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**MAINTENANCE & HYDRAULIC TOOLS FOR
BEARINGS AND TRANSMISSION PARTS**



www.begaspecialtools.com



The bearing is at the heart of the triangle. We have specialized in the development and supply of industrial special tools for the Monitoring, Mounting and Dismounting of bearings and transmission parts. In our philosophy, they are inseparable.

MAINTENANCE AND HYDRAULIC TOOLS FOR BEARINGS AND TRANSMISSION PARTS

Bega Special Tools manufactures and distributes special tools for the safe and cost-effective mounting and dismounting of bearings and transmission parts. The tools are used in production and maintenance departments in MRO and OEM companies. We serve all types of industries, offering special solutions for the Wind, Rail, Mining and Steel industries. We aim to improve the quality of maintenance and installation of rotating parts in machines, thus extending their economic life.

BETEX® is a registered trademark of Bega International bv.



Dear reader,

In this catalogue you will find our BETEX® tools programme for maintenance (MRO) and production (OEM).

| | |
|------------------------|---|
| MOUNTING | : induction heaters (low and middle frequency), electrical heaters, mounting tools |
| DISMOUNTING | : mechanical and hydraulic pullers up to 150 tonnes, various auxiliary tools |
| HYDRAULICS | : cylinders, pumps, jacks, workshop presses |
| ALIGNMENT & MONITORING | : shims, alignment computers, checkers for bearings, temperature, noise, vibration |
| LUBRICATION | : Perma automatic lubrication systems (catalogue on request) |



For further information and details of a nearby dealer,
please contact: sales@bega.nl.



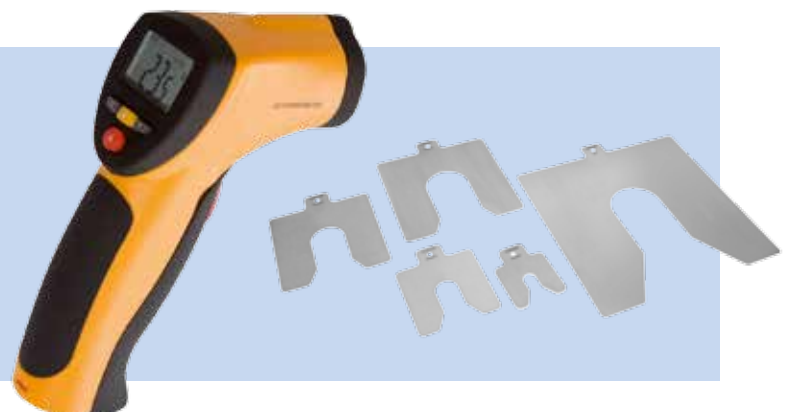
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BETEX® INDUCTION HEATERS

Bega develops, manufactures and sells a wide range of BETEX® induction heaters for professional use in industry and industrial services.

Our induction heaters are used around the world, are reliable and user friendly.

- Standard and TURBO heaters (low frequency) are used to heat bearings and other transmission components for mounting purposes.
- MF Quick-Heaters (middle frequency) are used to heat all kinds of parts for mounting and dismounting purposes.

OUR RANGE INCLUDES

- Portable models
- Benchtop models
- Roll-around models
- Heavy-duty models
- Custom-made models
- Middle frequency models for mounting and dismounting.



ADVANTAGES OF BETEX® INDUCTION HEATERS

- ✓ Safety first!
- ✓ Environmentally friendly: no smoke, no open flames, no fumes, no oil waste.
- ✓ The energy saving alternative to traditional methods.
- ✓ Evenly distributed heating: the microprocessor controlled electronics prevent overheating and explosive heating.
- ✓ Robust design for working in industrial environments.
- ✓ For sealed (2RS-ZZ) and pre-lubricated bearings.
- ✓ Automatic power reduction.
- ✓ Automatic demagnetisation to $<2A/cm$.
- ✓ Automatic reheat mode.
- ✓ Unique, user-friendly swivel-arm construction.
- ✓ Suitable for continuous use (24/7).
- ✓ Designed for MRO and OEM departments.
- ✓ 3-year warranty on electronic unit.
- ✓ Large choice from STANDARD and TURBO series, from 3.6 to 100 kVA.
- ✓ TURBO models: high output, very energy efficient.
- ✓ Practical solutions based on more than 38 years of experience.
- ✓ Complying with CE and IEC requirements.

BETEX® INDUCTION HEATERS

WHY USE INDUCTION HEATING?

Induction heating is a superior, fast and controlled heating method. It is a safe and environmentally-friendly alternative for traditional heating methods such as ovens, oil baths or blow torches. These methods cause smoke, fumes or oil waste and are hazardous for personal health and safety.

FOR BEARINGS AND OTHER COMPONENTS

BETEX® induction heaters are versatile and can be used for the heating of gear wheels, bushes, couplings, etc. It is common knowledge that a correct mounting method extends bearing life. Even, tension-free heating prevents unnecessary damage and retains original lubrication. Ideal for sealed bearings (2RS-ZZ) and pre-lubricated bearings.

TEMPERATURE OR TIME CONTROLLED HEATING

Digital electronics ensure optimum control during the heating process. automatically regulating the most efficient use of power and ensuring even and rapid heating. No extra steps are necessary. This prevents explosive heating (no discoloration or pitting of material).

DEMAGNETISATION

Fail-safe demagnetisation is essential for bearings and transmission parts. The proven quality of BETEX® induction heaters guarantees maximum demagnetisation (< 2A/cm). This has a major positive effect on the life span of bearings, gears, etc.

ENERGY EFFICIENT

All BETEX® induction heaters are energy efficient in comparison with classic methods. The advantage of the TURBO series over the Standard series is that larger components can be heated in a relatively short time while consuming the same amount of energy.

DEPENDABLE QUALITY

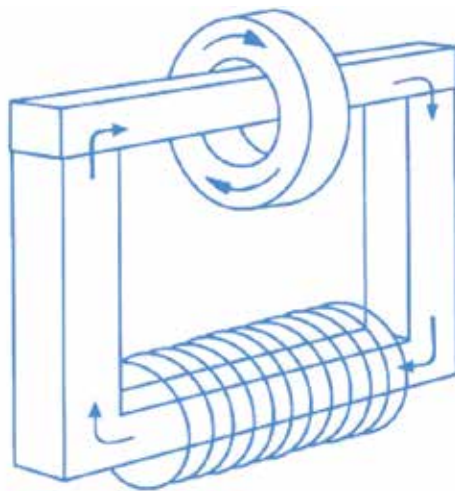
BETEX® induction heaters are proven to be reliable. Their sturdy styling and user-friendly design guarantees sustained, problem-free operation in an industrial environment. Our Standard series heaters are low frequency (50/60Hz). We also make use of the middle frequency (< 20kHz) principle for combined mounting and dismantling applications.

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.

WORKING PRINCIPLE

The heater works by inducing a (low frequency) current in the part to be heated. This is achieved by incorporating the component 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 component which consequently becomes hot. The work piece is automatically demagnetized after each heating cycle.



STANDARD or TURBO?

TURBO models offer low energy consumption combined with high output as an added advantage.
The maximum TURBO effect is achieved with heating in the horizontal position!

| Comparison of heating times, Standard and TURBO induction heaters | | | | | | |
|---|---------|---------|---------|---------|-----------|---------|
| Heating in horizontal position, to 110°C, in minutes | | | | | | |
| Bearing no. 22322 | 22332 | 23148 | 22348 | 175296 | gearwheel | |
| Weight kg | 18 kg | 50 kg | 65,5 kg | 147 kg | 220 kg | 300 kg |
| Bore/OD mm | 110/240 | 160/340 | 240/400 | 220/500 | 350/580 | 210/600 |
| ELD 3.6 kVA 230V. | 30.00 | -- | -- | -- | -- | -- |
| 24 RLDi TURBO 3.6 kVA, 230V | 03.47 | 23.00 | -- | -- | -- | -- |
| 22 ESDi 3.6 kVA, 230V | 07.45 | 27.20 | 49.00 | -- | -- | -- |
| 24 RSDi TURBO 3.6 kVA, 230V | -- | 06.03 | 19.20 | 47.00 | -- | -- |
| 38 ESD 8 kVA, 400V | 02.58 | 07.10 | 11.50 | 31.20 | -- | -- |
| 40 RSD TURBO 8 kVA, 400V | -- | 02.00 | 03.58 | 07.10 | 26.50 | 15.00 |
| 38 ZFD 12 kVA, 400V | -- | 10.40 | 10.38 | 22.15 | 39.50 | 48.45 |
| 40 RMD TURBO 12 kVA, 400V | -- | -- | 01.45 | 02.35 | 08.40 | 06.35 |

Heating times are subject to the relationship between:

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



All heaters are supplied with:

- Instruction manual
- Heat resistant gloves 150°C
- Magnetic temperature probe (240°C)
- Vaseline for maintenance

Optional:

- Trolley
- Adapter yokes
- Heat resistant gloves 300°C
- Magnetic temperature probe (350°C (higher on request))



INDUCTION HEATERS

Portable models

Benchtop models

Roll-around models

Heavy-duty models

Middle frequency technology

BETEX CONE HEATER, CH SERIES

For the heating of bearings, enabling easy mounting by means of shrinkage fitting.

Using the correct mounting method extends the bearing's life. Electrical heating is a safe alternative for traditional heating methods such as hammers, oil baths or blow torches. Suitable for the heating of gear wheels, bushes, couplings and other round metal components.

The affordable alternative!

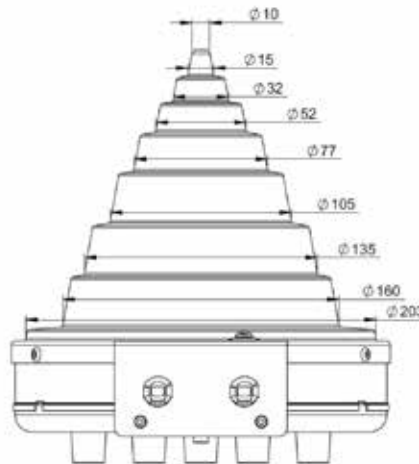
If your budget is limited, then the BETEX Cone Heater is an affordable alternative to other heating systems. Easy to use and suitable for various sizes. In a lightweight aluminium housing. For quick and even heating.

