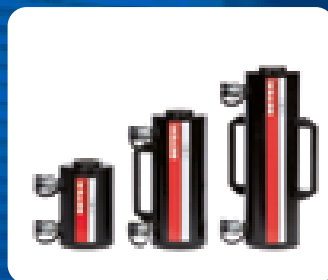




ANNO 1978

Maintenance & hydraulic tools for bearings and transmission parts



BETEX STOOL
MAINTENANCE

Maintenance and hydraulic tools for bearings and transmission parts

Bega Special Tools, established in 1978, is an internationally operating company. We are manufacturer and distributor of special tools under our brand name BETEX®. These special maintenance tools are used for the safe and cost-effective mounting and dismounting of bearings and transmission parts.



Dealer network

The tools are used in production and maintenance departments in MRO and OEM companies. Bega exports through a network of distributors and delivers to all types of industries. For further information and details of a nearby dealer, please contact: sales@bega.nl.

Bega is distributor of:



**Perma automatic
lubrication systems**

Catalogue on request



Power Team

Catalogue on request

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Aluminium hand pumps, 700 bar

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BETEX® INDUCTION HEATERS

Mounting & Dismounting

Why use induction heating?

Induction heating is a superior, fast and controlled heating method. It is a safe and environmentally-friendly alternative to traditional heating methods such as ovens, oil baths or blow torches. These methods generate smoke, fumes or oil waste and are 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 BETEX® induction heaters guarantees maximum demagnetization (< 2A/cm). This has a major impact on the service life of for instance bearings and gear wheels.

Energy efficient

All BETEX® 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 (ΔT).

For more control and stress-free mounting

Thanks to the 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.



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-frequency 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

Bega develops, manufactures and sells BETEX® induction heaters for professional use in industry and industrial services. Our induction heaters are used around the world, are reliable and user friendly.



Advantages of BETEX® induction heaters

- ✓ Safety for the user and the workpiece to be heated
- ✓ For mounting and dismounting
- ✓ 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><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

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

Read more on page 30.



All heaters are supplied with:

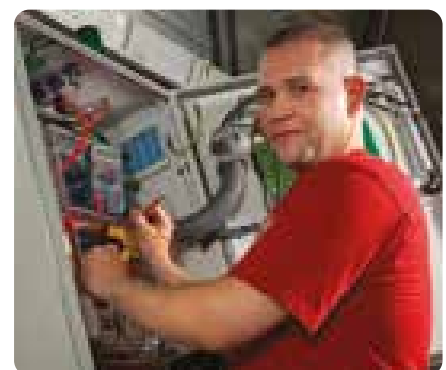
- Instruction manual
- Heat-resistant gloves 250°C / 482 °F
- Magnetic temperature probe (240°C / 464 °F)
- Vaseline for maintenance

Dependable quality

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

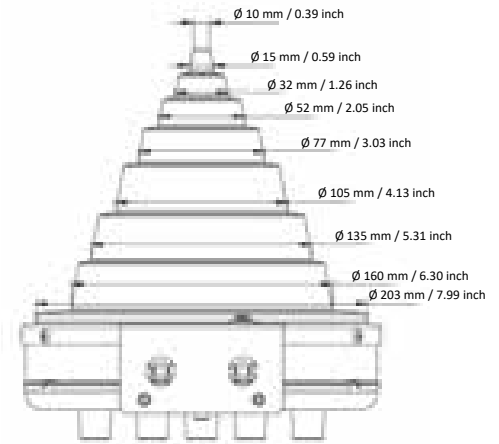
Service & Warranty

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



ELECTRIC HEATERS

BETEX Cone Heater, CH series



BETEX Cone Heater

For the heating of bearings, enabling easy mounting by means of shrink-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 | 50/60Hz | 50/60Hz |
| Max. weight ± kg | 5-7 kg | 5-7 kg |
| 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 | - | Yes |
| Dimensions mm / LxWxH | 365x220x240 | 365x220x240 |
| Heater weight kg | 2.4 | 2.6 |

INDUCTION HEATERS

BETEX iDuctor – hand tool

The ultimate tool for flameless heating

The BETEX iDuctor is a professional type of induction hand tool. 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. Also suitable for removing decals and coating layers.

Advantages

- ✓ Ergonomic design
- ✓ Time savings
- ✓ Cost savings
- ✓ Convenient
- ✓ Can be operated with one hand
- ✓ No open flames
- ✓ Safe to use
- ✓ Versatile
- ✓ Suitable for difficult to access locations
- ✓ Maintenance free



Supplied with case

Both devices are supplied in a handy PE case with a 2-mtr flexible inductor and heat-resistant gloves (250°C).



BETEX iDuctor 1 – 1200W

This is an ideal solution for stuck nuts, bolts, etc., where often a conventional blow torch or grinder is used. Using a blow torch with open flames entails some form of risk and may cause pollution. A grinder can spark and cause damage to the area surrounding the part. Workplaces become safer, cleaner and more efficient with the BETEX iDuctor 1.



BETEX iDuctor 2 – 2300W

The only induction hand tool on the market with an output of no less than 2300 Watts. Using the BETEX iDuctor 2 you can heat larger and heavier workpieces even faster. No open flames. Considerable time savings.



| | Art. no | Description | Art. no | Description |
|---|---------|--|---------|--|
| | 231101 | iDuctor 1, 230V CE | 231301 | iDuctor 2, 230V CE* |
| | 231102 | iDuctor 1, 120V CE, incl. transformer | 231302 | iDuctor 2, 120V CE, incl. transformer* |
| | 231103 | iDuctor 1, c(UL)us 120V, incl. transformer | | |
| Voltage/Amp/Hz | | 230V/6A, 50/60Hz | | 230V/12A, 50/60Hz |
| Power | | 1200W | | 2300W |
| Thermal protection | | Yes | | Yes |
| Error message | | Yes | | Yes |
| Cooling fan | | Yes | | Yes |
| Microprocessor controlled, automatic power control in case of overload or overheating | | Yes | | Yes |
| LED lighting | | Yes | | Yes |

Optional

- Set of 9 inductors, consisting of 8 induction coils with min/max inner diameter: 18-52 mm (bolt sizes M8-M30) and 1 U-inductor, inner diameter 160 mm; easy to exchange
- Flexible inductor for BETEX iDuctor 1: 1.1 meters
- Flexible inductor for BETEX iDuctor 2: 2.5, 3, 3.5 meters
- ID pad for localised heating of surfaces, removal of decals, adhesives and coatings
- Heat-resistant gloves up to 300°C / 572 °F



| | Art. no | Inductor diameter / length mm | Temp. isolation |
|---------------------|---------|-------------------------------|-----------------|
| iDuctor 1 | | | |
| Inductor 1.1 mtr | 231202 | 3.5 / 1100 | 650°C |
| Inductor 2.0 mtr | 231203 | 3.5 / 2000 | 650°C |
| ID-pad | 231205 | 3.5 / - | 250°C |
| Inductor set 9 pcs. | 231204 | 3.5 / - | 250°C |
| iDuctor 2 | | | |
| Inductor 2.0 mtr | 231203 | 3.5 / 2000 | 650°C |
| Inductor 2.5 mtr | 231217 | 3.5 / 2500 | 650°C |
| Inductor 3.0 mtr | 231218 | 3.5 / 3000 | 650°C |
| Inductor 2.5 mtr | 231219 | 3.5 / 3500 | 650°C |
| ID-pad | 231205 | 3.5 / - | 250°C |
| Inductor set 9 pcs. | 231304 | 3.5 / - | 250°C |

Inductor sets consist of:

*BETEX iDuctor 1 – Induction coils:
M30, M24, M20, M16, M12, M10, M08, (with a 3.5-mm winding), U-coil*

*BETEX iDuctor 2 – Induction coils:
M30, M24, M20, M16, M12, M10*, M08*, (with a 3.5-mm* or 5.5-mm winding), U-coil*

INDUCTION HEATERS – LIGHTWEIGHT: 7 KG

BETEX 24 XLDi



0

min. ID Ø mm

180

max. OD Ø mm

50

max. width mm

10

max. bearing weight kg

BETEX 24 XLDi

- Portable induction heater, weighs as little as 7 kg
- Single temperature measurement
- Digital display
- Ideal for use in workshops or on-site
- No yokes necessary

Read more about the advantages of induction heaters on page 6.

| Type | BETEX XLDi |
|---------------------------|-----------------|
| Power | 1200W |
| Voltage/Amp standard | 230V/16A |
| Frequency Hz | 50-60 |
| Temperature control | Yes |
| Time control | Yes |
| Max. temperature °C / °F | 150 °C / 302 °F |
| Max. time range | 0-45 min. |
| Temperature hold | Yes |
| Automatic demagnetization | <2A/cm |
| Weight in kg | 7 |

See page 27 for detailed technical specifications.



INDUCTION HEATERS – PORTABLE

BETEX BLF 200 portable



10

min. ID Ø mm

240

max. OD Ø mm

120

max. width mm

20

max. bearing weight kg

BASIC
SERIES

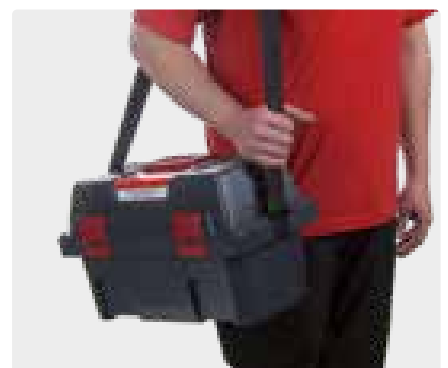
BETEX BLF 200

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

Read more about the advantages of induction heaters on page 6.

| Type | BETEX BLF 200 |
|--------------------------|---------------------|
| Power 230V | 3.0 kVA |
| Power 120V | 1.5 kVA |
| Voltage/Amp standard | 230V/16A |
| Voltage/Amp optional | 120V/15A |
| Frequency Hz | 50-60 |
| 5 yokes included, mm | Ø 7, 10, 14, 20, 40 |
| Temperature check | Yes |
| Time check | Yes |
| Max. temperature °C / °F | 150 °C / 302 °F |
| Max. time range | 0-45 min. |
| Temperature hold | Yes |
| Automatic demagnetising | <2A/cm |
| Weight kg (incl. yokes) | 21 |

See page 27 for detailed technical specifications.



INDUCTION HEATERS

BETEX BLF 201 & SLF 301


10/65

min. ID Ø mm

400

max. OD Ø mm

120

max. width mm

50





max. bearing weight kg

BASIC
 SERIES

BETEX BLF 201

- Portable induction heater
- Single temperature measurement
- Digital display
- 3 yokes included.

Read more about the advantages of induction heaters on page 6.

| Type | BETEX BLF 201 BASIC | BETEX SLF 301 SMART |
|-------------------------------|---------------------|---|
| Power 230V | 3.0 kVA | 3.0 kVA |
| Power 120V | 1.5 kVA | 1.5 kVA |
| Voltage/Amp standard | 230V/13A | 230V/13A |
| Voltage/Amp optional | 120V/13A | 120V/13A |
| Frequency Hz | 50-60 | 50-60 |
| Log functionality | No | Yes |
| Magnetic probe | 1 | 2 |
| Delta-T ΔT | No | Yes |
| 3 yokes included, mm | Ø 7, 14, 40x50 | Ø 7, 14, 40x50 |
| Temperature check | Yes | Yes  |
| Time control | Yes | Yes  |
| Time or temperature control | No | Yes  |
| Temperature and speed control | No | Yes  |
| Max. temperature °C / °F | 240 °C / 464 °F | 240 °C / 464 °F |
| Max. time range | 0-45 min. | 0-99 min. |
| Temperature hold | Yes | Yes |
| Automatic demagnetization | <2A/cm | <2A/cm |
| Weight kg (excl. yokes) | 21 | 21 |

See page 27 for detailed technical specifications.



10/65

min. ID Ø mm

400

max. OD Ø mm

120

max. width mm

50

max. bearing weight kg

SMART
SERIES

*Use in combination with
Impact fitting tool sets.*

BETEX SLF 301

- Portable induction heater
- Double temperature measurement ΔT
- Touchscreen with clear graph
- Log function and export to USB stick
- Create proof of work report
- Stress-free heating
- 3 yokes included

ΔT

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**



**Heating a hanging workpiece, for
small bores**



**Recommended horizontal
heating position**

INDUCTION HEATERS

BETEX BLF 202 & SLF 302


30/72

min. ID Ø mm

500

max. OD Ø mm

180

max. width mm

100





max. bearing weight kg

BASIC
 SERIES

BETEX BLF 202

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

Read more about the advantages of induction heaters on page 6.

| Type | BETEX BLF 202 BASIC | BETEX SLF 302 SMART |
|-------------------------------|---------------------|---|
| Power 230V | 3.7 kVA | 3.7 kVA |
| Power 120V | 1.8 kVA | 1.8 kVA |
| Voltage/Amp standard | 230V/16A | 230V/16A |
| Voltage/Amp optional | 120V/15A | 120V/16A |
| Frequency Hz | 50-60 | 50-60 |
| Log functionality | No | Yes |
| Magnetic probe | 1 | 2 |
| Delta-T ΔT | No | Yes |
| 2 yokes included, mm | Ø 20, 50 | Ø 20, 50 |
| Temperature control | Yes | Yes  |
| Time control | Yes | Yes  |
| Time or temperature control | No | Yes  |
| Temperature and speed control | No | Yes  |
| Max. temperature °C / °F | 240 °C / 464 °F | 240 °C / 464 °F |
| Max. time range | 0-45 min. | 0-99 min. |
| Temperature hold | Yes | Yes |
| Automatic demagnetization | <2A/cm | <2A/cm |
| Weight kg (excl. yokes) | 31 | 31 |

See page 27 for detailed technical specifications.



30/72

min. ID Ø mm

500

max. OD Ø mm

180

max. width mm

100

max. bearing weight kg

SMART
SERIES

*Use in combination with
Impact fitting tool sets.*

BETEX SLF 302

- Benchtop model, heating capacity up to 100 kg
- With swivel arm and 2 yokes included
- Double temperature measurement ΔT
- Touchscreen with clear graph
- Log function and export to USB stick
- Create proof of work report
- Stress-free heating

ΔT

For more control and stress-free mounting

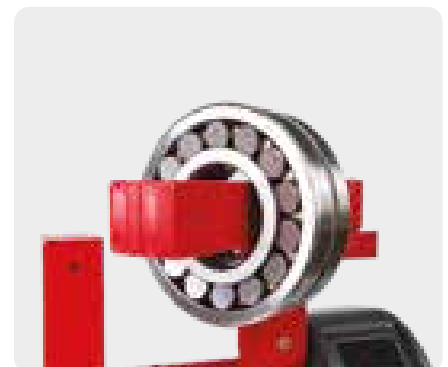
Thanks to the Delta-T ΔT monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



**Log function and export to
USB stick**



**Recommended horizontal
heating position**



Ergonomic swivel arm

INDUCTION HEATERS

BETEX BLF 203 & SLF 303


45/110

min. ID Ø mm

600

max. OD Ø mm

210

max. width mm

150





max. bearing weight kg

BASIC
 SERIES

BETEX BLF 203

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

Read more about the advantages of induction heaters on page 6.

| Type | BETEX BLF 203 BASIC | BETEX SLF 303 SMART |
|-------------------------------|---------------------|---|
| Power 230V | 3.7 kVA | 3.7 kVA |
| Power 120V | No | No |
| Voltage/Amp standard | 230V/16A | 230V/16A |
| Voltage/Amp optional | No | No |
| Frequency Hz | 50-60 | 50-60 |
| Log functionality | No | Yes |
| Magnetic probe | 1 | 2 |
| Delta-T ΔT | No | Yes |
| 2 yokes included, mm | Ø 30, 70x80 | Ø 30, 70x80 |
| Temperature control | Yes | Yes  |
| Time control | Yes | Yes  |
| Time or temperature control | No | Yes  |
| Temperature and speed control | No | Yes  |
| Max. temperature °C / °F | 240 °C / 464 °F | 240 °C / 464 °F |
| Max. time range | 0-45 min. | 0-99 min. |
| Temperature hold | Yes | Yes |
| Automatic demagnetization | <2A/cm | <2A/cm |
| Weight kg (excl. yokes) | 52 | 52 |

See page 27 for detailed technical specifications.



DT

Delta T



45/110

min. ID Ø mm

600

max. OD Ø mm

210

max. width mm

150

max. bearing weight kg

SMART
SERIES

*Use in combination with
Impact fitting tool sets.*

BETEX SLF 303

- Powerful benchtop model, heating capacity up to 150 kg
- With swivel arm and 2 yokes included
- Double temperature measurement ΔT
- Touchscreen with clear graph
- Log function and export to USB stick
- Create proof of work report
- Stress-free heating

DT

For more control and stress-free mounting

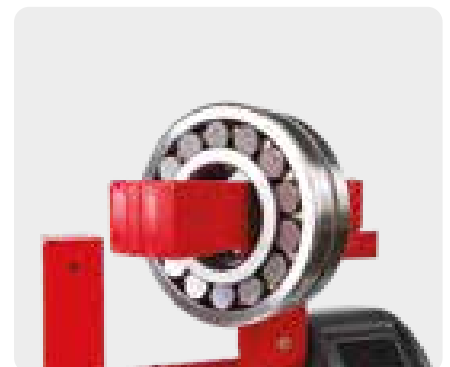
Thanks to the Delta-T ΔT monitoring, it is possible to measure the internal and external temperature of a workpiece with 2 temperature probes. Thus the maximum preset temperature difference between 2 points can never be exceeded. This achieves even and uniform heating and prevents material stress.



**Log function and export to
USB stick**



**Recommended horizontal
heating position**



Ergonomic swivel arm

INDUCTION HEATERS – TURBO

BETEX 40 RSD & 40 RSDm **TURBO**



30/160

min. ID Ø mm

790

max. OD Ø mm

315

max. width mm

350

max. bearing weight kg



TURBO

- The TURBO effect only works when the workpiece is in a horizontal position
- High output, energy efficient

BETEX 40 RSD **TURBO**

- Powerful benchtop model, heating capacity up to 350kg
- With swivel arm
- Suitable for horizontal and vertical heating
- Electronically controlled power regulation
- Acoustic signal at the end of each heating cycle
- Push buttons for easy operation
- Digital display
- Including magnetic sensor up to 240°C / 464 °F (optionally up to 350°C / 622 °F)
- Automatic power reduction
- Yokes: selection of 5 sizes
- Mobile version BETEX 40 RSDm
- Voltages: 400V, 480V, 500V and 600V

Read more about the advantages of induction heaters on page 6.

| Type | BETEX 40 RSD and RSDm (mobile) TURBO |
|---------------------------|--|
| Power | 8 kVA |
| Voltage/Amp standard | 2 ~ 400V/20A |
| Frequency Hz | 50-60 |
| Temperature control | Yes |
| Time control | Yes |
| Max. temperature °C / °F | 240 °C / 464 °F (Optional 350 °C / 662 °F) |
| Max. time range | 0-60 min. |
| Temperature hold | Yes |
| Automatic demagnetization | <2A/cm |
| Weight in kg | 97 (RSD) 160 (RSDm) |

See page 28 for detailed technical specifications.

**30/160**

min. ID Ø mm

790

max. OD Ø mm

315

max. width mm

350

max. bearing weight kg

**TURBO**

- The TURBO effect only works when the workpiece is in a horizontal position
- High output, energy efficient

BETEX 40 RSDm TURBO – Mobile version**Read more about the advantages of induction heaters on page 6.****Folding operating panel**

INDUCTION HEATERS – STANDARD

BETEX 38 ZFD



30

min. ID Ø mm

720

max. OD Ø mm

340

max. width mm

300

max. bearing weight kg

BETEX 38 ZFD

- Mobile heater with heating capacity up to 300 kg
- With swivel arm
- Suitable for horizontal and vertical heating
- Electronically controlled power regulation
- Acoustic signal at the end of each heating cycle
- Push buttons for easy operation
- Digital display
- Including magnetic sensor up to 240°C (optionally up to 350°C)
- Automatic power reduction
- Yokes: selection of 5 sizes
- Voltages: 400V, 480V, 500V and 600V

Read more about the advantages of induction heaters on page 6.



Ergonomic swivel arm



Folding operating panel

| Type | BETEX 38 ZFD |
|---------------------------|--|
| Power | 12 kVA |
| Voltage/Amp standard | 2 ~ 400V/30A |
| Frequency Hz | 50-60 |
| Temperature control | Yes |
| Time control | Yes |
| Max. temperature °C / °F | 240 °C / 464 °F (Optional 350 °C / 662 °F) |
| Max. time range | 0-99 min. |
| Temperature control | Yes |
| Automatic demagnetization | <2A/cm |
| Weight in kg | 125 |

See page 28 for detailed technical specifications.

INDUCTION HEATERS – TURBO

BETEX 40 RMD TURBO



60/175

min. ID Ø mm

920

max. OD Ø mm

365

max. width mm

600

max. bearing weight kg



TURBO

- The TURBO effect only works when the workpiece is in a horizontal position
- High output, energy efficient

BETEX 40 RMD TURBO

- Mobile heater with heating capacity up to 600kg
- Suitable for horizontal and vertical heating
- With swivel arm
- Electronically controlled power regulation
- Acoustic signal at the end of each heating cycle
- Push buttons for easy operation
- Digital display
- Including magnetic sensor up to 240°C / 464 °F (optionally up to 350°C / 622 °F)
- Yokes: selection of 4 sizes
- Automatic power reduction
- Including fixed or adjustable supports for maximum support
- Voltages: 400V, 480V, 500V and 600V

Read more about the advantages of induction heaters on page 6.



Folding operating panel

| Type | BETEX 40 RMD TURBO |
|-------------------------------|--|
| Power | 12 kVA |
| Voltage/Amp standard | 2 ~ 400V/30A |
| Frequency Hz | 50-60 |
| Temperature control | Yes |
| Time control | Yes |
| Max. temperature °C / °F | 240 °C / 464 °F (Optional 350 °C / 662 °F) |
| Max. time range | 0-99 min. |
| Temperature hold | Yes |
| Automatic demagnetization | <2A/cm |
| Weight adjustable supports kg | 205 |
| Weight fixed supports kg | 185 |

See page 28 for detailed technical specifications.

INDUCTION HEATERS – STANDARD

BETEX SUPER & SUPER DL-700



BETEX SUPER

60

min. ID Ø mm

900

max. OD Ø mm

400

max. width mm

600

max. bearing weight kg

BETEX SUPER DL-700

60

min. ID Ø mm

1300

max. OD Ø mm

700

max. width mm

600

max. bearing weight kg

BETEX SUPER

- Heavy-duty heaters for special applications, in maintenance and production
- Heating capacity up to 600 kg
- Electronically controlled power regulation
- Push buttons for easy operation
- Digital display
- Acoustic signal at the end of each heating cycle
- Including magnetic sensor up to 240°C (optionally up to 350°C)
- Including 1 yoke, 100 mm
- Voltages: 400V, 480V, 500V and 600V

Optional:

- Electric crane

Read more about the advantages of induction heaters on page 6.

| Type | BETEX SUPER / DL-700 |
|---------------------------|--|
| Power | 24 kVA |
| Voltage/Amp standard* | 2 ~ 400V/60A |
| Frequency Hz | 50-60 |
| Temperature control | Yes |
| Time control | Yes |
| Max. temperature °C / °F | 240 °C / 464 °F (Optional 350 °C / 662 °F) |
| Max. time range | 0-99 min. |
| Temperature hold | Yes |
| Automatic demagnetization | <2A/cm |
| Weight in kg | 220/320 |

* See page 29 for detailed technical specifications and other voltages.



INDUCTION HEATERS – TURBO

BETEX SUPER TURBO



175/200

min. ID Ø mm

1700

max. OD Ø mm

750

max. width mm

1200

max. bearing weight kg



TURBO

- The TURBO effect only works when the workpiece is in a horizontal position
- High output, energy efficient

BETEX SUPER TURBO

- Heavy-duty heaters for special applications, in maintenance and production, with adjustable yoke
- Heating capacity up to 1200kg
- Electronically controlled power regulation
- Push buttons for easy operation
- Digital display
- Acoustic signal at the end of each heating cycle
- Including magnetic sensor up to 240°C (optionally up to 350°C)
- Including 1 yoke, 100 mm
- Voltages: 400V, 480V, 500V and 600V

Read more about the advantages of induction heaters on page 6.

| Type | BETEX SUPER TURBO |
|---------------------------|--|
| Power | 24 kVA |
| Voltage/Amp standard* | 2 ~ 400V/60A |
| Frequency Hz | 50-60 |
| Temperature control | Yes |
| Time control | Yes |
| Max. temperature °C / °F | 240 °C / 464 °F (Optional 350 °C / 662 °F) |
| Max. time range | 0-99 min. |
| Temperature hold | Yes |
| Automatic demagnetization | <2A/cm |
| Weight in kg | 450 (incl. yoke) |

* See page 29 for detailed technical specifications and other voltages.



Extendable yoke

INDUCTION HEATERS – STANDARD

BETEX GIANT, 40, 100 kVA



85/215

min. ID Ø mm

1400-2500

max. OD Ø mm

440-990

max. width mm

1500-3500

max. bearing weight kg

Multiple types available

Various capacities and designs are possible. See page 29 for detailed technical specifications.

BETEX GIANT

- Heavy-duty heaters for special applications, in maintenance and production
- Heating capacities from 1500 to 3500 kg
- Electronically controlled power regulation
- Push buttons for easy operation
- Digital display
- Acoustic signal at the end of each heating cycle
- Including magnetic sensor up to 240°C (optionally up to 350°C)
- Yokes: see technical specifications

Optional:

- Electric crane

Read more about the advantages of induction heaters on page 6.



BETEX GIANT, 100 kVA



Optional crane

TECHNICAL SPECIFICATIONS



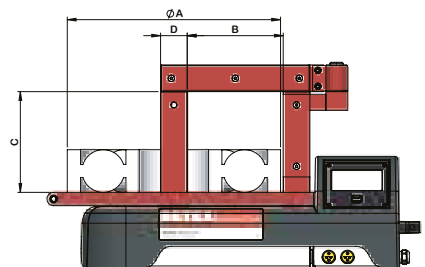
| Type | 24 XLDi Portable | BLF 200 Portable | BLF 201 | BLF 202 | BLF 203 | SLF 301 ΔT | SLF 302 ΔT | SLF 303 ΔT |
|--|---------------------|----------------------|-----------------|-----------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Standard power 230V | 1200kW | 3.0 kVA | 3.7 kVA | 3.7 kVA | 3.7 kVA | 3.0 kVA | 3.7 kVA | 3.7 kVA |
| Optional power 120V | 1200kW | 1.5 kVA | 1.5 kVA | 1.8 kVA | | 1.5 kVA | 1.8 kVA | |
| Voltage/Amp*: standard | 230V/16A | 230V/16A | 230V/16A | 230V/16A | 230V/16A | 230V/13A | 230V/16A | 230V/16A |
| Voltage/Amp*: optional | 120V/15A | 120V/15A | 120V/15A | 120V/15A | | 120V/13A | 120V/15A | |
| Frequency Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Yokes, standard mm | - | 7, 10, 14, 20, 40 | 7, 14, 40x50 | 20, 50 | 30, 70x80 | 7, 14, 40x50 | 20, 50 | 30, 70x80 |
| Swivel arm | - | No | No | Yes | Yes | No | Yes | Yes |
| Max. workpiece weight kg (\pm) | 10 | 20 | 50 | 100 | 150 | 50 | 100 | 150 |
| Min. ID \varnothing mm, vertical/horizontal | - | 10 | 10/65 | 30/72 | 45/110 | 10/65 | 30/72 | 45/110 |
| Max. OD \varnothing mm | A 180 | 240 | 400 | 500 | 600 | 400 | 500 | 600 |
| Max. width mm | B - | 120 | 120 | 180 | 210 | 120 | 180 | 210 |
| Pole height mm | C - | 135 | 130 | 185 | 205 | 130 | 185 | 205 |
| Pole diameter mm | D 40 | 40x40 | 40x50 | 30x50 | 70x80 | 40x50 | 30x50 | 70x80 |
| Max. width at horizontal heating mm | - | - | 125 | 180 | 200 | 125 | 180 | 200 |
| Display | Digital | Digital | Digital | Digital | Digital | Touch | Touch | Touch |
| Log function | No | No | No | No | No | Yes | Yes | Yes |
| Magnetic probe | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Delta-T ΔT | No | No | No | No | No | Yes | Yes | Yes |
| Temperature control | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Time control | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Time or temperature control | No | No | No | No | No | Yes | Yes | Yes |
| Temperature and speed control | No | No | No | No | No | Yes | Yes | Yes |
| Max. temperature °C / °F | 150 °C / 302 °F | 150 °C / 302 °F | 240 °C / 464 °F | 240 °C / 464 °F | 240 °C / 464 °F | 240 °C / 464 °F | 240 °C / 464 °F | 240 °C / 464 °F |
| Max. time range | 0-45 min. | 0-45 min. | 0-45 min. | 0-45 min. | 0-45 min. | 0-99 min. | 0-99 min. | 0-99 min. |
| Acoustic signal at the end of each heating cycle | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Error message | Message | Message | Message | Message | Message | Report | Report | Report |
| Temperature hold | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Automatic power reduction | No | No | Yes | Yes | Only in temp. & speed mode | Only in temp. & speed mode | Only in temp. & speed mode | Only in temp. & speed mode |
| Aut. demagnetization, <2A/cm ² | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Thermal electronics protection | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Support for horizontal heating | No | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Dimensions mm (lxwxh) | 460x240x280 | 460x240x280 | 600x226x272 | 702x256x392 | 788x315x456 | 600x226x272 | 702x256x392 | 477x315x456 |
| Heater weight kg excl. yokes | 7 | 21 (incl. yokes) | 21 | 31 | 52 | 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



TECHNICAL SPECIFICATIONS



| Type | 38ESD | 40RSD and RSDm (mobile) TURBO | 38ZFD | 40RMD TURBO |
|--|-----------------------|---------------------------------|-----------------------|---|
| Standard power 230V | 8 kVA | 8 kVA | 12 kVA | 12 kVA |
| Voltage/Amp*: standard | 2 ~ 400V/20A | 2 ~ 400V/20A | 2 ~ 400V/30A | 2 ~ 400V/30A |
| Voltage/Amp*: optional | 2 ~ 500V/16A | 2 ~ 500V/16A | 2 ~ 500V/24A | 2 ~ 500V/24A |
| | 2 ~ 480V/16A | 2 ~ 480V/16A | 2 ~ 480V/24A | 2 ~ 480V/24A |
| | 2 ~ 600V/14A | 2 ~ 600V/14A | 2 ~ 600V/20A | 2 ~ 600V/20A |
| Frequency Hz | 50/60 | 50/60 | 50/60 | 50/60 |
| Yokes, standard mm / set 1 | 30, 70 | Optional | Optional | Optional |
| Yokes, standard mm / set 2 | 20, 30, 70 | 20, 30, 40, 60, 80 | 20, 30, 40, 60, 80 | 40, 60, 80 |
| Swivel arm | Yes | Yes | Yes | Yes |
| Max. workpiece weight kg (±) | 150 | 350 | 300 | 600 |
| Min. ID Ø mm | 30/Ø110 | 30/Ø160 | 30/Ø130 | 60/Ø175 |
| Max. OD Ø mm | A 500/720 *1 | 790 | 720/1080 *1 | 920 |
| Max. width mm | B 200 | 315 | 340 | 365 |
| Pole height mm | C 210 | 320 | 340 | 305 |
| Pole diameter mm | D 70 | Ø160 | 80 | Ø175 |
| Max. width at horizontal heating mm | 180 | 280 | 290 | 305 telescopic supports 320 fixed supports |
| 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 |
| Max. temperature °C / °F | 240 °C *2 / 464 °F *2 | 240 °C *2 / 464 °F *2 | 240 °C *2 / 464 °F *2 | 240 °C *2 / 464 °F *2 |
| Max. time range | 0-60 min. | 0-60 min. | 0-99 min. | 0-99 min. |
| Acoustic signal at the end of each heating cycle | Yes | Yes | Yes | Yes |
| Error message | Yes | Yes | Yes | Yes |
| Temperature hold | Yes | Yes | Yes | Yes |
| Automatic power reduction | Yes | Yes | Yes | Yes |
| Aut. demagnetization, <2A/cm | Yes | Yes | Yes | Yes |
| Thermal electronics protection | Yes | Yes | Yes | Yes |
| Support for horizontal heating | Yes | Yes | Yes | Yes |
| Dimensions mm (lxwxh) | 630x365x470 | 1200x500x650 1200x640x1000/M | 1200x640x1000 | 1200x640x1000 |
| Heater weight kg excl. yokes | 53 | 97 (RSD) 160 (RSDm) | 125 | 205 (telescopic supports) 185 (fixed supports) |
| Electric crane for yokes | - | - | - | - |
| Alarm signal | - | - | - | - |
| Mobile | - | Yes (RSDm) | Yes | Yes |

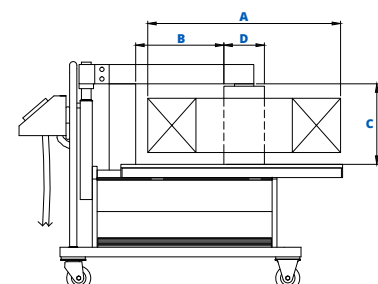
We reserve the right to alter technical specifications without prior notice.

*1 With adaptor yokes, only available for the Standard models

*2 On request: 350°C, with heavy-duty sensor and extra isolation

*3 Subject to power and design

On request: other voltage/amperage/higher temperature up to 480°C



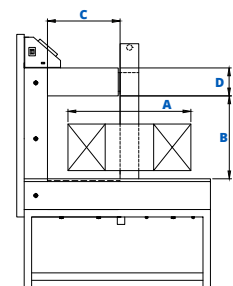


| Type | SUPER Standard / DL-700 | SUPER TURBO | GIANT Standard / DL-700 | GIANT DL-700 / DL-1000 |
|--|-------------------------------|-------------------------------|-------------------------------|--|
| Standard power 230V | 24 kVA | 24 kVA | 40 kVA | 100 kVA |
| Voltage/Amp*: standard | 2 ~ 400V/60A 2 ~ 500V/48A | 2 ~ 400V/60A 2 ~ 500V/48A | 2 ~ 400V/100A 2 ~ 500V/80A | 2 ~ 400V/120, 250A 2 ~ 500V/100, 200A |
| Voltage/Amp*: optional | 2 ~ 480V/48A 2 ~ 600V/40A | 2 ~ 480V/48A 2 ~ 600V/40A | 2 ~ 480V/80A 2 ~ 600V/65A | 2 ~ 480V/80A 2 ~ 600V/65A |
| Frequency Hz | 50/60 | 50/60 | 50/60 | 50/60 |
| Yokes, standard mm / set 1 | Optional | Includes | Optional | Optional |
| Yokes, standard mm / set 2 | 40, 50, 60, 80, 100 *3 | 1 yoke | 60, 80, 100, 150 *3 | 60, 80, 100, 150, 200 *3 |
| Swivel arm | - | - | - | - |
| Max. workpiece weight kg (±) | 600 | 1200 | 1500/2000 *3 | 3000/3500 *3 |
| Min. ID Ø mm | 60/85 *3 | 175/Ø200 | 85 *3 | 85/215 *3 |
| Max. OD Ø mm | A 900/1300 *3 | 1700 | 1400/1700 *3 | 1700/2500 *3 |
| Max. width mm | B 400/700 *3 | 750 | 620/700 *3 | 700/900 *3 |
| Pole height mm | C 390 | 595 | 660/740 *3 | 740/1000 *3 |
| Pole diameter mm | D 170/180 *3 | Ø200 | 150 *3 | 150/200 *3 |
| Max. width at horizontal heating mm | 390/690 *3 | 600 | 440/730 *3 | 730/990 *3 |
| 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 |
| Max. temperature °C / °F | 240/350 °C *2 / 464/662 °F *2 | 240/350 °C *2 / 464/662 °F *2 | 240/350 °C *2 / 464/662 °F *2 | 240/350 °C *2 / 464/662 °F *2 |
| Max. time range | 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 |
| Error message | Yes | Yes | Yes | Yes |
| Temperature hold | Yes | Yes | Yes | Yes |
| Automatic power reduction | Yes | Yes | Yes | Yes |
| Aut. demagnetization, <2A/cm | Yes | Yes | Yes | Yes |
| Thermal electronics protection | Yes | Yes | Yes | Yes |
| Support for horizontal heating | Yes | Yes | Yes | Yes |
| Dimensions mm (lxwxh) | 1000x500x1350 *3 | 1600x700x1300 | 1750x600x1470 *3 | 2150x900x2210 *3 |
| Heater weight kg excl. yokes | 220/320 *3 | 450 (incl. yoke) | 660/800 *3 | 800/1700 *3 |
| Electric crane for yokes | Optional | - | Optional | Optional |
| Alarm signal | Optional | Optional | Optional | Optional |
| Mobile | Optional | Optional | Optional | Optional |



Heating times are subject to the relationship between:

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



CUSTOM MADE

We build custom induction heaters

Why custom made?

