH	7420110	092525296-0000-10
HYDNUT120-E-INCH	7420120	092441297-0000-10
HYDNUT130-E-INCH	7420130	092525520-0000-10
HYDNUT140-E-INCH	7420140	092526284-0000-10
HYDNUT150-E-INCH	7420150	092412360-0000-10
HYDNUT160-E-INCH	7420160	092527809-0000-10
HYDNUT170-E-INCH	7420170	092531466-0000-10
HYDNUT180-E-INCH	7420180	092431364-0000-10

Type	Art. no.	SAP material no.
HYDNUT190-E-INCH	7420190	092531768-0000-10
HYDNUT200-E-INCH	7420200	092423779-0000-10
HYDNUT220-E-INCH	7420220	092377785-0000-10
HYDNUT240-E-INCH	7420240	092532489-0000-10
HYDNUT260-E-INCH	7420260	092425488-0000-10
HYDNUT280-E-INCH	7420280	092426166-0000-10
HYDNUT300-E-INCH	7420300	092416403-0000-10
HYDNUT320-E-INCH	7420320	092534759-0000-10
HYDNUT340-E-INCH	7420340	092407021-0000-10
HYDNUT360-E-INCH	7420360	092536808-0000-10
HYDNUT380-E-INCH	7420380	092426662-0000-10
HYDNUT400-E-INCH	7420400	092417043-0000-10
HYDNUT420-E-INCH	7420420	092538800-0000-10
HYDNUT440-E-INCH	7420440	092543200-0000-10
HYDNUT460-E-INCH	7420460	092402844-0000-10
HYDNUT480-E-INCH	7420480	092546323-0000-10
HYDNUT500-E-INCH	7420500	092549640-0000-10
HYDNUT530-E-INCH	7420530	092413102-0000-10
HYDNUT560-E-INCH	7420560	093759932-0000-10
HYDNUT600-E-INCH	7420600	093757824-0000-10
HYDNUT630-E-INCH	7420630	093762178-0000-10
HYDNUT670-E-INCH	7420670	093453531-0000-10
HYDNUT710-E-INCH	7420710	093763662-0000-10
HYDNUT750-E-INCH	7420750	093765215-0000-10
HYDNUT800-E-INCH	7420800	093765754-0000-10
HYDNUT850-E-INCH	7420850	093768710-0000-10
HYDNUT900-E-INCH	7420900	093769091-0000-10
HYDNUT950-E-INCH	7420950	093741693-0000-10

## Schaeffler HYDNUT-HEAVY

Type	Art. no.	SAP material no.
HYDNUT100-HEAVY	7430100	087022893-0000-10
HYDNUT125-HEAVY	7430125	039083403-0000-02
HYDNUT150-HEAVY	7430150	087023067-0000-10
HYDNUT175-HEAVY	7430175	038456427-0000-02
HYDNUT200-HEAVY	7430200	054758947-0000-10
HYDNUT225-HEAVY	7430225	061190012-0000-10
HYDNUT250-HEAVY	7430250	039620182-0000-10
HYDNUT275-HEAVY	7430275	093097921-0000-10
HYDNUT300-HEAVY	7430300	061569933-0000-10
HYDNUT325-HEAVY	7430325	054409489-0000-10
HYDNUT350-HEAVY	7430350	093244614-0000-10
HYDNUT375-HEAVY	7430375	055315348-0000-10
HYDNUT400-HEAVY	7430400	088547701-0000-10
HYDNUT425-HEAVY	7430425	093250630-0000-10
HYDNUT450-HEAVY	7430450	062207180-0000-10
HYDNUT475-HEAVY	7430475	069844852-0000-10
HYDNUT500-HEAVY	7430500	093253460-0000-10
HYDNUT525-HEAVY	7430525	093253931-0000-10
HYDNUT550-HEAVY	7430550	093265514-0000-10
HYDNUT575-HEAVY	7430575	054551315-0000-10
HYDNUT600-HEAVY	7430600	093265859-0000-10
HYDNUT625-HEAVY	7430625	093266022-0000-10
HYDNUT650-HEAVY	7430650	093266170-0000-10
HYDNUT675-HEAVY	7430675	093266235-0000-10
HYDNUT700-HEAVY	7430700	093266383-0000-10
HYDNUT750-HEAVY	7430750	093266421-0000-10
HYDNUT800-HEAVY	7430800	093266570-0000-10
HYDNUT850-HEAVY	7430850	093266642-0000-10
HYDNUT900-HEAVY	7430900	092764592-0000-10

## Schaeffler HYDNU T pump sets

Type	Art. no.	SAP material no.
AHP-801-HN-SET	7265781	302040919-0000-10
AHP-802-HN-SET	7265782	302041621-0000-10
AP-3000S-HN-SET	720006221	302041087-0000-10
AP-8000S-HN-SET	720006241	302041648-0000-10
EP-320S-HN-SET	8300067	304180335-0000-10

## BETEX PPK

Type	Art. no.	SAP material no.
PPK-4T	7560804	303016558-0000-10
PPK-10T	7560810	303016540-0000-10