Advantages:

- Easy-to-use, just plug in and switch on
- Light weight, easy to move around
- Reliable & flexible
- Safe & clean operation

Models with thermometer (CHC)

- With preset temperature 120°C / 248°F
- With temperature hold: the unit will keep the bearing at preset temperature.



| Standard | diameter Ø |
|----------|------------|
| mm | inch |
| 10 | 0.39 |
| 15 | 0.59 |
| 32 | 1.26 |
| 52 | 2.05 |
| 77 | 3.03 |
| 105 | 4.13 |
| 135 | 5.31 |
| 160 | 6.30 |
| 203 | 7.99 |

Note: 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 control in °C and °F Fixed temperature | - | 120°C / 248°F |
| Heat retention function | - | Yes |
| Dimensions mm / " LxWxH | 365x220x240 | 365x220x240 |
| Weight heater kg / lbs | 2.4 kg | 2.6 kg |

PORTABLE

BETEX iDuctor 1- handheld induction heater



The ultimate tool for flameless heating

The BETEX iDuctor is a new professional type of induction hand tool. All sorts of metal parts, such as drive components, bearing housings, bolts, nuts, pipes and small surfaces can be heated locally. Thanks to the precise heating the surroundings retain a normal temperature. Stuck parts that are heated will expand and loosen.

This is an ideal solution for stuck nuts and bolts, where often a conventional blow torch or grinder are used. Using an open fire entails some form of risk and may cause pollution. A grinder can spark and cause damage to the area surrounding the part. All in all, workplaces become much safer, cleaner and faster with the iDuctor 1!

As standard the BETEX iDuctor comes in a handy carrying case, a 2-meter long flexible 'wrappable' inductor and a set of heat-resistant gloves (150°C).

Advantages

- Ergonomic design
- Time savings
- Cost savings
- Convenient
- Can be operated with one hand
- No open fire
- Safe to use
- Versatile
- For hard to reach locations
- Maintenance free.

Optional

- Set of 9 inductors, consisting of 8 induction spirals in sizes min/max ID: 18-52 mm (bolt sizes M8- M30) and 1 U-inductor, ID 160 mm; all easy to exchange
- Flexible inductor, 1.1 mtr
- iD-pad for heating flat surfaces to remove coating layers, decals
- Heat resistant gloves up to 300°C

Spirals and flexible inductors




iD-pad

Flexible inductor for heating different kinds of parts



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TECHNICAL DETAILS - iDuctor 1, handheld

| | |
|--|------------------|
|  | |
| Type BETEX | iDuctor 1 |
| Voltage/Amp/Hz | 230V/6A, 50/60Hz |
| Power | 1200W |
| Thermal protection | yes |
| Error code | yes |
| Cooling fan | yes |
| Microprocessor controlled, automatic power control in case of overload or overheating. | yes |
| LED lighting | yes |



| Inductors | | | | | | |
|------------------------------------|----------------|------------------------|----------------------|------------|-----------|------------------------|
| Item | Article number | Conductor thickness mm | Internal diameter mm | Winding mm | Length mm | Temperature insulation |
| 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 |
| Spareparts * Set 9 pcs. | | | | | | |
| M30 | - | 3.5 | 52 | 3.5 | 240 | 250°C |
| M24 | - | 3.5 | 47 | 3.5 | 240 | 250°C |
| M20 | - | 3.5 | 40 | 3.5 | 200 | 250°C |
| M16 | - | 3.5 | 32 | 3.5 | 200 | 250°C |
| M12 | - | 3.5 | 26 | 3.5 | 200 | 250°C |
| M10 | - | 3.5 | 23 | 3.5 | 250 | 250°C |
| M10 | - | 3.5 | 23 | 3.5 | 150 | 250°C |
| M08 | - | 3.5 | 18 | 3.5 | 150 | 250°C |
| Ucoil | - | 3.5 | 160 | 0.5 | 600 | 250°C |



Portable - lightweight induction heater

BETEX 24 XLDi portable - heating cap. 10 kg



Light weight induction heater for use in workshops and on site.

- Min. ID Ø: 0 mm
- Max. OD Ø: 180 mm
- Max. width: 50 mm
- Automatic demagnetisation
- Shoulder strap
- No yokes necessary
- **Weighs only 7 kg**

- Max. bearing weight: 10 kg
- Max. weight other parts: 7 kg

Technical details page 39

AREAS OF APPLICATION:

- Technical services
- MRO organisation
- Service engineers



STANDARD Portable

BETEX 22 ELDi portable - heating cap. 20 kg



Portable heater for use in the workshop and on site.

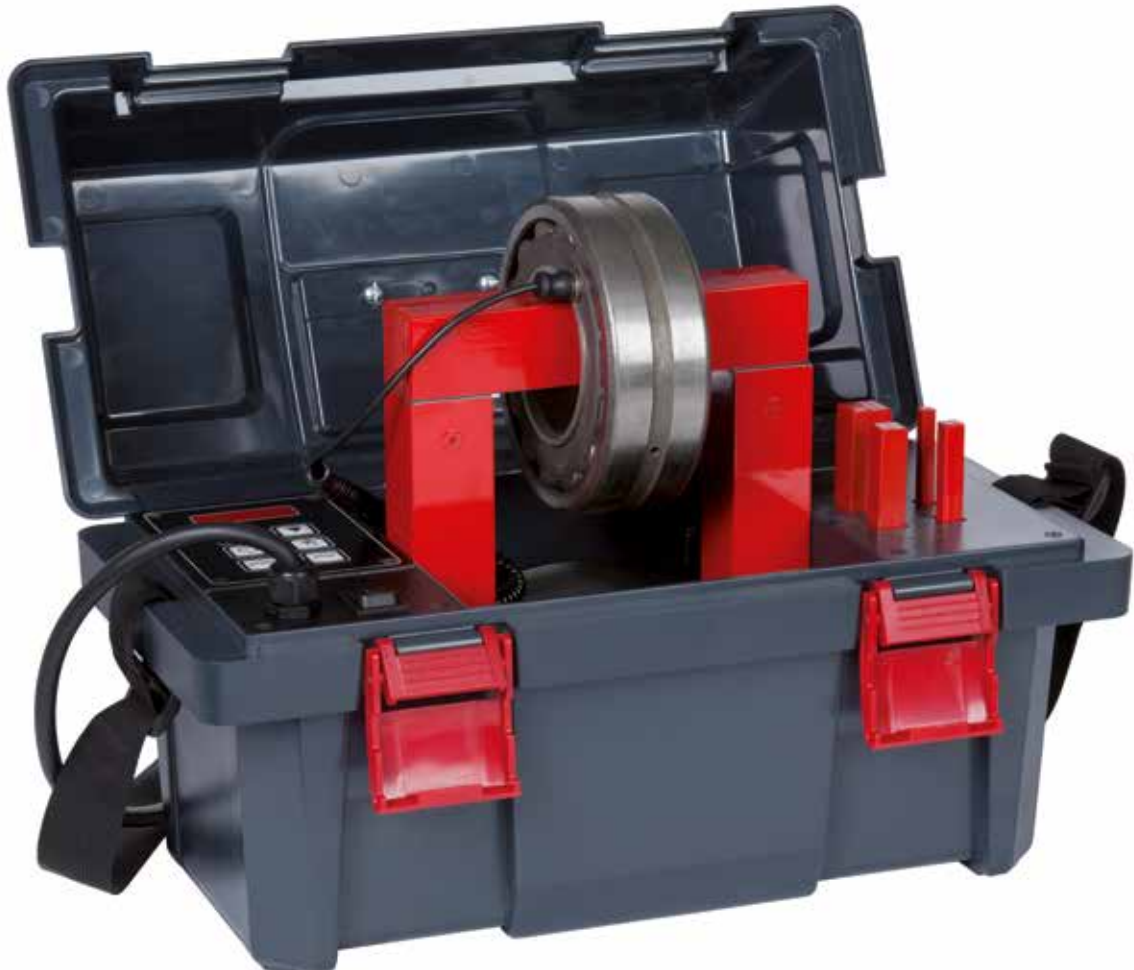
- Min. ID Ø: 10 mm
- Max. OD Ø: 240 mm
- Max. width: 120 mm
- Automatic demagnetisation
- Automatic power reduction.
- Including 5 induction yokes
- Shoulder strap

- Max. bearing weight: 20 kg
- Max. weight other parts: 10 kg

Technical details page 39

AREAS OF APPLICATION:

- Technical services
- MRO organisation



TURBO Portable

BETEX 24 RLDi **TURBO** - heating cap. 50 kg



Portable heater for use in the workshop and on site.

- Min. ID Ø: 10/100 mm
- Max. OD Ø: 380 mm
- Max. width: 130 mm
- Automatic demagnetisation
- Automatic power reduction.
- Including 5 yokes

- Max. bearing weight: 50 kg
- Max. weight other parts: 30 kg

Technical details page 39

AREAS OF APPLICATION:

- Technical services
- MRO organisation

✓ *High output,
energy efficient!*



The **TURBO** effect only works when the component is in a horizontal position

STANDARD Benchtop

BETEX 22 ESDi - heating cap. 65 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector



Basic bench-top type with swivel arm for use in the workshop.