Sometimes standard products do not suffice. We can engineer and manufacture solutions for your specific applications. We have many years of experience and numerous examples of custom projects. Our team looks forward to developing your product in consultation with you.

Fast and accurate heating

Induction heaters can be used immediately, preheating is not required. Local heating up to 300°C within seconds is possible. Users can work safely, cleanly and deliver high quality thanks to smart electronics. Whether it involves special parts or serial heating.

Whatever your requirements, induction heating enables you to achieve:

- ✓ A clean and safe workplace
- ✓ Improved productivity
- ✓ Lower production costs
- ✓ Efficient energy consumption

Advantages of custom induction heaters

Induction heaters are the ideal solution for safe heating of special parts or serial heating. In addition, induction heaters offer the following advantages:

- ✓ Can be used immediately, no preheating required
- ✓ Controlled heating, no loss of quality
- ✓ Fast, safe, clean, stress-free heating
- ✓ Environmentally friendly and durable
- ✓ Capacities and designs to the client's requirements
- ✓ Thanks to the application of low-frequency 50/60 Hz, the investment may be lower compared to medium-frequency or high-frequency solutions

A clean and safe workplace

Instead of blow torches, ovens or oil baths, induction offers you:

- Process control
- No (open) flames
- No polluting fumes
- No excessive noise
- No hot oil

Safety first!

Our customised products are used in lots of different industries:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox factories
- Machine tool industry
- Transport sector
- MRO/OEM sector
- Wind energy sector
- Power plants
- Mining industry



BETEX Twin Heater

For simultaneous heating of 2 bearings in the Rail industry.

Temperature: 110°C

Time needed: 4 min.



BETEX 38 ESD

The pole of a standard heater is adapted to be able to heat special workpieces.



BETEX coil heaters

For heating various aluminium stator housings.

Temperature: 220°C

Time needed: 25 to 50 sec.



Custom made

This sandwich heater heats two aluminium parts simultaneously.

Thanks to induction heating, the time required is reduced by 50%, resulting in extremely fast heating.

Temperature: 220°C
Time needed: 20 sec. per 2 pieces



Custom made

Thanks to this coil heater, the heating time of a train wheel was reduced from 40 minutes to 16 minutes.

The outdated blow torches were discarded. This durable solution is safer, faster and offers complete control.

Temperature: 250°C
Time needed: 16 min.



Custom made

Coil heaters can be used to quickly heat aluminium housings prior to mounting. The heater heats 5 different sizes.

Temperature: 250°C
Time needed: 30 sec. to 4 min.



BETEX GIANT

Adapted for heating train wheels. The induction yoke is extendable.

Temperature: 240°C
Time needed: 27 min.



BETEX GIANT

Adapted for heating large stainless steel pipes (1100 kg), used in wind turbines.

Temperature: 270°C
Time needed: 3 hours



BETEX GIANT

Adapted for heating rails.

Temperature: 250°C
Time needed: 7 min.

INDUCTION HEATERS

BETEX MF Quick-Heaters – medium-frequency technology

Mounting, dismantling and preheating of metal components

Fast and/or controlled heating with ΔT

Thanks to medium-frequency technology, energy is transferred to the workpiece effectively, so it is heated easily and quickly. The BETEX MF Quick-Heater consists of a generator with a fixed or flexible inductor. Its compact dimensions make it easy to move.

BETEX MF Quick-Heaters 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.

Advantages of BETEX MF Quick-Heaters

- ✓ For mounting, dismantling and preheating
- ✓ Suitable for steel, cast iron, stainless steel and titanium
- ✓ Temperature and/or time controlled heating
- ✓ Double temperature measurement (ΔT monitoring)
- ✓ Low connection power (32/63 Amp)
- ✓ Generators are adjustable from 2.5 to 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



To be used for

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

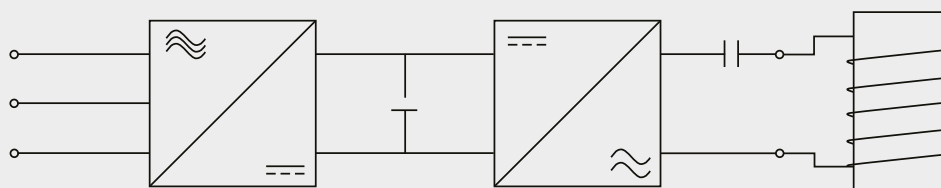
The BETEX MF Quick-Heater

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 22 kW 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.



Flexible inductors

Flexible inductors are a multifunctional solution for various shapes or sizes. They can be used in or around a workpiece.



Heating a bore for bearing or shaft mounting



Heating a coupling for dismounting

Fixed inductors

Fixed inductors are used for serial work.



Heating bearing rings for dismounting



Heating labyrinth rings for dismounting

Testing

For special applications, we can carry out tests in advance with components that the client provides for this purpose. If necessary, we can supply a customised application.

For standard applications, we have a large database with examples. We also use simulation programmes.

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

BETEX MF Quick-Heaters – medium-frequency technology



22/44
power kW

3.5"
display inch

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

BETEX MF Quick-Heater 2.5

- Compact design with 3.5" display
- User-friendly touchscreen operation
- Choice of 2 generators: 22 or 44 kW
- Smart electronics ensure optimum operating frequency
- Adjustable power regulation
- Double temperature measurement (ΔT monitoring)
- Choice between fixed and flexible inductors



22 kW

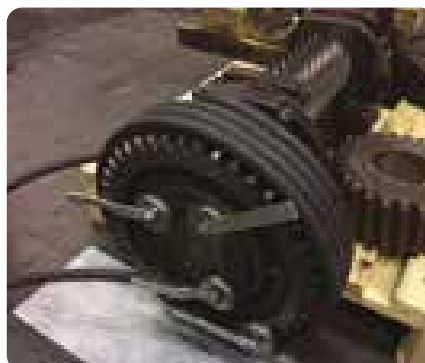
ΔT

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.

Magnetic holder

Optional: magnetic holders to secure the flexible inductors.





44 kW

22/44
power kW

7"
display inch

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

BETEX MF Quick-Heater 3.0

- Compact design with 7" display
 - User-friendly touchscreen operation
 - Choice of 2 generators: 22 or 44 kW
 - Smart electronics ensure optimum operating frequency
 - Adjustable power regulation
 - Double temperature measurement (ΔT monitoring)
 - Choice between fixed and flexible inductors
-
- Can heat according to preset temperature/time curve
 - The heating process is displayed in a clear graph
 - Create proof of work report
 - Log function to save data or export it via a USB port



22 kW

Which inductor?

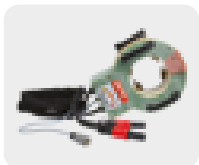
For the MF Quick-Heater, choose a suitable inductor for your application. Request our product questionnaire for proper advice and a quotation.



Flexible inductor



Fixed inductor



Fixed inductor



Pin inductor



Fixed inductor



Table inductor



Sandwich table inductor

SMART inductor recognition

When a fixed inductor is connected to the generator for a second time, it will automatically select the correct settings. All you have to do is press START.

Bearing rings and labyrinth rings can be dismantled using custom inductors.

INDUCTION HEATERS

Medium-frequency projects



BETEX 3.0, 22 kW

Mounting of wheels in an elevator plant using pin inductors. For this client, custom inductors were made, with the required lengths and diameters.



BETEX 3.0, 22 kW

Dismounting in a steel factory, using a flexible inductor wrapped around a bearing ring.

Temperature: 200°C
Time needed: 17 min.



BETEX 3.0, 44 kW

Dismounting of a coupling at a gearbox repair company.

Temperature: 100°C
Time needed: 7 min.



BETEX 3.0, 22 kW

Preheating in preparation for laser cladding.

INDUCTION HEATERS

Medium-frequency heating methods

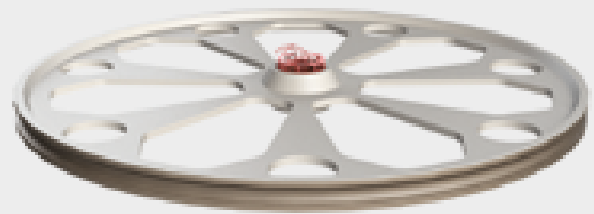
Fixed inductor around the workpiece

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



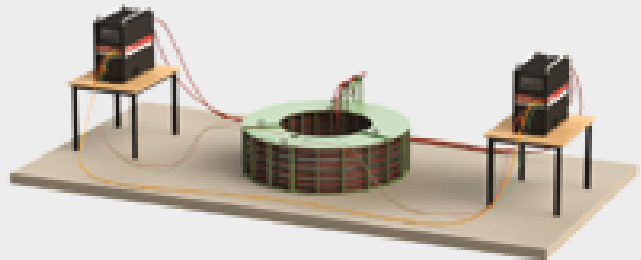
Fixed inductor in the workpiece

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.



TECHNICAL SPECIFICATIONS

Medium-frequency 2.5



| Type | MF Quick-Heater 2.5, 22kW | MF Quick-Heater 2.5, 44kW |
|-----------------------------------|--|--|
| Forced air cooling | Yes | Yes |
| Power | 22kW | 44kW |
| Frequency | 10-25 kHz | 10-25 kHz |
| Voltage/Amperage | 3 ~ 400V/32A | 3 ~ 400V/63A |
| Voltage/Amperage | 3 ~ 450V/30A | 3 ~ 450V/59A |
| Voltage/Amperage | 3 ~ 500V/28A | 3 ~ 500V/55A |
| Voltage/Amperage | 3 ~ 600V/23A | 3 ~ 600V/45A |
| Frequency | 50/60Hz | 50/60Hz |
| Temperature measurement | For type K thermocouple | For type K thermocouple |
| Accuracy | ± 3.5°C / ± 38.2 °F | ± 3.5°C / ± 38.2 °F |
| Inductor recognition | Yes | Yes |
| Temperature sensor | Yes, for max 300°C / 572 °F | Yes, for max 300°C / 572 °F |
| Extra thermocouple input | Yes | Yes |
| Dimensions of generator LxWxH | 600 x 300 x 600 mm | 600 x 650 x 580 mm |
| Weight of generator | 46 kg | 78 kg |
| Trolley | Optional | Optional |
| Operation: | | |
| Dimensions display | 3.5" | 3.5" |
| Heat curve in display | Yes | Yes |
| Setpoint power | Via touchscreen | Via touchscreen |
| Setpoint temperature | Via touchscreen | Via touchscreen |
| Setpoint temperature curve | Yes | Yes |
| Setpoint timer | Via touchscreen | Via touchscreen |
| Selection operating mode | Via touchscreen | Via touchscreen |
| Digital readings temperature | 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 |
| Digital readings power | Actual value on touchscreen | Actual value on touchscreen |
| Digital readings frequency | Actual value on touchscreen | Actual value on touchscreen |
| USB connection | No | No |
| Network connection | No | No |
| Heating log | No | No |
| Signaling by: | | |
| Installation in operational state | Green flash light | Green flash light |
| Error message | Red continuous light / acoustic signal | Red continuous light / acoustic signal |
| End of heating cycle | Green continuous light / acoustic signal | Green continuous light / acoustic signal |

Min. winding diameter flexible inductors 22kW

| Type m / °C | Diameter cable | Min. winding diameter |
|-----------------------------|----------------|-----------------------|
| 15/20/25/30m/180°C / 356 °F | Ø 12 mm | ca. 75 mm |
| 15/20/25/30m/180°C / 356 °F | Ø 15 mm | ca. 100 mm |
| 15/20/25/30m/300°C / 572 °F | Ø 20 mm | ca. 120 mm |

Min. winding diameter flexible inductors 44kW

| Type m / °C | Diameter cable | Min. winding diameter |
|-----------------------------|----------------|-----------------------|
| 15/20/25/30m/180°C / 356 °F | Ø 19 mm | ca. 140 mm |
| 15/20/25/30m/300°C / 572 °F | Ø 28 mm | ca. 220 mm |

TECHNICAL SPECIFICATIONS

Medium-frequency 3.0



| Type | MF Quick-Heater 3.0, 22kW | MF Quick-Heater 3.0, 44kW |
|-----------------------------------|--|--|
| Forced air cooling | Yes | Yes |
| Power | 22kW | 44kW |
| Frequency | 10-25 kHz | 10-25 kHz |
| Voltage/Amperage | 3 ~ 400V/32A | 3 ~ 400V/63A |
| Voltage/Amperage | 3 ~ 450V/30A | 3 ~ 450V/59A |
| Voltage/Amperage | 3 ~ 500V/28A | 3 ~ 500V/55A |
| Voltage/Amperage | 3 ~ 600V/23A | 3 ~ 600V/45A |
| Frequency | 50/60Hz | 50/60Hz |
| Temperature measurement | For type K thermocouple | For type K thermocouple |
| Accuracy | ± 3.5°C / ± 38.2 °F | ± 3.5°C / ± 38.2 °F |
| Inductor recognition | Yes | Yes |
| Temperature sensor | Yes, for max 300°C / 572 °F | Yes, for max 300°C / 572 °F |
| Extra thermocouple input | Yes | Yes |
| Dimensions of generator LxWxH | 600 x 300 x 600 mm | 600 x 650 x 580 mm |
| Weight of generator | 46 kg | 78 kg |
| Trolley | Optional | Optional |
| Operation | | |
| Dimensions display | 7" | 7" |
| Heat curve in display | Yes | Yes |
| Setpoint power | Via touchscreen | Via touchscreen |
| Setpoint temperature | Via touchscreen | Via touchscreen |
| Setpoint temperature curve | Yes | Yes |
| Setpoint timer | Via touchscreen | Via touchscreen |
| Selection operating mode | Via touchscreen | Via touchscreen |
| Digital readings temperature | 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 |
| Digital readings power | Actual value on touchscreen | Actual value on touchscreen |
| Digital readings frequency | Actual value on touchscreen | Actual value on touchscreen |
| USB connection | Yes | Yes |
| Network connection | Yes | Yes |
| Heating log | Yes | Yes |
| Signaling by | | |
| Installation in operational state | Light optional | Light optional |
| Error message | Acoustic signal / light optional | Acoustic signal / light optional |
| End of heating cycle | Acoustic signal | Acoustic signal |



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 collets, suitable for ± 375 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.

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.**

*Use in combination with
BETEX Induction heaters.*



IMPACT 39

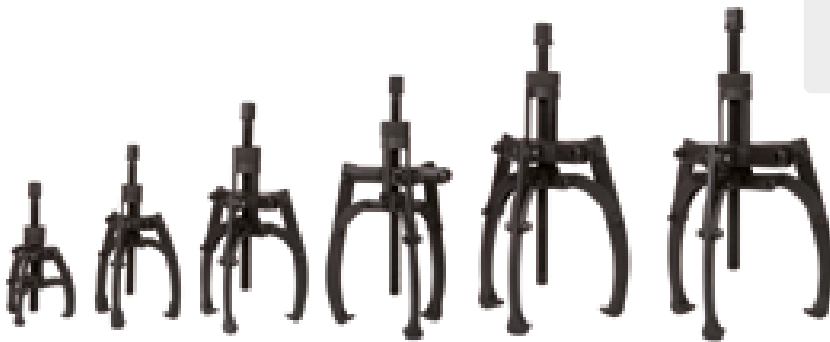
- With 4 sleeves
- With 39 collets, suitable for ± 600 bearings.

| Impact | 33 | 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 in kg | 4.8 | 6.5 |

MECHANICAL PULLERS

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

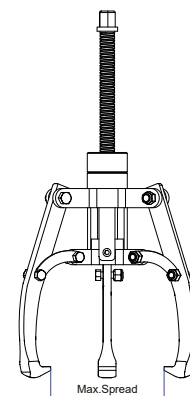
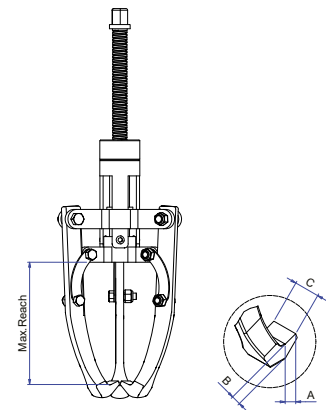
2 - 12
tons



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 | A mm | B mm | C mm | Weight in kg |
|-------------|---------|-----------|----------------------|----------------|------|------|------|--------------|
| MSP 2/3-120 | 798250 | 2 | 80 | 120 | 8 | 6 | 15 | 1.6 |
| MSP 2/3-180 | 798300 | 3 | 120 | 180 | 6 | 7 | 15 | 2.3 |
| MSP 2/3-270 | 798350 | 5 | 160 | 270 | 11 | 10 | 25 | 4.3 |
| MSP 2/3-300 | 798400 | 8 | 210 | 300 | 13 | 14 | 27 | 6.1 |
| MSP 2/3-380 | 798450 | 10 | 250 | 380 | 14 | 10 | 29 | 9.6 |
| MSP 2/3-440 | 798500 | 12 | 250 | 440 | 14 | 10 | 29 | 11.2 |

* incl. safety net

** incl. safety blanket

MECHANICAL PULLERS

BETEX KZZ Key Puller



BETEX KZZ

For professional removal of parallel keys

With the BETEX KZZ, you can easily remove keys from shafts of motors, pumps and all kinds of other applications in drive technology. For keys up to a width of 35 mm.

Safe!

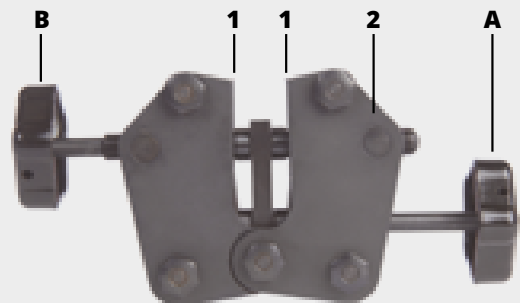
Hammer and chisel are no longer needed.

Advantages

- ✓ Safe dismounting.
- ✓ Quick dismounting.
- ✓ No damage to shafts or keys due to perpendicular dismounting.
- ✓ Shafts remain straight.
- ✓ Saves time, labour and costs.
- ✓ Jaws are made from specially tempered steel.
- ✓ Threaded screws with left and right trapezoidal thread.

Easy to use

1. Turn both jaws (1) upwards or downwards with handwheel (A) until they are in line with the housing (2).
2. Use handwheel (B) to set the size of the key to be pulled, with ± 1 mm of play.
3. Turn handwheel (B) to screw both jaws hand-tight to the key.
4. Turn handwheel (A) to pull the key upwards perpendicularly.
5. Turn the jaws downwards with handwheel (A); use handwheel (B) to unscrew the key.



| Type | Art. no | Max. spread mm | Weight in kg |
|------|---------|----------------|--------------|
| KZZ | 4900011 | 35 | 2.2 |

MECHANICAL PULLERS

BETEX 46

Simple, handy 2-arm puller for parts gripped externally. For dismantling of, for example, pulleys, bearings, rings and fans from electric motors.

During dismantling, the arms cannot slip as they are pressed against the cross bar. The harder the pulling force, the tighter the jaws grip around the workpiece. One-hand operation. The spring pressure ensures that the puller arms close steadily.

| Type | Art. no | Max. diam. mm | Max. shaft length mm |
|--------|---------|---------------|----------------------|
| 46-200 | 046200 | 60 | 40 |
| 46-000 | 046000 | 75 | 60 |
| 46-010 | 046010 | 110 | 100 |
| 46-020 | 046020 | 220 | 200 |



BETEX 47

Patented special 2-arm bearing pullers

This bearing puller is especially suitable for pulling bearings, rings, etc. fit flushly with other parts. This is due to the special jaw construction. Prevent damage during dismantling and save time. This system is often used for dismantling bearings from anchors, pump shafts, etc.

| Type | Art. no | Max. diam. mm | Max. shaft length mm |
|--------|---------|---------------|----------------------|
| 47-100 | 047100 | 45 | 65 |
| 47-200 | 047200 | 90 | 100 |
| 47-300 | 047300 | 150 | 150 |



BETEX 48/49

2/2 Bearing splitters and counter supports

BETEX 48/49 is constructed for the dismantling of hard-to-reach bearings and other parts, where there is insufficient space for grip with a puller. Suitable for multiple applications. For a complete set you need both the BETEX 48 and the BETEX 49.

| Type | Art. no | Max. diam. mm | Counter support | Art. no | Max. shaft length mm |
|--------|---------|---------------|-----------------|---------|----------------------|
| 48-060 | 048060 | 60 | 49-100 | 049100 | 150 |
| 48-075 | 048075 | 75 | 49-100 | 049100 | 150 |
| 48-115 | 048115 | 115 | 49-200 | 049200 | 200 |
| 48-150 | 048150 | 150 | 49-300 | 049300 | 300 |



MECHANICAL PULLERS

BETEX 52

Patented self-centering 3-arm pullers (mechanical and hydraulic) for diameters of Ø40 mm to Ø640 mm

With these 3-arm pullers, the 3 arms move inwards or outwards simultaneously. Bending or deflecting is impossible. The harder the pulling force, the tighter the jaws grip around the workpiece. 20-ton hydraulic screws are available for the two largest pullers in case of heavy-duty applications or corrosion. They have a 15 mm stroke, which creates a shock effect, moving the workpiece from its position. The thread of the screws in the rest position is in no way affected by the building up of hydraulic pressure, thus keeping wear and tear to the screws down to a minimum.



| Type | Art. no | Max. diam. mm | Max. shaft length mm |
|-------------|------------|---------------|----------------------|
| 52-230 | 052230 | 230 | 150 |
| 52-295 | 052295 | 295 | 235 |
| 52-390/394* | 052390/394 | 390 | 270 |
| 52-640/644* | 052640/644 | 640 | 300 |

* These types can easily be made hydraulic, by replacing the mechanical screw and the screw-bush with a 20-ton mechanical hydraulic screw.

BETEX 54

Patented 2-arm pullers for diameters of Ø40 mm to Ø350 mm

This 2-arm puller is an excellent solution for dismounting bearings, rings, gear wheels, couplings, etc. Reversal of the arms enables internal dismounting. The locking system prevents bending or slipping of the arms. Extended arms and additional extension arms are available for long shafts.



| Type | Art. no | Max. diam. mm | Max. shaft length mm | | |
|--------|---------|---------------|----------------------|----------------|---------------------------|
| | | | Standard | With extension | With additional extension |
| 54-100 | 054100 | 80 | 100 | 200 | 250 |
| 54-200 | 054200 | 120 | 125 | 200 | 250 |
| 54-300 | 054300 | 160 | 150 | 250 | 300 |
| 54-400 | 054400 | 200 | 175 | 250 | 300 |
| 54-500 | 054500 | 250 | 200 | 300 | 400 |
| 54-600 | 054600 | 350 | 250 | 300 | 400 |

Also available as a complete set with free stand: art. no. 054009

MECHANICAL PULLERS



BETEX 625/630

Shaft protector sets for shaft centers and hollow shafts

These shaft protectors are indispensable between shaft and bearing puller, when dismounting bearings, couplings, etc. There are 2 types, 625 for shaft center protection and 630 for hollow shafts.

By using these shaft protectors you prevent:

- damage to the center hole and screw
- puller overload due to tilting (e.g. the 3-arm puller 52)

BETEX 625 consists of 6 pieces:

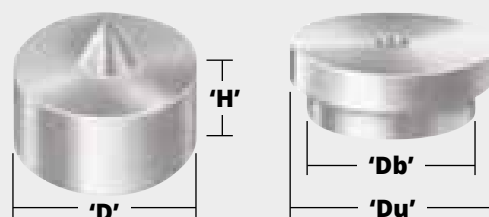
'D' min. = \varnothing 19 mm 'H' min. = \varnothing 16 mm
 'D' max. = \varnothing 38 mm 'H' max. = \varnothing 19 mm

BETEX 630 'S' consists of 11 pieces

'Db' min. = \varnothing 19 mm 'Du' min. = \varnothing 25 mm
 'Db' max. = \varnothing 51 mm 'Du' max. = \varnothing 64 mm

BETEX 630 'T' consists of 6 pieces

'Db' min. = \varnothing 54 mm 'Du' min. = \varnothing 67 mm
 'Db' max. = \varnothing 76 mm 'Du' max. = \varnothing 89 mm



MECHANICAL PULLERS



BETEX 44

Hydraulic minipress 8/15 ton

When mechanical screws are used, at the moment when the greatest pressure is required, a large part of the manual force is lost due to the friction of the thread. This minipress administers a 'shock' to the part which is to be extracted. This enables optimal use to be made of BETEX pullers 52 and 54, without loss of force or wear and tear to screws. Note: to be used from 49-200, 52-230 and 54-300.



| Type | Art. no | Cap. tons | Stroke mm |
|--------|---------|-----------|-----------|
| 44-080 | 044080 | 8 | 7 |
| 44-150 | 044150 | 15 | 10 |

MECHANICAL PULLERS



BETEX 62-9 Slide hammer puller

Used in combination with internal expander puller.

- Weight: 0.9 kg
- 2 sizes with strokes of 90 mm and 300 mm
- 2 connecting threads (M10 and M14x1.5)

The advantage of the slide hammer puller is that it can be used independently from any housing, so no pressure points required. After positioning the internal expander puller, the slide hammer puller is connected through the hexagon adaptor.

We recommend:
up to bore diameter 39.5 mm no. 62-9092
up to bore diameter 79.5 mm no. 62-9302



BETEX 62

Internal expander puller up to Ø150 mm bore

This special expander system is designed to carry out awkward dismounting jobs (in blind holes) quickly and efficiently. Since the contact surface is divided into multiple jaws (max. 6 pieces) you always have the grip you require behind the bearing, bushing, etc. Deflection is impossible.

The counter supports are universal, which means that the arms can be twisted in any direction to find the best point of pressure.

The larger types are equipped with a conical puller adapter in the expander, which prevents friction when tightening the screw.

Bearings, bushings, sealing rings, etc., are extracted effortlessly.

- Larger and longer sizes on request.
- BETEX 62 comes in 3 sets.
- Set 62-105 comes in a free PE case.

| Type | Suitable for expanders | Expander | For diameter from-to mm | For max. depth mm | * | **** |
|---------------|------------------------|----------|-------------------------|-------------------|-----|------|
| 62-100 | 62-005 > 62-030 | 62-005 | 5-7 | 35 | * | **** |
| | | 62-007 | 7-10 | 35 | * | **** |
| | | 62-010 | 10-14 | 35 | * | **** |
| | | 62-014 | 14-20 | 45 | * | **** |
| | | 62-020 | 20-30 | 50 | * | **** |
| 62-200 | 62-040 > 62-070 | 62-030 | 30-40 | 90 | * | **** |
| | | 62-040 | 40-50 | 95 | ** | **** |
| | | 62-050 | 50-60 | 95 | ** | **** |
| 62-200/62-300 | 62-070 > 62-0125 | 62-060 | 60-70 | 95 | ** | **** |
| | | 62-070 | 70-80 | 95 | ** | **** |
| | | 62-080 | 80-100 | 140 | *** | |
| | | 62-0100 | 100-125 | 140 | *** | |
| | | 62-0125 | 125-150 | 140 | *** | |

* = set 1 62-101

** = set 2 62-201

*** = set 3 62-301

**** = combination set 62-105, including free carrying case



MECHANICAL PULLERS

BETEX 63, 64 / TRACTA

These systems are unique and suitable for difficult dismounting jobs of roller bearings.

Advantages:

- Suitable for all kinds of roller bearings.
- Shaft Ø10.5 mm up to Ø100 mm, larger sizes on request.
- Dismounting from housing and shaft in one act.
- Also for flush fit bearings.
- Unlimited shaft lengths through extensions.
- 360° grip over full bearing.
- Hydraulic type on request.
- Suitable for serial dismounting.
- Prevents damage to bearing, bearing housing and shaft!



Collets for BETEX 63, 64 / TRACTA

There are 4 different pulling principles that can be applied, depending on the bearing type. To define the correct collet, the following details must be available:

- bearing bore Ø
- outer diameter
- bearing number
- mounting method
- drawing



Principle 1:

Grips on inner bearing ring. Bearing is dismounted in one act, from shaft *and* bearing house.

Examples: self-aligning ball bearings, four-point bearings and ball bearings with split inner ring.



Principle 2:

Grips on rollers, independent of number of rolls. Also when the bearing is flush fit.

Examples: wheel bearings, tapered bearings.



Principle 3:

Grips on inner bearing ring.

Example: tapered roller bearings.



Principle 4:

Grips in or behind inner bearing ring, or behind outer bearing ring.

Examples: cylindrical roller bearing, bushings, gear wheels, etc.

| Type | Shaft diam. mm | Outer diam. mm | Max. stroke mm | Max. shaft length mm | Max. shaft length mm with additional extension |
|--------|----------------|----------------|----------------|----------------------|--|
| 63-100 | 10.5 | 26 | 62 | 95 | 165 |
| 63-200 | 18 | 35 | 64 | 100 | 180 |
| 64-400 | 30.5 | 60 | 78 | 135 | 235 |
| 64-500 | 46 | 75 | 80 | 150 | 250 |
| 64-600 | 66 | 100 | 92 | 170 | 270 |
| 64-700 | 77 | 125 | 120 | 205 | 305 |
| 63-800 | 100 | 140 | 150 | 240 | 390 |

Larger models on request

HYDRAULIC PULLERS

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

Compact pullers for dismantling 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.
- Safety net/blanket and adapters included.
- In useful carrying case.
- HSP pullers are self-centering.

4 - 30
tons

Use in combination with accessory sets: page 56



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



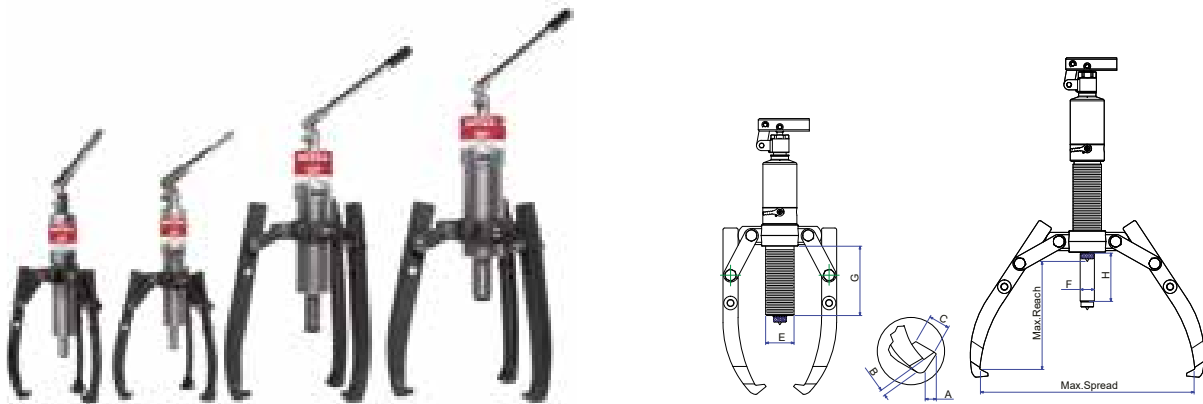
PE carrying case



2-arm or 3-arm puller



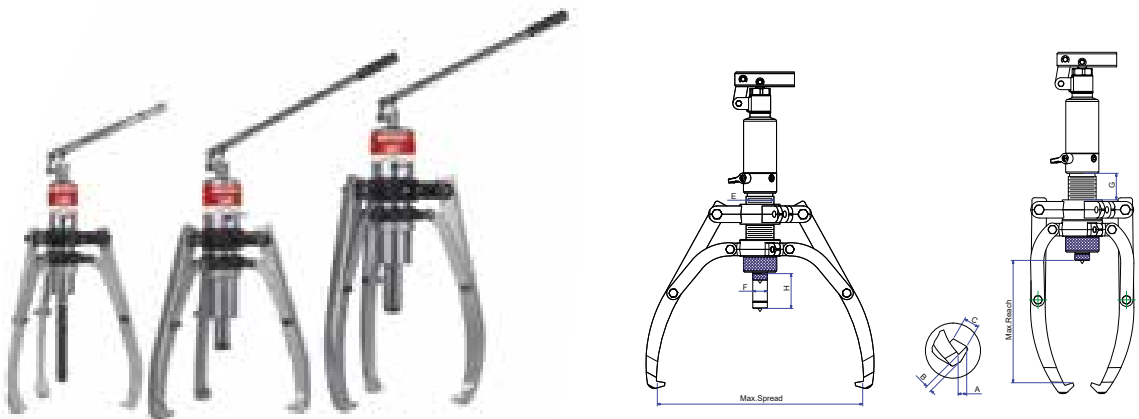
can be rotated 360°



BETEX HP 2/3-arm Hydraulic pullers

| Type | Art. no | Cap. tons | Max. shaft length mm | Max. spread mm | Stroke H mm | A mm | B mm | C mm | E mm | F mm | G mm | Weight in kg |
|----------|---------|-----------|----------------------|----------------|-------------|------|------|------|------|------|------|--------------|
| HP 43* | 791000 | 4 | 185 | 255 | 60 | 11 | 6 | 22 | 42 | 22 | 84 | 4.5 |
| HP 63* | 792000 | 6 | 220 | 330 | 70 | 13 | 10 | 25 | 45 | 23 | 94 | 5.5 |
| HP 83* | 793000 | 8 | 230 | 350 | 85 | 11 | 10 | 25 | 50 | 25 | 122 | 6.5 |
| HP 123* | 794000 | 12 | 270 | 375 | 85 | 14 | 10 | 29 | 60 | 28 | 118 | 8.0 |
| HP 203** | 796000 | 20 | 360 | 520 | 111 | 20 | 27 | 33 | 80 | 40 | 160 | 22.0 |
| HP 303** | 797000 | 30 | 360 | 550 | 111 | 20 | 27 | 38 | 98 | 50 | 155 | 32.0 |

* incl. safety net ** incl. safety blanket



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

| Type | Art. no | Cap. tons | Max. shaft length mm | Max. spread mm | Stroke H mm | A mm | B mm | C mm | E mm | F mm | G mm | Weight in kg |
|-----------|---------|-----------|----------------------|----------------|-------------|------|------|------|------|------|------|--------------|
| HSP 43* | 791500 | 4 | 190 | 315 | 60 | 13 | 10 | 22 | 42 | 22 | 40 | 8.0 |
| HSP 63* | 792500 | 6 | 230 | 390 | 70 | 13 | 10 | 22 | 45 | 23 | 50 | 10.0 |
| HSP 83* | 793500 | 8 | 280 | 460 | 85 | 13 | 13 | 27.5 | 50 | 25 | 70 | 12.0 |
| HSP 123* | 794500 | 12 | 300 | 515 | 85 | 15 | 16.5 | 29 | 60 | 28 | 70 | 15.0 |
| HSP 203** | 796500 | 20 | 325 | 520 | 111 | 18 | 20 | 33 | 80 | 40 | 62 | 26.0 |
| HSP 303** | 797500 | 30 | 415 | 620 | 111 | 18 | 20 | 38 | 98 | 50 | 85 | 36.0 |

* incl. safety net ** incl. safety blanket

HYDRAULIC PULLERS

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

8 - 50
tons



Use in combination with accessories
page 56 and hand and foot pump sets:
page 100.



BETEX HXP

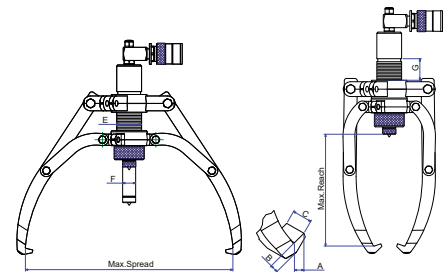
Safe and user-friendly dismounting of bearings, couplings, rings, etc.