## BETEX TL &amp; TLS

Type	Art. no.	SAP material no.
TLS-15T-SET	789160	302981420-0000-10
TLS-15T	789150	302981390-0000-10
TLS-15T-DUO-SET	789162	302981462-0000-10
TL-15T	789170	302981349-0000-10
TL-15T-SET	789180	302981357-0000-10
TL-15T-DUO-SET	789181	302981381-0000-10
TLS-25T	789250	302981489-0000-10
TLS-25T-SET	789260	302982060-0000-10
TLS-25T-DUO-SET	789261	302982078-0000-10

## BETEX PFS

Type	Art. no.	SAP material no.
PFS-10T	789410	302981160-0000-10
PFS-10T-SET	789411	302981179-0000-10
PFS-10T-DUO-SET	789412	302981187-0000-10
PFS-10T-I	789413	302981195-0000-10

## BETEX HNS

Type	Art. no.	SAP material no.
HNS-19-24	781924	302685278-0000-10
HNS-24-32	782432	302685286-0000-10
HNS-32-41	783241	302685294-0000-10
HNS-41-50	784150	302685308-0000-10
HNS-50-60	785060	302685316-0000-10

## BETEX TOOL-RAILWAY-SEALCAP-PRESS2

Type	Art. no.	SAP material no.
TOOL-RAILWAY-SEALCAP-PRESS2	7550100	304411477-0000-10

## BETEX Shims

Type	Art. no.	SAP material no.
SHIMS-RVS-35X300	8125505	302685278-0000-10
SHIMS-RVS-50X500	812552	302685286-0000-10
SHIMS-RVS-75X750	812553	302685294-0000-10
SHIMS-RVS-100X1000	812554	302685308-0000-10
SHIMS-35-005-MN-35X30X0.050	B035005	300750587-0000-10
SHIMS-35-010-MP-35X30X0.100	B035010	300751257-0000-10
SHIMS-35-015-MQ-35X30X0.150	B035015	300751273-0000-10
SHIMS-35-020-MR-35X30X0.200	B035020	300750595-0000-10
SHIMS-35-025-MS-35X30X0.250	B035025	300750609-0000-10
SHIMS-35-040-MT-35X30X0.400	B035040	300750617-0000-10
SHIMS-35-050-MU-35X30X0.500	B035050	300751222-0000-10
SHIMS-35-070-MV-35X30X0.700	B035070	300751230-0000-10
SHIMS-35-100-MW-35X30X1.000	B035100	300751249-0000-10
SHIMS-50-0025-AK-50X50X0.0250	B0500025	300753241-0000-10
SHIMS-50-005-AN-50X50X0.050	B050005	300753250-0000-10
SHIMS-50-010-AP-50X50X0.100	B050010	300753268-0000-10
SHIMS-50-015-AQ-50X50X0.150	B050015	300753276-0000-10