- Min. ID Ø: 15 mm
- Max. OD Ø: 380 mm
- Max. width: 150 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: set of 3 or 5 sizes

- Max. bearing weight: 65 kg
- Max. weight other parts: 30 kg

Optional:

- Adaptor yokes
- Max. OD Ø: 580 mm

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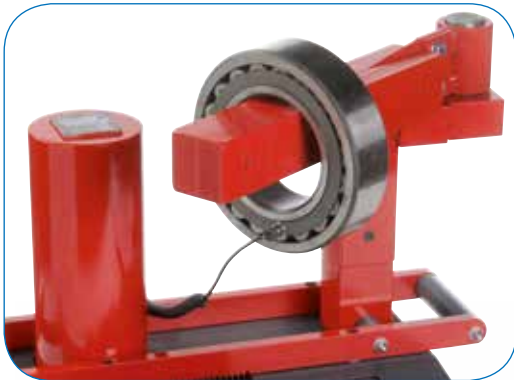


TURBO Benchtop

BETEX 24 RSDi **TURBO** - heating cap. 150 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector



Basic benchtop type with swivel arm for use in the workshop.

- Min. ID Ø: 15/120 mm
- Max. OD Ø: 520 mm
- Max. width: 200 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: set of 3 or 5 sizes
- Max. bearing weight: 150 kg
- Max. weight other parts: 80 kg

Technical details page 40

✓ High output,
energy efficient!



The TURBO effect only works when the component is in a horizontal position

STANDARD Benchtop

BETEX 38 ESD - heating cap. 150 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector



Medium size benchtop type with swivel arm for use in the workshop.

- Min. ID Ø: 30 mm
- Max. OD Ø: 500 mm
- Max. width: 200 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: set of 2 or 3 sizes

- Max. bearing weight: 150 kg
- Max. weight other parts: 75 kg

Optional:

- Adaptor yokes
- Max. OD Ø: 720 mm

Technical details page 40



TURBO Benchtop

BETEX 40 RSD / 40 RSDm **TURBO** - heating cap. 350 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector

Medium size benchtop type with swivel arm for use in the workshop.

- Min. ID Ø: 30/160 mm
- Max. OD Ø: 790 mm
- Max. width: 315 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: selection of 5 sizes
- Max. bearing weight: 350 kg
- Max. weight other parts: 250 kg

Technical details page 40

✓ High output,
energy efficient!

Mobile version
40 RSDm **TURBO**



The **TURBO** effect only works when the component is in a horizontal position

STANDARD Mobile

BETEX 38 ZFD - heating cap. 300 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector

Roll-around heater with swivel arm and convenient folding operating panel. easier to operate.

- Min. ID Ø: 30 mm
- Max. OD Ø: 720 mm
- Max. width: 340 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: selection of 5 sizes

- Max. bearing weight: 300 kg
- Max. weight other parts: 200 kg

Optional:

- Adapter yokes
- Max. OD Ø: 1080 mm

Technical details page 41



◀ Folding operating panel from ZFD/RMD/RSD series.

TURBO Mobile

BETEX 40 RMD **TURBO** - heating cap. 600 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- Railway sector
- MRO/OEM sector

✓ *High output,
energy efficient!*

Roll-around heater with swivel arm and convenient folding operating panel. easier to operate.

- Min. ID Ø: 60/175 mm
- Max. OD Ø: 920 mm
- Max. width: 365 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: selection of 3 sizes

- Max. bearing weight: 600 kg
- Max. weight other parts: 450 kg

Technical details page 41



◀ Folding operating panel from ZFD/RMD/RSR series.

The TURBO effect only works when the component is in a horizontal position

STANDARD Heavy duty

BETEX SUPER - heating cap. 600 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector
- Wind energy
- Energy plants
- Mining industry



Heavy duty heaters.

- Min. ID Ø: 60 mm
- Max. OD Ø: 900/1300 mm
- Max. width: 400/700 mm
- Automatic demagnetisation
- Automatic power reduction.
- Yokes: selection of 5 sizes

- Max. bearing weight: 600 kg
- Max. weight other parts: 350 kg

Optional:

- electric crane
- enlarged width 700 mm: DL700

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 41



Heating times are subject to the relationship between:

- Min. bore and max. outside diameter, width, weight.
- Required temperature and material type.
- Available power.

TURBO Heavy duty

BETEX SUPER TURBO - heating cap. 1200 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector
- Wind energy
- Energy plants
- Mining industry

Heavy duty heaters.

- Min. ID Ø: 175/200 mm
- Max. OD Ø: 1700 mm
- Max. width: 750 mm
- Automatic demagnetisation
- Automatic power reduction.
- Including 1 yoke

- Max. bearing weight: 1200 kg
- Max. weight other parts: 900 kg

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 41



The TURBO effect only works when the component is in a horizontal position

STANDARD Heavy duty

BETEX GIANT - heating cap. 3500 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector
- Wind energy
- Energy plants
- Mining industry



Heavy duty heaters.

- Min. ID Ø: 85/215 mm
- Max. OD Ø: 1400-2500 mm.
- Max. width: 440-990 mm.
- Automatic demagnetisation
- Automatic power reduction
- Yokes: selection of 5 sizes

- Max. bearing weight: 1500-3500 kg
- Max. weight other parts: 900-2500 kg

Optional:

- electric crane
- enlarged width 700 mm: DL700
- enlarged width 1000 mm: DL1000

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 41



Heating times are subject to the relationship between:

- Min. bore and max. outside diameter, width, weight.
- Required temperature and material type.
- Available power.

TURBO Heavy duty

BETEX GIANT TURBO - heating cap. 12000 kg

AREAS OF APPLICATION:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Machine construction
- Transport sector
- MRO/OEM sector
- Wind energy
- Energy plants
- Mining industry



✓ High output,
energy efficient!



Heavy duty heaters.

- Min. ID Ø: 115 - 240 mm
- Max. OD Ø: 1400-2500 mm.
- Max. width: 450-1020 mm.
- Automatic demagnetisation
- Automatic power reduction
- Including 1 yoke
- Max. bearing weight: 1500-12000 kg
- Max. weight other parts: < 12000 kg

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 41

The TURBO effect only works when the component is in a horizontal position



STEEL



MACHINE BUILDING



RAIL/METRO



RAIL/METRO



STEEL



WIND



WIND

Rail transport

Bega has offered many solutions in the area of heating components in the rail transport sector.

The most important advantages for our customers are:

- Time and energy efficient.
- Can be immediately deployed, no pre-heating time needed.
- Controlled heat, no quality loss.
- Fast, safe, clean, stress-free heating.
- Environmentally friendly, no flames, smoke or noise.
- Capacities and types to the client's requirements.

References available on request.

For more information: www.begaspecialtools.com



BETEX GIANT TURBO
For heating wheels for subways, trams, trains and locomotives.



◀ BETEX GIANT

Client: manufacturer of bogie sets
 Component: train wheel
 Weight: 330 kg
 Max. temp.: 240°C
 Required time: 27 minutes
 Optional: slide-in induction yoke

BETEX 40 RSDm TURBO 8 kVA ▲

Client: manufacturer of drive systems for trains
 Component: gearwheel
 Weight: 150 kg
 Max. temp.: 150°C
 Required time: 35 minutes



BETEX GIANT ▲

Client: supplier of rail components
 Component: rail track
 Max. temp.: 250°C
 Required time: 7 minutes

Wind energy

Bega has been supplying induction heaters for many years for the sustainable manufacture of wind turbines. Here we show some examples of successful projects with manufacturers and suppliers in this sector.

The most important advantages for our customers are:

- Time and energy efficient.
- Can be immediately deployed, no pre-heating time needed.
- Controlled heat, no quality loss.
- Fast, safe, clean, stress-free heating.
- Environmentally friendly, no flames, smoke or noise.
- Capacities and types to the client's requirements.

For more information: www.begaspecialtools.com



BETEX GIANT *TURBO* 48-100 kVA



◀ BETEX GIANT XL

Client: manufacturer of wind turbines
Component: stainless steel ring
Weight: 1100 kg
Temp.: 270°C
Time: 3 hours

BETEX GIANT ▼

Client: manufacturer of wind turbines
Component: (main) bearing
Temp.: 120°C
Time: 25 min.



Wind energy



BETEX GIANT TURBO

Client: supplier of wind turbine components
Component: bearing housing
Weight: 4300 kg
Temp.: 90°C
Time: 55 min.



Machine tool industry

Our large heaters are very suitable for heavy and large components where safe, rapid and stress-free heating is a priority.

Bega Special Tools designs and produces customised, powerful and sturdy heaters for various industrial environments on request.



BETEX GIGANT DL-700



BETEX GIGANT DL-700
References available on request.

◀ BETEX GIGANT DL-1000

Client: manufacturer of steel sections
Component: section roller
Weight: up to 12000 kg

This company was using blow torches and was looking for an environmental friendly method. Opting for induction heating was obvious and satisfied the client's needs in several ways, also due to the controlled and stress-free heating of the sections.



Specials - custom-made

Bega designs and builds custom-made heaters for serial heating of components such as bearings, gear wheels, bushes, rings and aluminium houses of E-motors.

When fast and accurate heating is imperative, these 'Specials' offer surprising solutions. For example, it is possible to integrate them into fully automated production processes, even with a pick-and-place unit if desired.

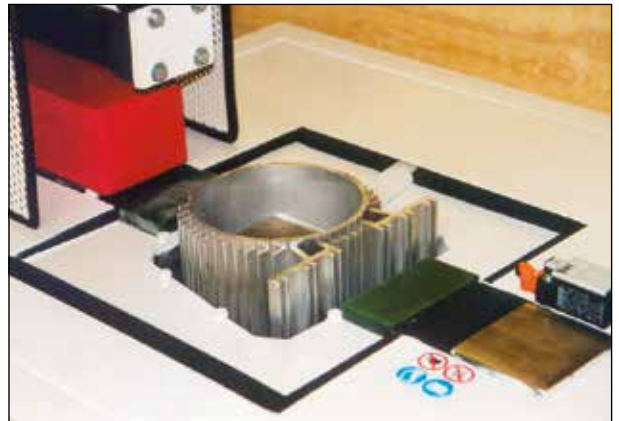
A huge advantage is the use of low frequency (50/60Hz), which costs much less than middle or high frequency solutions.

The most important advantages for our customers are:

- Heating times from 30 seconds to temperatures up to < 300°C.
- Energy-saving production method
- Increase in production capacity
- Safe, rapid, simple operation

References available on request.