- 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 also available with mobile crane (see page 62 + 63).
- Accessory sets available for the 8-ton and 12-ton versions.
- In useful carrying case.
- Adapters included.



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 | Stroke H mm | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Weight in kg |
|-----------|---------|-----------|----------------------|----------------|-------------|------|------|------|------|------|------|------|--------------|
| HXP 83* | 793600 | 8 | 280 | 460 | 85 | 13 | 10 | 22 | - | 22 | 40 | 42 | 9.0 |
| HXP 123* | 794600 | 12 | 300 | 515 | 85 | 13 | 13 | 27.5 | - | 25 | 70 | 50 | 11.7 |
| HXP 203** | 796600 | 20 | 325 | 520 | 111 | 15 | 16.5 | 29 | - | 28 | 70 | 60 | 24.0 |
| HXP 303** | 797600 | 30 | 415 | 620 | 111 | 20 | 27 | 33 | - | 40 | 62 | 80 | 34.0 |
| HXP 503** | 799600 | 50 | 455 | 860 | 159 | 23 | 35 | 60 | - | 40 | - | 127 | 140.0 |

* incl. safety net

** incl. safety blanket

HYDRAULIC PULLERS

BETEX Tri-Section Pullers



4 - 12
tons

BETEX Tri-section pullers

- Complete hydraulic tri-section puller set for safe and easy dismounting.
- 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 mm | Min. spread mm | Max. spread mm | Weight in kg |
|---------------------|---------|-----------|----------------------|----------------|----------------|--------------|
| Tri-section set 4t | 792160 | 4 | 211 | 30 | 160 | 20 |
| Tri-section set 6t | 792210 | 6 | 243 | 50 | 210 | 30 |
| Tri-section set 8t | 792340 | 8 | 243 | 50 | 270 | 34 |
| Tri-section set 12t | 792495 | 12 | 284 | 90 | 340 | 68 |

HYDRAULIC PULLERS

BETEX HPP, 3-in-1 Push Puller, **self-centering**



Use in combination with accessory sets: page 56.

BETEX HPP

A unique patented 3-in-1 puller for dismounting and mounting of rings, wheels, bearings, etc.

Suitable for easy and safe mounting/dismounting of bearings and rings through the inner and/or outer ring. With integrated pump and cylinder.

The push puller is designed in such a way that it can be used to mount and dismount parts. The forces are evenly distributed, creating a perfectly axial process.

When mounting, the puller arms press on the inner bearing ring, which prevents the transmission of force and/or heat through the outer ring to the moving parts, so the bearing is not damaged.



Pulling externally



Mounting



Pulling internally



Practical example

User friendly

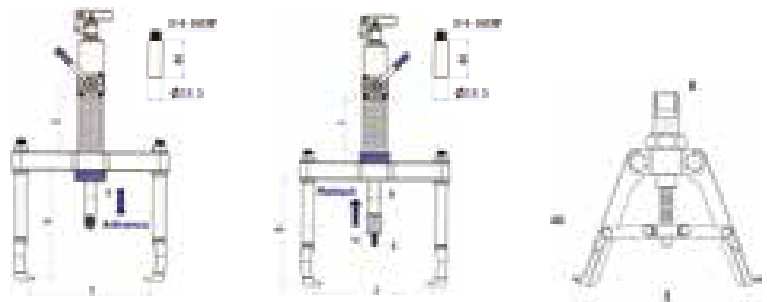
- Unique jaw design for mounting and outer ring pulling without removing and changing.
- Thanks to the 3-arm design, there is always an even and constant force when mounting and dismounting parts through the inner and/or outer ring.
- Extensions are available for larger shaft lengths.
- The self-centering design distributes the force evenly, preventing the puller arms from slipping or coming off during use.

Safe

- The integrated overpressure valve guarantees user safety, prevents damage and overload to push puller and workpiece. It also ensures that the maximum pressure is not exceeded.
- Most parts are forged SCM440 alloy steel, creating a very safe and durable product.

Cost savings

- The 3-in-1 design reduces preparation time, dismounting time and working time.
- The push puller is ideal for mounting and dismounting a wide variety of parts such as rings, wheels, bearings, couplings and pulleys.



| Type | Art. no | Operations | Output tons | A mm | B mm | C mm | D mm | E | F mm | Weight in kg |
|---------|---------|---------------|-------------|---------|---------|------|------|-----------|------|--------------|
| HPP 123 | 794200 | Mounting | 8 | 44-280 | 270 | 140 | 28 | M12-P1.75 | 30 | 19.5 |
| | | Outer pulling | 12 | 85-300 | 260 | 140 | 28 | - | - | |
| | | Inner pulling | 8 | 110-245 | 130-150 | - | - | 1"-12UNF | - | |

ACCESSORY SETS

BETEX BEARING SPLITTERS



BETEX BEARING SPLITTERS

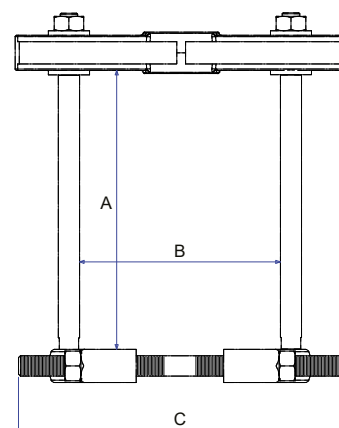
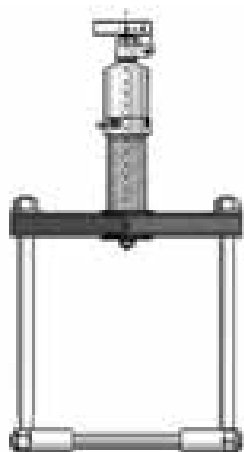
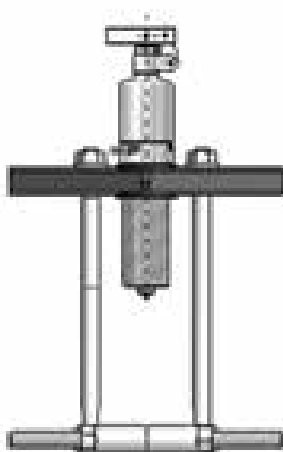
Accessory sets for 4, 6, 8 and 12 ton HP, HSP, HXP and HPP pullers.

This accessory set consists of:

- 1 Puller block
- 2 Sets of connection rods
- 2 Plates for min/max \varnothing 15-290 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 | Min. spread B mm | Max. spread C mm | Weight in kg |
|---|---------|-----------|----------------------|---------------------|---------------------|--------------|
| Acc. Set HP 43 HSP 43 | 791100 | 4 | 224 | \varnothing 12 | \varnothing 145 | 7.5 |
| Acc. Set HP 63 HSP 63 | 792100 | 6 | 255 | \varnothing 28 | \varnothing 220 | 11.5 |
| Acc. Set HP 83 HSP 83 HXP 83 | 793100 | 8 | 255 | \varnothing 28 | \varnothing 230 | 12.0 |
| Acc. Set HP 123 HSP 123 HXP 123 HPP 123 | 794100 | 12 | 298 | \varnothing 38 | \varnothing 310 | 21.0 |

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

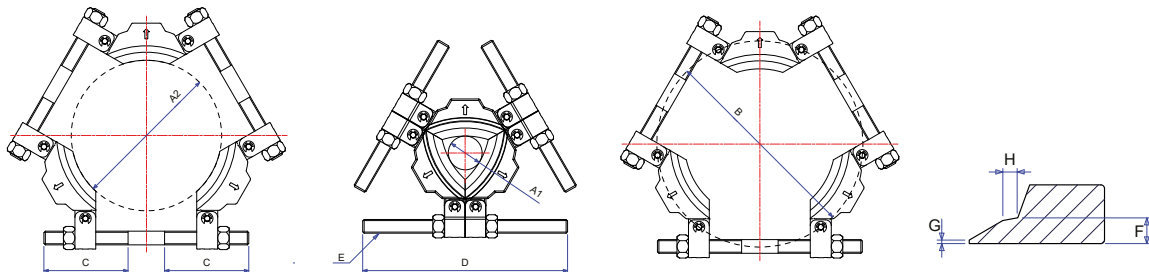
The Tri-Section Plate is specially designed for 3-arm (hydraulic) pullers.

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 comes in 4 different models suitable for bearings with shafts from 26 to 495 mm.



| Type | Art. no | Cap. tons | Available shaft diam | | Max. Spread B mm | C mm | D mm | E | F mm | G mm | H mm | Weight in kg |
|-----------------|---------|-----------|----------------------|-------|------------------|------|------|--------------|------|------|------|--------------|
| | | | A1 mm | A2 mm | | | | | | | | |
| 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!

The BETEX mobile hydraulic puller quickly and easily removes machine parts such as bearings, couplings, bushings, gear wheels, etc. The Mobipuller excels in its functional and ergonomic operation. 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.

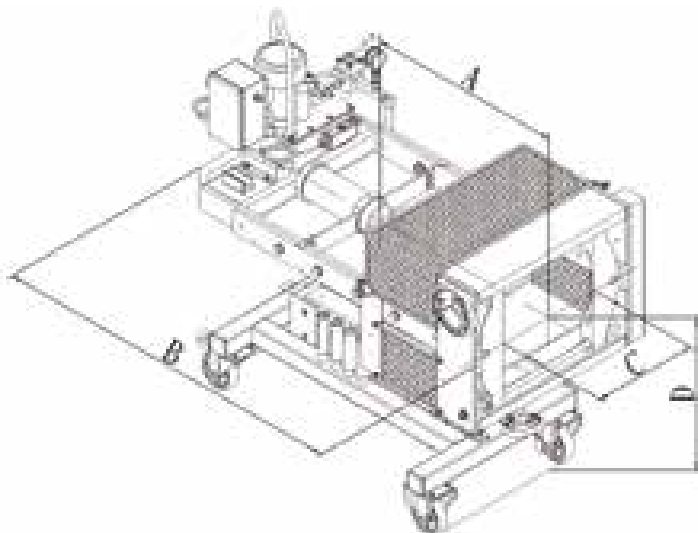
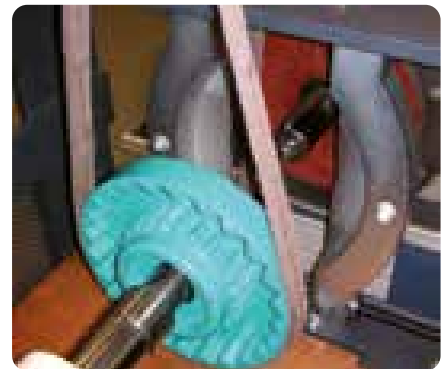
To ensure safe and easy operation, the electrical versions are supplied with remote control.

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 in 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 | 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 | 740 | 1560 | 430 | 900/1430 | 450 |
| 50 EVA 430 S 340* | 700005 | 50 | 340 | single acting electrical | 660 | 1560 | 430 | 900/1430 | 455 |
| 50 EVAD 430 S 340* | 700006 | 50 | 340 | double acting electrical | 615 | 1560 | 430 | 900/1430 | 470 |
| 50 EVAD 430 S 460* | 700007 | 50 | 460 | double-acting electrical | 470 | 1560 | 430 | 900/1430 | 485 |

* Remote control included

MOBILE HYDRAULIC PULLER

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



50
tons



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. It is easy to convert into a 2-arm 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 (self-braking) and 2 fixed wheels.
- The hydraulic cylinder is of the spring-return type with a 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.
See page 52.



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 | 140 |
| 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 LxWxH mm | 1850 x 970 x 1550 |
| Weight in kg | 280 |

MOBILE HYDRAULIC PULLER

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

50
tons



Valve block



Adapters

BETEX HXPM 50 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.
- 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 (self-braking) and 2 fixed wheels.
- The hydraulic cylinder is of the spring-return type with a 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 LxWxH mm | 2700 x 655 x 900 |
| Weight in 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 (self-braking) and 2 fixed wheels.
- The hydraulic cylinder is 2-stage, of the spring-return type with a 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 LxWxH mm | 2245 x 800 x 1155 | 2545 x 800 x 1155 |
| Weight in kg | 385 | 400 |

MOBILE HYDRAULIC PULLER

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

100
tons



Valve block



Adapters



Adjustable jaw tips for optimum 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 (self-braking) and 2 fixed wheels.
- The hydraulic cylinder is of the spring-return type with a 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.

Use in combination with UHAP2800 high pressure pump, see page 111.



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 LxWxH mm | 2450 x 1350 x 1200 |
| Weight in kg | 870 |

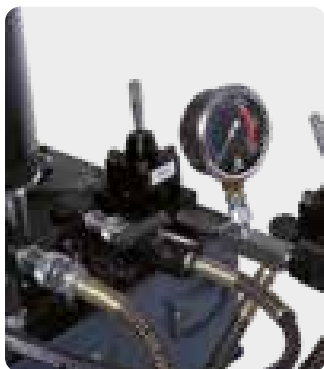
MOBILE HYDRAULIC PULLER

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

100
tons



Valve block



Pump detail



Adjustable jaw tips for optimum 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 (self-braking) and 2 fixed wheels.
- The hydraulic cylinder is 2-stage, of the spring-return type with a 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.

Use in combination with UHAP2800 high pressure pump, see page 111.



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 LxWxH mm | 2790 x 1030 x 1410 |
| Weight in kg | 1120 |

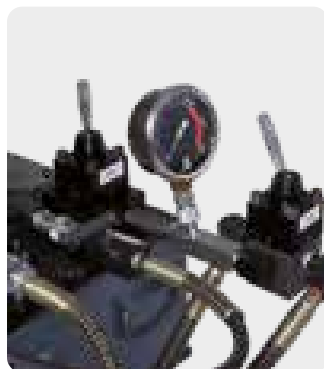
MOBILE HYDRAULIC PULLER

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

150
tons



Valve block



Pump block



Adapters



Adjustable jaw tips for optimum 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 clasping, 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 (self-braking) and 2 fixed wheels.
- The hydraulic cylinder is of the spring-return type with a max. operating pressure of 700 bar (150 tons).
- The total stroke is 325 mm. Seven adapters (extensions) are included, with a total length of 1125 mm.
- Adjustable jaw tips for extra grip.

Use in combination with UHAP2800 high pressure pump, see page 111.



Advantages of unique self-centering pullers:

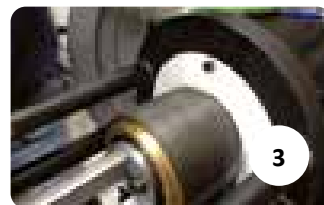
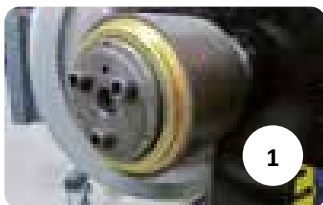
- ✓ The arms slide inwards or outwards simultaneously.
- ✓ Prevents damage to shaft and object being pulled.
- ✓ Can be operated by one person.
- ✓ Work efficiently and save time.

| Type | HXPM 150 - 2/3-jaw |
|----------------------------------|--|
| 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 LxWxH mm | 2990 x 1030 x 1390 |
| Weight in kg | 1200 |

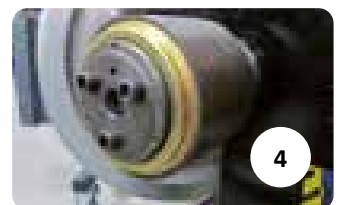
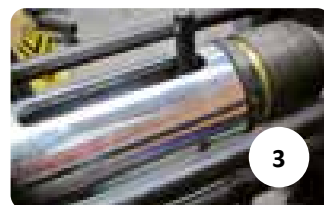
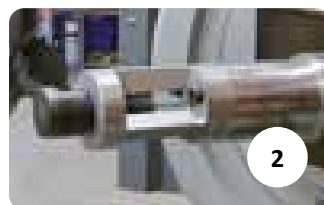
MOBILE HYDRAULIC PULLERS

BETEX BPP & BPPS Side Shift Bearing Puller Pusher

100
tons



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



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

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
- Pulling capacity (dismounting) adjustable to 100 t max.
- Pushing capacity (mounting) adjustable to 68 t max.
- 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).
- The side-shift model is extra compact and easy to manoeuvre thanks to the 4 castor wheels.

The BPPS Side-Shift model is compact and easy to manoeuvre because of the 4 castors wheels.



Accessory set

Request our questionnaire for sound advice and quotations.

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 | adjustable to 100 t max. | adjustable to 100 t max. |
| Pushing capacity, mounting tons | adjustable to 68 t max. | adjustable to 68 t max. |
| Max. stroke mm | 392 | 255 |
| Max. shaft diameter mm depending on acc. | 178 | 178 |
| Min. shaft diameter mm depending on acc. | 120 | 90 |
| 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 LxWxH mm | 2210 x 652 x 900 | 1299 x 627 x 909 |
| Weight in kg | 560 | 400 |

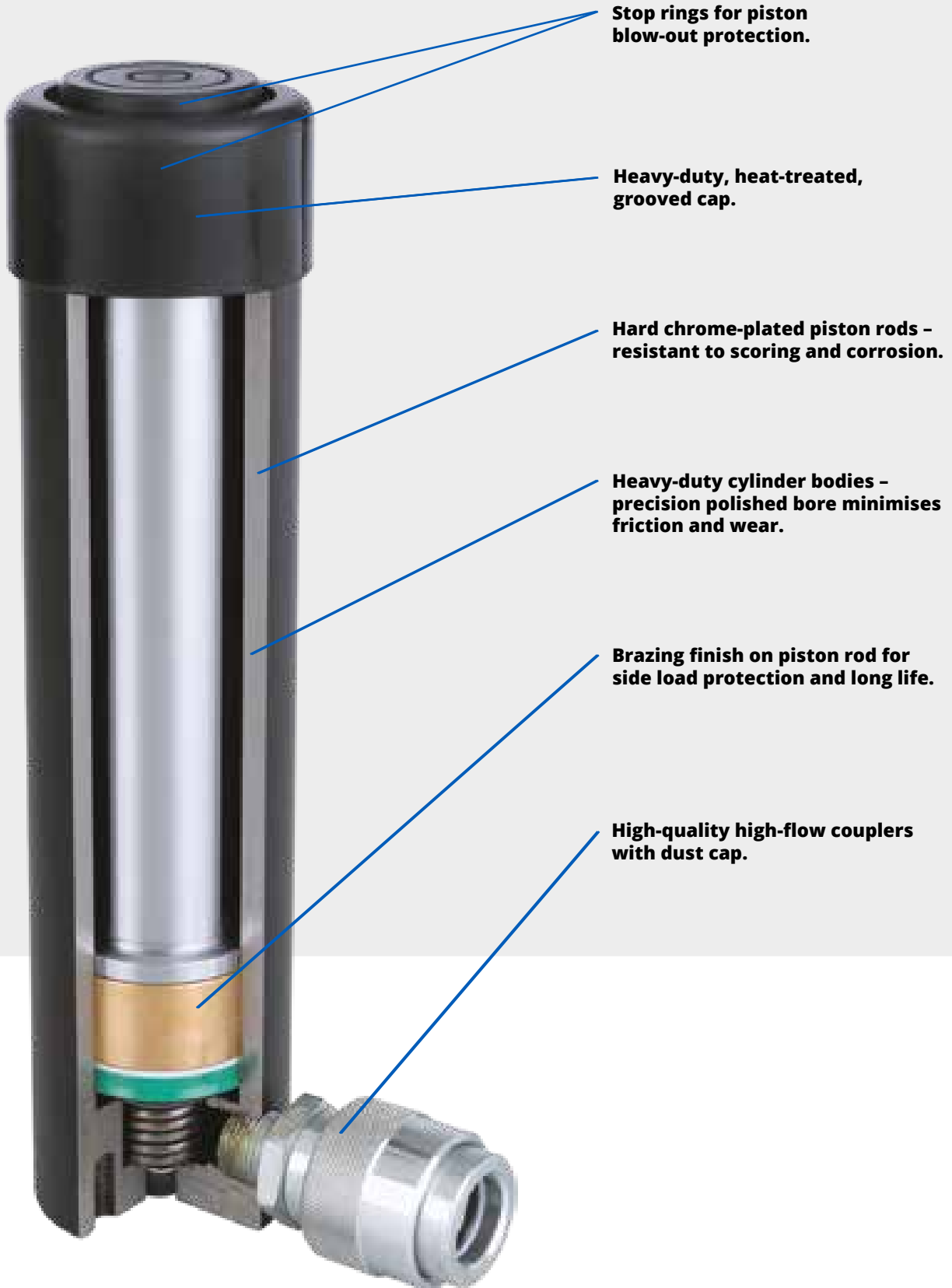
EXPLANATION OF CYLINDERS

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.

TIP!
Selecting the right hydraulics, see pag. 137.

| Series | Description | Type | Capacity tons | Stroke mm | Page |
|--------|----------------------------------|---------------|---------------|-----------|------|
| NSSS | General purpose, spring return | Single-acting | 4.5-100 | 25.4-406 | 76 |
| NSLS | Compact, spring return | Single-acting | 5-150 | 6-17 | 78 |
| NSCS | Compact, spring return | Single-acting | 10-100 | 38-62 | 80 |
| NSHS | Hollow, spring return | Single-acting | 12-100 | 8-160 | 81 |
| JLLC | Pan lock nut, load return | Single-acting | 50-1000 | 50-300 | 82 |
| JLPC | Pan lock nut, load return | Single-acting | 60-520 | 45-50 | 84 |
| NDAC | General purpose | Double acting | 10-100 | 150-470 | 89 |
| NDAH | Hollow | Double acting | 30-100 | 76-257 | 90 |
| SSA | Aluminium, spring return | Single-acting | 20-100 | 50-250 | 87 |
| ACHC | Aluminium, hollow, spring return | Single-acting | 30-60 | 50-150 | 86 |
| ADHC | Aluminium, hollow | Double acting | 30-60 | 50-250 | 85 |
| ALNC | Aluminium, lock nut, load return | Single-acting | 20-100 | 50-25 | 88 |



STANDARD CYLINDERS

BETEX NSSS series, spring-return, single-acting



4.5 - 100
capacity ton

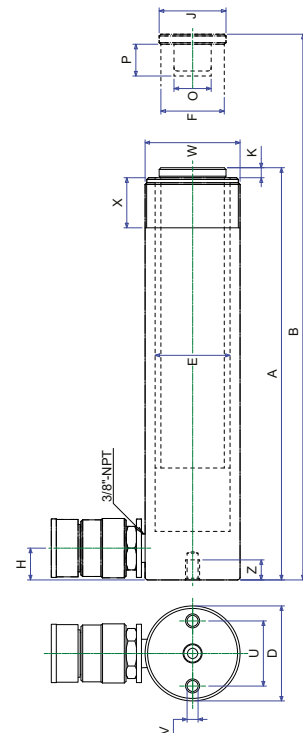
25.4 - 406
stroke mm

700
max. operating pressure bar

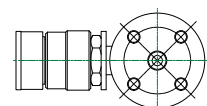
Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

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 | Cap. ton | Stroke mm | Oil cap. m ³ | 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 | 4.5 | 26 | 17 | 110 | 136 | 38 | 28.6 | 25.4 | 19 | 25 | 6 | ¾"-16 | 14 | 25 | ¼"-20 | 1½"-16 | 28 | 14 | 1 |
| NSSS 53 | 5 | 76 | 54 | 165 | 241 | 38 | 30 | 25.4 | 19 | 25 | 6 | ¾"-16 | 14 | 25 | ¼"-20 | 1½"-16 | 28 | 14 | 1.5 |
| NSSS 55 | 5 | 127 | 90 | 216 | 343 | 38 | 30 | 25.4 | 19 | 25 | 6 | ¾"-16 | 14 | 25 | ¼"-20 | 1½"-16 | 28 | 14 | 1.9 |
| NSSS 57 | 5 | 183 | 129 | 273 | 456 | 38 | 30 | 25.4 | 19 | 25 | 6 | ¾"-16 | 16 | 25 | ¼"-20 | 1½"-16 | 28 | 14 | 2.4 |
| NSSS 59 | 5 | 232 | 164 | 324 | 556 | 38 | 30 | 25.4 | 19 | 25 | 6 | ¾"-16 | 16 | 25 | ¼"-20 | 1½"-16 | 28 | 14 | 2.8 |
| NSSS 101 | 10 | 25.4 | 36.5 | 90 | 115.4 | 57 | 42.8 | 38 | 19 | - | - | #10-24 | 6.5 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 1.8 |
| NSSS 102 | 10 | 51 | 73 | 121 | 172 | 57 | 42.8 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 2.3 |
| NSSS 104 | 10 | 101 | 145 | 171 | 272 | 57 | 42.8 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 3.3 |
| NSSS 106 | 10 | 152.5 | 242 | 247 | 399.5 | 57 | 45 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 4.4 |
| NSSS 108 | 10 | 203.5 | 323 | 298 | 501.5 | 57 | 45 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 5.4 |
| NSSS 1010 | 10 | 255.5 | 406 | 350 | 605.5 | 57 | 45 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 6.4 |
| NSSS 1012 | 10 | 305.5 | 486 | 400 | 705.5 | 57 | 45 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 6.8 |
| NSSS 1014 | 10 | 356.5 | 567 | 451 | 807.5 | 57 | 45 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | ⅝"-18 | 2¼"-14 | 30 | 13 | 8.2 |
| NSSS 151 | 15 | 26.5 | 63 | 124 | 150.5 | 73 | 55 | 40 | 19 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 3.3 |
| NSSS 152 | 15 | 52.5 | 125 | 149.6 | 202.1 | 73 | 55 | 40 | 19 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 4.1 |
| NSSS 154 | 15 | 102.5 | 243 | 200 | 302.5 | 73 | 55 | 40 | 19 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 5.0 |
| NSSS 156 | 15 | 153 | 363 | 271.6 | 424.6 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 6.8 |
| NSSS 158 | 15 | 203.5 | 483 | 322 | 525.5 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 8.2 |
| NSSS 1510 | 15 | 254.5 | 604 | 373 | 627.5 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 9.5 |
| NSSS 1512 | 15 | 305 | 724 | 424 | 729 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 10.9 |
| NSSS 1514 | 15 | 355.7 | 845 | 474.6 | 830.3 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 11.8 |
| NSSS 1516 | 15 | 406 | 824 | 523 | 929 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | ⅜"-16 | 2¾"-16 | 30 | 13 | 12.8 |
| NSSS 251 | 25 | 25.5 | 98 | 139.5 | 165 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 5.9 |
| NSSS 252 | 25 | 51 | 196 | 165 | 216 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 6.4 |
| NSSS 254 | 25 | 102 | 392 | 216 | 318 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 8.2 |
| NSSS 256 | 25 | 158.5 | 610 | 273 | 431.5 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 10 |
| NSSS 258 | 25 | 209.5 | 806 | 324 | 533.5 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 12.2 |
| NSSS 2510 | 25 | 260.5 | 1002 | 375 | 636.5 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 14.1 |
| NSSS 2512 | 25 | 311 | 1196 | 425.5 | 736.5 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 16.3 |
| NSSS 2514 | 25 | 361.5 | 1390.5 | 476 | 837.5 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1½"-16 | 25.4 | 58 | ½"-13 | 3⅝"-12 | 50 | 19 | 17.7 |
| NSSS 308 | 30 | 209.5 | 925 | 387.5 | 597 | 103 | 75 | 60 | 57 | 50 | 10.5 | 1½"-16 | 25.4 | - | - | 4"-12 | 50 | - | 18.1 |
| NSSS 502 | 50 | 51 | 361 | 177 | 228 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | ½"-13 | 5"-12 | 55 | 19 | 15 |
| NSSS 504 | 50 | 101.5 | 719 | 229 | 330.5 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | ½"-13 | 5"-12 | 55 | 19 | 19.1 |
| NSSS 506 | 50 | 157.5 | 1116 | 283 | 440.5 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | ½"-13 | 5"-12 | 55 | 19 | 23.1 |
| NSSS 508 | 50 | 203 | 1446 | 349 | 552 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | ½"-13 | 5"-12 | 55 | 19 | 27.1 |
| NSSS 5010 | 50 | 260 | 1853 | 385 | 645 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | ½"-13 | 5"-12 | 55 | 19 | 30.4 |
| NSSS 5013 | 50 | 335.5 | 2377 | 461 | 796.5 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | ½"-13 | 5"-12 | 55 | 19 | 37.6 |
| NSSS 756 | 75 | 155 | 1752 | 285 | 440 | 152 | 120 | 95 | 30 | 70 | 3 | - | - | - | - | 5¾"-12 | 45 | - | 29.5 |
| NSSS 7513 | 75 | 333.5 | 3770 | 491 | 824.5 | 152 | 120 | 95 | 30 | 70 | 3 | - | - | - | - | 5¾"-12 | 45 | - | 59 |
| NSSS 1006 | 100 | 170 | 2432 | 358 | 825 | 177 | 135 | 105 | 40 | 70 | 3 | - | - | 139 | ¾"-10 | 6⅞"-12 | 45 | 25 | 59 |
| NSSS 10010 | 100 | 260 | 3720 | 448 | 708 | 177 | 135 | 105 | 40 | 70 | 3 | - | - | 139 | ¾"-10 | 6⅞"-12 | 45 | 25 | 72.6 |

FLAT CYLINDERS

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



5 - 150
capacity ton

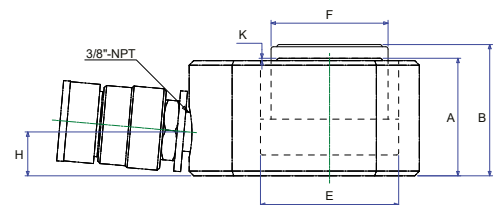
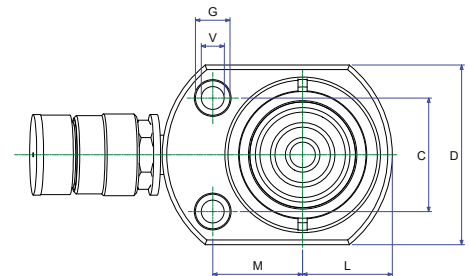
6 - 17
stroke mm

700
max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

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 | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | C mm | D mm | E ø mm | F ø mm | G ø mm | H mm | K mm | L mm | M mm | O ø mm | P ø mm | U mm | V ø mm | Weight kg | |
|-----------|----------|-----------|--------------------------|--------------------|------|------|------------|--------|--------|--------|------|------|------|------|--------|--------|------|--------|-----------|--|
| | | | | A | B | | | | | | | | | | | | | | | |
| | | | | Min. | Max. | | | | | | | | | | | | | | | |
| NSLS 50 | 5 | 6 | 4.5 | 33 | 39 | 28.5 | 58.5 x 44 | 31 | 25.4 | 9.5 | 16 | 1 | 22 | 22 | - | - | - | 5.3 | 1.0 | |
| NSLS 100 | 10 | 12 | 18.0 | 42 | 54 | 36.5 | 82.5 x 60 | 44 | 38 | 11 | 19 | 1 | 30 | 34 | - | - | - | 7.5 | 1.4 | |
| NSLS 200 | 20 | 12 | 34.0 | 51 | 63 | 49.3 | 100 x 78 | 60 | 50.8 | 15 | 19 | 1 | 39 | 39 | - | - | - | 10 | 3.1 | |
| NSLS 300 | 30 | 13 | 54.0 | 58 | 71 | 52.3 | 117.5 x 95 | 73 | 63.5 | 16 | 19 | 2 | 47.5 | 47.5 | - | - | - | 10 | 4.5 | |
| NSLS 500 | 50 | 16 | 113.0 | 66 | 82 | 66.5 | 145 x 115 | 95 | 70 | 19 | 19 | 2 | 57.5 | 58 | - | - | - | 11 | 6.8 | |
| NSLS 750 | 75 | 16 | 180.0 | 79 | 95 | 76.2 | 170 x 145 | 120 | 82.5 | 20.5 | 19 | 2 | 72.5 | 70 | - | - | - | 13.5 | 11.3 | |
| NSLS 1000 | 100 | 16 | 229.0 | 85 | 101 | 76.2 | 185 x 160 | 135 | 92 | 20.5 | 19 | 2 | 80 | 78 | - | - | - | 13.5 | 14.5 | |
| NSLS 1500 | 150 | 17 | 363.0 | 100 | 117 | 117 | 225 x 195 | 165 | 115 | 20.5 | 23 | 2 | 97.5 | 85 | - | - | - | 13.5 | 26.3 | |

FLAT CYLINDERS

BETEX NSLS series, telescopic, load-return, single-acting



10
capacity ton

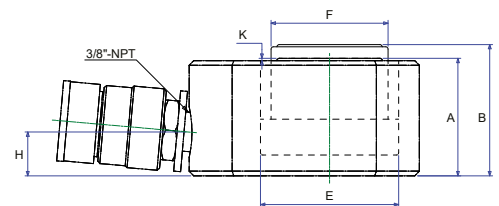
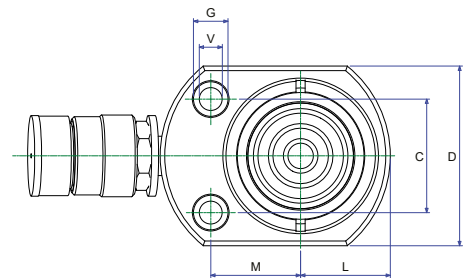
13
stroke mm

700
max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX NSLS telescopic series

- Suitable in confined spaces in combination with a long stroke.
- 2 different tonnages 10+5 and 20+10.
- All cylinders are single-acting with load-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 | Cap. ton | | Stroke mm | | Oil cap. cm ³ | Install. height mm | | C mm | D mm | E ø mm | F ø mm | G ø mm | H mm | K mm | L mm | M mm | V ø mm | Weight kg |
|------------|----------|-----|-----------|-----|--------------------------|--------------------|--------|------|---------|--------|--------|--------|------|------|------|------|--------|-----------|
| | 1st | 2nd | 1st | 2nd | | Min. A | Max. B | | | | | | | | | | | |
| NSLS 10-05 | 10 | 5 | 13 | 12 | 29 | 42 | 67 | 36.5 | 82,5x60 | 44 | 38 | 11 | 19 | 1 | 30 | 34 | 7.5 | 1.6 |
| NSLS 20-10 | 20 | 10 | 13 | 12 | 55 | 51 | 76 | 49.3 | 100x78 | 60 | 50.8 | 15 | 19 | 1 | 39 | 39 | 10 | 2.6 |

COMPACT CYLINDERS

BETEX NSCS series, short stroke, spring-return, single-acting



10 - 100

capacity ton

38 - 62

stroke mm

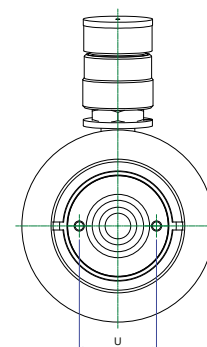
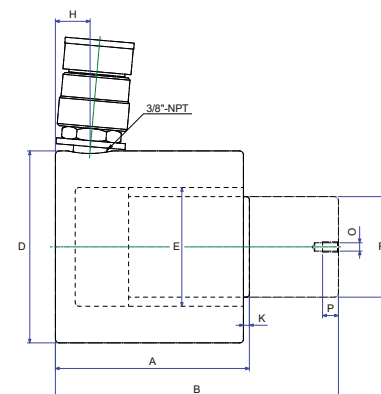
700

max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX NSCS 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.



| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | C mm | D mm | E ø mm | F ø mm | G ø mm | H mm | K mm | L mm | M mm | O ø mm | P ø mm | U mm | V ø mm | Weight kg | |
|-----------|----------|-----------|--------------------------|--------------------|-------|------|------|--------|--------|--------|------|------|------|------|--------|--------|------|--------|-----------|--|
| | | | | A | B | | | | | | | | | | | | | | | |
| | | | | Min. | Max. | | | | | | | | | | | | | | | |
| NSCS 101 | 10 | 38 | 55.0 | 88 | 126 | - | 78 | 42.8 | 38 | - | 17.5 | 5 | - | - | M4 | 8 | 26 | - | 4.1 | |
| NSCS 201 | 20 | 45 | 127.0 | 98 | 143 | - | 97 | 60 | 50.8 | - | 17.5 | 3 | - | - | M5 | 9 | 39 | - | 5.0 | |
| NSCS 302 | 30 | 62 | 274.0 | 117 | 179 | - | 107 | 75 | 63.5 | - | 19 | 3 | - | - | M5 | 8 | 39 | - | 6.8 | |
| NSCS 502 | 50 | 60.5 | 429.0 | 122 | 182 | - | 127 | 95 | 70 | - | 19 | 2 | - | - | M5 | 8 | 39 | - | 10.9 | |
| NSCS 1002 | 100 | 58 | 830.0 | 141.5 | 199.5 | - | 165 | 135 | 92 | - | 19 | 1.5 | - | - | M8 | 10 | 55 | - | 22.7 | |

HOLLOW CYLINDERS

BETEX NSHS series, spring-return, single-acting



12 - 100

capacity ton

8 - 160

stroke mm

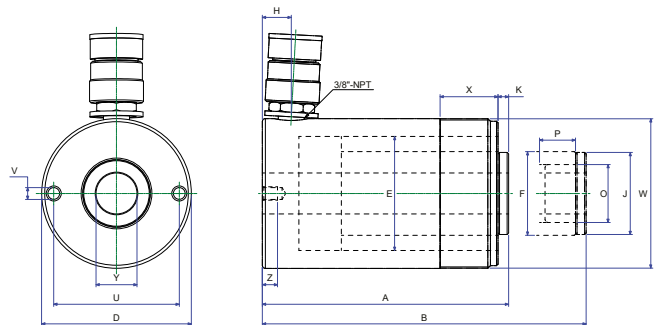
700

max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

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 | Cap. ton | Stroke mm | Oil cap. cm ³ | 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 | 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 | 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 | 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 | 20 | 51 | 173 | 162 | 213 | 98.5 | 75 | 55 | 19 | 54 | 7 | 1 7/8"-16 | 25 | 82.6 | 3/8"-16 | 3 7/8"-12 | 38 | 27 | 9.4 | 7.5 | |
| NSHS 206 | 20 | 155 | 527 | 306 | 461 | 98.5 | 75 | 55 | 19 | 54 | 7 | 1 7/8"-16 | 25 | 82.6 | 3/8"-16 | 3 7/8"-12 | 38 | 27 | 9.4 | 13.5 | |
| NSHS 302 | 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 | 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 | 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 | 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 | 100 | 76 | 1085 | 254 | 330 | 213 | 165 | 125 | 38 | 125 | 14 | 4"-16 | 30 | 178 | 5/8"-11 | 8 3/8"-12 | 60 | 79 | 19 | 50.1 | |

CYLINDERS WITH LOCKNUT

BETEX JLLC series, high tonnage, load-return, single-acting



50 - 1000

capacity ton

50 - 300

stroke mm

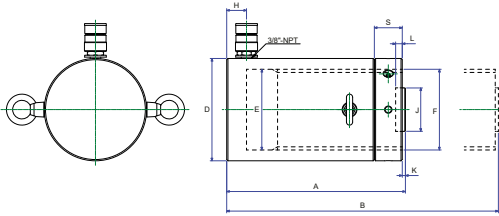
700

max. operating pressure bar

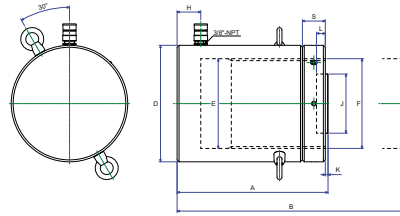
Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX JLLC series

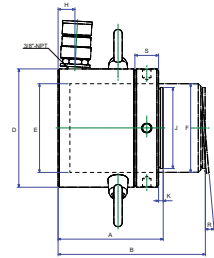
- Single-acting, load return.
- With locknut for positive and safe load holding over a long period of time.
- Chrome plated to prevent corrosion and to lower friction for smoother operation.
- Withstands side-load forces up to 5% of rated cylinder capacity without scoring.
- Stop ring for piston blow-out protection.
- Interchangeable, hardened, grooved saddle as standard.
- High-flow coupler and dust cap included with all models.
- Female coupler and dust cap included with all models.
- Cylinders inside roll-polished, outside blasted with black nitride coating.