Type	Art. no.	SAP material no.
SHIMS-50-020-AR-50X50X0.200	B050020	300753284-0000-10
SHIMS-50-025-AS-50X50X0.250	B050025	300766076-0000-10
SHIMS-50-040-AT-50X50X0.400	B050040	300753292-0000-10
SHIMS-50-050-AU-50X50X0.500	B050050	300753306-0000-10
SHIMS-50-070-AV-50X50X0.700	B050070	300753314-0000-10
SHIMS-50-100-AW-50X50X1.000	B050100	300753527-0000-10
SHIMS-50-200-AX-50X50X2.000	B050200	300753535-0000-10
SHIMS-50-300-AY-50X50X3.000	B050300	300753543-0000-10
SHIMS-75-005-BN-75X75X0.050	B075005	300752547-0000-10
SHIMS-75-010-BP-75X75X0.100	B075010	300752555-0000-10
SHIMS-75-015-BQ-75X75X0.150	B075015	300752563-0000-10
SHIMS-75-020-BR-75X75X0.200	B075020	300752571-0000-10
SHIMS-75-0025-BK-75X75X0.0250	B0750025	300752539-0000-10
SHIMS-75-025-BS-75X75X0.250	B075025	300752580-0000-10
SHIMS-75-040-BT-75X75X0.400	B075040	300752598-0000-10
SHIMS-75-050-BU-75X75X0.500	B075050	300752601-0000-10
SHIMS-75-070-BV-75X75X0.700	B075070	300752610-0000-10
SHIMS-75-100-BW-75X75X1.000	B075100	300752628-0000-10
SHIMS-75-200-BX-75X75X2.000	B075200	300752636-0000-10
SHIMS-75-300-BY-75X75X3.000	B075300	300752644-0000-10
SHIMS-100-0025-CK-100X100X0.0250	B1000025	300752920-0000-10
SHIMS-100-005-CN-100X100X0.050	B100005	300752938-0000-10
SHIMS-100-010-CP-100X100X0.100	B100010	300752946-0000-10
SHIMS-100-015-CQ-100X100X0.150	B100015	300752954-0000-10
SHIMS-100-020-CR-100X100X0.200	B100020	300752962-0000-10
SHIMS-100-025-CS-100X100X0.250	B100025	300752970-0000-10
SHIMS-100-040-CT-100X100X0.400	B100040	300752989-0000-10
SHIMS-100-050-CU-100X100X0.500	B100050	300752997-0000-10
SHIMS-100-070-CV-100X100X0.700	B100070	300753004-0000-10
SHIMS-100-100-CW-100X100X1.000	B100100	300753012-0000-10
SHIMS-100-200-CX-100X100X2.000	B100200	300753128-0000-10
SHIMS-100-300-CY-100X100X3.000	B100300	300753136-0000-10
SHIMS-125-0025-DK-125X125X0.0250	B1250025	300752180-0000-10
SHIMS-125-005-DN-125X125X0.050	B125005	300752199-0000-10
SHIMS-125-010-DP-125X125X0.100	B125010	300752202-0000-10
SHIMS-125-015-DQ-125X125X0.150	B125015	300752210-0000-10
SHIMS-125-020-DR-125X125X0.200	B125020	300752849-0000-10
SHIMS-125-025-DS-125X125X0.250	B125025	300752865-0000-10
SHIMS-125-040-DT-125X125X0.400	B125040	300752873-0000-10
SHIMS-125-050-DU-125X125X0.500	B125050	300752881-0000-10
SHIMS-125-070-DV-125X125X0.700	B125070	300752890-0000-10
SHIMS-125-100-DW-125X125X1.000	B125100	300752911-0000-10
SHIMS-125-200-DX-125X125X2.000	B125200	300753322-0000-10
SHIMS-125-300-DY-125X125X3.000	B125300	300753330-0000-10
SHIMS-200-0025-EK-200X200X0.0250	B2000025	300752660-0000-10
SHIMS-200-005-EN-200X200X0.050	B200005	300752679-0000-10
SHIMS-200-010-EP-200X200X0.100	B200010	300752687-0000-10
SHIMS-200-015-EQ-200X200X0.150	B200015	300752695-0000-10
SHIMS-200-020-ER-200X200X0.200	B200020	300752709-0000-10
SHIMS-200-025-ES-200X200X0.250	B200025	300752725-0000-10
SHIMS-200-040-ET-200X200X0.400	B200040	300752733-0000-10
SHIMS-200-050-EU-200X200X0.500	B200050	300752741-0000-10
SHIMS-200-070-EV-200X200X0.700	B200070	300752750-0000-10
SHIMS-200-100-EW-200X200X1.000	B200100	300752776-0000-10
SHIMS-200-200-EX-200X200X2.000	B200200	300752784-0000-10
SHIMS-200-300-EY-200X200X3.000	B200300	300752792-0000-10
SHIMS-CASE-ABCD-10/9	B020019	303497645-0000-10
SHIMS-CASE-ABCD-10/10	B020030	300692196-0000-10
SHIMS-CASE-ABCD-10/11	B020040	303497653-0000-10
SHIMS-CASE-ABCD-10/12	B020060	303497670-0000-10

Type	Art. no.	SAP material no.
SHIMS-CASE-ABC-10/10	B020100	300692170-0000-10
SHIMS-CASE-ABC-10/9	B020110	303497815-0000-10
SHIMS-CASE-ABC-10/11	B020140	303498722-0000-10
SHIMS-CASE-ABC-10/12	B020160	303498730-0000-10
SHIMS-CASE-AB-10/9	B020210	303497777-0000-10
SHIMS-CASE-AB-10/10	B020230	303497785-0000-10
SHIMS-CASE-AB-10/11	B020240	303497793-0000-10
SHIMS-CASE-AB-10/12	B020270	303497807-0000-10
SHIMS-CASE-BC-10/9	B020310	303497688-0000-10
SHIMS-CASE-BC-10/10	B020330	303497696-0000-10
SHIMS-CASE-BC-10/11	B020340	303497700-0000-10
SHIMS-CASE-BC-10/12	B020370	303497718-0000-10
SHIMS-CASE-CD-10/9	B020410	303498030-0000-10
SHIMS-CASE-CD-10/10	B020430	303498048-0000-10
SHIMS-CASE-CD-10/11	B020440	303498064-0000-10
SHIMS-CASE-CD-10/12	B020470	303498072-0000-10
SHIMS-CASE-E-10/9	B020590	303498080-0000-10
SHIMS-CASE-E-10/10	B020600	300692560-0000-10
SHIMS-CASE-E-10/11	B020620	303498102-0000-10
SHIMS-CASE-E-10/12	B020660	303498110-0000-10

## Schaeffler LASER-EQUILIGN2

Type	Art. no.	SAP material no.
LASER-EQUILIGN2	780500	096035269-0000-10

## Schaeffler LASER-SMARTY3

Type	Art. no.	SAP material no.
LASER-SMARTY3	7803105	301252106-0000-10

## Schaeffler LASER-TRUMMY2

Type	Art. no.	SAP material no.
LASER-TRUMMY2	780703	056652895-0000-10



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