For more information: www.begaspecialtools.com



Heating bores in housings
For mounting bearings and pins (including in frames and gearboxes).



INDUCTION HEATERS FOR MOUNTING & DISMOUNTING

BETEX MF QUICK-HEATERS - MIDDLE FREQUENCY TECHNOLOGY

For mounting & dismantling of bearings, labyrinth rings, bearing inner rings, bearing rings, bushes, couplings, gears ...

Middle frequency induction heating is a safe and cost effective heating method, which improves the quality of installation or maintenance. This method is fast, simple and energy efficient, compared to conventional methods. Middle frequency technology makes it easier and quicker to transfer effective energy in the work piece. The MF Quick-Heater is compact and mobile so it's easier for you move around.

This system is also clean and operates very quietly. The MF Quick-Heater saves you time as it can be deployed very rapidly (fewer actions) and heats faster than conventional methods. Energy use is much lower thanks to its more efficient electricity consumption. Each heater is customised to your needs and supplied with required size(s) of inductors.



BENEFITS OF BETEX MIDDLE FREQUENCY INDUCTION HEATERS

- ✓ **Economic:** One device for mounting and dismantling.
- ✓ **Choice between two standard generators:** 22 or 44 kW.
Low connection power (32/63 Amp).
- ✓ **Choice** between fixed and/or flexible inductors.
- ✓ **Safe:** Temperature-controlled heating: overheating is not possible because demand is constantly monitored and adjusted if necessary. When the preset temperature is reached, the device will switch off automatically.
- ✓ **Energy efficient operation:** Short heating times and process optimization.
- ✓ **Clean and environment friendly:** No oil, gas, no pre-heating necessary (lower CO2 emissions).
- ✓ **Flexible operation:** Compact and easy to transport on site.
- ✓ **Versatile:** The inductors can be placed both in and around the component. You can also place a component on a flat surface (table model) or work with flexible inductors. The inductors are supplied in various diameters, fixed or flexible according to your requirements.
- ✓ **Smart Inductor recognition:** When a fixed inductor is connected to the generator for a second time, the correct settings are selected automatically. Simply press the START button to get the job done.
- ✓ **Air-cooled:** No need for unreliable water cooling.
- ✓ Automatic demagnetisation

INDUCTION HEATERS FOR MOUNTING & DISMOUNTING

BETEX MF QUICK-HEATERS - MIDDLE FREQUENCY TECHNOLOGY

✓ *The smart, eco-friendly way of heating*

Middle frequency induction heating is a superior, fast and controlled heating method. It prevents unnecessary damage to parts and reduces wear and tear.

1. Steel industry

Couplings were removed using a 22 kW generator and a flexible inductor. In 3 minutes temperature of 100°C was reached. The old method lasted 2 hours so time saving was tremendous. The new method also caused improvement in working conditions: cleaner and quieter!

2. Rail/Metro industry

Easy disassembly of inner rings, NU-NJ bearings, labyrinth rings. Perfectly even heating results in a safe, fast and clean job.

3. Machine building, gear & drive systems

Flexible inductors are used to heat the bore of this large cable pulley so the bearing can be installed properly.

4. Paper/printing industry

This printing company could not dismantle bearing sleeves in-house – not without serious damage to part and paper roll – so the job was outsourced. This was not very efficient as it involved transport back and forward, costs for getting the job done etc. The customer can now do the job on location with their own MF Quick-Heater and is rapidly earning back the investment.



1.



2.

MOUNTING & DISMOUNTING

- Bearings
- Labyrinth rings
- Bearing inner rings
- Bearing rings
- Bearing housings
- Rollers
- Pipes
- Train wheels / rims
- Bushes
- Couplings



Flexible inductors may be used IN or AROUND a part.



3.



4.

Find more application examples on www.begaspecialtools.com/industries

INDUCTION HEATERS FOR MOUNTING & DISMOUNTING

BETEX MF QUICK-HEATERS, MIDDLE FREQUENCY TECHNOLOGY - 22 KW, 44 KW

MF Quick-Heaters 3.0

- Compact design with large 7" display
- Heats according to preset temperature/time curve
- Shows temperature development in chart form
- Option of logging the heating cycle
- USB connection for software upgrading
- Login option for remote servicing
- Smart electronics ensure optimal operating frequency
- Adjustable power control
- Advises user on optimal heating (more/fewer windings)
- Dual temperature sensing (monitoring ΔT)
- Option to operate several heaters together



✓ *NEW GENERATION 3.0 !*

Testing

For special applications, we carry out tests in advance with components that you make available to us. And we supply custom jobs where needed.

For standard applications, we have a large database with examples of different applications. But we also use simulation programs.

We supply optimal solutions to you so you can enjoy major savings. Measurable savings are realised not just by avoiding any damage to the job in the first place, but also by making it possible to reuse those components!



Request our product questionnaire for sound advice and quotations

INDUCTION HEATERS FOR MOUNTING & DISMOUNTING

BETEX MF QUICK-HEATERS, MIDDLE FREQUENCY TECHNOLOGY - 22 KW, 44 KW



Fixed Inductors are used in series operations.

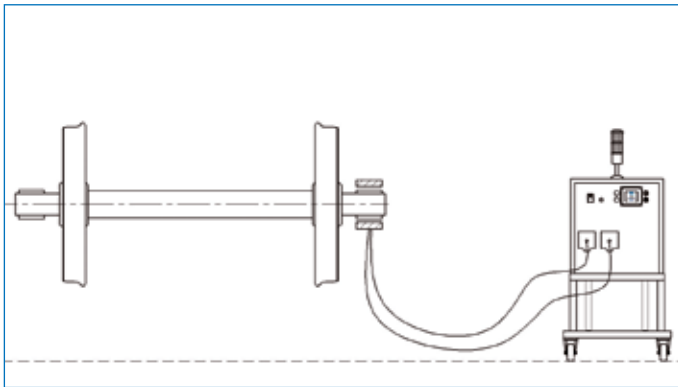
Flexible Inductors have multifunctional applications. Ideal when working with different designs or sizes.



- For mounting, dismounting and preheating
- Controlled heating
- Low connection power (32/63 Amp)
- Generators adjustable from 2.5 - 44 kW
- Easy to use, flexible and mobile
- Suitable for production and maintenance applications
- NO: residual magnetism, fire hazard, excessive noise or polluting fumes



MIDDLE FREQUENCY HEATING METHODS

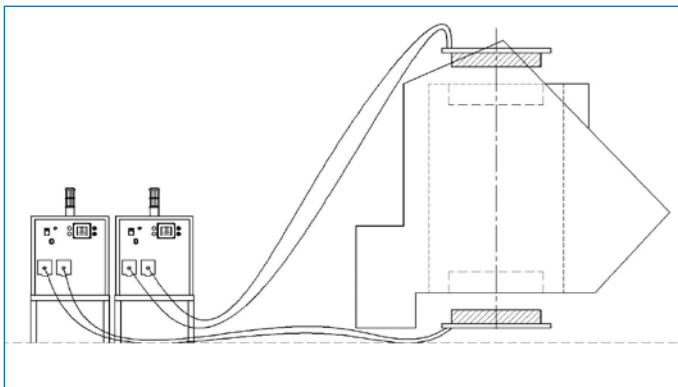


Method 1

- Fixed inductor

Heating with fixed inductor around the component. Energy input from outside to inside.

For bearing rings, pipes and rings.

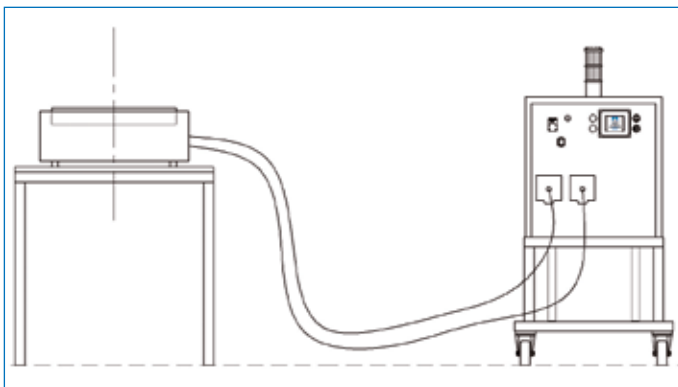


Method 2

- Fixed inductor

Heating with fixed inductor in the component. Energy input is outwards.

For example, bored holes for gearboxes or bearing bores in housings/frames.

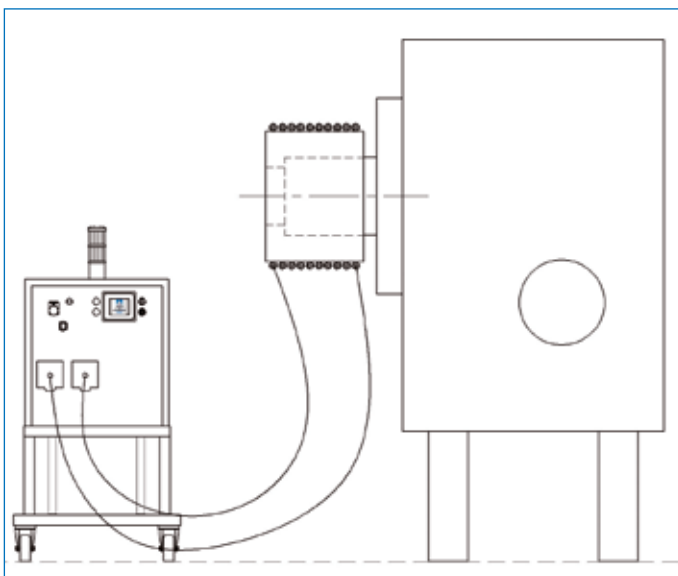


Method 3

- Table inductor

The part is lying flat on an inductor table and is heated in a very short time to the required temperature.

This method is suitable for light products that require serial heating.