JLLC 50-200T model



JLLC 300-1000T model



Optional Tilt Saddle (TSA)

| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | D ø mm | E ø mm | F mm | H mm | J mm | K mm | L mm | S mm | Weight kg | Optional Tilt Saddle | | |
|-------------|----------|-----------|--------------------------|--------------------|------|--------|--------|---------|------|------|------|------|------|-----------|----------------------|-------|----------|
| | | | | A | B | | | | | | | | | | J1 mm | K1 mm | Type |
| | | | | Min. | Max. | | | | | | | | | | | | |
| JLLC 502 | 50 | 50 | 354.5 | 164 | 214 | 125 | 95 | Tr95x4 | 20 | 70 | 4 | 13 | 35 | 15 | 70 | 24 | TSA-100 |
| JLLC 506 | 50 | 150 | 1063.5 | 264 | 414 | 125 | 95 | Tr95x4 | 20 | 70 | 4 | 13 | 35 | 25 | 70 | 24 | TSA-100 |
| JLLC 5010 | 50 | 250 | 1772.5 | 364 | 614 | 125 | 95 | Tr95x4 | 20 | 70 | 4 | 13 | 35 | 35 | 70 | 24 | TSA-100 |
| JLLC 1002 | 100 | 50 | 665 | 187 | 237 | 165 | 130 | Tr130x4 | 32 | 70 | 4 | 13 | 45 | 30 | 70 | 24 | TSA-100 |
| JLLC 1006 | 100 | 150 | 1995 | 287 | 437 | 165 | 130 | Tr130x4 | 32 | 70 | 4 | 13 | 45 | 48 | 70 | 24 | TSA-100 |
| JLLC 10010 | 100 | 250 | 3325 | 387 | 637 | 165 | 130 | Tr130x4 | 32 | 70 | 4 | 13 | 45 | 64 | 70 | 24 | TSA-100 |
| JLLC 1502 | 150 | 50 | 1005 | 209 | 259 | 205 | 160 | Tr160x6 | 49 | 125 | 4 | 25 | 45 | 53 | 125 | 20 | TSA-200 |
| JLLC1506 | 150 | 150 | 3015 | 309 | 459 | 205 | 160 | Tr160x6 | 49 | 125 | 4 | 25 | 45 | 78 | 125 | 20 | TSA-200 |
| JLLC 15012 | 150 | 300 | 6030 | 459 | 759 | 205 | 160 | Tr160x6 | 49 | 125 | 4 | 25 | 45 | 117 | 125 | 20 | TSA-200 |
| JLLC 2002 | 200 | 50 | 1345 | 243 | 293 | 235 | 185 | Tr185x6 | 52 | 125 | 4 | 25 | 50 | 83 | 125 | 20 | TSA-200 |
| JLLC 2006 | 200 | 150 | 4035 | 343 | 493 | 235 | 185 | Tr185x6 | 52 | 125 | 4 | 25 | 50 | 117 | 125 | 20 | TSA-200 |
| JLLC 20012 | 200 | 300 | 8070 | 493 | 793 | 235 | 185 | Tr185x6 | 52 | 125 | 4 | 25 | 50 | 170 | 125 | 20 | TSA-200 |
| JLLC 3002 | 300 | 50 | 2167.5 | 295 | 345 | 305 | 235 | Tr235x6 | 62 | 160 | 5 | 25 | 60 | 173 | 195 | 75 | TSA-300 |
| JLLC 3006 | 300 | 150 | 6502.5 | 395 | 545 | 305 | 235 | Tr235x6 | 62 | 160 | 5 | 25 | 60 | 233 | 195 | 75 | TSA-300 |
| JLLC 30012 | 300 | 300 | 13005 | 545 | 845 | 305 | 235 | Tr235x6 | 62 | 160 | 5 | 25 | 60 | 323 | 195 | 75 | TSA-300 |
| JLLC 4002 | 400 | 50 | 2755 | 335 | 385 | 355 | 265 | Tr265x6 | 76 | 160 | 5 | 25 | 70 | 250 | 225 | 85 | TSA-400 |
| JLLC 4006 | 400 | 150 | 8265 | 435 | 585 | 355 | 265 | Tr265x6 | 76 | 160 | 5 | 25 | 70 | 327 | 225 | 85 | TSA-400 |
| JLLC 40012 | 400 | 300 | 16530 | 585 | 885 | 355 | 265 | Tr265x6 | 76 | 160 | 5 | 25 | 70 | 441 | 225 | 85 | TSA-400 |
| JLLC 5002 | 500 | 50 | 3532.5 | 375 | 425 | 395 | 300 | Tr300x6 | 81 | 180 | 5 | 25 | 80 | 367 | 250 | 90 | TSA-500 |
| JLLC 5006 | 500 | 150 | 10597.5 | 475 | 625 | 395 | 300 | Tr300x6 | 81 | 180 | 5 | 25 | 80 | 466 | 250 | 90 | TSA-500 |
| JLLC 50012 | 500 | 300 | 21195 | 625 | 925 | 395 | 300 | Tr300x6 | 81 | 180 | 5 | 25 | 80 | 617 | 250 | 90 | TSA-500 |
| JLLC 6002 | 600 | 50 | 4274 | 395 | 445 | 425 | 330 | Tr330x6 | 89 | 195 | 5 | 25 | 85 | 446 | 275 | 95 | TSA-600 |
| JLLC 6006 | 600 | 150 | 12823 | 495 | 645 | 425 | 330 | Tr330x6 | 89 | 195 | 5 | 25 | 85 | 562 | 275 | 95 | TSA-600 |
| JLLC 60012 | 600 | 300 | 25646 | 645 | 945 | 425 | 330 | Tr330x6 | 89 | 195 | 5 | 25 | 85 | 737 | 275 | 95 | TSA-600 |
| JLLC 8002 | 800 | 50 | 5970 | 455 | 505 | 505 | 390 | Tr390x6 | 105 | 225 | 5 | 25 | 100 | 709 | 320 | 120 | TSA-800 |
| JLLC 8006 | 800 | 150 | 17910 | 555 | 705 | 505 | 390 | Tr390x6 | 105 | 225 | 5 | 25 | 100 | 870 | 320 | 120 | TSA-800 |
| JLLC 80012 | 800 | 300 | 35820 | 705 | 1005 | 505 | 390 | Tr390x6 | 105 | 225 | 5 | 25 | 100 | 1110 | 320 | 120 | TSA-800 |
| JLLC 10002 | 1000 | 50 | 7257 | 495 | 545 | 555 | 430 | Tr430x6 | 108 | 250 | 5 | 25 | 110 | 949 | 360 | 135 | TSA-1000 |
| JLLC 10006 | 1000 | 150 | 21772 | 595 | 745 | 555 | 430 | Tr430x6 | 108 | 250 | 5 | 25 | 110 | 1141 | 360 | 135 | TSA-1000 |
| JLLC 100012 | 1000 | 300 | 43544 | 745 | 1045 | 555 | 430 | Tr430x6 | 108 | 250 | 5 | 25 | 110 | 1430 | 360 | 135 | TSA-1000 |

CYLINDERS WITH LOCKNUT

BETEX JLPC series, high tonnage, load-return, compact, single-acting



60 - 520

capacity ton

45 - 50

stroke mm

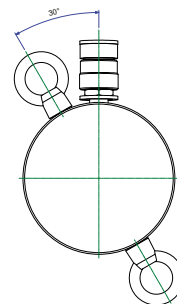
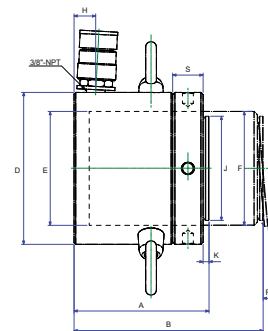
700

max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX JLPC series

- All cylinders are single-acting with load-return.
- Extremely low height for use in confined spaces.
- With locknut for positive and safe load holding over a long period of time.
- Chrome plated to prevent corrosion and to lower friction for smoother operation.
- Withstands side-load forces up to 3% of rated cylinder capacity without scoring.
- Pressure relief valve port functions as a stroke limiter.
- Female coupler and dust cap included with all models.
- Cylinders inside roll-polished, outside blasted with black nitride coating.



| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | D mm | E ø mm | F ø mm | H mm | J ø mm | K mm | R mm | S mm | Weight kg |
|-----------|----------|-----------|--------------------------|--------------------|----------|------|--------|---------|------|--------|------|------|------|-----------|
| | | | | A | B | | | | | | | | | |
| JLPC 602 | 60 | 50 | 433 | Min. 124 | Max. 174 | 140 | 105 | Tr105x4 | 20 | 96 | 5 | 5° | 28 | 15 |
| JLPC 1002 | 100 | 50 | 715 | 137 | 187 | 175 | 135 | Tr135x6 | 21 | 126 | 8 | 5° | 31 | 26 |
| JLPC 1502 | 150 | 45 | 963 | 148 | 193 | 220 | 165 | Tr165x6 | 27 | 150 | 9 | 5° | 40 | 44 |
| JLPC 2002 | 200 | 45 | 1273.5 | 155 | 200 | 245 | 190 | Tr190x6 | 30 | 180 | 10 | 5° | 43 | 57 |
| JLPC 2502 | 250 | 45 | 1633 | 159 | 204 | 275 | 215 | Tr215x6 | 32 | 200 | 11 | 5° | 44 | 74 |
| JLPC 4002 | 400 | 45 | 2574 | 178 | 223 | 350 | 270 | Tr270x6 | 39 | 250 | 11 | 5° | 55 | 134 |
| JLPC 5002 | 520 | 45 | 3179 | 192 | 237 | 400 | 300 | Tr300x6 | 48 | 285 | 10 | 5° | 62 | 189 |

ALUMINIUM CYLINDERS

BETEX ADHC series, hollow, double-acting



30 - 60
capacity ton

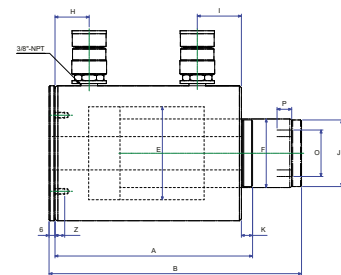
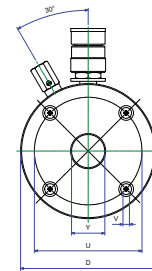
50 - 250
stroke mm

700
max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX ADHC series

- Considerably lighter than steel cylinders.
- Hard-anodized coating reduces wear and corrosion.
- Stop rings for piston blow-out protection.
- Rod wiper protects inner cylinder from dirt.
- Female coupler and dust cap included with all models.
- Carrying handles on all models as standard.
- Mounting holes base plate: M6, 10 mm deep (V).



Cylinder bore

| Type | Cap. ton | Stroke mm | Cap. tons | | Oil cap. cm ³ | | Install. height mm | | D ø mm | E ø mm | F ø mm | H mm | I mm | J ø mm | K mm | P mm | O ø mm | U mm | Y ø mm | Weight kg |
|-----------|----------|-----------|-----------|------|--------------------------|------|--------------------|------|-----------|-----------|-----------|---------|---------|-----------|---------|---------|-----------|---------|-----------|-----------|
| | | | Push | Pull | Push | Pull | Min. | Max. | | | | | | | | | | | | |
| ADHC 302 | 30 | 50 | 38.5 | 22.7 | 275 | 162 | 202 | 252 | 138 | 95 | 70 | 35 | 45 | 68 | 11.5 | 25 | 1 7/8"-16 | 110 | 34 | 9.3 |
| ADHC 306 | 30 | 150 | 38.5 | 22.7 | 825 | 486 | 327 | 477 | 138 | 95 | 70 | 35 | 45 | 68 | 11.5 | 25 | - | 110 | 34 | 13 |
| ADHC 3010 | 30 | 250 | 38.5 | 22.7 | 1374 | 810 | 430 | 680 | 138 | 95 | 70 | 35 | 45 | 68 | 11.5 | 25 | - | 110 | 34 | 16 |
| ADHC 602 | 60 | 50 | 62.6 | 31 | 447.5 | 221 | 250 | 300 | 200 | 125 | 100 | 50 | 50 | 89 | 14 | 25 | 2 3/4"-16 | 160 | 54 | 15.5 |
| ADHC 606 | 60 | 150 | 62.6 | 31 | 1342 | 662 | 350 | 500 | 200 | 125 | 100 | 50 | 50 | 89 | 14 | 25 | - | 160 | 54 | 23 |
| ADHC 6010 | 60 | 250 | 62.6 | 31 | 2237 | 1104 | 433 | 683 | 200 | 125 | 100 | 50 | 50 | 89 | 14 | 25 | - | 160 | 54 | 30.5 |

ALUMINIUM CYLINDERS

BETEX ACHC series, hollow, spring-return, single-acting



30 - 60

capacity ton

50 - 150

stroke mm

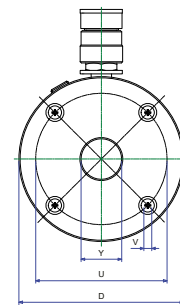
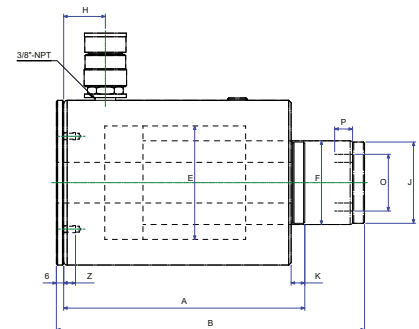
700

max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX ACHC series

- Considerably lighter than steel cylinders.
- All cylinders are single-acting with spring-return.
- Chrome plated center hole for extra protection.
- Large piston surface for side load protection.
- Hard-anodized coating reduces wear and corrosion.
- Stop rings for piston blow-out protection.
- Female coupler and dust cap included with all models.
- Rod wiper protects inner cylinder from dirt.
- Carrying handles on some models.
- Mounting holes base plate: M6, 10 mm deep (V).



Cylinder bore

| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | D ø mm | E ø mm | F ø mm | H mm | J ø mm | K mm | O ø mm | L mm | U mm | Y ø mm | Weight kg |
|---------|----------|-----------|--------------------------|--------------------|------|--------|--------|--------|------|--------|------|------------|------|------|--------|-----------|
| | | | | A | B | | | | | | | | | | | |
| | | | | Min. | Max. | | | | | | | | | | | |
| ACHC302 | 30 | 50 | 275 | 202 | 252 | 138 | 95 | 70 | 35 | 68 | 11.5 | 1 7/8\"-16 | 25 | 110 | 34 | 10 |
| ACHC306 | 30 | 150 | 825 | 327 | 477 | 138 | 95 | 70 | 35 | 68 | 11.5 | - | 25 | 110 | 34 | 14 |
| ACHC602 | 60 | 50 | 447.5 | 250 | 300 | 200 | 125 | 100 | 50 | 89 | 14 | 2 3/4\"-16 | 25 | 160 | 54 | 19.5 |
| ACHC606 | 60 | 150 | 1342 | 350 | 500 | 200 | 125 | 100 | 50 | 89 | 14 | - | 25 | 160 | 54 | 25 |

ALUMINIUM CYLINDERS

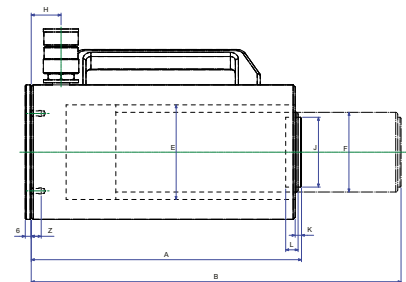
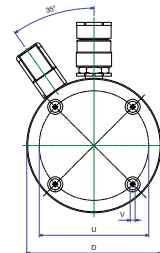
BETEX SSA series, spring-return, single-acting



20 - 100
capacity ton

50 - 250
stroke mm

700
max. operating pressure bar



BETEX SSA series

- Considerably lighter than steel cylinders.
- All cylinders are single-acting with spring-return.
- Large saddle surface for side load protection.
- Special O-ring protects inside from dirt.
- Hard-anodized coating reduces wear and corrosion.
- Female coupler and dust cap included with all models.
- Carrying handles on all models as standard.
- Mounting holes base plate: M6, 10 mm deep (V).

| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | D ø mm | E ø mm | F ø mm | H ø mm | J ø mm | K mm | L mm | U mm | Weight kg |
|-----------|----------|-----------|--------------------------|--------------------|------|--------|--------|--------|--------|--------|------|------|------|-----------|
| | | | | A | B | | | | | | | | | |
| | | | | Min. | Max. | | | | | | | | | |
| SSA 202 | 20 | 50 | 166 | 168 | 218 | 92 | 65 | 55 | 25 | 40 | 3 | 9 | 70 | 4.3 |
| SSA 204 | 20 | 100 | 332 | 218 | 318 | 92 | 65 | 55 | 25 | 40 | 3 | 9 | 70 | 5 |
| SSA 206 | 20 | 150 | 498 | 268 | 418 | 92 | 65 | 55 | 25 | 40 | 3 | 9 | 70 | 5.7 |
| SSA 208 | 20 | 200 | 664 | 318 | 518 | 92 | 65 | 55 | 25 | 40 | 3 | 9 | 70 | 6.5 |
| SSA 302 | 30 | 50 | 221 | 175 | 225 | 110 | 75 | 60 | 25 | 40 | 3 | 9 | 80 | 6 |
| SSA 304 | 30 | 100 | 442 | 225 | 325 | 110 | 75 | 60 | 25 | 40 | 3 | 9 | 80 | 6.9 |
| SSA 306 | 30 | 150 | 663 | 275 | 425 | 110 | 75 | 60 | 25 | 40 | 3 | 9 | 80 | 7.9 |
| SSA 308 | 30 | 200 | 884 | 325 | 525 | 110 | 75 | 60 | 25 | 40 | 3 | 9 | 80 | 8.8 |
| SSA 502 | 50 | 50 | 354.5 | 171 | 221 | 135 | 95 | 80 | 30 | 70 | 6 | 12 | 110 | 7.7 |
| SSA 504 | 50 | 100 | 709 | 221 | 321 | 135 | 95 | 80 | 30 | 70 | 6 | 12 | 110 | 9.1 |
| SSA 506 | 50 | 150 | 1063.5 | 271 | 421 | 135 | 95 | 80 | 30 | 70 | 6 | 12 | 110 | 11.7 |
| SSA 508 | 50 | 200 | 1418 | 321 | 521 | 135 | 95 | 80 | 30 | 70 | 6 | 12 | 110 | 13.5 |
| SSA 5010 | 50 | 250 | 1772.5 | 371 | 621 | 135 | 95 | 80 | 30 | 70 | 6 | 12 | 110 | 16.4 |
| SSA 1002 | 100 | 50 | 715 | 185 | 235 | 200 | 135 | 105 | 45 | 70 | 6 | 12 | 160 | 17.2 |
| SSA 1004 | 100 | 100 | 1430 | 235 | 335 | 200 | 135 | 105 | 45 | 70 | 6 | 12 | 160 | 21 |
| SSA 1006 | 100 | 150 | 2145 | 285 | 435 | 200 | 135 | 105 | 45 | 70 | 6 | 12 | 160 | 25.1 |
| SSA 1008 | 100 | 200 | 2860 | 335 | 535 | 200 | 135 | 105 | 45 | 70 | 6 | 12 | 160 | 28.5 |
| SSA 10010 | 100 | 250 | 3575 | 388 | 638 | 200 | 135 | 105 | 45 | 70 | 6 | 12 | 160 | 30.7 |

ALUMINIUM CYLINDERS

BETEX ALNC series, load-return, single-acting



20 - 100

capacity ton

50 - 250

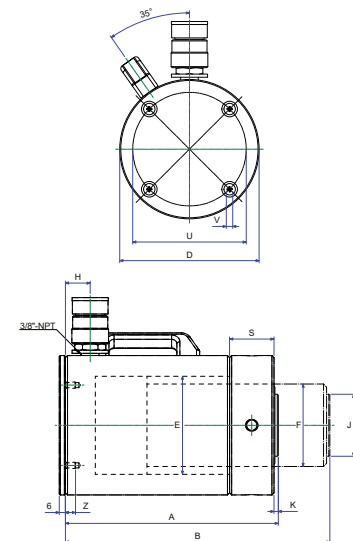
stroke mm

700

max. operating pressure bar

BETEX ALNC series

- Considerably lighter than steel cylinders.
- All cylinders are single-acting with load-return.
- Locknut for positive and safe load holding over a long period of time.
- Large piston surface for side load protection.
- Hard-anodized coating reduces wear and corrosion.
- Female coupler and dust cap included with all models.
- Carrying handles on all models as standard.
- Mounting holes bottom: M6, 10 mm deep (V).



| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Install. height mm | | D ø mm | E ø mm | F ø mm | H ø mm | J ø mm | K mm | L mm | U mm | Weight kg |
|------------|----------|-----------|--------------------------|--------------------|------|--------|--------|---------|--------|--------|------|------|------|-----------|
| | | | | A | B | | | | | | | | | |
| | | | | Min. | Max. | | | | | | | | | |
| ALNC 202 | 20 | 50 | 166 | 212 | 262 | 92 | 65 | Tr55x3 | 25 | 40 | 3 | 25 | 70 | 4.8 |
| ALNC 204 | 20 | 100 | 332 | 262 | 362 | 92 | 65 | Tr55x3 | 25 | 40 | 3 | 25 | 70 | 5.5 |
| ALNC 206 | 20 | 150 | 498 | 312 | 462 | 92 | 65 | Tr55x3 | 25 | 40 | 3 | 25 | 70 | 6.3 |
| ALNC 208 | 20 | 200 | 664 | 412 | 612 | 92 | 65 | Tr55x3 | 25 | 40 | 3 | 25 | 70 | 6.9 |
| ALNC 302 | 30 | 50 | 221 | 205 | 255 | 110 | 75 | Tr60x3 | 25 | 40 | 3 | 30 | 80 | 6.9 |
| ALNC 304 | 30 | 100 | 442 | 255 | 355 | 110 | 75 | Tr60x3 | 25 | 40 | 3 | 30 | 80 | 7.7 |
| ALNC 306 | 30 | 150 | 663 | 305 | 455 | 110 | 75 | Tr60x3 | 25 | 40 | 3 | 30 | 80 | 7.6 |
| ALNC 308 | 30 | 200 | 884 | 355 | 555 | 110 | 75 | Tr60x3 | 25 | 40 | 3 | 30 | 80 | 9.6 |
| ALNC 502 | 50 | 50 | 354 | 212 | 262 | 135 | 95 | Tr80x4 | 30 | 60 | 3 | 43 | 110 | 9.3 |
| ALNC 504 | 50 | 100 | 708 | 262 | 362 | 135 | 95 | Tr80x4 | 30 | 60 | 3 | 43 | 110 | 10.7 |
| ALNC 506 | 50 | 150 | 1062 | 312 | 462 | 135 | 95 | Tr80x4 | 30 | 60 | 3 | 43 | 110 | 13.7 |
| ALNC 508 | 50 | 200 | 1418 | 362 | 562 | 135 | 95 | Tr80x4 | 30 | 60 | 3 | 43 | 110 | 14.5 |
| ALNC 5010 | 50 | 250 | 1770 | 412 | 662 | 135 | 95 | Tr80x4 | 30 | 60 | 3 | 43 | 110 | 16.5 |
| ALNC 1002 | 100 | 50 | 715 | 235 | 285 | 200 | 135 | Tr105x6 | 45 | 70 | 3 | 51 | 160 | 21.7 |
| ALNC 1004 | 100 | 100 | 1430 | 285 | 385 | 200 | 135 | Tr105x6 | 45 | 70 | 3 | 51 | 160 | 25.2 |
| ALNC 1006 | 100 | 150 | 2145 | 335 | 485 | 200 | 135 | Tr105x6 | 45 | 70 | 3 | 51 | 160 | 29.2 |
| ALNC 1008 | 100 | 200 | 2860 | 385 | 585 | 200 | 135 | Tr105x6 | 45 | 70 | 3 | 51 | 160 | 33 |
| ALNC 10010 | 100 | 250 | 3575 | 435 | 685 | 200 | 135 | Tr105x6 | 45 | 70 | 3 | 51 | 160 | 35.4 |

DOUBLE-ACTING CYLINDERS

BETEX NDAC series



10 - 100

capacity ton

150 - 470

stroke mm

700

max. operating pressure bar

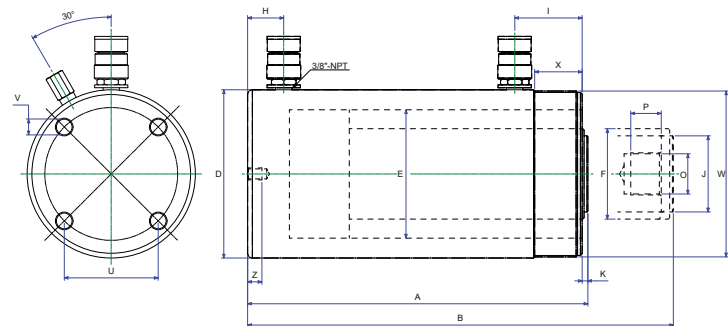
Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX NDAC series

- Cylinders are double-acting.
- Pistons are hard chromed.
- Ram inside roll-polished.
- Exterior blasted with black nitride coating.
- Female coupler and dust cap included with all models.
- Particularly suitable for construction sites, shipyards, utility companies, mining and maintenance workshops.



Overpressure valve



| Type | Cap. ton | | Stroke mm | Oil cap. cm ³ | | Install. height mm | | D ø mm | E ø mm | F ø mm | H mm | I mm | J ø mm | K mm | O ø mm | P mm | U mm | V ø mm | Z mm | W ø mm | X mm | Weight kg |
|------------|----------|------|-----------|--------------------------|------|--------------------|-------|--------|--------|--------|------|------|--------|------|-----------|------|-------|-----------|------|-----------|------|-----------|
| | Push | Pull | | Push | Pull | Min. | Max. | | | | | | | | | | | | | | | |
| NDAC 1010 | 10 | 4 | 251 | 399 | 144 | 408 | 659 | 78 | 45 | 36 | 36.5 | 55 | 40 | 8 | 1"-8 | 25.4 | - | - | - | 2 1/4"-14 | 27 | 13 |
| NDAC 1012 | 10 | 4 | 301 | 478 | 172 | 458 | 759 | 78 | 45 | 36 | 36.5 | 55 | 40 | 8 | 1"-8 | 25.4 | - | - | - | 2 1/4"-14 | 27 | 15 |
| NDAC 2512 | 25 | 10 | 305 | 1175 | 450 | 476.5 | 781.5 | 103 | 70 | 55 | 25 | 75 | 50 | 11.5 | 1 1/2"-16 | 25 | 69.85 | 1 1/2"-13 | 19 | 4"-12 | 40 | 29 |
| NDAC 308 | 30 | 14 | 209 | 923 | 426 | 387 | 596 | 103 | 75 | 55 | 25 | 75 | 50 | 12 | 1 1/2"-16 | 25.4 | - | - | - | 4"-12 | 50 | 20 |
| NDAC 3014 | 30 | 14 | 368 | 1625 | 751 | 547 | 915 | 103 | 75 | 55 | 25 | 75 | 50 | 12 | 1 1/2"-16 | 25.4 | - | - | - | 4"-12 | 50 | 29 |
| NDAC 506 | 50 | 14 | 150 | 1062 | 309 | 331 | 481 | 127 | 95 | 80 | 30 | 70 | 70 | 5 | 1"-12 | 25.4 | - | - | - | 5"-12 | 50 | 29 |
| NDAC 5013 | 50 | 14 | 330 | 2338 | 680 | 511 | 841 | 127 | 95 | 80 | 30 | 70 | 70 | 5 | 1"-12 | 25.4 | - | - | - | 5"-12 | 50 | 43 |
| NDAC 5018 | 50 | 41 | 470 | 3330 | 968 | 675 | 1145 | 127 | 95 | 80 | 52 | 70 | 70 | 5 | 1"-12 | 25.4 | 88.9 | 5/8"-11 | 22 | 5"-12 | 50 | 59 |
| NDAC 756 | 75 | 29.5 | 155 | 1752 | 654 | 348 | 503 | 152 | 120 | 95 | 30 | 75 | 70 | 5 | 1"-12 | 38 | 114.3 | 3/4"-10 | 22 | 5 3/4"-12 | 45 | 40 |
| NDAC 7513 | 75 | 29.5 | 333 | 3764 | 1405 | 526 | 859 | 152 | 120 | 95 | 30 | 75 | 70 | 5 | 1"-12 | 38 | 114.3 | 3/4"-10 | 22 | 5 3/4"-12 | 45 | 58 |
| NDAC 1006 | 100 | 43 | 160 | 2289 | 1155 | 358 | 518 | 177 | 135 | 95 | 38 | 71 | 80 | 5 | 1 3/4"-12 | 35 | 139.7 | 3/4"-10 | 25 | 6 7/8"-12 | 50 | 59 |
| NDAC 10013 | 100 | 43 | 330 | 4721 | 2383 | 528 | 858 | 177 | 135 | 95 | 38 | 71 | 80 | 5 | 1 3/4"-12 | 35 | 139.7 | 3/4"-10 | 25 | 6 7/8"-12 | 50 | 83 |

DOUBLE-ACTING CYLINDERS

BETEX NDAH series, hollow



30 - 100

capacity ton

76 - 257

stroke mm

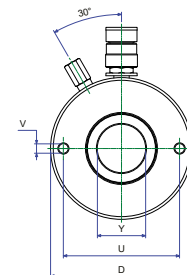
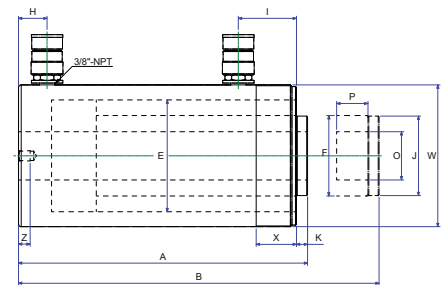
700

max. operating pressure bar

Use in combination with our pumps, see from page 91, and accessories, see page 112-115.

BETEX NDAH series

- All cylinders are double-acting and hollow.
- Pistons are hard chromed.
- Ram inside roll-polished.
- Exterior blasted with black nitride coating.
- Female coupler and dust cap included with all models.
- Particularly suitable for construction sites, shipyards, utility companies, mining and maintenance workshops.



Cylinder bore

| Type | Cap. ton | | Stroke mm | Oil cap. cm ³ | | Install. height mm | | D | E | F | H | I | J | K | O | P | U | V | Z | W | X | Y | Weight kg |
|------------|----------|------|-----------|--------------------------|------|--------------------|-------|-------|-----|-----|------|------|------|------|-----------|----|-----|---------|----|-----------|----|----|-----------|
| | Push | Pull | | Push | Pull | Min. | Max. | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | |
| NDAH 307 | 30 | 21 | 178 | 849 | 541 | 330 | 508 | 117 | 90 | 65 | 21.5 | 60.5 | 59.5 | 0.5 | 1 7/8"-16 | 25 | 92 | 3/8"-16 | 14 | 4 1/2"-12 | 42 | 34 | 22 |
| NDAH 3010 | 30 | 21 | 257 | 1226 | 782 | 431 | 688 | 117 | 90 | 65 | 21.5 | 60.5 | 59.5 | 10 | 1 7/8"-16 | 25 | 92 | 3/8"-16 | 14 | 4 1/2"-12 | 42 | 34 | 27 |
| NDAH 603 | 60 | 41 | 89 | 797 | 526 | 247.5 | 336.5 | 158.6 | 125 | 90 | 32 | 65 | 89 | 12.5 | 2 3/4"-16 | 25 | 130 | 1/2"-13 | 14 | 6 1/4"-12 | 50 | 54 | 28 |
| NDAH 606 | 60 | 41 | 165 | 1477 | 975 | 323.5 | 488.5 | 158.6 | 125 | 90 | 32 | 65 | 89 | 12.5 | 2 3/4"-16 | 25 | 130 | 1/2"-13 | 14 | 6 1/4"-12 | 50 | 54 | 35 |
| NDAH 6010 | 60 | 41 | 257 | 2300 | 1518 | 437.5 | 694.5 | 158.6 | 125 | 90 | 32 | 65 | 89 | 12.5 | 2 3/4"-16 | 25 | 130 | 1/2"-13 | 14 | 6 1/4"-12 | 50 | 54 | 45 |
| NDAH 1003 | 100 | 64 | 76 | 1086 | 692 | 254 | 330 | 213 | 165 | 125 | 38 | 82 | 125 | 12 | 4"-16 | 30 | 178 | 5/8"-11 | 19 | 8 3/8"-12 | 60 | 79 | 52 |
| NDAH 1006 | 100 | 64 | 152 | 2172 | 1384 | 325 | 477 | 213 | 165 | 125 | 38 | 82 | 125 | 12 | 4"-16 | 30 | 178 | 5/8"-11 | 19 | 8 3/8"-12 | 60 | 79 | 65 |
| NDAH 10010 | 100 | 64 | 256 | 3656 | 2331 | 462 | 718 | 213 | 165 | 125 | 38 | 82 | 125 | 12 | 4"-16 | 30 | 178 | 5/8"-11 | 19 | 8 3/8"-12 | 60 | 79 | 88 |

ALUMINIUM HAND PUMPS

BETEX AHP series, lightweight



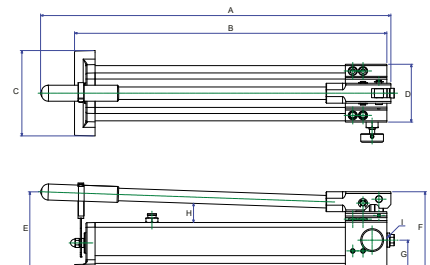
350 - 1620
usable oil-capacity cm³

700
bar

Use in combination with accessories,
see page 112-115.