Method 4

- Flexible inductor

The flexible inductor is wrapped around a component, for example, a gear coupling which was removed smoothly, with no damage to the shaft.

Suitable for non-cylindrical shapes or extreme dimensions.

*Technical details
page 42*





WIND



MRO



POWER PLANTS



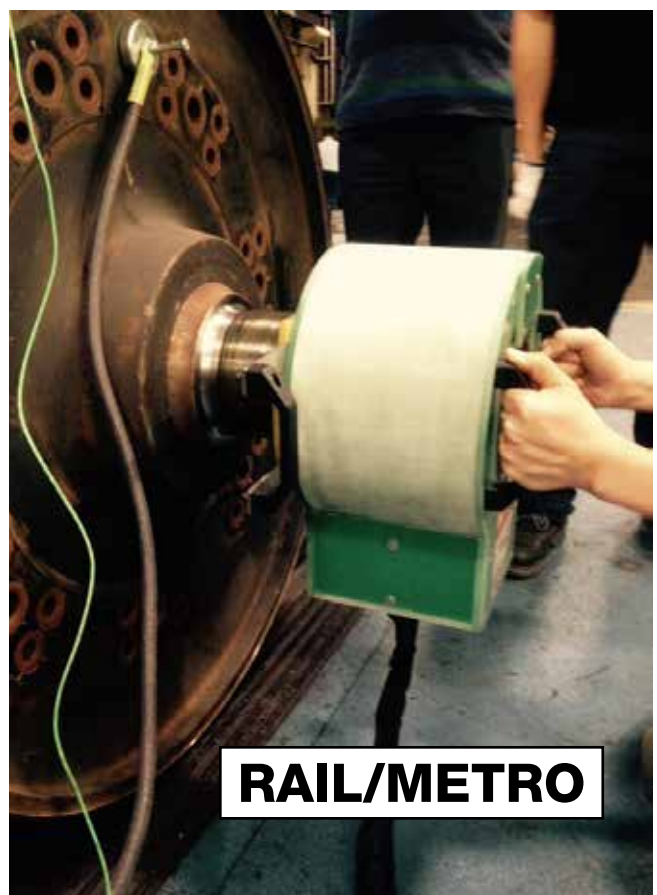
MACHINE BUILDING



PAPER/PRINTING



MACHINE BUILDING



TECHNICAL DETAILS - Portable

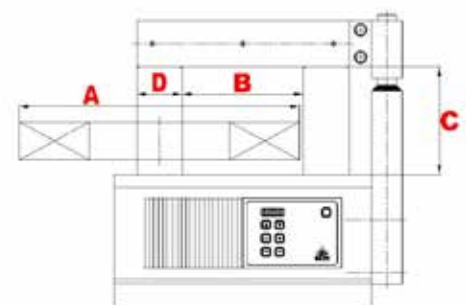


| Type BETEX | 24 XLDi Portable | 22 ELDi Standard Portable | 24 RLDi TURBO Portable | |
|--------------------------------------|---------------------|---------------------------------|------------------------------|------|
| Facility power: standard | 1200W | 3.6 kVA | 3.6 kVA | |
| Voltage/Amp*: standard | 230V/6A | 230V/16A | 230V/16A | |
| Voltage/Amp*: optional | - | 120V/15A | 120V/15A | |
| Frequency Hz | 50/60Hz | 50/60Hz | 50/60Hz | |
| Yokes, standard mm / set 1 | - | 7,10,14,20,40 | 7,10,14,20,40 | |
| Yokes, standard mm / set 2 | - | in box | in heater | |
| Swivel arm | - | - | - | |
| Max. weight ± kg | | | | |
| - bearings | 10 | 20 | 50 | |
| - other drive components | 7 | 10 | 30 | |
| Min. ID Ø: mm: vertical/horizontal | 0 | 10 | 10/Ø100 | |
| Max. OD Ø: mm | *A | 180 | 240 | 380 |
| Max. width, mm | *B | - | 120 | 130 |
| Max. width at horizontal heating, mm | *C | 50 | - | 135 |
| Cross section poles mm | *D | - | 40 | Ø100 |
| Pole height mm | - | 130 | 165 | |
| Temperature control in °C or °F | | | | |
| - max reach* | 150°C | 150°C | 240°C | |
| - magnetic probe | yes | yes | yes | |
| - digital display | yes | yes | yes | |
| Time control | | | | |
| - max reach | 0-45 min. | 0-30 min. | 0-45 min. | |
| - digital display | yes | yes | yes | |
| Sound signal | yes | yes | yes | |
| Error code | yes | yes | yes | |
| Temperature hold | yes | yes | yes | |
| Automatic power reduction | - | - | yes | |
| Automatic demagnetization, <2A/cm | yes | yes | yes | |
| Thermal protection | yes | yes | yes | |
| Support for horizontal heating | - | - | yes | |
| Dimensions mm (l×w×h) | 460x240x280 | 460x240x280 | 600x220x275 | |
| Weight heater kg | 7 | 21 | 23 | |
| excl. Yokes | | (incl. yokes) | (incl. yokes) | |
| Electric crane for yokes | - | - | - | |
| Alarm signal | - | - | - | |
| Mobile | - | - | - | |

Heating times are subject to the relationship between:

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

TURBO design: high output, very energy efficient!



TECHNICAL DETAILS - Workshop models

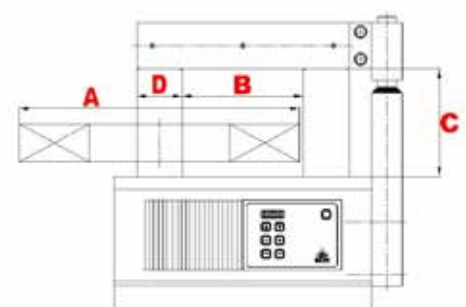


| Type BETEX | 22 ESDi | 24 RSDi TURBO | 38 ESD | 40 RSD and RSDm (mobile) TURBO |
|------------------------------------|----------------|------------------|--------------|--------------------------------------|
| Facility power: standard | 3.6 kVA | 3.6 kVA | 8 kVA | 8 kVA |
| Voltage/Amp*: standard | 230V/16A | 230V/16A | 2 ~ 400V/20A | 2 ~ 400V/20A |
| Voltage/Amp*: optional | 120V/15A | 120V/15A | 2 ~ 500V/16A | 2 ~ 500V/16A |
| Voltage/Amp*: optional | | | 2 ~ 600V/14A | 2 ~ 600V/14A |
| Frequency Hz | 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz |
| Yokes, standard mm / set 1 | 14,30,60 | 14,30,60 | 30,70 | optional |
| Yokes, standard mm / set 2 | 10,14,20,30,60 | 10,14,20,30,60 | 20,30,70 | 20,30,40,60,80 |
| Swivel arm | yes | yes | yes | yes |
| Max. weight ± kg | | | | |
| - bearings | 65 | 150 | 150 | 350 |
| - other drive components | 30 | 80 | 75 | 250 |
| Min. ID Ø: mm: vertical/horizontal | 15/Ø100 | 15/Ø120 | 30/Ø110 | 30/Ø160 |
| Max. OD Ø: mm | *A 380/580 *1 | 520 | 500/720 *1 | 790 |
| Max. width, mm | *B 150 | 130 | 200 | 315 |
| Max. width at | *C 125 | 230 | 180 | 280 |
| horizontal heating, mm | | | | |
| Cross section poles mm | *D 60 | Ø120 | 70 | Ø160 |
| Pole height mm | 140 | 230 | 210 | 320 |
| Temperature control in °C or °F | | | | |
| - max reach* | 240°C | 240°C*2 | 240°C*2 | 240°C*2 |
| - magnetic probe | yes | yes | yes | yes |
| - digital display | yes | yes | yes | yes |
| Time control | | | | |
| - max reach | 0-45 min. | 0-45 min. | 0-60 min. | 0-60 min. |
| - digital display | yes | yes | yes | yes |
| Sound signal | yes | yes | yes | yes |
| Error code | yes | yes | yes | yes |
| Temperature hold | yes | yes | yes | yes |
| Automatic power reduction | - | yes | yes | yes |
| Automatic demagnetization, <2A/cm | yes | yes | yes | yes |
| Thermal protection | yes | yes | yes | yes |
| Support for horizontal heating | yes | yes | yes | yes |
| Dimensions mm (lxwxh) | 340x290x380 | 440x370x420 | 630x365x470 | 1200x640x1000 |
| Weight heater kg | 31 | 37 | 53 | 65/105 |
| excl. Yokes | | | | |
| Electric crane for yokes | - | - | - | - |
| Alarm signal | - | - | optional | optional |
| Mobile | - | - | - | yes (40RSDm) |

Heating times are subject to the relationship between:

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

TURBO design: high output, very energy efficient!



TECHNICAL DETAILS - Roll around, heavy duty

| 38 ZFD | 40 RMD TURBO | SUPER Standard and DL-700 | SUPER TURBO | GIANT Standard and DL-700 | GIANT Standard DL-700/DL-1000 | GIANT XL TURBO |
|----------------|--------------------|---------------------------------|----------------|---------------------------------|-------------------------------------|---------------------|
| 12 kVA | 12 kVA | 24 kVA | 24 kVA | 40 kVA | 48, 100 kVA | 40, 48, 100kVA |
| 2 ~ 400V/30A | 2 ~ 400V/30A | 2 ~ 400V/30A | 2 ~ 400V/60A | 2 ~ 400V/100A | 2 ~ 400V/120,250A | 2~400V/100,120,250A |
| 2 ~ 500V/24A | 2 ~ 500V/24A | 2 ~ 500V/24A | 2 ~ 500V/48A | 2 ~ 500V/80A | 2 ~ 500V/100,200A | 2~500V/80,100,200A |
| 2 ~ 600V/20A | 2 ~ 600V/20A | 2 ~ 600V/20A | 2 ~ 600V/40A | 2 ~ 600V/65A | | |
| 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz | 50/60Hz |
| optional | optional | optional | included | optional | optional | included |
| 20,30,40,60,80 | 40,60,80 | 40,50,60,80,100*3 | 1 yoke | 60,80,100,150*3 | 60,80,100,150,200*3 | 1 yoke |
| yes | yes | - | - | - | - | - |
| 300 | 600 | 600 | 1200 | 1500/2000*3 | 3000/3500*3 | 1500/12000*3 |
| 200 | 450 | 350 | 900 | 900/1500*3 | 1500/2500*3 | <12000*3 |
| 30/Ø130 | 60/Ø175 | 60/85*3 | 175/Ø200 | 85*3 | 85/215*3 | 115/240*3 |
| 720/1080 *1 | 920 | 900/1300*3 | 1700 | 1400/1700*3 | 1700/2500*3 | 1400/2500*3 |
| 340 | 365 | 400/700*3 | 750 | 620/700*3 | 700/900*3 | 450/1020*3 |
| 290 | 305 adj. supports | 390/690*3 | 600 | 440/730*3 | 730/990*3 | 450/1000*3 |
| | 320 fixed supports | | | | | |
| 80 | Ø175 | 100*3 | Ø200 | 150*3 | 150/200*3 | 200*3 |
| 340 | 305 | 390*3 | 595 | 660/740*3 | 740/1000*3 | 900*3 |
| 240°C*2 | 240°C*2 | 240/350°C*2 | 240/350°C*2 | 240/350°C*2 | 240/350°C*2 | 240/350°C*2 |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| 0-99 min. | 0-99 min. | 0-99 min. | 0-99 min. | 0-99 min. | 0-99 min. | 0-99 min. |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |
| 1200x640x1000 | 1200x640x1000 | 1000x500x1350*3 | 1600x700x1300 | 1750x600x1470*3 | 2150x900x2210*3 | 2350x1000x1875*3 |
| 125 | 205 adj. supports | 220/320 kg*3 | 450 kg | 660/800 kg*3 | 800/1700 kg*3 | 1800 kg*3 |
| - | 185 fixed supports | | (incl. yoke) | | | |
| - | - | optional | - | optional | optional | optional |
| optional | optional | optional | optional | optional | optional | optional |
| yes | yes | optional | optional | optional | optional | optional |

*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 execution



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

Reference list available on request
 For more information: www.begaspecialtools.com

TURBO: *High output, energy efficient!*

TECHNICAL DETAILS - Middle frequency



| Type BETEX MF Quick-Heater | MF Quick-heater 2.0, 22 kW | MF Quick-heater 2.0, 44 kW |
|-----------------------------------|--|--|
| Forced air cooling | yes | yes |
| Power | 22kW | 44kW |
| Frequency reach | 10-20 kHz | 10-20kHz |
| Voltage/Amperage | 3 ~ 400V/32A | 3 ~ 400V/63A |
| 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 | ± 3.5°C |
| Inductor recognition | yes | yes |
| Temperature sensor | yes, for max 300°C | yes, for max 300°C |
| Extra thermocouple input | optional | optional |
| Dimensions generator LxWxH | 553 x 500 x 700 mm | 640 x 1050 x 1856 mm |
| Weight: | 135 kg | 185 kg |
| Trolley | yes | yes |
| Operation: | | |
| Dimensions display | 3,5" | 3,5" |
| Heat curve in display | no | no |
| Setpoint power | via touchscreen | via touchscreen |
| Setpoint temperature | via touchscreen | via touchscreen |
| Setpoint temperature curve | no | no |
| Setpoint timer | via touchscreen | via touchscreen |
| Selection operating mode | via touchscreen | via touchscreen |
| Digital readings temperature | setpoint and actual value on the touchscreen | setpoint and actual value on the touchscreen |
| Digital readings time | setpoint and actual value on the touchscreen | setpoint and actual value on the touchscreen |
| Digital readings power | actual value on the touchscreen | actual value on the touchscreen |
| Digital readings frequency | actual value on the touchscreen | actual value on the touchscreen |
| USB connection | no | no |
| Network connection | no | no |
| Signaling by: | | |
| Ready message | green continuous light | green continuous light |
| Installation in operational state | green flash light | green flash light |
| Error message | red continuous light | red continuous light |
| End of heating cycle | acoustic signal | acoustic signal |

| Min. winding diameter flexible inductors 22kW | | |
|---|----------------|-----------------------|
| Type m / °C | Diameter cable | Min. winding diameter |
| 15/20/25/30m/180°C | Ø 12 mm | ca. 75 mm |
| 15/20/25/30m/180°C | Ø 15 mm | ca. 100 mm |
| 15/20/25/30m/300°C | 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 | Ø 19 mm | ca. 140 mm |
| 15/20/25/30m/300°C | Ø 28 mm | ca. 220 mm |



| Type BETEX MF Quick-Heater | MF Quick-heater 3.0, 22 kW | MF Quick-heater 3.0, 44 kW |
|-----------------------------------|--|--|
| Forced air cooling | yes | yes |
| Power | 22kW | 44kW |
| Frequency reach | 10-25 kHz | 10-25 kHz |
| Voltage/Amperage | 3 ~ 400V/32A | 3 ~ 400V/63A |
| 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 | ± 3.5°C |
| Inductor recognition | yes | yes |
| Temperature sensor | yes, for max 300°C | yes, for max 300°C |
| Extra thermocouple input | optional | optional |
| Dimensions generator LxWxH | 600 x 300 x 596 mm | 600 x 650 x 596 mm |
| Weight: | 46 kg | 85 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 the touchscreen | setpoint and actual value on the touchscreen |
| Digital readings time | setpoint and actual value on the touchscreen | setpoint and actual value on the touchscreen |
| Digital readings power | actual value on the touchscreen | actual value on the touchscreen |
| Digital readings frequency | actual value on the touchscreen | actual value on the touchscreen |
| USB connection | yes | yes |
| Network connection | yes | yes |
| Signaling by: | | |
| Ready message | optional | optional |
| Installation in operational state | optional | optional |
| Error message | optional | optional |
| End of heating cycle | acoustic signal | acoustic signal |



FITTING TOOL SETS

BETEX IMPACT 33 & 39

For safe, precise and quick mounting of bearings, bushings, sealing rings, cam wheels and pulleys the use of an Impact fitting tool set is an absolute necessity.

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.

In this way mounting forces are not transmitted via balls or rollers of the bearings and hence the raceways are not damaged.

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

The sets can be used for bore diameters of 10 to 60 mm or parts thereof. Impact is also suitable for safe, precise and quick mounting of other machine parts, like bushings, sealing rings, cam wheels and pulleys.

IMPACT 33

- with 3 sleeves
- with 33 rings, suitable for +/- 375 bearings.

IMPACT 39

- with 4 sleeves
- with 39 rings, suitable for +/- 600 bearings.



TIP! Use in combination with Betex induction heaters

FITTING TOOL SETS

BETEX IMPACT 33 & 39

Your benefits:

- Quick, precise and safe mounting
- No more damage to shafts, bearing houses or sealing rings
- Extended life-cycle of bearings
- The impact resistant plastic collets are made of unbreakable sheet material
- The collet numbers are clearly engraved and marked

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

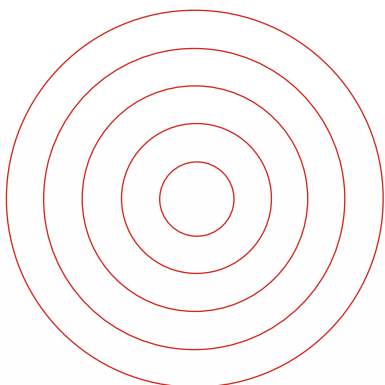


Collets are engraved and marked clearly



MECHANICAL PULLERS

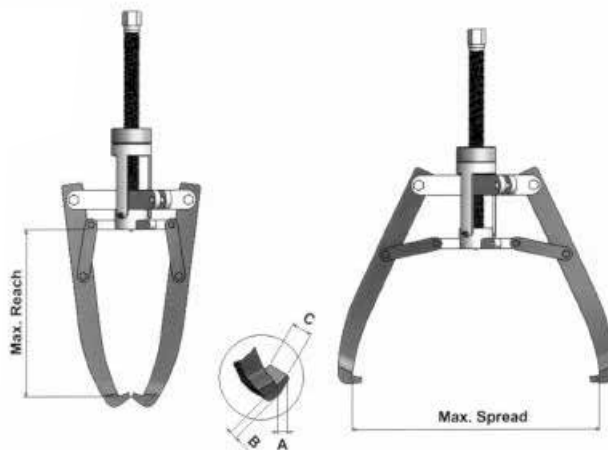
BETEX MSP 2/3-arm pullers, **self-centering**



Safe and easy dismantling of bearings, couplings, rings etc.

Ergonomic design, easily operated by one person!

- **Practical!**
Self-centering 2 or 3-arm puller with self-locking system.
Easy to convert and easy to use in every position.
- **Safe!**
The arms adjust themselves simultaneously, either inwards or outwards. Self-locking system guarantees arms neither bend nor deflect.
- **Economical!**
2- or 3-arm combination puller. Two pullers for the price of one.
- **Strong!**
The harder the force, the tighter the jaws grip!



Advantages of self centering puliers:

- Prevent damage to shaft and workpiece being pulled.
- Work efficient and save time.

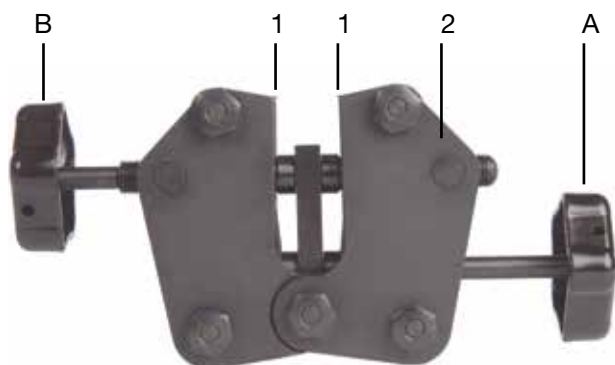
2, 3, 5, 8, 10 en 12 ton capacity!