BETEX AHP series

- 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.
- Available separately and as a complete set, see page 100.



| Type | Art. no | Operating pressure bar | | Reservoir volume cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | 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 | 7265500 | 20 | 700 | 500 | 350 | 12.9 | 1.65 | 391 | 361 | 110 | 77 | 140 | 127 | 42.5 | 37 | 3/8"-NPT | 2.3 |
| AHP 702 | 7265700 | 20 | 700 | 1000 | 750 | 12.9 | 1.65 | 542 | 513 | 110 | 77 | 130 | 127 | 42.5 | 37 | 3/8"-NPT | 3.5 |
| AHP 703 | 7265750 | 20 | 700 | 2000 | 1620 | 12.9 | 2.3 | 623 | 556 | 150 | 102 | 135 | 135 | 50 | 37 | 3/8"-NPT | 6 |
| AHP 703D | 7265760 | 20 | 700 | 2000 | 1620 | 12.9 | 2.3 | 623 | 556 | 150 | 102 | 135 | 135 | 24/37 | 37 | 3/8"-NPT | 7 |

STEEL HAND PUMPS

BETEX PB / HC series, heavy-duty



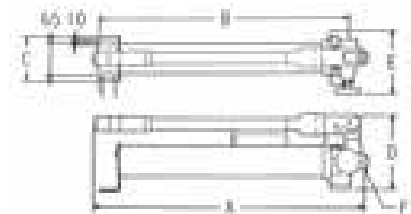
350 - 2500
usable oil-capacity cm³

700
bar

Use in combination with accessories,
see page 112-115.

BETEX PB / HC series

- Heavy-duty hydraulic hand pumps.
- Two-stage pump provides rapid pumping to load the cylinder quickly.
- Low handle effort required for easy operation.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- External control and locking of maximum pressure.
- Our hand pumps are characterised by their rugged construction and easy-operation handles.
- Carrying handle for easy portability.
- The professional choice for a wide range of industrial applications.
- **Available separately and as a complete set, see page 100.**



| Type | Art. no | Operating pressure bar | | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F | Weight in kg |
|---------|----------|------------------------|-----------|-------------------------------------|---------------------------------------|-----------|------|------|------|------|------|----------|--------------|
| | | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | |
| PB 350 | 7262350 | 13.8 | 700 | 350 | 13.0 | 2.8 | 335 | 303 | 90 | 146 | 128 | 3/8"-NPT | 5.5 |
| PB 600 | 7262600 | 13.8 | 700 | 600 | 13.0 | 2.8 | 545 | 480 | 90 | 146 | 128 | 3/8"-NPT | 7 |
| PB 700 | 7262700 | 13.8 | 700 | 700 | 13.0 | 2.8 | 590 | 541 | 90 | 146 | 128 | 3/8"-NPT | 7.3 |
| HC 1500 | 72621500 | 13.8 | 700 | 1500 | 13.0 | 2.8 | 633 | 551 | 106 | 200 | 142 | 3/8"-NPT | 11.2 |
| HC 2000 | 72622000 | 13.8 | 700 | 2000 | 13.0 | 2.8 | 580 | 523 | 140 | 189 | 148 | 3/8"-NPT | 11.5 |
| HC 2500 | 72622500 | 13.8 | 700 | 2500 | 13.0 | 2.8 | 713 | 632 | 106 | 200 | 142 | 3/8"-NPT | 12 |

STEEL HAND PUMPS

BETEX P 900 series, heavy-duty



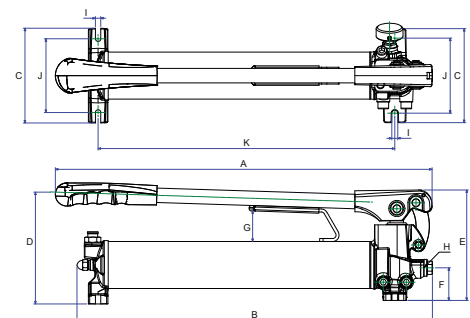
300 - 2200
usable oil-capacity cm³

700
bar

Use in combination with accessories,
see page 112-115.

BETEX P 900 series

- Heavy-duty hydraulic hand pumps.
- 2-stage hand pumps provide rapid pumping to load the cylinder quickly.
- Low handle effort required for easy operation.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- Our hand pumps are characterised by their rugged construction and easy-operation handles.
- Carrying handle for easy portability.
- The professional choice for a wide range of industrial applications and day-to-day operations.
- The P904D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- **Available separately and as a complete set, see page 100.**



| Type | Art. no | Max. pressure bar | | Oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | K mm | Weight kg |
|--------|---------|-------------------|-----------|--------------------------|---------------------------------------|-----------|------|-------|------|------|------|------|------|----------|------|------|------|-----------|
| | | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | | | |
| P 901 | 7262901 | 20 | 700 | 450 | 19.4 | 1.2 | 447 | 369.5 | 140 | 163 | 164 | 48.5 | 45 | 3/8" NPT | 8 | 112 | 282 | 6.5 |
| P 902 | 7262902 | 20 | 700 | 850 | 19.4 | 2.8 | 560 | 530 | 140 | 167 | 164 | 48.5 | 45 | 3/8" NPT | 8 | 112 | 442 | 7.8 |
| P 903 | 7262903 | 20 | 700 | 1600 | 19.4 | 2.8 | 633 | 597.5 | 140 | 170 | 164 | 48.5 | 36.5 | 3/8" NPT | 8 | 112 | 510 | 10 |
| P 904 | 7262904 | 27.5 | 700 | 2500 | 39.5 | 2.8 | 633 | 578 | 150 | 208 | 195 | 55 | 46 | 3/8" NPT | 8 | 121 | 502 | 13.5 |
| P 904D | 7262905 | 27.5 | 700 | 2500 | 35.6 | 2.8 | 633 | 609 | 150 | 208 | 195 | 38 | 47 | 3/8" NPT | 8 | 121 | 502 | 15 |

STEEL HAND PUMPS

BETEX HP 35 series, heavy-duty



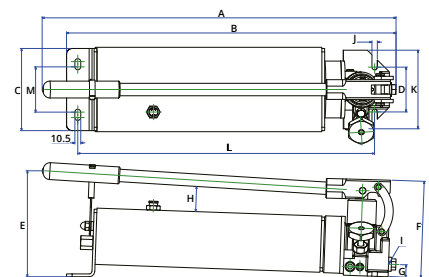
3500
usable oil-capacity cm³

700
bar

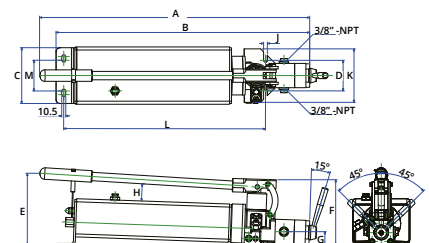
Use in combination with accessories, see page 112-115.

BETEX HP 35 series

- Heavy-duty hydraulic hand pumps.
- Two-stage pump provides rapid pumping to load the cylinder quickly.
- Low handle effort required for easy operation.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- Our hand pumps are characterised by their rugged steel construction and easy-operation handles.
- The handy release knobs with locking mechanism make these pumps particularly suitable for industrial applications and day-to-day operations.
- The HP 35D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



HP 35 model



HP 35D model (double-acting)

| Type | Art. no | Operating pressure bar | | Oil capacity cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | M mm | Weight kg |
|--------|---------|------------------------|-----------|------------------------------|-------------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|-------|------|----------|------|-----------|
| | | 1st stage | 2nd stage | | | 1st stage | 2nd stage | | | | | | | | | | | |
| HP 35 | 7200056 | 28 | 700 | 3500 | 3500 | 30 | 3 | 628 | 586 | 146 | 79.7 | 190 | 79.9 | 22.35 | 45 | 3/8"-NPT | 80.5 | 16.5 |
| HP 35D | 7200057 | 28 | 700 | 3500 | 3500 | 30 | 3 | 715 | 662 | 146 | 79.7 | 190 | 79.7 | 36 | 45 | 3/8"-NPT | 80.5 | 16.8 |

STEEL HAND PUMPS

BETEX HP 80 series, heavy-duty



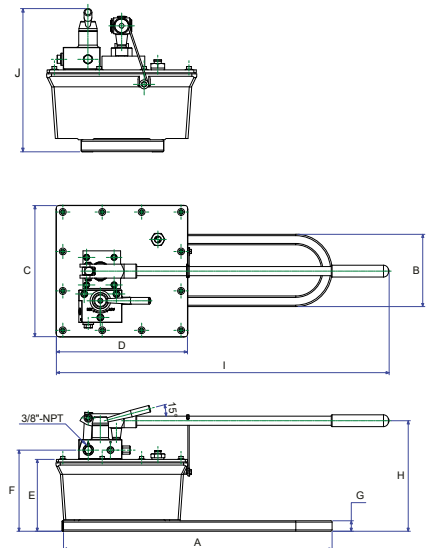
8000
usable oil-capacity cm³

700
bar

Use in combination with accessories, see page 112-115.

BETEX HP 80 series

- Heavy-duty hydraulic hand pumps.
- Two-stage pump provides rapid pumping to load the cylinder quickly.
- Low handle effort required for easy operation.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The pumps are equipped with a slow discharge function, which allows for multi-directional operation.
- The HP 80D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



| Type | Art. no | Operating pressure bar | | Oil capacity cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | Weight kg |
|--------|---------|------------------------|-----------|------------------------------|-------------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|------|------|------|------|-----------|
| | | 1st stage | 2nd stage | | | 1st stage | 2nd stage | | | | | | | | | | | |
| HP 80 | 7200063 | 27.5 | 700 | 8000 | 8000 | 113 | 4 | 635 | 171 | 310 | 310 | 170 | 192 | 25 | 261 | 787 | 298 | 24 |
| HP 80D | 7200064 | 27.5 | 700 | 8000 | 8000 | 113 | 4 | 635 | 171 | 310 | 310 | 170 | 196 | 25 | 261 | 787 | 298 | 24 |

SPECIAL HAND PUMPS

BETEX P 350



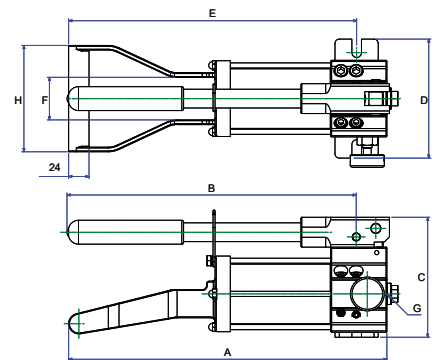
350
usable oil-capacity cm³

700
bar

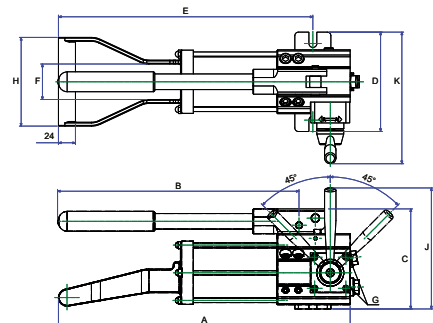
Use in combination with accessories, see page 112-115.

BETEX P 350 series

- Special lightweight design with unique triangular basis which makes the pump easy to handle.
- The sealed aluminium oil reservoir allows the hand pumps to be used in a range of positions, without the risk of oil leakage.
- **This also allows for use under water/in the sea!**
- P 350A hand pump with single port for 1 single-acting cylinder.
- P 350B hand pump with 2 ports for simultaneous use of 2 single-acting cylinders.
- P 350D double-acting hand pump for 1 double-acting cylinder.



P 350A, P 350B



P 350C

| Type | Art. no | Max. pressure bar | | Oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K mm | Weight kg |
|--------|---------|-------------------|-----------|--------------------------|---------------------------------------|-----------|------|------|------|------|-------|------|----------|------|------|------|-----------|
| | | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | | |
| P 350A | 7262401 | 20 | 700 | 350 | 5.8 | 0.9 | 374 | 340 | 140 | 140 | 338.5 | 50 | 3/8" NPT | 125 | - | - | 4.4 |
| P 350B | 7262402 | 20 | 700 | 350 | 5.8 | 0.9 | 421 | 340 | 140 | 140 | 363.5 | 50 | 3/8" NPT | 125 | - | - | 6.2 |
| P 350D | 7262403 | 20 | 700 | 350 | 5.8 | 0.9 | 411 | 340 | 140 | 140 | 358.5 | 50 | 3/8" NPT | 125 | 171 | 185 | 5.3 |

SPECIAL HAND PUMPS

BETEX P 550



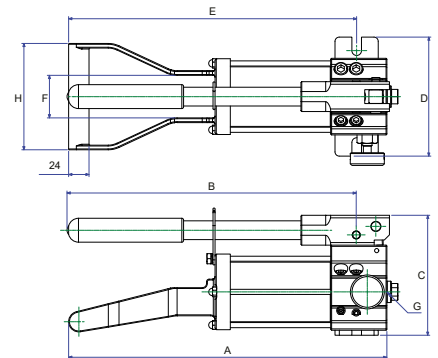
550
usable oil-capacity cm³

700
bar

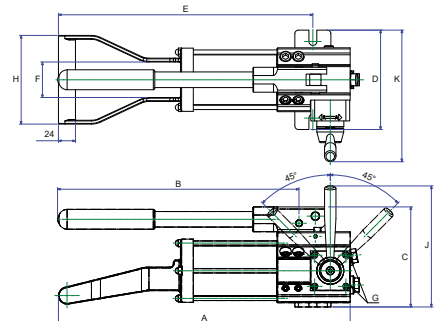
Use in combination with accessories, see page 112-115.

BETEX P 550 series

- Special lightweight design with unique triangular basis which makes the pump easy to handle.
- The sealed aluminium oil reservoir allows the hand pumps to be used in a range of positions, without the risk of oil leakage.
- **This also allows for use under water/in the sea!**
- P 550B hand pump with 2 ports for simultaneous use of 2 single-acting cylinders.
- P 550D double-acting hand pump for 1 double-acting cylinder.



P 550A, P 550B



P 550C

| Type | Art. no | Max. pressure bar | | Oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K mm | Weight kg |
|--------|---------|-------------------|-----------|--------------------------|---------------------------------------|-----------|------|------|------|------|-------|------|----------|------|------|------|-----------|
| | | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | | |
| P 550A | 726501 | 20 | 700 | 550 | 5.8 | 0.9 | 494 | 463 | 140 | 140 | 458.5 | 50 | 3/8" NPT | 125 | - | - | 6 |
| P 550B | 726502 | 20 | 700 | 550 | 5.8 | 0.9 | 541 | 463 | 140 | 140 | 483.5 | 50 | 3/8" NPT | 125 | - | - | 7.1 |
| P 550D | 726503 | 20 | 700 | 550 | 5.8 | 0.9 | 531 | 463 | 140 | 140 | 478.5 | 50 | 3/8" NPT | 125 | 171 | 185 | 5.5 |

SPECIAL HAND PUMPS

BETEX P 1000



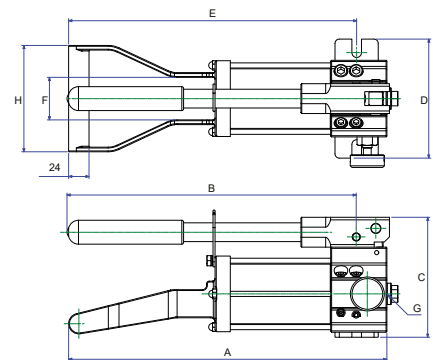
1000
usable oil-capacity cm³

700
bar

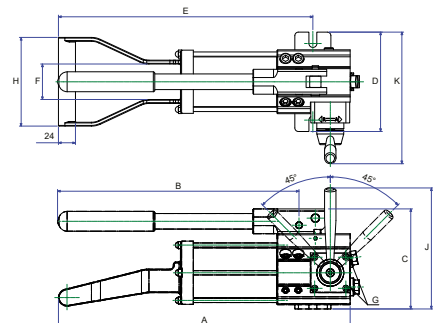
Use in combination with accessories, see page 112-115.

BETEX P 1000 series

- Special lightweight design with unique triangular basis which makes the pump easy to handle.
- The sealed aluminium oil reservoir allows the hand pumps to be used in a range of positions, without the risk of oil leakage.
- **This also allows for use under water/in the sea!**
- P 1000A hand pump with single port for 1 single-acting cylinder.
- P 1000B hand pump with 2 ports for simultaneous use of 2 single-acting cylinders.
- P 1000D double-acting hand pump for 1 double-acting cylinder.



P 1000A, P 1000B



P 1000C

| Type | Art. no | Max. pressure bar | | Oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K mm | Weight kg |
|---------|----------|-------------------|-----------|--------------------------|---------------------------------------|-----------|------|------|------|------|-------|------|----------|------|------|------|-----------|
| | | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | | |
| P 1000A | 72621001 | 20 | 700 | 1000 | 5.8 | 0.9 | 694 | 568 | 140 | 140 | 658.5 | 50 | 3/8" NPT | 125 | - | - | 6.6 |
| P 1000B | 72621002 | 20 | 700 | 1000 | 5.8 | 0.9 | 741 | 568 | 140 | 140 | 683.5 | 50 | 3/8" NPT | 125 | - | - | 8.3 |
| P 1000D | 72621003 | 20 | 700 | 1000 | 5.8 | 0.9 | 731 | 568 | 140 | 140 | 678.5 | 50 | 3/8" NPT | 125 | 171 | 185 | 7.7 |

STEEL FOOT PUMPS

BETEX FHB series



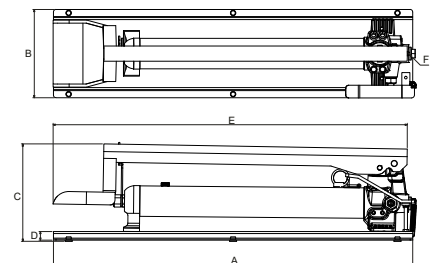
350 - 700
usable oil-capacity cm³

700
bar

Use in combination with accessories,
see page 112-115.

BETEX FHB series

- Heavy-duty hydraulic foot pumps.
- Two-stage pump provides rapid pumping to load the cylinder quickly.
- Forged construction made of steel.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- The pumps are equipped with a slow discharge function, which allows for multi-directional operation.



| Type | Art. no | Operating pressure bar | | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F | Weight kg |
|---------|---------|------------------------|-----------|-------------------------------------|---------------------------------------|-----------|------|------|------|------|------|----------|-----------|
| | | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | |
| FHB 350 | 7200058 | 13.8 | 700 | 350 | 13 | 2.8 | 474 | 174 | 192 | 17 | 461 | 3/8"-NPT | 8.5 |
| FHB 600 | 7200059 | 13.8 | 700 | 600 | 13 | 2.8 | 660 | 174 | 192 | 17 | 647 | 3/8"-NPT | 10.8 |
| FHB 700 | 7200060 | 13.8 | 700 | 700 | 13 | 2.8 | 708 | 174 | 192 | 17 | 695 | 3/8"-NPT | 11.1 |

PUMP SETS

BETEX Pump sets 700 bar

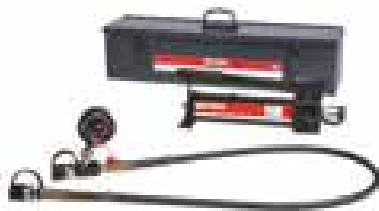
Lightweight aluminium or heavy-duty hand pumps, 2-stage. Robust construction for a long service life and easy-operation handles. Easy to move around.

- The double-acting models are provided with double hoses and adapters (AHP 703D and P 904D)
- The air-driven foot pump set AP1600S is designed for use with single-acting cylinders.

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

The sets contain:

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



Aluminium hand pump sets

| Type | Art. no |
|----------|---------|
| AHP 701 | 7265501 |
| AHP 702 | 7265701 |
| AHP 703 | 7265751 |
| AHP 703D | 7265761 |

Steel hand pump sets

| Type | Art. no |
|---------|----------|
| PB 350 | 7262351 |
| PB 600 | 7262601 |
| PB 700 | 7262701 |
| HC 1500 | 72621501 |
| HC 2000 | 72622001 |

Steel hand pump sets

| Type | Art. no |
|--------|---------|
| P 901 | 7262911 |
| P 902 | 7262912 |
| P 903 | 7262913 |
| P 904 | 7262914 |
| P 904D | 7262915 |



Ultra-high pressure hand pump sets

| Type | Art. no |
|----------|---------|
| P 905 | 7262916 |
| AHP 704 | 7265801 |
| AHP 705 | 7265901 |
| UHP 2800 | 7292801 |

Foot pump set

| Type | Art. no |
|----------|----------|
| AP 1600S | 72000626 |

AIR PUMPS

BETEX AP 1600 / 3000 / 8000 series, foot pumps



1300 - 7200
usable oil-capacity cm³
700
bar

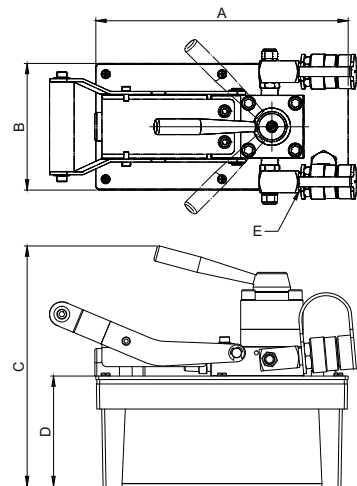
Use in combination with accessories, see page 112-115.

BETEX AP 1600 / 3000 / 8000 series

- The air-driven hydraulic foot pumps are designed for use with single-acting cylinders and tools such as the BETEX® cylinder series.
- Rugged construction: most components are made of aluminium alloy. They have a long service life, and are user-friendly and easy to move.
- The automatic overload-relief valve (700 bar) protects the components in the hydraulic system and ensures safe operation.
- The pumps are equipped with a slow discharge function, which allows for multi-directional operation.
- Air pressure of 5-8 bar for optimum operation.
- The D models are designed especially for double-acting cylinders, without the need for an extra control valve and adapters.
- **Set:** The AP 1600S is also available as a set. See page 100.
- **New in this series is the AP 8000 with a larger capacity, 7200cm³**



New: AP 8000 series



| Type | Art. no | Operation | Operating pressure bar | Reservoir volume cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ /min | | A mm | B mm | C mm | D mm | E | Weight kg |
|----------|----------|-----------|------------------------|----------------------------------|-------------------------------------|--|-----------|-------|-------|------|------|----------|-----------|
| | | | | | | 1st stage | 2nd stage | | | | | | |
| AP 1600S | 7200062 | single | 700 | 1600 | 1300 | 1250 | 195 | 244 | 129 | 207 | 114 | 3/8"-NPT | 7.3 |
| AP 1600D | 72000621 | double | 700 | 1600 | 1300 | 1250 | 195 | 244 | 129 | 207 | 114 | 3/8"-NPT | 9.3 |
| AP 3000S | 72000622 | single | 700 | 3000 | 2500 | 1250 | 195 | 309 | 160 | 247 | 114 | 3/8"-NPT | 9.1 |
| AP 3000D | 72000623 | double | 700 | 3000 | 2500 | 1250 | 195 | 309 | 160 | 247 | 114 | 3/8"-NPT | 12 |
| AP 8000S | 72000624 | single | 700 | 8000 | 7200 | 1250 | 195 | 311.6 | 311.6 | 236 | 143 | 3/8"-NPT | 19.1 |
| AP 8000D | 72000625 | double | 700 | 8000 | 7200 | 1250 | 195 | 311.6 | 311.6 | 276 | 143 | 3/8"-NPT | 21.5 |

AIR PUMPS

BETEX AP 921 series, foot pumps



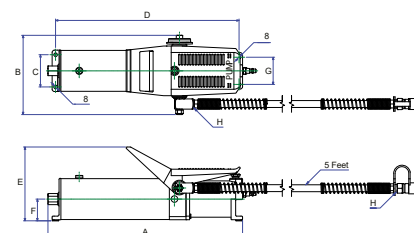
750
usable oil-capacity cm³

700
bar

Use in combination with accessories, see page 112-115.

BETEX AP 921 series

- The air-driven hydraulic foot pump is designed for use with single-acting cylinders and tools such as the BETEX® cylinder series.
- Rugged construction: most components are made of aluminium alloy. They have a long service life, and are user-friendly and easy to move.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- Air pressure of 5-8 bar for optimum operation.
- The pump is equipped with a slow deflation function, which allows for multi-directional operation.



| Type | Art. no | Operating pressure bar | Reservoir volume cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ /min | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H | Weight kg |
|--------|---------|------------------------|----------------------------------|-------------------------------------|--|-----------|------|------|------|------|------|------|------|----------|-----------|
| | | | | | 1st stage | 2nd stage | | | | | | | | | |
| AP 921 | 7200061 | 700 | 850 | 750 | 700 | 100 | 423 | 170 | 70 | 399 | 160 | 47 | 59 | 1/4"-NPT | 5.4 |

AIR PUMPS

BETEX AP 13 series

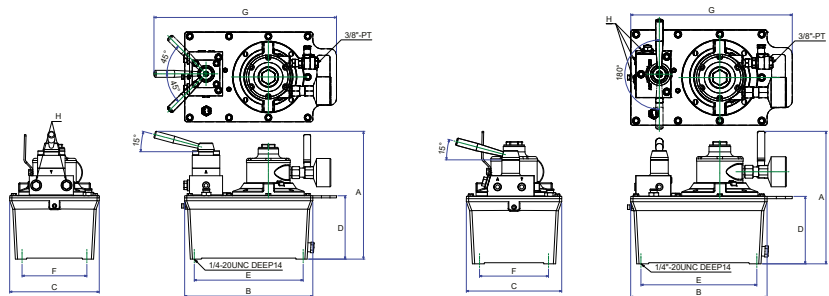


2400
usable oil-capacity cm³

700
bar

BETEX AP 13

- The AP 13 has a 3-litre durable aluminium reservoir.
- Air motor capable of starting under full load.
- Two speed operation for fast cylinder advance.
- The automatic overload-relief valve (700 bar) protects the components in the hydraulic system and ensures safe operation.
- Air pressure of 5-8 bar for optimum operation.
- The AP 13D is single-acting; the AP 13S is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



AP 13D

AP 13S

| Type | Art. no | Operation | Operating pressure bar | Reservoir volume cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ /min | | | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Weight kg |
|--------|----------|-----------|------------------------|----------------------------------|-------------------------------------|--|------|-----|-----|------|-------|-------|-------|------|-------|------|-----------|
| | | | | | | 0 | 7 | 350 | 700 | | | | | | | | |
| AP 13S | 72000613 | single | 700 | 3000 | 2400 | 4000 | 2800 | 330 | 280 | 287 | 295.5 | 206.5 | 146.2 | 251 | 149.4 | 350 | 18.7 |
| AP 13D | 72000614 | double | 700 | 3000 | 2400 | 4000 | 2800 | 330 | 280 | 295 | 295.5 | 206.5 | 146.2 | 251 | 149.4 | 421 | 19.2 |

AIR PUMPS

BETEX AP 18 series

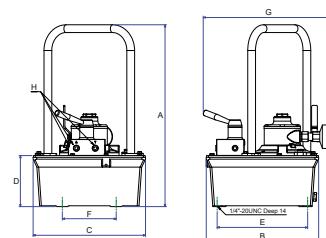


7200
usable oil-capacity cm³

700
bar

BETEX AP 18 series

- The AP 18 has a 8-litre durable aluminium reservoir.
- Air motor capable of starting under full load.
- Two speed operation for fast cylinder advance.
- The automatic overload-relief valve (700 bar) protects the components in the hydraulic system and ensures safe operation.
- Air pressure of 5-8 bar for optimum operation.
- The AP 18S is single-acting; the AP 18D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



| Type | Art. no | Operation | Operating pressure bar | Reservoir volume cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ /min | | | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Weight kg |
|--------|----------|-----------|------------------------|----------------------------------|-------------------------------------|--|------|-----|-----|------|------|------|-------|------|-------|------|-----------|
| | | | | | | 0 | 7 | 350 | 700 | | | | | | | | |
| AP 18S | 72000615 | single | 700 | 8000 | 7200 | 4000 | 2800 | 330 | 280 | 504 | 312 | 312 | 141.5 | 251 | 149.4 | 363 | 20 |
| AP 18D | 72000616 | double | 700 | 8000 | 7200 | 4000 | 2800 | 330 | 280 | 504 | 312 | 312 | 141.5 | 251 | 149.4 | 408 | 20.5 |

ELECTRIC PUMPS

BETEX EP 13 series



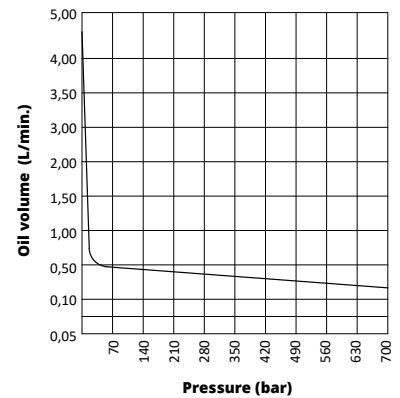
2.4
usable oil capacity litres

700
bar

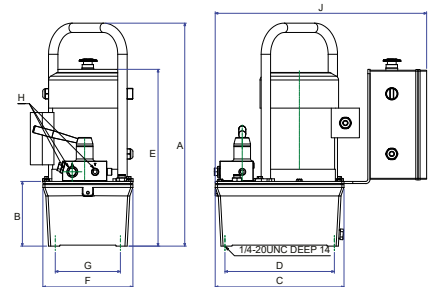
Use in combination with accessories, see page 112-115.

BETEX EP 13 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 13D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



| Type | Art. no | Voltage | Valve type | Valve function | Motor |
|--------|---------|---------|--------------|-------------------------|---|
| EP 13S | 8300010 | 120V | 2 pos./2-way | Hold / return | 0.37kW, 120V/10A-230V/5A 50/60Hz, single phase |
| EP 13S | 8300012 | 230V | 2 pos./2-way | Hold / return | |
| EP 13D | 8300011 | 120V | 3 pos./4-way | Advance / hold / return | |
| EP 13D | 8300013 | 230V | 3 pos./4-way | Advance / hold / return | |



| Type | Operation | Reservoir volume (liters) | Usable oil capacity (liters) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | Weight in kg |
|--------|-----------|---------------------------|------------------------------|---------------------|--|------|-----|-----|-------|-------|-------|------|------|-------|-------|---------|------|--------------|
| | | | | | 0 | 7 | 350 | 700 | | | | | | | | | | |
| EP 13S | single | 3 | 2.4 | 700 | 4000 | 2800 | 330 | 300 | 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 | 300 | 511.5 | 148.5 | 295.5 | 251 | 406 | 206.5 | 149.4 | 3/8"NPT | 485 | 25.8 |

ELECTRIC PUMPS

BETEX EP 18 series



6

usable oil capacity litres

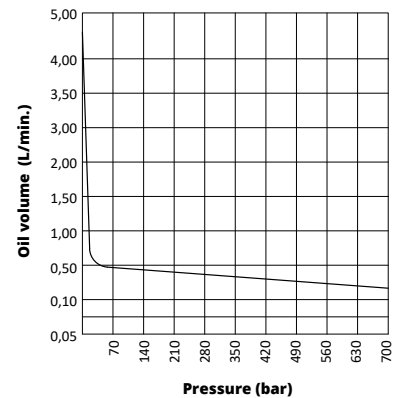
700

bar

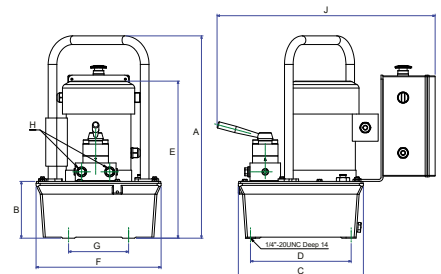
Use in combination with accessories, see page 112-115.

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 | Art. no | Voltage | Valve type | Valve function | Motor |
|--------|---------|---------|----------------|-------------------------|---|
| EP 18S | 8300021 | 120V | 2 pos. / 2-way | Hold / return | 0.37kW, 120V/10A-230V/5A 50/60Hz, single phase |
| | 8300031 | 230V | 2 pos. / 2-way | Hold / return | |
| EP 18D | 8300023 | 120V | 3 pos. / 4-way | Advance / hold / return | |
| | 8300033 | 230V | 3 pos. / 4-way | Advance / hold / return | |
| EP18SS | 8300022 | 120V | 2 pos. / 2-way | Hold / return | |
| | 8300032 | 230V | 2 pos. / 2-way | Hold / return | |
| EP18DS | 8300024 | 120V | 3 pos. / 4-way | Advance / hold / return | |
| | 8300034 | 230V | 3 pos. / 4-way | Advance / hold / return | |



| Type | Operation | Reservoir volume (liters) | Usable oil capacity (liters) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | Weight in kg |
|----------|-----------|---------------------------|------------------------------|---------------------|--|------|-----|-----|------|-------|-------|------|-------|-------|-------|----------|-------|--------------|
| | | | | | 0 | 7 | 350 | 700 | | | | | | | | | | |
| EP 18S | single | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 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 | 4200 | 2800 | 330 | 300 | 504 | 141.5 | 311.6 | 251 | 391.5 | 311.6 | 149.4 | 3/8" NPT | 543.5 | 31.7 |
| EP 18SS* | single | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 504 | 141.5 | 311.6 | 251 | 391.5 | 311.6 | 149.4 | 3/8" NPT | 543.5 | 31.7 |
| EP 18DS* | double | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 504 | 141.5 | 311.6 | 251 | 391.5 | 311.6 | 149.4 | 3/8" NPT | 543.5 | 31.7 |

* Model with solenoid valve

ELECTRIC PUMPS

BETEX EP 211 series



8.5

usable oil capacity litres

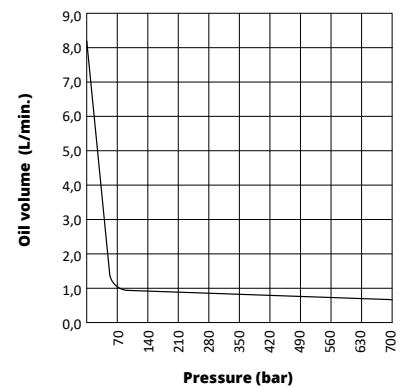
700

bar

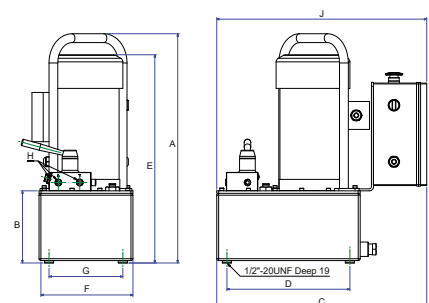
Use in combination with accessories, see page 112-115.