BETEX MSP 2/3-arm mechanical self-centering pullers

| Type | Art. no. | Cap. ton | Max. shaft length mm | Max. spread mm | A mm | B mm | C mm | Weight 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 |

KEY-EXTRACTOR

BETEX KZZ



For professional removal of parallel keys.

The Betex KZZ Key-extractor (Item No. 4900011) is used for the safe removal of keys from the shafts of any type of machine, motor, blower, compressor, etc. For keys to 35 mm in width.

Safe!

You no longer need a hammer and chisel.

Advantages

- Safe and fast removal.
- Perpendicular removal. No damage to shafts or keys.
- Shafts remain straight.
- Saves time, labour and costs.
- Jaws are made from specially tempered steel.
- Screw has left and right trapezium thread.

Easy to use

1. Turn wheel (A) to move the jaws (1) up or down so that they are aligned with housing (2).
2. Turn wheel (B) to fit the size of the key allowing ± 1 mm space.
3. Turn wheel (B) **hand tight** to secure the key with the jaws.
4. Then turn wheel (A) to extract the key perpendicularly.
5. Turn wheel (A) to move the jaws down; turn wheel (B) to open the jaws and free the key.

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

MECHANICAL PULLERS

BETEX 46

Simple, handy 2-arm puller for parts gripped externally like pulleys, bearings, rings, etc. Suitable for removing fans from electric motors.

During operation the arms cannot slip because they are pressed against the cross bar. The higher the necessary pulling force, the stronger the arms are pressed against the cross bar.

One-hand operation. A spring inside the housing guarantees a continual clamping of the forged alloy steel arms.

BETEX 46 is available in 4 types

| 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 particularly suitable for extracting bearings, bearing rings etc. that **fit flushly with other parts**. This is due to the special jaws construction.

You prevent damage and save time. This system is generally applied when dismantling bearings from anchors, pump, shafts etc.

BETEX 47 is available in 3 types

| 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 pullers

Betex no. 48/49 is designed for dismantling flush-fitting bearings and other parts where an ordinary puller would be unable to get a proper grip.

Suitable for various applications.

BETEX 48 is available in 5 types

BETEX 49 is available in 4 types

| Type | Art. no. | Max. diam. mm | Counter support | Max. shaft length mm | |
|---------|----------|---------------|-----------------|----------------------|----------------|
| | | | | standard | with extension |
| 48 -060 | 048060 | 60 | 49 -100 | 150 | 250 |
| 48 -075 | 048075 | 75 | 49 -100 | 150 | 250 |
| 48 -115 | 048115 | 115 | 49 -200 | 200 | 300 |
| 48 -150 | 048150 | 150 | 49 -300 | 300 | 400 |
| 48 -210 | 048210 | 210 | 49 -400 | 300 | 400 |



MECHANICAL PULLERS

BETEX 52

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

The three arms of these pullers adjust themselves simultaneously and symmetrically, inwards or outwards. **Bending or deflecting** is impossible. The higher the pulling force, the stronger the arms are clamping the workpiece. For 20-ton hydraulic screws are available for the two largest pullers in case of heavy-duty applications or corrosion. capacity 20 or 1000 kg. They have a 15 mm stroke, which creates a **shock effect**, moving the workpiece from its position. The thread of the screws is in no way affected by the building up of hydraulic pressure, thus keeping wear and tear to the screws down to a minimum.



BETEX 52 with mechanical screw is available in 6 types

| Type | Art. no. | Max. diam. mm | Max. shaft length: mm |
|-------------|------------|---------------|-----------------------|
| 52 -085 | 052085 | 85 | 65 |
| 52 -130 | 052130 | 130 | 105 |
| 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 may be converted into hydraulic tools simply by replacing the mechanical screw and the screw-bush with a 20 ton mechanical hydraulic screw.

BETEX 54

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

This 2-arm puller is extremely well-suited for applications involving the extraction of bearing-rings, inner rings, gear wheels, couplings etc. Reversal of the arms makes internal dismantling also possible.

The **self-locking system** guarantees that the arms will not deflect. Extended and extra-extended arms can be supplied for long shafts.



BETEX 54 with standard arm length is available in 6 types

| Type | Art. no. | Max. diam. mm | Max. shaft length mm | | |
|---------|----------|---------------|----------------------|----------------|----------------------|
| | | | standard | with extension | with extra 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 56

Internal 4-arm bearing pullers with interchangeable claws (in case) for total 66 bearings up to Ø105 mm

This 4-arm bearing puller has been specially developed to extract ball-bearings from casings and shafts using a single action. The 6000, 6200, 6300 and 6400 series are used most commonly. These three sets of pullers will remove 66 different ball-bearings from Ø10 up to Ø105 mm shafts.

BETEX 56 is available in 3 sets

| Set | Art. no. | Max. shaft length mm | Claws (4 per set) | No. of bearings |
|---------|----------|----------------------|-------------------|-----------------|
| 56 -020 | 056020 | 65 | 3 sets | 12 |
| 56 -120 | 056120 | 90 | 5 sets | 30 |
| 56 -220 | 056220 | 150 | 5 sets | 24 |

| Set | Ball-bearing 6000 | Ball-bearing 6200 | Ball-bearing 6300 | Ball-bearing 6400 |
|---------|-------------------|-------------------|-------------------|-------------------|
| 56 -020 | 6004 to 6006 | 6200 6205 | 6300 6302 | - |
| 56 -120 | 6007 to 6020 | 6206 6212 | 6303 6308 | 6403 6405 |
| 56 -220 | 6021 | 6213 6219 | 6309 6319 | 6406 6412 |



BETEX 44

Hydraulic 8/15 tons mini-press

When using mechanical screws, much of the force is lost as a result of the friction caused by 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: may be used from 49-200, 52-230 and 54-300 and upwards.

BETEX 44 is available in 2 types

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



BETEX 625/630

Shaft protector sets for shaft centers and hollow shafts

These shaft protectors are indispensable between shaft and bearing puller while dismantling bearings, couplings etc. There are two types: 625 for protecting shaft centers and 630 for hollow shafts.

Use of shaft protectors prevents:

- distortion to the shaft centers and the screw
- puller overload due to tilting (e.g. the 3-arm puller 52)



BETEX 625 consists of a 6-piece set

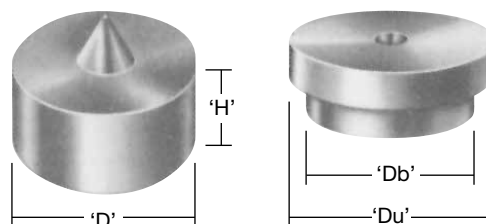
'D' min. = Ø 19 mm 'H' min. = Ø 16 mm
'D' max. = Ø 38 mm 'H' max. = Ø 19 mm

BETEX 630 'S' consists of a 11-piece set

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

BETEX 630 'T' consists of a 6-piece set

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



MECHANICAL PULLERS

BETEX 62

Internal expander-puller up to a bore of Ø150 mm

This special expander system has been developed to facilitate rapid and effective dismantling under difficult conditions, e.g. in 'blind holes'. The multiple adjustable jaws (up to 6) ensure the correct grip from behind the bearing, bush 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 type 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 is available in 3 sets

Set 62/105 comes in a free carrying case

| Type counter support | Suitable for expanders | Expander | For diameter 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 -030 | 30 -40 | 90 | * | **** |
| 62 -200 | 62-040→ 62 -070 | 62 -040 | 40 -50 | 95 | ** | **** |
| | | 62 -050 | 50 -60 | 95 | ** | **** |
| | | 62 -060 | 60 -70 | 95 | ** | **** |
| 62-200/62-300 | 62-070→ 62 -0125 | 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

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 supporting face.

After positioning the internal puller the slide hammer 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. 62-9392

MECHANICAL PULLERS

BETEX 63, 64 / TRACTA

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

The benefits are:

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

BETEX 63, 64 / TRACTA

| Type | Shaft diam. mm | Outer diam. mm | Max. stroke mm | Max. shaft length mm | Max. shaft length with extra 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



BETEX 63



BETEX 64

MECHANICAL PULLERS

Collets for BETEX 63, 64 / TRACTA

There are 4 different pulling principles that can be applied, depending on 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: grip on inner bearing ring. Bearing is dismantled in one act, from shaft and bearing house.

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



Principle 1

Principle 2: grip on rollers, independent of number of rolls. Also when bearing is flush fit.

Example: wheel bearings, tapered bearings.



Principle 2

Principle 3: grip on inner bearing ring.

Example: tapered roller bearings.



Principle 3

Principle 4: grip in or behind inner bearing, or behind outer bearing ring.

Example: cylindrical roller bearing, lowest inner ring of the ball bearings, outer ring of needle roller bearings, spherical roller bearings, NU-, NJ-bearing bushes, ABS-rings, bushes, gear wheels.



Principle 4

HYDRAULIC PULLERS

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



Compact, ergonomic design, easily operated by one person!

- **Multifunctional!**

These HP-pullers are ideal for pulling a wide variety of parts, including bearings, bushings, wheels, gears and pulleys. Applications for HP-pullers will be found in motor repair shops, service companies, maintenance shops, industry, mining, paper mills, chemical plants, shipping, offshore, etc.

- **Compact!**

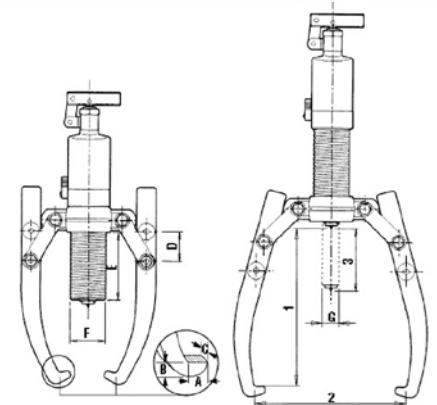
The self contained hydraulic pump saves space, as you don't need a separate pump, hose or cylinder.