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 | Art. no | Voltage | Valve type | Valve function | Motor |
|----------|---------|---------|----------------|-------------------------|--|
| EP 211S | 8300041 | 120V | 2 pos. / 2-way | Hold / return | 1.12kW, 120V/23A-230V/12A 50/60Hz, single phase |
| | 8300051 | 230V | 2 pos. / 2-way | Hold / return | |
| EP 211D | 8300043 | 120V | 3 pos. / 4-way | Advance / hold / return | |
| | 8300053 | 230V | 3 pos. / 4-way | Advance / hold / return | |
| EP211SS | 8300042 | 120V | 2 pos. / 2-way | Hold / return | |
| | 8300052 | 230V | 2 pos. / 2-way | Hold / return | |
| EP 211DD | 8300044 | 120V | 3 pos. / 4-way | Advance / hold / return | |
| | 8300054 | 230V | 3 pos. / 4-way | Advance / hold / return | |



| Type | Operation | Reservoir volume (liters) | Usable oil capacity (liters) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | Weight in kg |
|-----------|-----------|---------------------------|------------------------------|---------------------|--|------|-----|-----|------|------|-------|------|-------|-------|------|---------|-------|--------------|
| | | | | | 0 | 7 | 350 | 700 | | | | | | | | | | |
| EP 211S | single | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 559 | 176 | 515.5 | 300 | 391.5 | 224.4 | 180 | 3/8"NPT | 515.5 | 38.9 |
| EP 211D | double | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 559 | 176 | 515.5 | 300 | 391.5 | 224.4 | 180 | 3/8"NPT | 515.5 | 38.9 |
| EP 211SS* | single | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 559 | 176 | 515.5 | 300 | 391.5 | 224.4 | 180 | 3/8"NPT | 515.5 | 38.9 |
| EP 211DS* | double | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 559 | 176 | 515.5 | 300 | 391.5 | 224.4 | 180 | 3/8"NPT | 515.5 | 38.9 |

* Model with solenoid valve

ELECTRIC PUMPS

BETEX EP 320 series



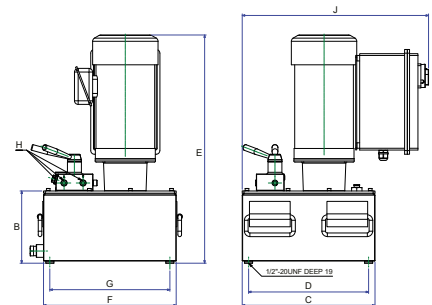
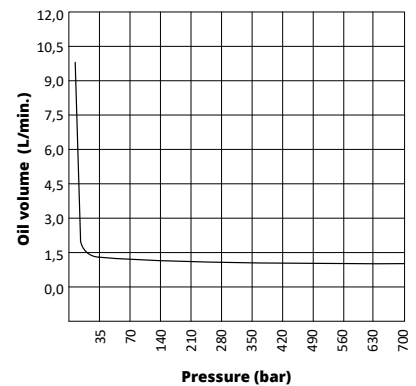
15
usable oil capacity litres

700
bar

Use in combination with accessories, see page 112-115.

BETEX EP 320 series

- Electrohydraulic pump, 230/400V, 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 320D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



| Type | Art. no | Valve type | Valve function | Motor |
|---------|---------|----------------|-------------------------|-----------------------------|
| EP 320S | 8300061 | 2 pos. / 2-way | Hold / return | 1.49kW 230V/7.5A-400V/5A |
| EP 320D | 8300063 | 3 pos. / 4-way | Advance / hold / return | 50/60Hz 3 phase |

| Type | Operation | Reservoir volume (liters) | Usable oil capacity (liters) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | B mm | C mm | D mm | E mm | F mm | G mm | H | Weight in kg |
|---------|-----------|---------------------------|------------------------------|---------------------|--|------|-----|-----|-------|------|------|-------|------|------|----------|--------------|
| | | | | | 7 | 70 | 350 | 700 | | | | | | | | |
| EP 320S | single | 20 | 15 | 700 | 9500 | 1020 | 980 | 900 | 198.5 | 365 | 330 | 627.5 | 365 | 330 | 3/8" NPT | 65 |
| EP 320D | double | 20 | 15 | 700 | 9500 | 1020 | 980 | 900 | 198.5 | 365 | 330 | 627.5 | 365 | 330 | 3/8" NPT | 65 |

ELECTRIC PUMPS

BETEX EP 420 series



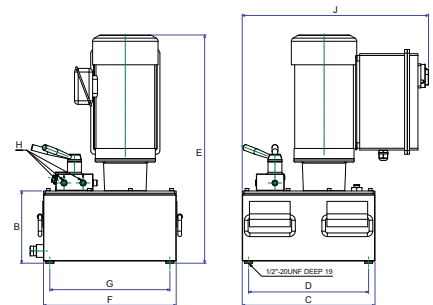
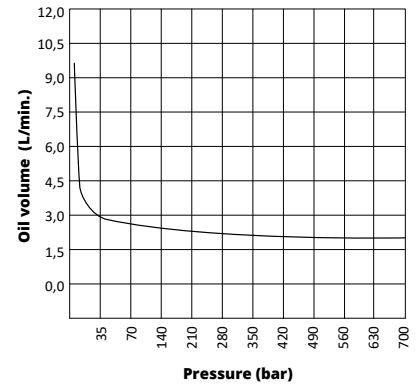
15
usable oil-capacity litres

700
bar

Use in combination with accessories, see page 112-115.

BETEX EP 420 series

- Electrohydraulic pump, 230/400V, 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 420D is designed especially for double-acting cylinders, without the need for an extra control valve and adapters.



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

| Type | Operation | Reservoir volume (liters) | Usable oil capacity (liters) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | B mm | C mm | D mm | E mm | F mm | G mm | H | J mm | Weight in kg |
|---------|-----------|---------------------------|------------------------------|---------------------|--|------|------|------|------|------|------|-------|------|------|----------|------|--------------|
| | | | | | 7 | 70 | 350 | 700 | | | | | | | | | |
| EP 420S | single | 20 | 15 | 700 | 9500 | 2600 | 2100 | 1950 | 199 | 365 | 330 | 627.5 | 365 | 330 | 3/8" NPT | 510 | 65 |
| EP 420D | double | 20 | 15 | 700 | 9500 | 2600 | 2100 | 1950 | 199 | 365 | 330 | 627.5 | 365 | 330 | 3/8" NPT | 510 | 65 |

ULTRA-HIGH PRESSURE PUMPS

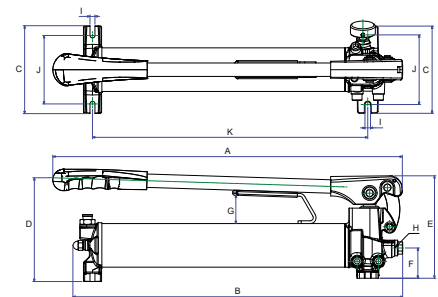
BETEX P / AHP / UHP series



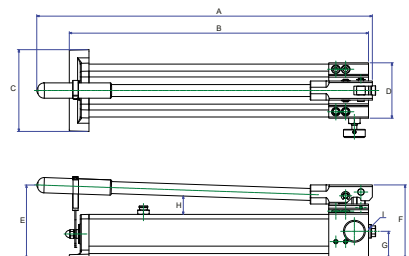
700 - 1620
usable oil capacity cm³
1000/1500/2800
bar

BETEX P / AHP / UHP series

- P 905: heavy-duty steel hand pump with ultra-high 1000 bar operating pressure.
- AHP 704/705: lightweight aluminium hand pumps with an operating pressure up to 1000 / 1500 bar.
- UHP 2800: lightweight aluminium model with ultra-high 2800 bar operating pressure for special applications.
- Automatic overload-relief valve protects the components in hydraulic systems and ensures safe operation.
- Available separately and as a complete set, see page 100.



P 905



AHP 704, AHP 705, UHP 2800

| Type | Art. no | Operating pressure bar | | Reservoir volume cm ³ | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H (mm) | I (mm) | Weight kg |
|----------|---------|------------------------|-----------|----------------------------------|-------------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|------|----------|------------|-----------|
| | | 1st stage | 2nd stage | | | 1st stage | 2nd stage | | | | | | | | | | |
| P 905 | 7262906 | 20 | 1000 | 850 | 750 | 19.4 | 1.2 | 560 | 530 | 140 | 167 | 164 | 48.5 | 45 | 3/8"-NPT | 8 | 6.5 |
| AHP 704 | 7265800 | 20 | 1000 | 1000 | 750 | 12.9 | 1.65 | 539 | 501 | 110 | 77 | 145 | 127 | 42.5 | 37 | 3/8"-NPT | 3.5 |
| AHP 705 | 7265900 | 20 | 1500 | 2000 | 1620 | 12.9 | 1 | 699 | 629 | 150 | 102 | 152 | 157 | 50 | 37 | 3/4"-16UNF | 6.7 |
| UHP 2800 | 7292800 | 20 | 2800 | 1000 | 700 | 12.9 | 0.65 | 620 | 488 | 80 | 140 | 108 | 157 | 26 | 37 | 3/4"-16UNF | 6.7 |

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 water and oil up to an operating pressure of 2800 bar.

- Portable, compact.
- Single-acting.
- Max. operating 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.

Both pumps include:

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



| Type | Art. no | Capacity (bar) | Oil capacity (liters) | Max. capacity | Weight in kg |
|-----------------|---------|----------------|-----------------------|---|--------------|
| UHAP 2800 | 7292803 | 2800 | 5 | 0.43 Liter p/min, at 7 bar air pressure | 29 |
| UHAP 2800 ULTRA | 7292802 | 2800 | 5 | 0.75 Liter p/min, at 7 bar air pressure | 32 |

ACCESSORIES

Max. operating pressure, 700 bar

With this simple yet complete line of accessories, consisting of hydraulic hoses, couplers, fittings, manifolds and pressure gauges, BETEX Hydraulics has the right accessory for a secure and optimally functioning system.

Coupler sets

- BETEX supplies a variety of screw-set quick couplers in 4 different sizes. These can also be used with existing hydraulic systems.
- All couplers are rated to 700 bar and have an anti-leak mechanism that works at both high and low pressure.

| Type | Art. no | One side | |
|---------|---------|----------|-------------------------|
| CP 330B | 7299179 | 3/8" NPT | Standard coupler set |
| CP 331B | 7299131 | 3/8" NPT | Standard coupler female |
| CP 332B | 7299132 | 3/8" NPT | Standard coupler male |
| CP 430 | 7299794 | 3/8" NPT | No-spill coupler set |
| CP 431 | 7299793 | 3/8" NPT | No-spill coupler female |
| CP 432 | 7299792 | 3/8" NPT | No-spill coupler male |



Hoses

- Heavy-duty hoses for 700 bar, which meet global safety standards.
- Hoses are black rubber coated with two layers of steel braided reinforcement.
- Flexible hoses with spring guards at both ends.
- Available to special lengths upon request.
- Hose connection 3/8" NPT.



HFHS 332



HS 332



PHS 3312



HPHS 336

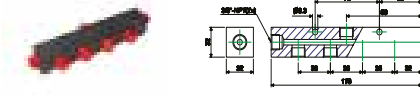
| Rubber | | | Rubber High-flow | | | Polyurethane | | | Polyurethane High-flow | | |
|-------------|----------|-----------|------------------|----------|-----------|--------------|----------|-----------|------------------------|----------|-----------|
| ID Ø 6.4 mm | | | ID Ø 9.4 mm | | | ID Ø 6.4 mm | | | ID Ø 9.7 mm | | |
| Type | Art. no | Length mm | Type | Art. no | Length mm | Type | Art. no | Length mm | Type | Art. no | Length mm |
| HS 332 | 7299032 | 600 | HFHS 332-BG | 72990395 | 600 | PHS 332 | 7299332 | 600 | HPHS 332 | 7299432 | 600 |
| HS 333 | 7299033 | 900 | HFHS 333-BG | 7299040 | 900 | PHS 333 | 7299333 | 1000 | HPHS 333 | 7299433 | 1000 |
| HS 335 | 7299035 | 1500 | HFHS 335-BG | 72990401 | 1500 | PHS 335 | 7299335 | 1500 | HPHS 335 | 7299435 | 1500 |
| HS 336 | 7299036 | 1800 | HFHS 336-BG | 7299041 | 1800 | PHS 336 | 7299336 | 1800 | HPHS 336 | 7299436 | 1800 |
| HS 338 | 7299037 | 2400 | HFHS 338-BG | 72990411 | 2400 | PHS 338 | 7299338 | 2400 | HPHS 338 | 7299438 | 2400 |
| HS 3310 | 7299038 | 3000 | HFHS 3310-BG | 7299042 | 3000 | PHS 3310 | 72993310 | 3000 | HPHS 3310 | 72994310 | 3000 |
| HS 3312 | 7299039 | 3600 | HFHS 3312-BG | 7299043 | 3600 | PHS 3312 | 72993312 | 3600 | HPHS 3312 | 72994312 | 3600 |
| HS 3315 | 72990391 | 4500 | HFHS 3315-BG | 7299044 | 4500 | PHS 3315 | 72993315 | 4500 | HPHS 3315 | 72994315 | 4500 |
| HS 3320 | 72990392 | 6000 | HFHS 3320-BG | 7299045 | 6000 | PHS 3320 | 72993320 | 6000 | HPHS 3320 | 72994320 | 6000 |
| HS 3330 | 72990393 | 9000 | | | | PHS 3330 | 72993330 | 9000 | HPHS 3330 | 72994330 | 9000 |
| HS 3350 | 72990394 | 15000 | | | | PHS 3350 | 72993350 | 15000 | | | |

ACCESSORIES

Max. operating pressure, 700 bar

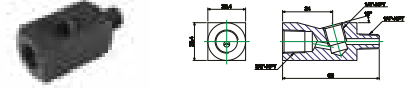
JP64

Manifold
Art. no: 7200139



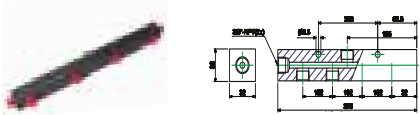
E1336

T-adapter for pressure gauge
Art. no: 7200181



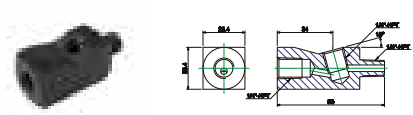
JP65

Manifold
Art. no: 7200140



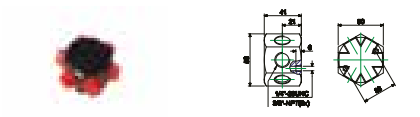
E1343

T-adapter for pressure gauge
Art. no: 7200182



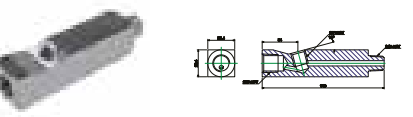
JP66

Manifold
Art. no: 7200141



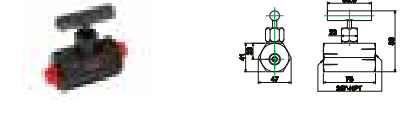
E1745

T-adapter for pressure gauge
Art. no: 7200183



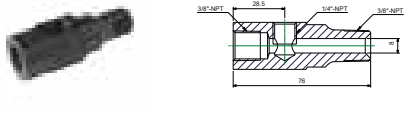
VB66

Control valve
Art. no: 7200226



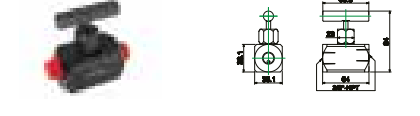
ADG323

T-adapter for high-flow pressure gauge
Art. no: 7299232



VB101

Control valve
Art. no: 7200224



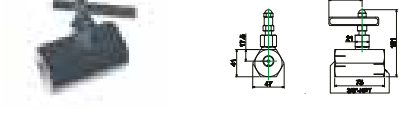
ADL101

Corner
Art. no: 7200142



VC331

Control valve
Art. no: 7200068



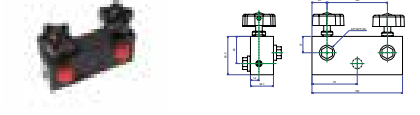
ADL202

Corner
Art. no: 7200143



VB201

Manifold
Art. no: 7200066



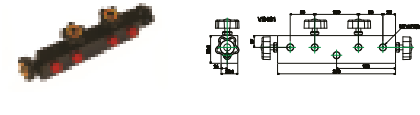
ADL303

Corner
Art. no: 7200144



VB401

Manifold
Art. no: 7200067



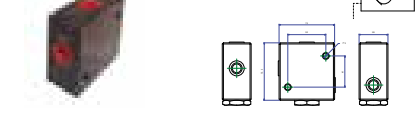
ADC303

Corner
Art. no: 7200145



BV42

Safety valve
Art. no: 7200342



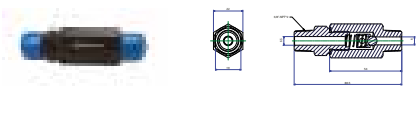
ADE303

Corner
Art. no: 7200200



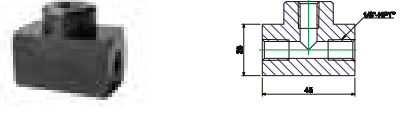
VH33

Non-return valve
Art. no: 7200229



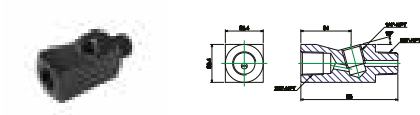
ADT101

T-piece
Art. no: 7200201



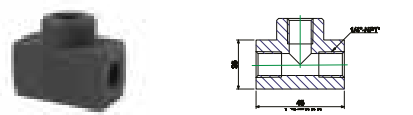
E0567

T-adapter for pressure gauge
Art. no: 7299230



ADT202

T-piece
Art. no: 7200202

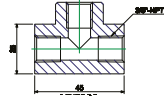


ACCESSORIES

Max. operating pressure, 700 bar

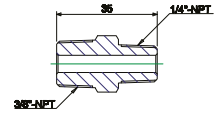
ADT303

T-piece
Art. no: 7200204



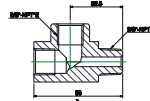
ADO203

Reducing connector
Art. no: 7200160



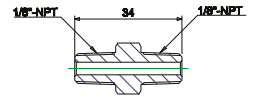
ADG303

T-piece
Art. no: 7200204



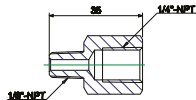
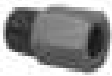
ADO101

Hexagon nipple
Art. no: 7200161



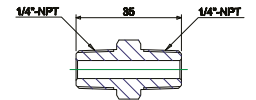
ADF102

Adapter
Art. no: 7200205



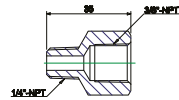
ADO202

Hexagon nipple
Art. no: 7200215



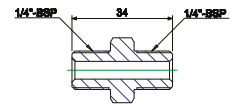
ADF203

Adapter
Art. no: 7200206



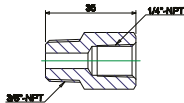
ADO204

Hexagon nipple
Art. no: 7200216



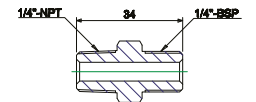
ADF302

Adapter
Art. no: 7200207



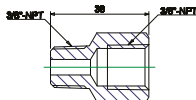
ADO205

Hexagon nipple
Art. no: 7200217



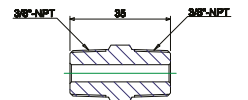
ADF303

Adapter
Art. no: 7200208



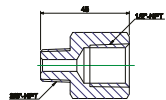
ADO303

Hexagon nipple
Art. no: 7200218



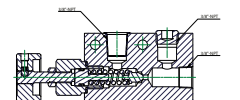
ADF304

Adapter
Art. no: 7200210



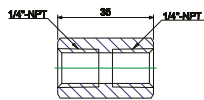
BG9623

Pressure regulator
Art. no: 7200227



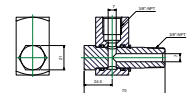
ADI202

Connector
Art. no: 200210



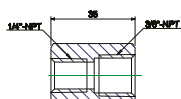
BG9705

High-low swivel connector
Art. no: 79000661



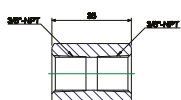
ADI203

Connector
Art. no: 7200211



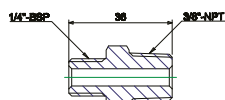
ADI303

Connector
Art. no: 7200212



ADO2031

Reducing connector
Art. no: 7200159



HYDRAULIC OIL

BETEX LPS 68 / ISO 15, Premium hydraulic oil



BETEX LPS 68 / ISO 15

- High-quality hydraulic oil with low pour point.
- Contains anti-wear, anti-rust, anti-oxidant and anti-foaming additives with high viscosity index.
- For pumps and cylinders, 700 bar.
- Available in 4 different cans containing 1, 2, 4 or 5 litres.

| Art. no | Description | Liter |
|---------|----------------------|-------|
| 789106 | Hydraulic Oil LPS 68 | 1.0 |
| 789107 | Hydraulic Oil LPS 68 | 2.0 |
| 789108 | Hydraulic Oil LPS 68 | 4.0 |
| 789109 | Hydraulic Oil LPS 68 | 5.0 |

| Type | BETEX LPS 68 |
|---|--------------|
| Gravity, API, 15.6°C / 60.08 °F | 29.5 |
| Viscosity, Kin, cSt @ 40°C / 104 °F | 70 |
| Viscosity, Kin, cSt @ 100°C / 212 °F | 11.3 |
| Viscosity Index | 155 |
| Pour Point, °C / °F | -39 / -38.2 |
| Flash Point, COC, °C / °F | 244 / 471.2 |
| Color, D1500 | L2.0 |
| TAN, mgKOH/g | 0.6 |
| Carbon Residue, Rams.,% | 0.17 |
| Emulsion, 54°C / 129.2 °F, 40-37-3, min | 15 |

LA68068

JACKS

BETEX CJ series, spring-return, flat, low height

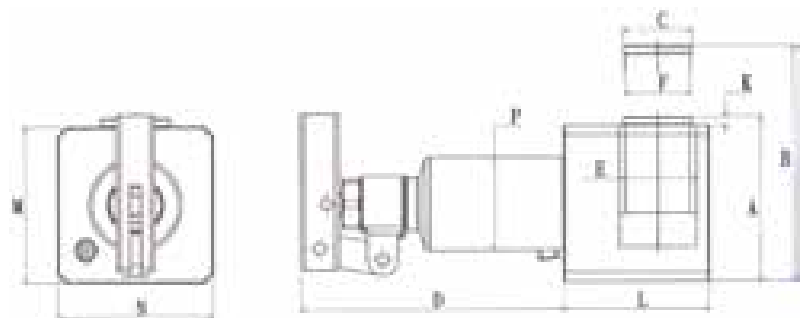


10
tons

20
tons

BETEX CJ series

- With integrated pump and cylinder.
- Available in 10 or 20 ton.
- Stroke: 41 mm.
- Max. operating pressure: 700 bar.
- Hard chromed piston.
- Ram inside roll-polished.
- Particularly suitable for jobs with limited space, such as positioning machines, mounting tools or load tests.



| Type | Art. no | Cap. tons | Stroke mm | Oil cap. cm ³ | Installation height | | C ø mm | D mm | E ø mm | F ø mm | K mm | L mm | M mm | N mm | P ø mm | Weight in kg |
|--------|---------|-----------|-----------|--------------------------|---------------------|-----------|-----------|---------|-----------|-----------|---------|---------|---------|---------|-----------|--------------|
| | | | | | A min. | B min. | | | | | | | | | | |
| CJ 100 | 7270100 | 10 | 41 | 155 | 95 | 136 | 40 | 152.5 | 45 | 37.95 | 4.9 | 85 | 90 | 70 | 53.8 | 5.5 |
| CJ 200 | 7270200 | 20 | 41 | 250 | 95 | 136 | 40 | 152.5 | 65 | 50.8 | 4.9 | 110 | 90 | 110 | 69.5 | 8 |

TOE JACKS

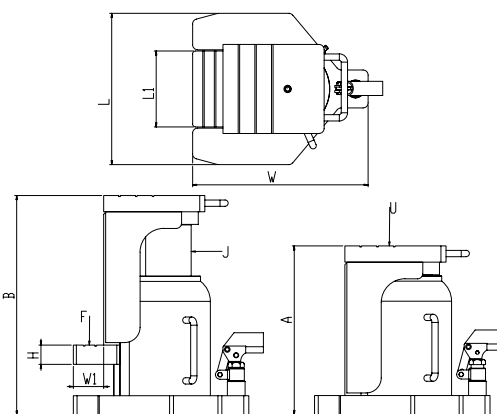
BETEX TOE series



2.5 - 50
tons

BETEX TOE series

- Heat-treated and chrome-plated hydraulic rod provides longer seal life and optimum performance
- Internal safety valve prevents toe jack being used beyond its rated capacity.
- Leakages are prevented by welding the housing onto the forged base.
- Low toe heights for tight spaces.
- Swivel sockets for easy operation.
- Toe jacks can be operated easily by hand.
- Removable handle makes unit easier to operate.



| Type | Art. no | Top cap. U tons | Lifting cap. F tons | Stroke mm | Min. height A mm | Max. height B mm | Piston rod diam. J mm | Dimension base plate LxW mm | Height H mm | Lifting plate L1xW1 mm | Weight kg |
|---------|---------|--------------------|------------------------|--------------|---------------------|---------------------|--------------------------|-----------------------------------|----------------|---------------------------|--------------|
| TOE-025 | 731025 | 2.5 | 1.2 | 100 | 194 | 294 | 19 | 140x190 | 19 | 65x50 | 7.4 |
| TOE-040 | 731040 | 4 | 2 | 110 | 204 | 314 | 25 | 150x200 | 19 | 65x50 | 9 |
| TOE-060 | 731060 | 6 | 3 | 110 | 212 | 322 | 36 | 160x217 | 19 | 65x50 | 11.3 |
| TOE-100 | 731100 | 10 | 5 | 130 | 258 | 388 | 40 | 189x242 | 22 | 75x55 | 17 |
| TOE-160 | 731160 | 16 | 8 | 131 | 275 | 406 | 52 | 211x256 | 25 | 90x55 | 23.2 |
| TOE-200 | 731200 | 20 | 10 | 140 | 303 | 443 | 56 | 228x274 | 25 | 100x60 | 33.1 |
| TOE-300 | 731300 | 30 | 15 | 147 | 322 | 469 | 70 | 259x305 | 32 | 110x60 | 52 |
| TOE-500 | 731500 | 50 | 25 | 148 | 333 | 481 | 90 | 299x347 | 38 | 150x60 | 84 |

PORTABLE POWER KITS

BETEX PPK series



4
tons

10
tons

Use in combination with BETEX shims, see page 138-140.

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 | Spreader |
| 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 |
| SR05A | 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 | Spreader |
| 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 shims, see page 143-145.

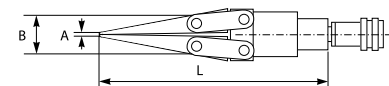
BETEX 15 TL / 15 TLS / 25 TLS series

These patented Special 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 set, see page 123.



Safety block



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

HYDRAULIC LIFTING WEDGE

BETEX HLW 18T series

18
tons



BETEX HLW 18T series

Specially designed to raise or lower heavy loads in one fluent, straight, vertical movement. The HLW series guarantees a safe and solid grip. For use on flanges with a minimum opening of 9.5 mm.

- Lifting heavy loads, placing and moving machines, and machine alignment.
- Maintenance, mounting and dismounting activities.
- Steady lift movement, fluent, straight, vertical lifting.
- Robust and exact, solid fixed grip at every stage by using stepped blocks.
- Safe, saves time and costs, ergonomic design.
- Single-acting piston, spring-return.
- Suitable for minimum openings from 9.5 mm.
- Lifting capacity: per step 19 mm lifting height.
- Maximum lift when using a multi-stage block of 67.5 mm.
- Lifting power: max. 36 tons (using 2 pcs. HLW 18T(I) or duo-set).
- Including safety block to secure the load and remove the lifting wedge.
- Available separately and as a complete set, see page 123.

Lifting height:

9.5 mm - 29.5 mm using the first step.

9.5 mm - 51 mm using 4 steps (without multi-stage raising block).

39.5 - 67.5 mm using multi-stage raising block.



Safety block



Raising block

| Type | Art. no | Max. cap. tons | Spread mm | Type of pump | Max. operating pressure bar | Weight kg |
|------------------------------------|---------|----------------|-------------|---------------|-----------------------------|-----------|
| HLW 18T | 789501 | 18 | 9.5 - 67.5* | single-acting | 700 | 10.8 |
| HLW 18T set (complete in case) | 789502 | 18 | 9,5 - 67,5* | single-acting | 700 | 24.6 |
| HLW 18T duo set (complete in case) | 789503 | 2 x 18 | 9.5 - 67.5* | single-acting | 700 | 37 |

* using raising block

HYDRAULIC FLANGE SPREADERS

BETEX PFS 10T series



10
tons

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.
- Including safety block to remove the spreader and carry the load.
- Available separately and as a complete set, see page 123.



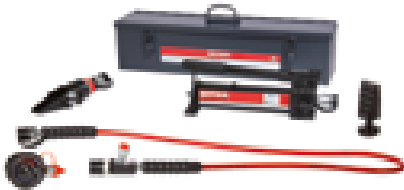
Safety block

| 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

The set always contains:

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

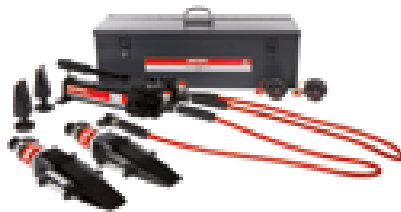


15 TL set

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

The duo-set always contains:

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



15 TLS Duo-set

- 2 hydraulic spreaders
- 2 hoses, 1.5 mtr
- Art. no: 789181

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.



HLW 18T set

- Hydraulic lifting wedge
- Hose, 2.1 mtr
- Art. no: 789502



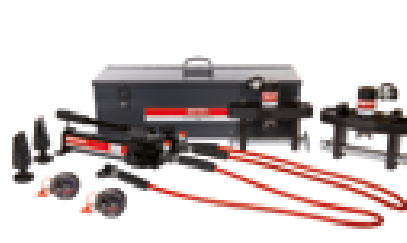
HLW 18T Duo-set

- 2 hydraulic lifting wedges
- 2 hoses, 2.1 mtr
- Art. no: 789503



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 10TI 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

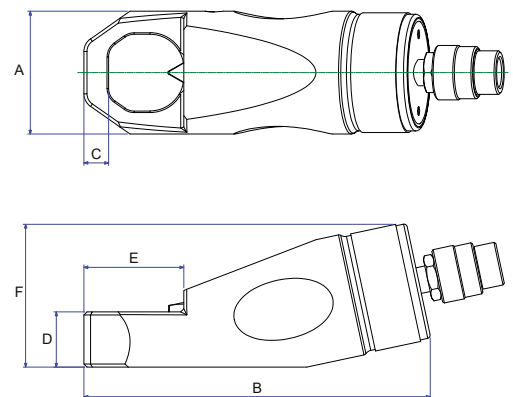


10 - 50
tons

Use in combination with hand pumps,
see page 91-98.

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 ³ | A mm | B mm | C mm | D mm | E mm | F mm | Weight kg |
|----------|---------|-----------------|-----------------------|-----------|--------------------------|---------|---------|---------|---------|---------|---------|--------------|
| HNS 1924 | 781924 | 19-24 | M12-M16 | 10 | 20 | 60 | 167.2 | 10 | 25 | 40 | 68 | 2.1 |
| HNS 2432 | 782432 | 24-32 | M16-M22 | 15 | 60 | 70 | 178 | 13 | 30 | 52 | 76 | 3.1 |
| HNS 3241 | 783241 | 32-41 | M22-M27 | 20 | 80 | 80 | 226 | 15 | 36 | 65 | 93 | 4.2 |
| HNS 4150 | 784150 | 41-50 | M27-M33 | 35 | 155 | 95 | 244 | 21 | 45 | 76 | 106 | 8.0 |
| HNS 5060 | 785060 | 50-60 | M33-M39 | 50 | 240 | 106 | 269 | 24 | 55 | 92 | 125 | 11.5 |

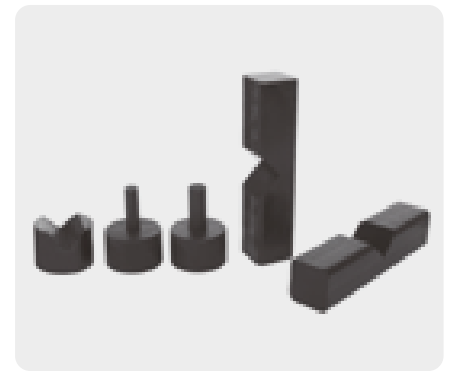
WORKSHOP PRESSES

BETEX WSP, with hand, air or electric pump



10
tons

25
tons



The WSP workshop presses are supplied with adapters and accessories.

BETEX WSP

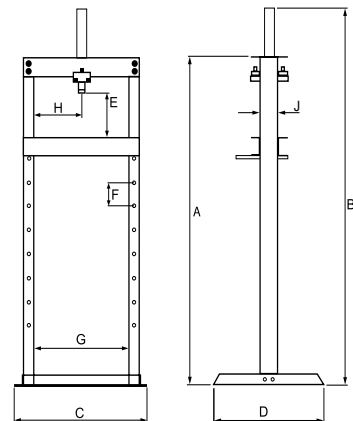
- The robust steel frame provides maximum stability and cannot bend.
- Various operating positions possible for the press bed.
- Steel crossbars prevent the frame from deforming when loaded.
- Available in 2 models: 10 and 25 tons.
- Includes pressure gauge for exact pressure readings.
- Single-acting and spring-return cylinder can be moved horizontally on the upper frame.
- Also available with hand, electric or air-hydraulic pump.

BETEX WSP 10 ton

Ideal for small pressing jobs. Repair of motors, transmissions, mounting and dismounting of couplings, bearings and other workpieces.

BETEX WSP 25 ton

Suitable for heavy-duty pressing jobs, in garages, industrial workshops, for mounting and dismounting of couplings, bearings and other workpieces.



| Type | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm |
|------------|------|------|------|------|----------|------|------|---------|------|
| WSP 10 ton | 1650 | 1900 | 740 | 610 | 225-1065 | 120 | 540 | 50-490 | 100 |
| WSP 25 ton | 1630 | 1880 | 920 | 700 | 268-980 | 120 | 620 | 100-520 | 125 |

| Type | Art. no | Cap. tons* | Stroke mm | Pump type | Operating pressure bar | Cylinder type | Weight in kg |
|----------|---------|------------|-----------|-----------|------------------------|---------------|--------------|
| WSP10 | 7511301 | 10 | 250 | manual | 700 | single-acting | 87 |
| WSPA10 | 7511302 | 10 | 250 | air | 700 | single-acting | 88 |
| WSP10HD | 7511401 | 10 | 250 | manual | 700 | single-acting | 87 |
| WSPA10HD | 7511402 | 10 | 250 | air | 700 | single-acting | 88 |
| WSPE10HD | 7511403 | 10 | 250 | electric | 700 | single-acting | 90 |
| WSP25 | 7512201 | 25 | 250 | manual | 700 | single-acting | 145 |
| WSPA25 | 7512202 | 25 | 250 | air | 700 | single-acting | 146 |
| WSPE25 | 7512203 | 25 | 250 | electric | 700 | single-acting | 148 |

* cap. up to 200 tons available.

WORKSHOP PRESSES

BETEX WSPM, with hand and/or foot pump



15
tons

30
tons

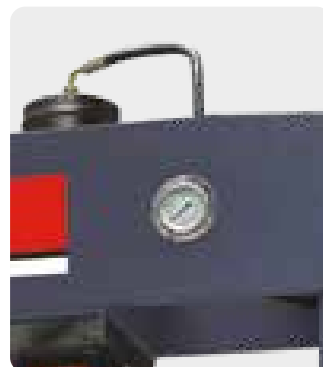
50
tons



Hand and foot pedal for double operation



Height-adjustable work surface with hoist



Integrated pressure gauge



Set of V adapters

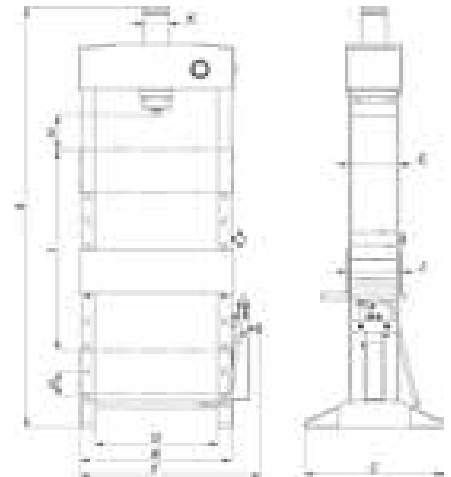
BETEX WSPM

These robust hydraulic workshop presses are suited for professional assembly work, or for professional testing of a wide range of workpieces. They are used for pressing, straightening, bending, punching, assembly, disassembly, etc.

The piston is easy to operate using the hand pump. While operating the press, operation can be switched from hand pump to foot pump.

- High quality! The robust steel frame is welded for maximum stability and a long services life.
- Work surface height is easy to adjust.
- Extremely suitable for high-precision work.
- The 50-ton version of the press is equipped with a hoist.
- Chrome-plated piston with automatic return.
- Single-acting and spring-return cylinder can be moved horizontally on the upper frame.
- Includes pressure gauge for exact capacity readings.
- Includes a set of V adapters.

| Dimensions (mm) | WSPM15 | WSPM30 | WSPM50 |
|-----------------|--------|--------|--------|
| A | 1880 | 2010 | 2025 |
| B | 680 | 685 | 910 |
| C | 600 | 643 | 764 |
| D | 560 | 565 | 750 |
| E | 190 | 230 | 300 |
| F | 828 | 836 | 1085 |
| G | 100 | 115 | 115 |
| H | 118 | 162 | 140 |
| I | 900 | 920 | 920 |
| J | 214 | 255 | 336 |
| K | 82 | 115 | 140 |



| Type | WSPM15 S160 W560 | WSPM30 S160 W565 | WSPM50 S160 W750 |
|----------------------------|------------------|------------------|------------------|
| Art. no | 7513001 | 7513002 | 7513003 |
| Pushing force tons | 15 | 30 | 50 |
| Maximum pressure bar | 382.2 | 374.6 | 399.5 |
| Cylinder stroke mm | 160 | 160 | 160 |
| Reservoir volume liters | 1.65 | 1.65 | 2.5 |
| Fixed cylinder | Yes | No | No |
| Movable cylinder | No | Yes | Yes |
| Operating width mm | 560 | 565 | 750 |
| Weight in kg | 117 | 165 | 340 |
| Cylinder inner diameter mm | 82 | 115 | 140 |
| Piston rod diameter mm | 40 | 40 | 50 |
| Piston bottom diameter mm | 50 | 50 | 60 |

WORKSHOP PRESSES

BETEX WSPE, electric



30 - 300
tons

| Dimensions mm | V block 30-60 t | V block 100 t | V block 160 t | V block 200 t |
|---------------|-----------------|---------------|---------------|---------------|
| Length | 350 | 440 | 505 | 560 |
| Width | 60 | 80 | 100 | 60 |
| Height | 120 | 140 | 170 | 120 |
| Weight in kg | 15 | 25 | 35 | 50 |



BETEX WSPE

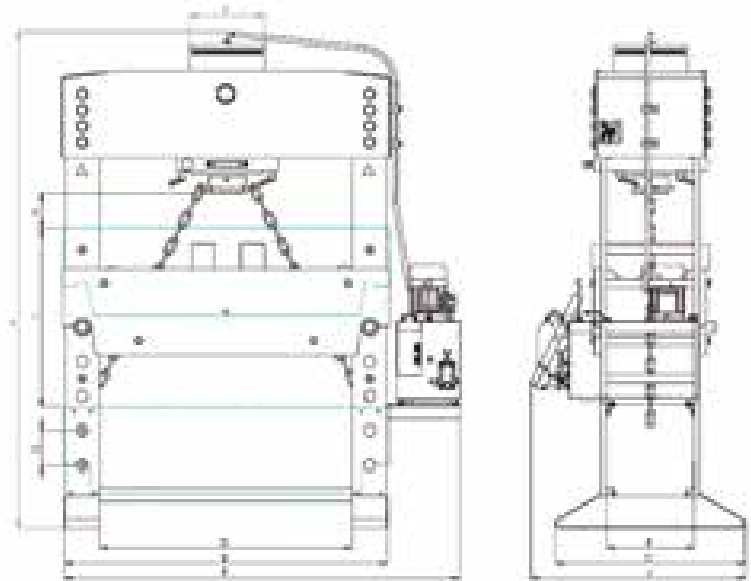
These electric hydraulic workshop presses are suited for general assembly work, straightening, and for testing a wide range of workpieces.

Unique! You have a choice of two different piston speeds: as soon as the rapidly lowering piston detects counter pressure, it will automatically switch back to a lower speed.

- High quality! The robust steel frame is welded for maximum stability and a long services life.
- Extremely well suited for high-precision work, manual or electric operation.
- Work surface height is easy to adjust.
- Cylinder can be moved horizontally on the upper frame.
- Two piston speeds, chrome-plated piston with removable piston head.
- Includes pressure gauge for exact capacity readings.
- Joystick for high-precision piston operation.
- Double-acting hand pump (except for 300-ton version) for high-precision piston operation.
- 220V CEE connector to connect a lamp or drill, if required.
- The presses are supplied without oil. (Recommended: Tellus 46)

Optional

- Foot pedal (30-300t)
- Set of V blocks



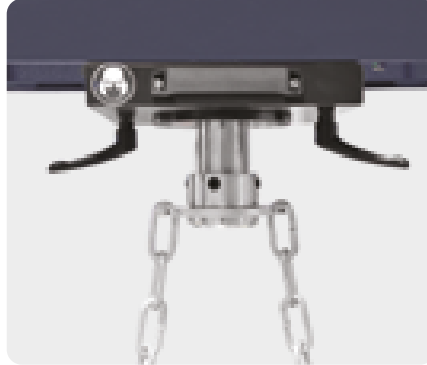
| Type | WSPE30 S380 W750 | WSPE60 S380 W750 | WSPE100 S380 W1100 | WSPE100 S380 W1500 | WSPE160 S400 W1100 | WSPE160 S400 W1500 | WSPE200 S400 W1300 | WSPE300 S480 W1750 |
|------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| A mm | 2120 | 2120 | 2140 | 2080 | 2200 | 2270 | 2270 | 2250 |
| B mm | 1000 | 1000 | 1350 | 1750 | 1410 | 1810 | 1610 | 2120 |
| C mm | 695 | 695 | 755 | 755 | 825 | 825 | 865 | 985 |
| D mm | 750 | 750 | 1100 | 1500 | 1100 | 1500 | 1300 | 1750 |
| E mm | 260 | 260 | 300 | 300 | 380 | 380 | 410 | 500 |
| F mm | 1315 | 1315 | 1665 | 2065 | 1725 | 2125 | 1925 | 2550 |
| G mm | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 177 |
| H mm | 200 | 197 | 180 | 130 | 180 | 180 | 180 | 180 |
| I mm | 750 | 750 | 750 | 750 | 750 | 750 | 750 | 531 |
| J mm | 805 | 805 | 865 | 865 | 935 | 935 | 975 | 1085 |
| K mm | 160 | 200 | 250 | 250 | 325 | 325 | 368 | 420 |

Operation



Press force regulation

Regulate the press force using this knob.



Work surface adjustment

Adjust the work surface height by placing the horseshoe (and the chain) around the piston. The chain is attached to the work surface. Use the joystick to raise or lower the work surface, using the pins to lock the work surface in place.



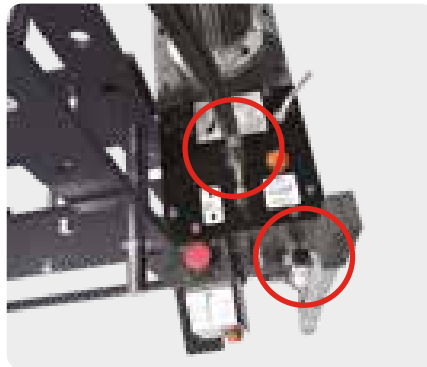
Cylinder position:

Positioning the cylinder is extremely fast (takes under 10 seconds). Move the cylinders to the left or the right by turning the levers and gripping the handle with your hand. Tighten the levers as soon as the cylinder is positioned the way you want it.



Speed

Unique: WSPE presses offer two operating speeds! At speed 1, the piston will move at ± 2.3 mm/sec. At speed 2, the piston will move at ± 9.5 mm/sec. As soon as the fast-lowering piston detects counter pressure, it will automatically switch back to the lower speed of 2.3 mm/sec. Exact speeds depend on the type of WSPE press.



Joystick:

Use the joystick to operate the WSPE presses, moving them up or down.

Hand pump:

The hand pump lets you perform high-precision work (in combination with the joystick). Note: the 300-ton press comes with a foot pedal or remote control.



| Type | WSPE30 S380 W750 | WSPE60 S380 W750 | WSPE100 S380 W1100 | WSPE100 S380 W1500 | WSPE160 S400 W1100 | WSPE160 S400 W1500 | WSPE200 S400 W1300 | WSPE300 S480 W1750 |
|--------------------------------|---------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Art. no 400 Volt | 7513004 | 7513005 | 7513006 | 7513008 | 7513007 | 7513009 | 7513010 | 7513011 |
| Art. no 220 Volt (USA) | 7513016 | 7513017 | 7513018 | 7513020 | 7513019 | 7513021 | 7513022 | 7513023 |
| Pushing force tons | 30 | 60 | 100 | 100 | 160 | 160 | 200 | 300 |
| Maximum pressure bar | 221 | 259 | 258 | 258 | 255 | 255 | 243 | 260 |
| Cylinder stroke mm | 380 | 380 | 380 | 380 | 400 | 400 | 400 | 480 |
| Oil supply ltr/min | 2.82/11.84 | 2.82/11.84 | 5.64/17.2 | 5.64/17.2 | 7.1/27.6 | 7.1/27.6 | 7.1/27.6 | 12/33 |
| Oil (tank and system) capacity | 37 | 41 | 46 | 46 | 57 | 57 | 64 | 100 |
| Pressing speed mm/sec | 3.57 | 2.07 | 2.47 | 2.47 | 2.40 | 2.40 | 1.84 | 1.80 |
| Approaching speed mm/sec | 9.80 | 8.69 | 7.54 | 7.54 | 7.48 | 7.48 | 5.73 | 4.9 |
| Return speed mm/sec | 18.11 | 10.79 | 9.06 | 9.06 | 9.35 | 9.35 | 7.08 | 6.2 |
| Engine kW | 1.5 | 1.5 | 2.2 | 2.2 | 3 | 3 | 3 | 5.5 |
| Voltage V/Ph | 400/3 220/3 | 400/3 220/3 | 400/3 220/3 | 400/3 220/3 | 400/3 220/3 | 400/3 220/3 | 400/3 220/3 | 400/3 220/3 |
| Frequency Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Nominal rpm | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 3000 | 2800 |
| Level of protection IP | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| Safety class I | I | I | I | I | I | I | I | I |
| Electric operation | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Manual operation | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No |
| Fixed cylinder | Yes | No | No | No | No | No | No | No |
| Movable cylinder | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Speeds | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Operating width mm | 750 | 750 | 1100 | 1500 | 1100 | 1500 | 1300 | 1750 |
| Weight in kg | 385 | 540 | 970 | 1145 | 1195 | 1430 | 1690 | 3150 |
| Cylinder inner diameter mm | 130 | 170 | 220 | 220 | 280 | 280 | 320 | 380 |
| Piston rod diameter mm | 55 | 75 | 90 | 90 | 125 | 125 | 140 | 180 |
| Piston bottom diameter mm | 80 | 100 | 120 | 120 | 160 | 160 | 175 | 215 |

WORKSHOP PRESSES

BETEX PFPE Portal presses, manual/electric



100
tons

160
tons

BETEX PFPE

These robust hydraulic portal presses with a manually operated portal are made of high-grade steel. They are extremely suitable for the shaping, straightening or bending of large sheets and heavy materials.

The frame can be moved lengthwise and the cylinder can be moved sideways, enabling access to the material from all sides.

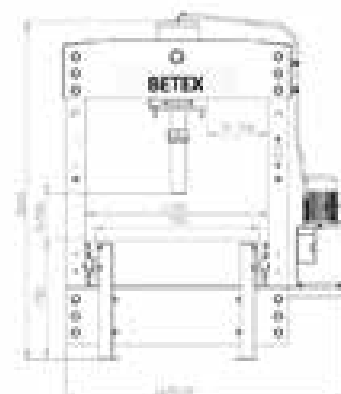
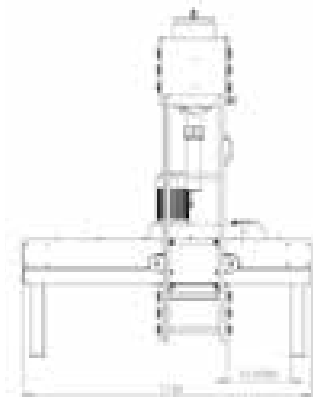
The cylinder and frame can be moved manually.

The hydraulic system is very precise, whether the press is operated electrically or manually (using the hand pump). This portal press is equipped with an integrated pressure gauge. The two-speed motorised hydraulic unit has automatic high-speed shutdown and includes a pressure regulator, a joystick to operate the cylinder and a hand pump for high-accuracy pressing.

The machine is supplied with cylinder extension as standard. (Excl. oil, Tellus 46).

Options:

- Flat lower table.
- Custom dimensions, versions and tonnages available on request.
- Set of V blocks.
- Remote control/foot pedal.



| Type | PFPE100 | PFPE160 |
|-----------------------------|----------|----------|
| Art. no | 7513024 | 7513025 |
| Pushing force tons | 100 | 160 |
| Engine power kW | 2.2 | 3 |
| Maximum pressure bar | 258 | 255 |
| Cylinder stroke mm | 380 | 400 |
| Installation width mm | 1100 | 1100 |
| Installation height mm | 700 | 700 |
| Operating height mm | 720 | 760 |
| Workbench dimensions LxW mm | 1740x996 | 1740x996 |
| Weight in kg | 1650 | 2185 |

WORKSHOP PRESSES

BETEX PFPE Portal presses, electric



150
tons

220
tons

300
tons

BETEX PFPE

These robust hydraulic portal presses are made of high-grade steel. They are extremely suitable for the shaping, straightening or bending of large sheets and heavy materials. The frame can be moved lengthwise and the cylinder can be moved sideways, enabling access to the material from all sides.

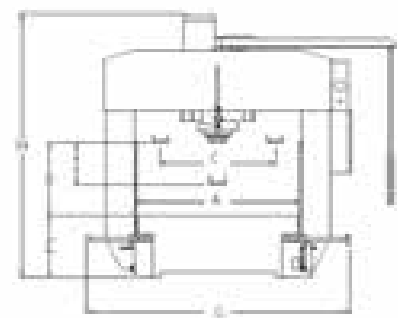
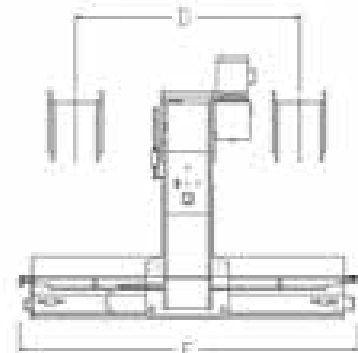
All portal presses are equipped with a double-acting cylinder with a chrome-plated piston and anti-wear guides to protect the cylinder. This press bushing has been designed especially so that different attachments can be fitted to it. The piston stroke is easy to set using the dedicated switches and suspended remote control, which can also be used for moving the frame and cylinder.

There is an emergency stop with interlock. The control panel (on the right side of the machine) includes a switch for the required work type (manual or semi-automatic). The two-speed electric hydraulic pump automatically switches to the lower speed when it detects counter pressure. The hydraulic pump is also equipped with a pressure controller and a gauge. (Excl. oil, Tellus 46).

- Made of ST-52.3 steel
- Large working desk with movable portal

Options:

- Flat lower table.
- Custom dimensions and tonnages available on request.

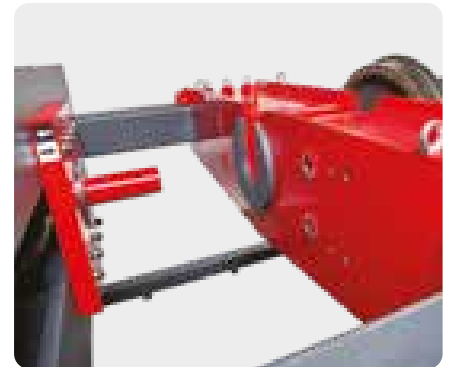


| Type | PFPE150 | PFPE220 | PFPE300 |
|-----------------------------|-----------|-----------|-----------|
| Art. no | 7513013 | 7513014 | 7513015 |
| Pushing force tons | 150 | 220 | 300 |
| Engine power kW | 4 | 5.5 | 7.5 |
| Maximum pressure bar | 315 | 315 | 315 |
| Cylinder stroke mm | 450 | 450 | 450 |
| Installation width mm | 1565 | 2060 | 2560 |
| Installation height mm | 700 | 700 | 700 |
| Operating height mm | 600 | 700 | 750 |
| Workbench dimensions LxW mm | 3000x1550 | 3500x2045 | 4000x2545 |
| Weight in kg | 6500 | 13000 | 16000 |

| Type | PFPE150 | PFPE220 | PFPE300 |
|------|---------|---------|---------|
| A | 1565 | 2060 | 2560 |
| B | 700 | 700 | 700 |
| C | 1100 | 1550 | 2000 |
| D | 2150 | 2500 | 3000 |
| E | 600 | 700 | 750 |
| F | 3260 | 3860 | 4360 |
| G | 2520 | 3430 | 3930 |
| H | 2640 | 3000 | 3100 |

CUSTOM MADE – RAIL WORKSHOP TOOLS

Universal hydraulic wheelset press BETEX HWS 150 ton



BETEX HWS 150

Wheelset press for pressing on and off wheelsets and other components of wheelsets (bearings, brake discs, etc.)

- Pressing force of 150 tons.
- Stroke: 460 mm.
- With pressing cylinders on both sides.
- With 2 adapter jaws for dismounting when little space is available.
- Positioning of the wheelset by means of overhead crane.
- Manual centering of the wheelset.
- Flexible supports for the positioning the wheelset.
- Automatic recording of the course of the force, stroke and speed for each mounting/ dismounting job.
- With remote control.
- Other tonnages, designs and functionalities available on request.

CUSTOM MADE – RAIL WORKSHOP TOOLS

Hydraulic wheel tyre press



Hydraulic wheel tyre press

Assembly of wheel rims for metro and tram

This hydraulic wheel rim press was developed to client specifications. The press is used to assemble wheels in wheel rims with intermediate rubber blocks fitted. These blocks are for travel comfort.

At assembly, a large cone is used to pull the wheel into the wheel rim hydraulically. The cone ensures that the rubber blocks are pressed together in a controlled manner, after which the wheel fits easily.

Objective:

The wheel and wheel rim must align perfectly to prevent vibrations in the vehicle.

- 3 Clasping arms.
- Automatic centering.
- Operation: from separate operating panel.
- Other tonnages, designs and functionalities available on request.

WORKBENCH

BETEX Mobilift



In case of bad working posture. Work desk too low. The feet cannot be placed under the workbench.

BETEX Mobilift

The BETEX Mobilift is a workbench with a modern construction based on a unique one-arm lifting principle.

The workbench is mobile and stable.

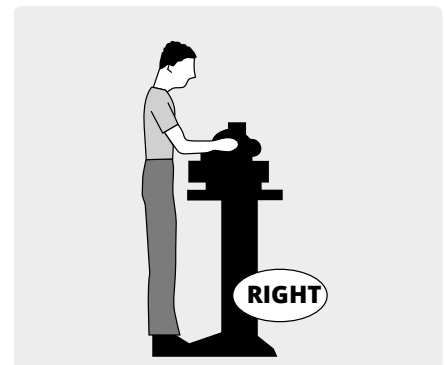
No hindrance from cables running across the floor thanks to the hydraulic pump.

All these features make the BETEX Mobilift a very popular addition to workshops and – after getting acquainted with it – it is impossible to imagine working without it.

BETEX Mobilift workbenches are available with 2 types of load capacity, 400 or 1000 kg.

Advantages:

- Very stable, therefore very suitable as a workbench.
- Extra safe thanks to lack of 'scissor' movement.
- Wooden workbench prevents workpieces from slipping.
- Equipped with 2 lockable drawers.
- Easy operation.
- Promotes right working posture!



The adjustable working height and space for feet allow users to adopt the right working posture, with a straight back and the workbench close to the body.

| Type | H400 | H1000 |
|--|--|--|
| Art. no | 260400 | 261000 |
| Load capacity kg | 400 | 1000 |
| Dimensions in lowest position mm (LxWxH) | 1500x950x620 | 1450x860x620 |
| Workbench dimensions (LxW) | 1220x800 | 1220x800 |
| Min. working height mm | 620 | 670 |
| Max. working height mm | 1160 | 1160 |
| Height adjustment | Hydraulic foot pump | Hydraulic foot pump |
| Protection | Non-return valve | Non-return valve |
| Base / frame | 2 castor wheels with brake 2 fixed wheels Ø 160 | 2 castor wheels with brake 2 fixed wheels Ø 160 |
| Wheel width mm | 50 | 50 |
| Wheel base mm | 630 | 630 |
| Length mm | 1080 | 1080 |
| Tools drawer mm (LxWxH) | 500x300x100 | 500x300x100 |

SELECTING THE RIGHT HYDRAULIC SET-UP

Step 1

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

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

1. Do you prefer a hand, foot, air, or electric powered pump?
2. How much oil capacity is required? (= oil capacity x no. of cylinders)
3. How fast must the pump be?
4. What is the frequency of the application?
5. Single-acting or double-acting?
6. Is the weight of the pump important?
7. Available air or electric supply?

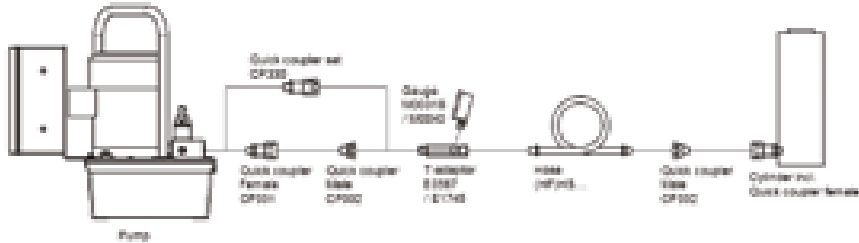
Step 3

Choose necessary hydraulic accessories, consider:

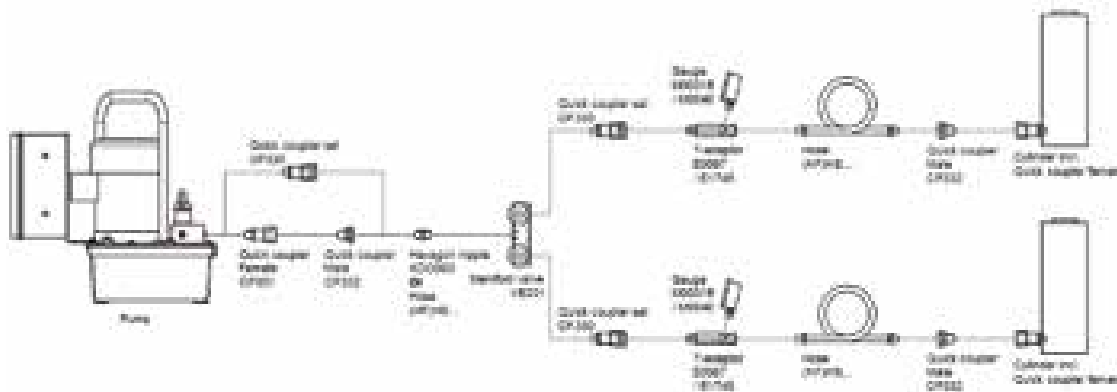
1. Required hose length and number
2. Coupling sets for coupling and uncoupling
3. Pressure gauge with T-adapter
4. Manifolds
5. Extra hydraulic oil

SELECTING THE RIGHT HYDRAULIC SET-UP

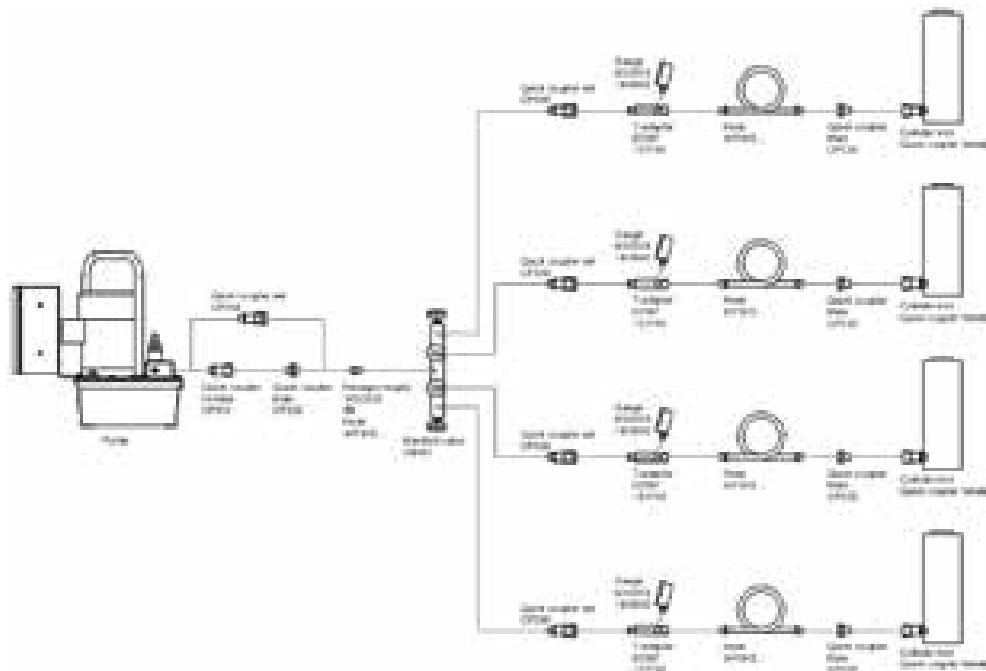
BETEX EP 18S + Single-acting cylinder



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

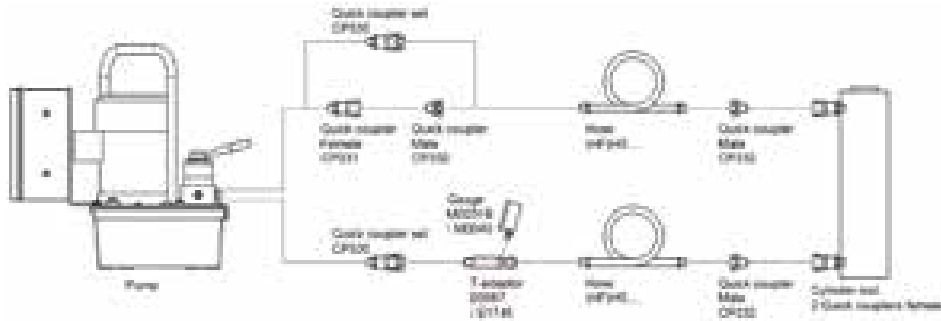


BETEX EP 18S + VB 401 + 4 single-acting cylinders

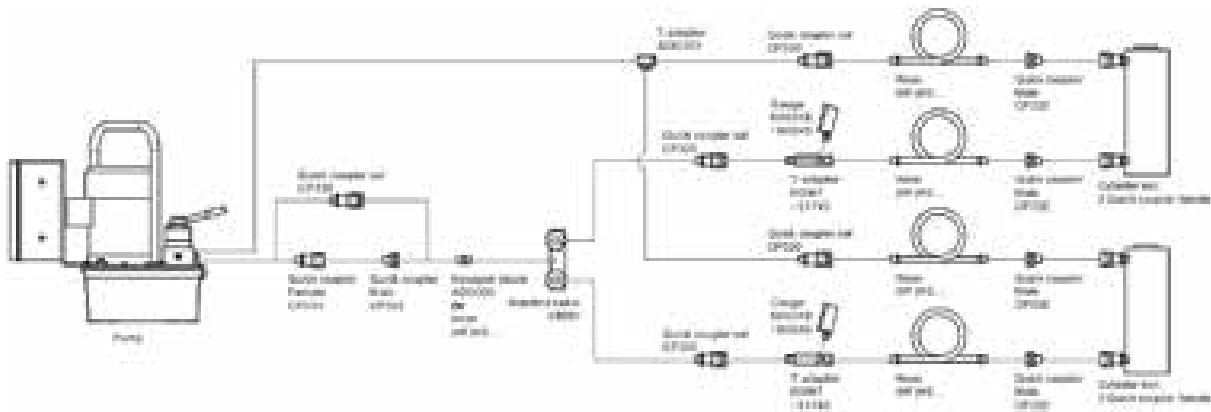


SELECTING THE RIGHT HYDRAULIC SET-UP

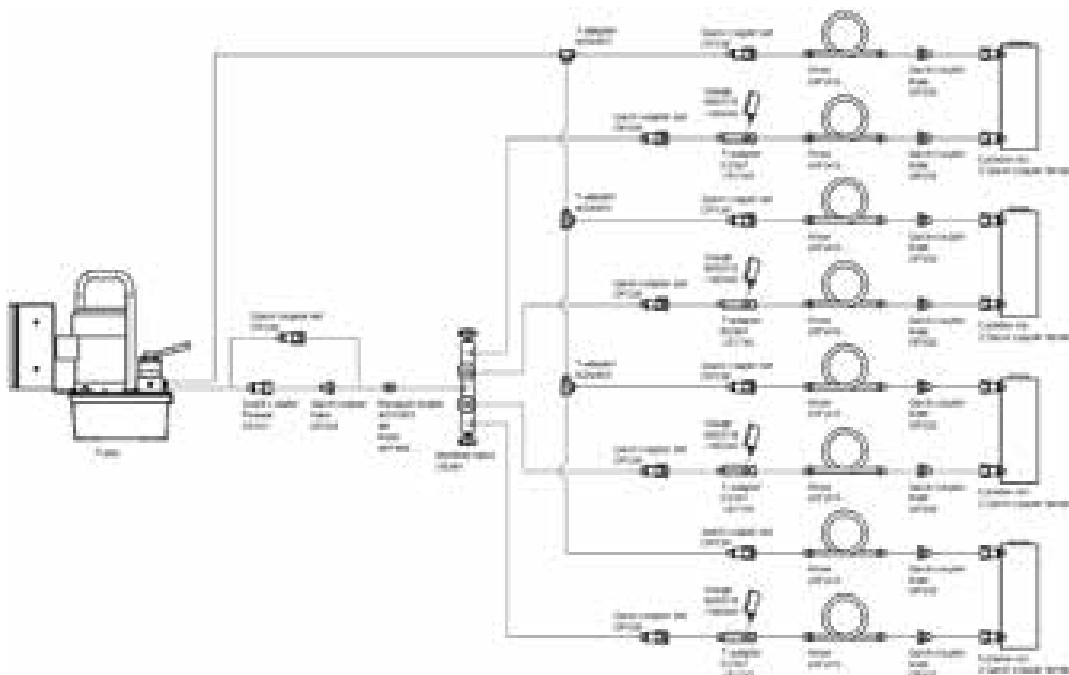
BETEX EP 18D + 1 double-acting cylinder



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



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



SAFETY TIPS

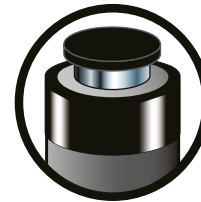
1. Choose the right cylinder

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.



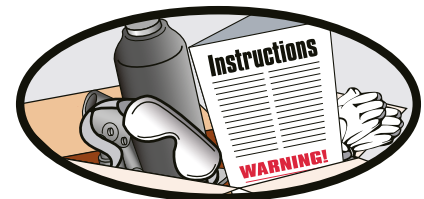
2. Check each component

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



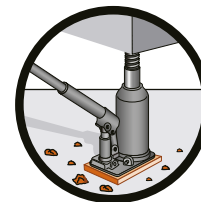
3. Safety instructions

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.



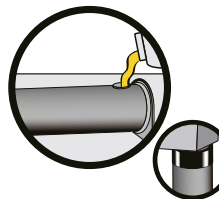
4. Properly and fully support each cylinder at its base

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.



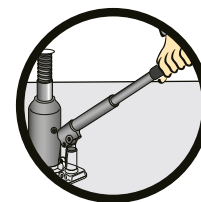
5. Fill oil reservoirs with cylinder retracted

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



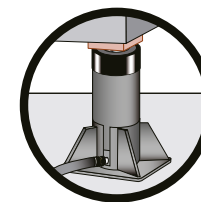
6. Know how your hydraulics work

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



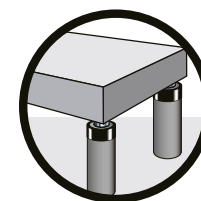
7. Center the load on the lifting point

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.



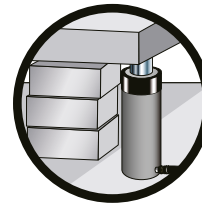
8. Distribute the load evenly when using multiple cylinders

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.



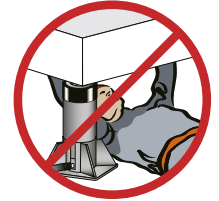
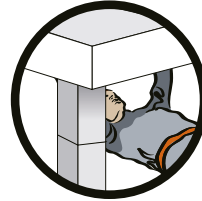
9. Support the load

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.



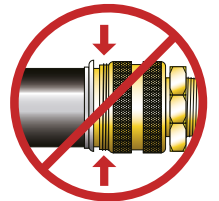
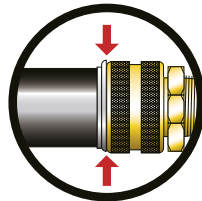
10. Do not use cylinders as permanent supports

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.



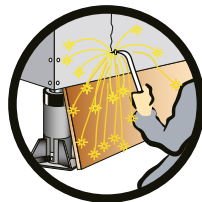
11. Connecting the hydraulics

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.



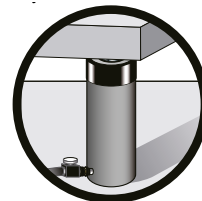
12. Avoid extreme heat or weld splatter

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.



HYDRAULICS SELECTION TABLE

| Type | Oil cap. cm ³ | Cylinder capacity tons | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------------|------------------------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 5 | 10 | 12 | 15 | 20 | 25 | 30 | 50 | 60 | 75 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 800 | 1000 | |
| PB 350 | 350 | Green | Orange | Green | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| PB 600 | 600 | Green | Green | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| PB 700 | 700 | Green | Green | Green | Green | Green | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HC 1500 | 1500 | Green | Green | Green | Green | Green | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HC 2000 | 2000 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HC 2500 | 2500 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 701 | 350 | Green | Orange | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 702 | 1000 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 703 | 2000 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 703D | 2000 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HP 35 | 3500 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red |
| HP 35D | 3500 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red |
| HP 80 | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red |
| HP 80D | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red |
| FHB 350 | 350 | Green | Orange | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| FHB 600 | 700 | Green | Green | Green | Green | Green | Green | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| FHB 700 | 700 | Green | Green | Green | Green | Green | Green | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 921 | 750 | Green | Green | Green | Green | Green | Green | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 1600S | 1600 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 1600D | 1600 | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 3000S | 3000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 3000D | 3000 | Green | Green | Green | Green | Green | Green | Orange | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 8000S | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red |
| AP 8000D | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Red | Red | Red | Red | Red | Red | Red |
| EP 13S | 3000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red |
| EP 13D | 3000 | Green | Green | Green | Green | Green | Green | Orange | Green | Orange | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| EP 18S | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red |
| EP 18D | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red |
| EP18SS | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red |
| EP18DS | 8000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Red | Red | Red | Red | Red | Red |
| EP 211S | 11000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange | Orange |
| EP 211D | 11000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange | Orange |
| EP211SS | 11000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange | Orange |
| EP 211DS | 11000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange | Orange | Orange |
| EP 320S | 15000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange |
| EP 320D | 15000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange |
| EP 420S | 15000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange |
| EP 420D | 15000 | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Orange | Orange | Orange | Orange | Orange | Orange |

- Generally recommended**
- Marginal, check requirements**
- Not recommended for most applications**

SOLID SHIMS

BETEX Shim cases



Case ABC



Case ABCD



Case E

31 standard combinations in handy case (other combinations on request)

| Art. no | Case type | Number of shims per series / case in the given thicknesses in mm | | | | | | | | | | | Number per case |
|---------|------------|--|------|------|------|------|------|------|------|------|------|------|-----------------|
| | | 0.025 | 0.05 | 0.10 | 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 |
| B020230 | AB 10/10 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 180 |
| B020240 | AB 10/11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 200 |
| B020220 | AB 20/9 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | | 340 |
| B020250 | AB 20/10 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 320 |
| B020260 | AB 20/11 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 360 |
| B020310 | BC 10/9 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | 180 |
| B020330 | BC 10/10 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 180 |
| B020340 | BC 10/11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 200 |
| B020320 | BC 20/9 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | | 340 |
| B020350 | BC 20/10 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 320 |
| B020360 | BC 20/11 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 360 |
| B020410 | CD 10/9 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | 180 |
| B020430 | CD 10/10 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 180 |
| B020440 | CD 10/11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 200 |
| B020420 | CD 20/9 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | | 340 |
| B020450 | CD 20/10 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 320 |
| B020460 | CD 20/11 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 360 |
| B020110 | ABC 10/9 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | 270 |
| B020100 | ABC 10/10 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 270 |
| B020140 | ABC 10/11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 300 |
| B020120 | ABC 20/9 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | | 510 |
| B020130 | ABC 20/10 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 480 |
| B020150 | ABC 20/11 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 540 |
| B020019 | ABCD 10/9 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | 360 |
| B020030 | ABCD 10/10 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 360 |
| B020040 | ABCD 10/11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 400 |
| B020029 | ABCD 20/9 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | | 680 |
| B020031 | ABCD 20/10 | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 640 |
| B020032 | ABCD 20/11 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 10 | 5 | 5 | 720 |
| B020600 | E 10/10 | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 5 | 5 | 90 |

SOLID SHIMS

BETEX stainless steel shims



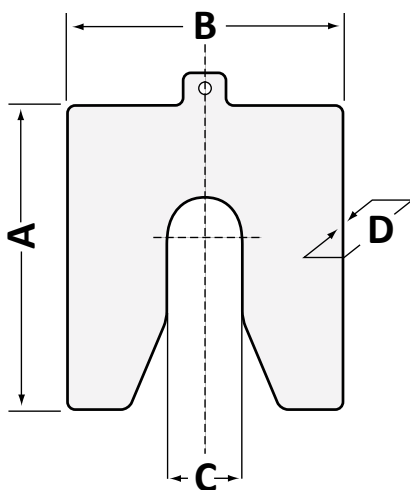
BETEX stainless steel shims

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

- Available in 6 difference sizes and 11 thicknesses.
- Packed in sets of 10 shims.
- High-quality, non-corroding material.
- The shim's thickness is etched on each shim.
- 31 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!



| | | Art. no | D mm |
|--|--|---------|------|
|--|--|---------|------|

Shim Mini 35

| | | | |
|---|-------|-----------|------|
| A | 35 mm | B035005Mn | 0.05 |
| | | B035010Mp | 0.10 |
| | | B035020Mr | 0.20 |
| B | 30 mm | B035025Ms | 0.25 |
| | | B035040Mt | 0.40 |
| | | B035050Mu | 0.50 |
| C | 9 mm | B035070Mv | 0.70 |
| | | B035100Mw | 1.00 |
| | | M8 | |

Shim A 50

| | | | |
|-----|-------|------------|-------|
| A | 50 mm | B0500025Ak | 0.025 |
| | | B050005An | 0.05 |
| | | B050010Ap | 0.10 |
| B | 50 mm | B050020Ar | 0.20 |
| | | B050025As | 0.25 |
| | | B050040At | 0.40 |
| C | 13 mm | B050050Au | 0.50 |
| | | B050070Av | 0.70 |
| | | B050100Aw | 1.00 |
| M12 | | B050200Ax | 2.00 |
| | | B050300Ay | 3.00 |
| | | | |

Shim B 75

| | | | |
|-----|-------|------------|-------|
| A | 75 mm | B0750025Bk | 0.025 |
| | | B075005Bn | 0.05 |
| | | B075010Bp | 0.10 |
| B | 75 mm | B075020Br | 0.20 |
| | | B075025Bs | 0.25 |
| | | B075040Bt | 0.40 |
| C | 21 mm | B075050Bu | 0.50 |
| | | B075070Bv | 0.70 |
| | | B075100Bw | 1.00 |
| M20 | | B075200Bx | 2.00 |
| | | B075300By | 3.00 |
| | | | |

Shim C 100

| | | | |
|-----|--------|------------|-------|
| A | 100 mm | B1000025Ck | 0.025 |
| | | B100005Cn | 0.05 |
| | | B100010Cp | 0.10 |
| B | 100 mm | B100020Cr | 0.20 |
| | | B100025Cs | 0.25 |
| | | B100040Ct | 0.40 |
| C | 32 mm | B100050Cu | 0.50 |
| | | B100070Cv | 0.70 |
| | | B100100Cw | 1.00 |
| M30 | | B100200Cx | 2.00 |
| | | B100300Cy | 3.00 |
| | | | |

Shims D 125

| | | | |
|-----|--------|------------|-------|
| A | 125 mm | B1250025Dk | 0.025 |
| | | B125005Dn | 0.05 |
| | | B125010Dp | 0.10 |
| B | 125 mm | B125020Dr | 0.20 |
| | | B125025Ds | 0.25 |
| | | B125040Dt | 0.40 |
| C | 45 mm | B125050Du | 0.50 |
| | | B125070Dv | 0.70 |
| | | B125100Dw | 1.00 |
| M42 | | B125200Dx | 2.00 |
| | | B125300Dy | 3.00 |
| | | | |

Shims E 200

| | | | |
|-----|--------|-----------|------|
| A | 200 mm | B200005En | 0.05 |
| | | B200010Ep | 0.10 |
| | | B200020Er | 0.20 |
| B | 200 mm | B200025Es | 0.25 |
| | | B200040Et | 0.40 |
| | | B200050Eu | 0.50 |
| C | 55 mm | B200070Ev | 0.70 |
| | | B200100Ew | 1.00 |
| | | B200200Ex | 2.00 |
| M52 | | B200300Ey | 3.00 |
| | | | |

PEEL-OFF SHIMS

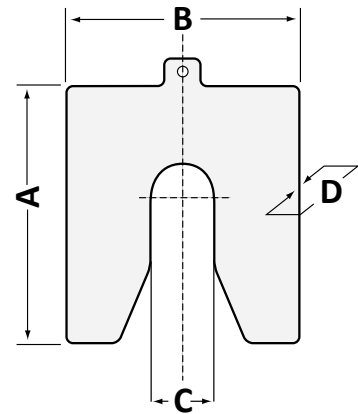
BETEX hard brass or stainless steel shims



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

BETEX peel-off shims

- Laminated pre-cut peel-off shims.
- Made of high-quality hard brass or stainless steel to prevent corrosion.
- Available in 7 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 | Bolt size | Dimensions mm |
|---------|-----------------|-------|------|------|------|-----------|-------------------|
| 8125005 | HMS | 10 | 35 | 30 | 9 | M8 | 610 x 1220 x 1.00 |
| 812502 | HMS | 10 | 50 | 50 | 13 | M12 | 610 x 1220 x 1.00 |
| 8125035 | HMS | 10 | 75 | 75 | 21 | M18 | 610 x 1220 x 1.00 |
| 812504 | HMS | 10 | 100 | 100 | 32 | M27 | 610 x 1220 x 1.00 |
| 8125045 | HMS | 10 | 125 | 125 | 45 | M36 | 610 x 1220 x 1.00 |
| 812506 | HMS | 10 | 200 | 200 | 55 | M52 | 610 x 1220 x 1.00 |
| 8125505 | STAINLESS STEEL | 10 | 35 | 35 | 9 | M8 | 610 x 1220 x 1.00 |
| 812552 | STAINLESS STEEL | 10 | 50 | 50 | 13 | M12 | 610 x 1220 x 1.00 |
| 812553 | STAINLESS STEEL | 10 | 75 | 75 | 21 | M18 | 610 x 1220 x 1.00 |
| 812554 | STAINLESS STEEL | 10 | 100 | 100 | 32 | M27 | 610 x 1220 x 1.00 |
| 8125545 | STAINLESS STEEL | 10 | 125 | 125 | 45 | M36 | 610 x 1220 x 1.00 |
| 812556 | STAINLESS STEEL | 10 | 200 | 200 | 55 | M52 | 610 x 1220 x 1.00 |

SHAFT ALIGNMENT SYSTEM

Fixturlaser Laser Kit

The Fixturlaser Laser Kit consists of two wireless sensors. The use of line lasers minimizes setup time. To make it even easier, the sensors are pre-mounted and are pre-set to the most common setup.

The free software runs on an iOS or Android tablet or phone, guiding the user through the entire alignment process. The user interface is entirely graphical and uses no text, so there are no language barriers to overcome.

In addition, the screen clearly shows the current position of the machine and indicates when the alignment is completed. A log with all relevant information is created and saved automatically.

The Fixturelaser is designed to be used with the free Laser Kit App.

- Adaptive user interface.
- VertiZontal Moves.
- Pre-mounted sensors.
- Bluetooth Auto Connect.

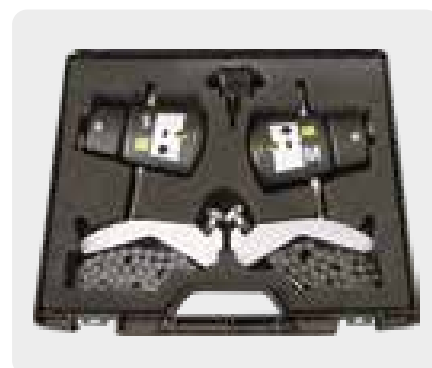


Complete system

- 2 measuring units (M5 & S5)
- 2 V-brackets with chain
- 1 tape measure, 5 m
- 1 charger
- 1 charging cable
- 1 shaft for rods
- 1 manual

Use in combination with: shims, see page 143 - 145.

| Type | Fixturlaser Laser Kit |
|------------------------|--|
| Art. no | 780328 |
| Case | |
| Weight incl. all parts | 2.75 kg |
| Dimensions | 357 x 305 x 96 mm |
| Sensor units | |
| Weight | 156 g |
| Dimensions | 139 x 79 x 40 mm |
| Measuring distance | 70 - 850 mm |
| Detector | PSD (single shaft) |
| Detector reach | 8.5 x 0.9 mm |
| Measurement accuracy | 3% +/- 0.01 mm |
| Angular accuracy | +/- 2° |
| Wireless communication | Class I Bluetooth transceiver with multi-drop capability. BLE Bluetooth Low Energy (BT 4.0) |
| Brackets | |
| Shaft diameter | Ø30 - 150 mm |
| Yokes | 2 pcs 150 mm |



SHAFT ALIGNMENT SYSTEM

Easy-Laser XT440

Easy alignment with maximum flexibility

The Easy-Laser XT440 is the first alignment system of the new XT generation. This shaft alignment system is platform independent and can therefore also be used with iOS and Android devices. The Easy-Laser XT440 is very robust, waterproof and dustproof (IP66/IP67). To make this new generation Easy-Laser as user-friendly as possible, all XT measuring programs have been collected in a single user-friendly app that can be downloaded for free.

- Able to align shafts both horizontally and vertically!
- The app works on your iOS or Android phone or tablet.
- No licenses. The measuring units determine which measurements can be carried out.
- Saves measurements.
- Possibility to save notes and photos.
- Information can be shared with your customer by email.
- The XT products are very robust, waterproof and dustproof (IP66/IP67).
- Long battery life.
- Use in combination with XT190, see page 153.

Optional:

- Thermal camera XT11



Complete system

- 1 measuring unit XT40-M
- 1 measuring unit XT40-S
- 2 measuring units (M & S)
- 2 chain brackets with rods
- 4 rods, 60 mm
- 1 tape measure, 3 m
- 1 hex key set
- 1 charger (100-240V AC)
- 1 DC splitter cable
- DC-USB adapter, for charging
- 1 quick-start manual
- USB with manuals
- 1 small case

| Type | Easy Laser XT440 |
|-----------------------------------|---|
| Art. no (with display) | 7803190 |
| Art. no (without display) | 780320 |
| Dimensions | 460 x 350 x 175 mm |
| Weight incl. all parts | 7.2 kg |
| Sensor unit M/S | |
| Detector type | True PSD 30 mm |
| Communication | Bluetooth |
| Measuring error / measuring range | < 1 % / up to 10 m |
| Laser type / Laser class | Diode laser / Safety class II |
| Casing material | Anodised alu PC/ABS + TPE |
| Dimensions / weight | 76 x 76.7 x 39.3 mm / 245 g |
| Display unit XT11 | |
| | -10 to 50°C / 14 to 122 °F |
| Display type | VGA 8" colour display, LED |
| Battery type / life | Heavy duty Li Ion rechargeable / 16 hours |
| Communication | WiFi |
| Casing material | PC/ABS + TPE |
| Dimensions / weight | 274 x 190 x 44 mm / 1,450 g |
| Cable (loading) | Splitter 1 m |
| Brackets (chain) | V bracket for chains, width 18 mm, shaft diameter 20-150 mm |
| Yokes | 120 mm, 60 mm extendable / Stainless steel |



SHAFT ALIGNMENT SYSTEM

Fixturlaser ECO

The ECO makes alignment equipment available to everyone thanks to its price/quality ratio.

The 20 mm sensors and user-friendly interface ensure that alignment can be performed in any situation.

- Integrated Bluetooth.
- Pre-mounted brackets.
- 4" colour display.
- VertiZontal Moves, innovative and time-saving features.
- Screen flip.
- 8 hours of battery time, when used continuously.
- CCD sensor technology.
- Actual values during adjustment.
- IP65 classified (resistant to extreme conditions).
- Narrow wireless sensor unit.



Complete system

- 1 display unit ECO
- 2 measuring units (S6 & M6)
- 1 tape measure, 5m
- 1 EUR/US power cable, 2 m
- 2 USB cables A-mini B 0.5 m black
- 2 USB cables A-mini B 1.5 m black
- 2 V-brackets with chain
- 2 universal tools
- 1 manual

Use in combination with: shims, see page 143 - 145.

| Type | Fixturlaser ECO |
|-----------------------------|---------------------------------|
| Art. no | 780346 |
| Weight incl. all parts | 4.8 kg |
| Dimensions | 415 x 325 x 180 mm |
| Display unit | |
| Dimensions | 181 x 106 x 34 mm |
| Weight | 0.36 kg |
| Display size | 4" (102 mm) diagonal 84x56 mm |
| Service life | 8 hours continuous |
| Sensor / units | |
| Weight | M6 200 g / S6 188 g |
| Protection class | IP65 |
| Measuring distance | Up to 3 m |
| Detector | Digital line sensor |
| Detector reach / resolution | 20 mm / 1% ±1 number |
| Measurement accuracy | 0.3% ±7 µm |
| Brackets | |
| Shaft diameter | Ø25-175 mm / Ø25-450 mm + chain |
| Yokes | 4 pcs 150 mm |



SHAFT ALIGNMENT SYSTEM

Fixturlaser EVO

The new laser alignment system, the Fixturlaser EVO, is based on simplicity. The user is guided through the alignment process using colour-coded symbols. The Fixturlaser EVO has an extensive software package, including the Feetlock program that can be used when machines are fixed.

- Integrated Bluetooth.
- 5" colour display, compact and lightweight.
- VertiZontal Moves, innovative and time-saving features.
- Screen flip.
- CCD sensor technology.
- Actual values during adjustment.
- IP65 classified (resistant to extreme conditions).
- Narrow wireless sensor units.
- 8 hours of battery time, when used continuously.



Complete system

- 1 display unit EVO
- 2 measuring units (M3 & S3)
- 2 V-brackets complete
- 2 chains, 8 mm
- 1 tape measure, 5 m
- 1 EUR/US power cable, 2 m
- 3 USB cables A-mini B 2 m, USB cable A-mini 0.5 m
- 1 EUR/US power supply, 2 m
- 2 universal tools
- 1 manual

Use in combination with: shims, see page 143 - 145.

| Type | Fixturlaser EVO |
|-----------------------------------|----------------------------------|
| Art. no | 780347 |
| Weight incl. all parts | 5.4 kg |
| Dimensions | 415 x 325 x 180 mm |
| Display unit | |
| Dimensions | 181 x 103 x 180 mm |
| Weight | 0.36 kg incl. battery |
| Display size | 5" (127 mm) diagonal / 111x63 mm |
| Service life | 8 hours continuous |
| Sensor / units | |
| Weight | M3 212 g / S3 188 g |
| Dimensions | 92 x 77 x 33 mm |
| Protection class | IP65 |
| Measuring distance | Up to 10 m |
| Detector | 2nd generation digital sensor |
| Large detector reach / resolution | 30 mm / 1 µm |
| Measurement accuracy | 0.3% ±7 µm |
| Brackets | |
| Shaft diameter | Ø25 - 175 mm |
| With extension chain | Ø25 - 450 mm |
| Yokes | 4 pcs 150 mm |



SHAFT ALIGNMENT SYSTEM

Fixturlaser NXA Pro

A shaft alignment system based on a digital laser! The NXA Pro is very compact: with a width of only 33.5 mm, the sensor units fit into the narrowest of spaces. The sensor units have long-life batteries, Bluetooth communication and gyroscopes. The gyroscopes make it possible to measure according to the Tripoint Method in the vertical shaft alignment application, something that no other shaft alignment instrument is capable of!

- OmniView: 6.5" display with icons and symbols to guide the user.
- Gyroscope with unique Tripoint Method for vertical shaft alignment.
- VertiZontal Moves, innovative and time-saving features.
- Integrated Bluetooth.
- Battery management, 10 hours of continuous operation, display charged to an 80% capacity within 1 hour.
- CCD sensor technology.
- Actual values during adjustment.
- IP65 classified (resistant to extreme conditions).
- Very compact sensor units.
- Measurements can be saved and copied to a USB stick.



Complete system

- 1 NXA Pro display unit
- 2 measuring units (M3 & S3)
- 2 V-brackets, 2 magnetic V-brackets
- 1 extension fixture
- 1 USB stick
- 1 magnetic base, 1 rod kit
- 1 power supply
- 1 chain 8 mm, 60 links
- 1 tape measure, 5 m
- 2 shafts for rods
- 1 manual (in English)

Use in combination with: shims, see page 143 - 145.

| Type | Fixturlaser NXA Pro |
|-------------------------------|--|
| Art. no | 780348 |
| Weight incl. all parts | 7.7 kg |
| Dimensions | 415 x 325 x 180 mm |
| Display unit | |
| Weight / Dimensions | 1.2 kg / 124 x 158 x 49 mm |
| Protection class | IP65 |
| Display size | 6.5" (165 mm) diagonal (133x100mm) |
| Gyroscope | 6-axis MEMS inertial measurement sensor with drift compensation and autom. field calibration |
| Service life | 10 hours continuous (with 50% LCD display light) |
| X-press battery charging time | 1 hour of charging > 6 hours of operation |
| Sensor / units | |
| Weight | M3 212 g / S3 188 g |
| Dimensions | 92 x 77 x 33 mm |
| Protection class | IP65 |
| Measuring distance | Up to 10 m |
| Detector | Quaity degree Ultra HD CCD |
| Detector reach / resolution | 30 mm / 1 µm |
| Measurement accuracy | 0.3% ±7 µm |
| Gyroscope | Refer to Display unit |
| Service life | 17 hours continuous |
| Shaft brackets | |
| Shaft diameter | ∅20 - 450 mm |
| Yokes | 4 pcs 85 mm and 4 pcs 160 mm (extendable to 245 mm) |



PULLEY ALIGNMENT SYSTEM

Fixturlaser PAT

The PAT alignment laser for pulleys will be your final solution for all your pulley alignment jobs! Because the groove of the belt is used as a reference, you can see at a glance whether the pulleys are properly aligned or not.

The PAT is supplied with two laser units, both equipped with a spring mechanism that can be fixed in the grooves of the pulleys. In addition, the PAT is equipped with various sized removable guides allowing the lasers to be mounted on most standard gauges (A-E 6 mm - 40 mm). Additional guides are available as accessories.

The use of two laser units makes it very easy for the user to determine the adjustment required, e.g. whether to correct a parallel error or an angular error. Within a few seconds it is clear whether the pulleys need to be aligned.



Complete system

- 2 boxes of V-guide tips
- 1 pair of laser transmitters
- 4 AAA batteries



| Type | Fixturlaser PAT |
|--------------------------|---------------------------------------|
| Art. no | 780700 |
| Weight incl. all parts | 1.5 kg |
| Dimensions | 250 x 180 x 80 mm |
| Sensor units | |
| Weight | 340 g |
| Dimensions | 61 x 77 x 61 mm |
| Laser | 630 – 675 nm class 2 diode laser |
| Laser line angle | 90°C |
| Laser power | < 1 mW |
| Measuring distance | 50 mm - 6000 mm |
| Measurement accuracy | In excess of 0.5 m or 0.2 degrees |
| Disc diameter range | 75 mm and larger |
| Pulley belt groove width | 6 mm - 40 mm |
| Power | 2 AAA batteries / 20 hours continuous |

PULLEY ALIGNMENT SYSTEM

Easy-Laser D90 BTA

The D90 BTA is an extremely affordable and universally applicable disc and pulley alignment system for the alignment of V-belts, toothed belts, flat belts and chain drives.

- 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.
- Operating range up to 10 mtr.

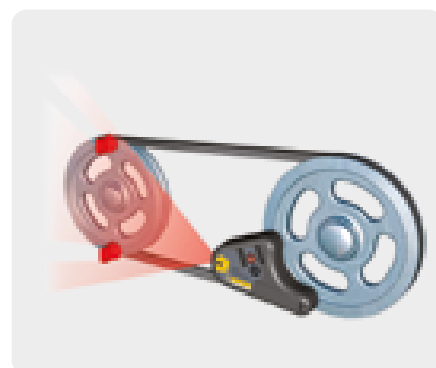


Complete system

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

Use in combination with: shims, see page 143 - 145.

| Type | Easy Laser D90 BTA |
|-------------------------------------|--|
| Art. no | 7803103 |
| Laser transmitter | |
| 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 |
| Battery type / life | 1x (AA) 1.5 V / 8 hours |
| Material | ABS plastic / hard anodised alu |
| Weight | 270 g |
| Dimensions | 145 x 86 x 30 mm |
| Detector | |
| Measuring distance | - |
| Measuring range | - |
| Display | - |
| Connection | - |
| Battery type / life | - |
| Material | - |
| Weight | - |
| Dimensions | - |



PULLEY ALIGNMENT SYSTEM

Easy-Laser XT190 BTA

A wireless and digital disc and pulley alignment system for the alignment of V-belts, toothed belts, flat belts and chain drives.

- Actual digital values for even greater accuracy.
- Possibility to save measurement results in a report/PDF creates long-term advantages and is beneficial for the service life of belts and chains.
- Can be used on your own Android or iOS device with app.
- Accurate, efficient and user-friendly.
- Simultaneous horizontal and vertical alignment.
- Easy to operate by 1 person.
- Use in combination with XT440, see page 147.

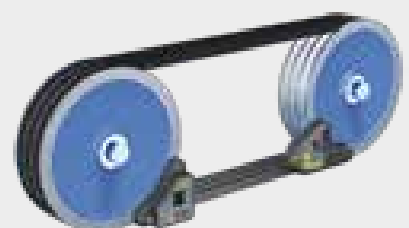


Complete system

- 1 laser / 1 sensor
- 2 targets
- 1 charger (100-240V AC) + cable
- 1 USB stick with documentation
- 1 carrying case

Use in combination with: shims, see page 143 - 145.

| Type | Easy-Laser XT190 BTA |
|-------------------------------------|--|
| Art. no | 7803104 |
| Case | 270 x 225 x 80 mm |
| Laser transmitter | |
| 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 |
| Battery type / life | 1x (AA) 1.5 V / 8 hours |
| Material | ABS plastic / hard anodised alu |
| Weight | 270 g |
| Dimensions | 145 x 86 x 30 mm |
| Detector | |
| Measuring distance | Up to 3 m between transmitter and receiver |
| Measuring range | Axial offset: ±3 mm. Angular value ±8° |
| Display | Yellow OLED 96 x 96 pixels |
| Connection | Bluetooth wireless technology |
| Battery type / life | Li-Po / 5 hours continuous |
| Material | ABS plastic / anodised alu |
| Weight | 190 g |
| Dimensions | 95 x 95 x 36mm |



MONITORING

BETEX Bearing Checker

The Bearing Checker is a unique instrument, small and lightweight, designed for fast, on-site condition assessment of all types of ball and roller bearings.

Problems are detected at an early stage; well before bearing damage is noticeable due to an increase in vibrations or temperature.

The assessed checking results provide service technicians and engineers with immediate information on the current condition of the bearing and the cause of potential problems with the machine. They can be determined without specialist training.

- Shock pulse method. With the quick coupling shock pulse sensor, the instrument can be used for bearing checks in a large number of rotating industrial machines that are supplied with standard checking nipples.
- An infrared temperature sensor measures the surface temperature.
- The instrument also has an electronic stethoscope function to listen to machine sounds.
- Checking results in green, yellow and red (the traffic light effect) give an immediate and reliable indication of the machine's condition in an easy-to-understand way.



Complete system

- Bearing Checker
- USB cable
- Quick Start

| Type | BETEX Bearing Checker |
|------------------------------|--|
| Art. no | 780302 |
| Shock pulse measuring method | dBm/dBc, measuring range -9 to 90 dBsc, ±3 dBsv |
| Probe type | Integrated probe |
| Temperature measuring range | -10 to + 50°C / 14 to 122 °F |
| Resolution | 1°C |
| Stethoscope | |
| Head phone mode | 7 sound levels |
| Bearing condition indication | Green, yellow and red LEDs |
| Measuring indication | Blue LED |
| General functionalities | Battery status display, probe line test, metric or imperial units, language-independent menus with symbols, memory for up to 10 readings |
| Keyboard | Sealed membrane |
| Display | Graphic monochrome, 64 x 128 pix, LED |
| Casing material | Copolyester/TPE |
| Power | 3.63V lithium-ion batteries or rechargeable USB, >25 hours of normal use |
| Dimensions | 207 x 74 x 41 mm |
| Weight | 335 g |



Available accessories

MONITORING

BETEX VibChecker

Vibrations are often the result of mechanical problems in industrial machines. When integrated into your normal maintenance activities, periodic vibration measurement with VibChecker will go a long way to help keep your equipment operational.

The VibChecker combines handiness and ease of use with affordability and durability. Suitable for both new and experienced users, the VibChecker covers the basic vibration monitoring needs in your maintenance activities.

- Lightweight and compact instrument for vibration measurement in a frequency range of 10-1000 Hz.
- Immediately following the measurement, the results are assessed automatically according to ISO standards.
- The results can be saved for subsequent follow-up.
- Green-yellow-red LEDs indicate the severity of the vibrations measured.
- A real-time FFT spectrum displays the vibration components for easy error pattern recognition.
- The results can be saved for subsequent reporting and follow-up.
- Built-in accelerometer.
- Convenient button operation and large display.
- Clear symbols.



Complete system

- VibChecker
- USB cable
- Quick Start

| Type | BETEX VibChecker |
|------------------------------------|---|
| Art. no | 780202 |
| Frequency range | 10 tot 1000 Hz |
| Readings | RMS / peak / peak-peak |
| Measuring range: | |
| - Speed | 100 mm/s RMS (4 ips) @ 80 Hz |
| - Acceleration | 100 m/s ² (10 g) @ 10-1000 Hz |
| - Displacement | 100 µm (4 mil) @ 80 Hz |
| Condition evaluation | Vibration level according to ISO2372 and ISO10816, part 2,34 >600rpm |
| Spectrum | Linear, 200 lines, optical zoom, marking points |
| General functionalities | Battery status indicator, reading check, metric or imperial units, menus with symbols, memory for up to 10 readings |
| Condition indication | Green, yellow and red LEDs |
| Operating temperature | -10 to + 50°C / 14 to 122 °F |
| Display | 2,4" colour TFT LCD |
| Casing material / Protection class | Copolyester/TPE/IP65 |
| Power | 3.63V lithium-ion batteries or rechargeable USB, >25 hours of normal use |
| Dimensions | 207 x 74 x 41 mm |
| Weight | 335 g |



MONITORING

Laser thermometers

Portable digital laser/infrared thermometer with a perfect price/quality ratio. The instruments measure very accurately, are low in energy consumption and easy to operate.

Ideal for fast and safe measurement of liquids, gases and many other substances, as well as for temperature measurements of motors, brake systems and heating systems.

The thermometers all have:

- Illuminated LCD display
- Accuracy: 0.1°C
- Automatic "hold" feature
- Readable temperature of 0.1°C
- Measurement in Celsius or Fahrenheit
- Batteries
- User Manual



BETEX 750 - K-Type

Digital thermometer

- Measuring range:
-50°C to 750°C / -58 to 1382 °F
- Protective cover and sensor included

| Type | BETEX 750 |
|---------------------|-------------------------------|
| Art. no | 610001 |
| Measuring range | -50 to 250°C / -58 to 482 °F |
| Accuracy | ± 0.5%+1°C |
| Resolution | 0.1°C |
| Data hold key | |
| Adjustable units | °C, °F |
| Thermocouple sensor | TP-01 type-K sensor with plug |
| Power | 2x 1.5V AAA batteries |
| Weight | 110 g |
| Dimensions | 128 x 61 x 25 mm |



BETEX 1220

Laser thermometer

- Measuring range:
-50°C to 300°C / -58 to 572 °F

| Type | BETEX 1220 |
|------------------|------------------------------|
| Art. no | 610020 |
| Measuring range | -50 to 300°C / -58 to 572 °F |
| Accuracy | ± 2 °C |
| Resolution | 1 °C |
| Response time | <0.8 sec. |
| Emissivity | 0.95 (adjustable 0.1-0.99) |
| Adjustable units | °C, °F |
| Power | 2x AAA batteries |
| Weight | 70 g |
| Dimensions | 155 x 50 x 72 mm |



BETEX 1230

Infrared thermometer

- Measuring range:
-50°C to 380°C / -58 to 716 °F

| Type | BETEX 1230 |
|----------------------|---|
| Art. no | 610230 |
| Measuring range | -50 to 380°C / -58 to 716 °F |
| Accuracy | > 0 °C: ± 2 % or ± 2 °C (highest value applies) |
| Resolution | 0.1 °C |
| Optical resolution | 13:1 |
| Response time | Max. 1 sec. |
| Emissivity | 0.1 ... 1.0 (adjustable) |
| Adjustable units | °C, °F |
| Laser | <1 mW, 630 ... 670 nm, class 2 |
| Automatic switch-off | After 15 min. |
| Power | 9V battery |
| Weight | 121 g |
| Dimensions | 145 x 75 x 39 mm |



BETEX 1240

Infrared thermometer

- Measuring range:
-40°C to 800°C / -40 to 1472 °F
- Mounting hooks included

| Type | BETEX 1240 |
|----------------------|---|
| Art. no | 610240 |
| Measuring range | -40 to 800°C / -40 to 1472 °F |
| Accuracy | -40 to 0 °C: ± 4 °C 0 to 400 °C: ± 1,5 °C 400 to 800 °C: ± 2 °C |
| Resolution | 0.1 °C at > 199.9 °C |
| Optical resolution | 12:1 |
| Emissivity | 0.1 to 1.0 (adjustable) |
| Laser | Class 2 |
| Automatic switch-off | After 30 sec. of inactivity |
| Power | 9V battery |
| Weight | 250 g |
| Dimensions | 95 x 82 x 192 mm |



BETEX 1300

Digital thermometer

- Measuring range:
-210°C to 1372°C / -346 to 2012 °F
- Incl. 2 thermowire sensors

| Type | BETEX 1300 |
|-------------------------------------|---|
| Art. no | 610260 |
| Measuring range thermocouple K Type | -200 to 1372 °C / -328 to 2501 °F |
| Measuring range thermocouple J Type | -210 to 1100 °C / -346 to 2012 °F |
| Accuracy | >100 °C (148 °F) ± [0.15 % of reading +1 °C (1.8 °F)] <100 °C (148 °F) ± [0.5 % of reading +2 °C (3.6 °F)] |
| Measurement | Direct / differential (T1-T2) |
| Adjustable units | °C / °F / K |
| Automatic switch-off | After 20 min. of inactivity |
| Power | 3x 1.5V AAA batteries |
| Weight | 145 g |
| Dimensions | 160 x 60 x 25 mm |

MONITORING

Decibel meter / Tachometer



BETEX 1500

Decibel meter / sound meter

Includes

- Adapters
- Wheel
- Inner and outer cone
- 3 reflective tapes
- Bag

| Type | BETEX 1500 |
|-----------------------|--|
| Art. no | 610270 |
| Measuring range | 35 - 135 dB |
| Dynamic range | 50 dB |
| Frequency range | 31.5 Hz - 8 kHz |
| Accuracy | ±2 dB |
| Frequency | 31.5 Hz - 8 kHz |
| Frequency measurement | A |
| Microphone type | 1/2" Elektret condensor microphone |
| Visual alarm limits | >100 dB: display shows "HI" <100 dB: display shows "LO" |
| Temperature accuracy | ±1.5 °C |
| Resolution | 0.1 |
| Display update | 300 ms |
| Battery life | <60 h |
| Automatic switch-off | After 15 min. of inactivity (may be deactivated) |
| Power | 3x 1.5V AAA batteries |
| Dimensions | 144 x 56 x 30.5 mm |
| Weight | 73 g |



BETEX 1600

Tachometer

Includes:

- Wind-noise suppressor

| Type | BETEX 1600 |
|-------------------------------|--|
| Art. no | 610280 |
| Measuring range laser-optical | 2 - 99999 r.p.m. |
| Measuring range mechanical | 2 - 20000 r.p.m. |
| Resolution | 0.1 r.p.m. in 2.0 - 9999.9 r.p.m. range |
| Accuracy | ± 0.05% of r.p.m. measuring value; ± 1 digit |
| Measuring distance | 50 - 500 mm |
| Memory | 10 readings |
| Power | 1 x 9V battery / external power source 6V |
| Casing | Robust ABS plastic |
| Display | LCD, 5 digits, 22 mm high |
| Dimensions | 160 x 60 x 42 mm |
| Weight | 200 g |

MONITORING

Stethoscope / Endoscope



BETEX ELS12

Electronic stethoscope / vibration checker

For preventive maintenance and machine repairs. Easily locate the source of mechanical noise in many machines.

Applications include the monitoring of the operating state of valves, injectors, electrical relays, pumps, lubrication systems, shafts, transmissions and bearings, etc.

| Type | BETEX ELS 12 |
|--------------------------|--------------------------------|
| Art. no | 610320 |
| Frequency range | 100 Hz - 10 kHz |
| Volume | Adjustable |
| Ambient temperature | -10 to +55 °C / 14 to 131 °F |
| Power | 9V battery |
| Casing | ABS |
| Base | 206 x 50 x 32 mm |
| Needle sensor (screw-in) | 1 x 290 mm; 1 x 70 mm (length) |
| Sensor material | Steel |
| Weight | 240 g incl. battery |

Includes:

- Stethoscope
- Headphones
- Sensor of 70 mm & 290 mm
- Case



BETEX Endoscope

Electronic videoscope

User-friendly videoscope suitable for detection, examination and preventive maintenance.

- Provides access to hard-to-reach spaces thanks to the 360-degree articulating tip, which is equipped with LED lighting.
- The probe is suitable for the toughest conditions.
- Its double insulation structure make it waterproof, and oil and corrosion resistant.
- Easy HDMI connection to a large screen, so external personnel can assess the test results properly.
- The endoscope is equipped with a magnetic handle.
- Easy one-hand operation.
- Simple user menu.

| Type | BETEX Endoscope |
|------------------|---|
| Art. no | 7803110 |
| Probe diameter | 6 mm |
| Pixels | 690,000 |
| Light intensity | 20.000 lux |
| Storage capacity | 8GB (expandable to 32GB) |
| Protection class | IP67 (probe) / IP55 (casing) |
| Interface | HDMI |
| File type | Photo: BMP, Video: MP4 |
| Display | 3,5" TFT daylight display (sunlight readable) |
| Weight | ≤ 0.45 kg (incl. battery) |

Includes:

- Card reader
- 8G SD card (expandable to 32GB)
- Case