- **Strong!**

The harder the force, the tighter the jaws grip!
The arms cannot bend or deflect.

- **Economical!**

2- or 3-arm combination puller, two pullers for the price of one, including integrated pump and cylinder!



- **Safe!**

The integral safety release valve prevents overloading and ensures you never exceed maximum power capacity.

- **Versatile!**

Various accessories are available. The sets are supplied in a practical PE case and consist of a puller block, connecting rods and a set of bearing splitters.

4, 6, 8, 12, 20 and 30 ton capacity!

BETEX HP 2/3-arm hydraulic pullers

TIP! For accessory sets see page 60-61

| Type | Art. no. | Cap. ton | Max. shaft length mm | Max. spread mm | Stroke mm | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Weight Kg |
|----------|----------|----------|----------------------|----------------|-----------|------|------|------|------|------|------|------|-----------|
| HP 43 * | 791000 | 4 | 185 | 255 | 60 | 11 | 6 | 22 | 32 | 84 | 42 | 22 | 4.5 |
| HP 63 * | 792000 | 6 | 220 | 330 | 70 | 13 | 10 | 25 | 51 | 122 | 45 | 25 | 6.5 |
| HP 83 * | 793000 | 8 | 230 | 350 | 85 | 11 | 10 | 25 | 51 | 122 | 50 | 25 | 6.5 |
| HP 123 * | 794000 | 12 | 270 | 375 | 85 | 14 | 10 | 29 | 51 | 118 | 60 | 28 | 8.0 |
| HP 203** | 796000 | 20 | 360 | 520 | 111 | 20 | 27 | 33 | 60 | 161 | 80 | 40 | 22.0 |
| HP 303** | 797000 | 30 | 360 | 550 | 111 | 20 | 27 | 38 | 60 | 155 | 98 | 50 | 32.0 |

* incl. safety net

** incl. safety blanket

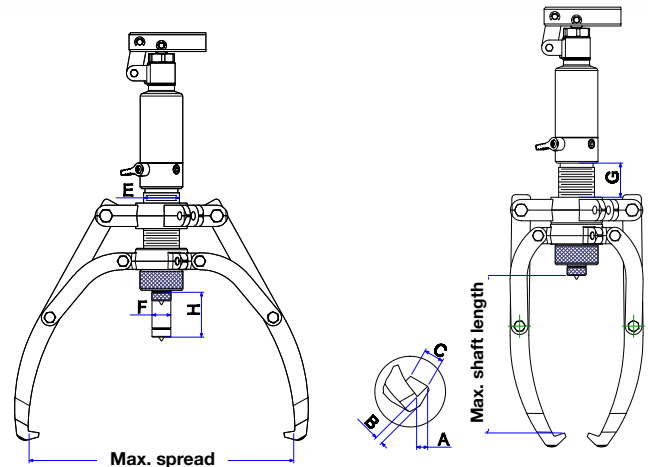
HYDRAULIC PULLERS

BETEX HSP 2/3-arm pullers, **self-centering**, with integrated pump and cylinder



Compact, ergonomic design, easily operated by one person!

- **Practical!**
Self-centering, easy to convert, 2-arm or 3-arm puller. The arms slide inwards or outwards simultaneously.
- **Compact!**
The self contained hydraulic pump saves space, as you don't need a separate pump, hose or cylinder.
- **Strong!**
The harder the force, the tighter the jaws grip. The arms cannot bend or deflect.
- **Economical!**
2/3-arm combination puller, two pullers for the price of one, including integrated pump and cylinder!
- **Safe!**
The integral safety release valve prevents overloading and ensures you never exceed maximum power capacity.
- **Versatile!**
Various accessories are available. The sets are supplied in a practical PE case and consist of a puller block, connecting rods and a set of bearing splitters.



Advantages of these self-centering pullers:

- Prevent damage to shaft and workpiece being pulled.
- Efficient and saves time.
- Can be used in any position.
- Adapters included.

4, 6, 8, 12, 20 and 30 ton capacity!

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

TIP! For accessory sets see page 60-61

| Type | Art. no. | Cap. ton | Max. shaft length mm | Max. spread mm | Stroke mm | A mm | B mm | C mm | D mm | E mm | F mm | G mm | Weight Kg |
|-----------|----------|----------|----------------------|----------------|-----------|------|------|------|------|------|------|------|-----------|
| HSP 43* | 791500 | 4 | 190 | 315 | 60 | 13 | 10 | 22 | - | 40 | 42 | 22 | 8.0 |
| HSP 63* | 792500 | 6 | 230 | 390 | 70 | 13 | 10 | 22 | - | 50 | 45 | 23 | 10.0 |
| HSP 83* | 793500 | 8 | 280 | 463 | 85 | 13 | 13 | 27.5 | - | 70 | 50 | 25 | 12.0 |
| HSP 123* | 794500 | 12 | 300 | 515 | 85 | 15 | 16.5 | 29 | - | 70 | 60 | 28 | 15.0 |
| HSP 203** | 796500 | 20 | 325 | 520 | 111 | 20 | 27 | 33 | - | 62 | 80 | 40 | 25.0 |
| HSP 303** | 797500 | 30 | 415 | 620 | 111 | 20 | 27 | 38 | - | 85 | 98 | 50 | 36.0 |

* incl. safety net

** incl. safety blanket

HYDRAULIC PULLERS

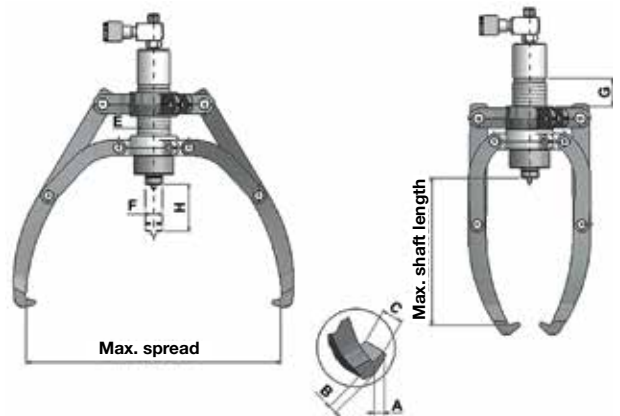
BETEX HXP 2/3-arm pullers, **self-centering**



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

Separate 2-stage handpump available

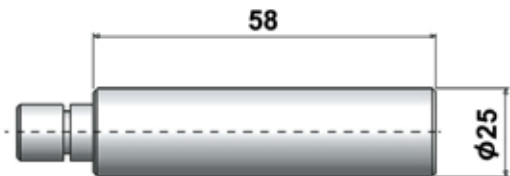
- **Practical!**
Self-centering, easy to convert 2- or 3-arm puller. The arms slide inwards or outwards simultaneously.
- **Safe!**
Arms can never deflect!
- **Economical!**
2- or 3-arm combination puller. Two pullers for the price of one.
- **Strong!**
The greater the pulling force, the tighter the jaws grip! The arms cannot bend or deflect.
- HXP503 also available with mobile crane (see page 64 + 65).



Advantages of self centering pullers:

- Prevent damage to shaft and workpiece being pulled.
- Work efficient and save time.
- Accessory sets are available for the 8 and 12 ton pullers.
- Supplied in handy carrying case.

8, 12, 20, 30 and 50 ton capacity!



TIP! Use in combination with accessories page 60-61 and hand and foot pump sets, from page 93.

BETEX HXP hydraulic self-centering pullers

| Type | Art. no. | Cap. ton | Max. shaft length mm | Max. Spread mm | Stroke mm H mm | Pump tip mm | | | Jaw tip mm | | | Weight Kg |
|-----------|----------|----------|----------------------|----------------|----------------|-------------|----|----|------------|------|------|-----------|
| | | | | | | E | F | G | A | B | C | |
| HXP 83* | 793600 | 8 | 280 | 460 | 85 | 42 | 22 | 40 | 13 | 10 | 22 | 9.0 |
| HXP 123* | 794600 | 12 | 300 | 515 | 85 | 50 | 25 | 70 | 13 | 13 | 27.5 | 11.7 |
| HXP 203** | 796600 | 20 | 325 | 520 | 111 | 60 | 28 | 70 | 15 | 16.5 | 29 | 24.0 |
| HXP 303** | 797600 | 30 | 415 | 620 | 111 | 80 | 40 | 62 | 20 | 27 | 33 | 34.0 |
| HXP 503** | 799600 | 50 | 455 | 860 | 330 | 98 | 50 | 85 | 20 | 27 | 38 | 140.0 |

* incl. safety net ** incl. safety blanket

HYDRAULIC PULLERS

BETEX TRI-SECTION PULLERS



BETEX Tri-section pullers

- The complete hydraulic tri-section puller set includes the Tri-section Plate for safe and easy dismantling.
- The narrow plate edges enable the dismantling of hard-to-grip components.
- The Tri-section Plate grip behind the inner and outer rings of the bearing, preventing the pulling force from being transmitted through the moving parts, minimizing the risk of bearing 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
- Handle 360° adjustable
- Tri-section plate
- Puller block
- Connection rods
- Steel storage case

4, 6, 8 and 12 ton capacity!



BETEX Tri-section hydraulic pullers

| Type | Art. no. | Cap. ton | Max. shaft length mm | Min. Spread mm | Max. Spread mm | Weight 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, self-centering 3-in-1 PUSH PULLER



Push



Pull



Pull



Push



Push Puller: three-in-one tool

This unique patented design provides end users with a three-in-one tool to easily and safely fit or mount/dis-mount bearings and sleeves using either their inner or outer edges.

The push puller is specially designed for combined pushing and pulling. The forces are evenly distributed, creating a perfectly axial process.

The pushing jaws fit on the bearing's inner ring, preventing the transmission of forces and/or heat through the outer ring to the moving parts, minimizing the risk of bearing damage.

User-friendly

- Unique, patented double-acting cylinder.
- Unique jaw design for mounting and outer ring pulling without removing and changing.
- Three-jaw structure always provides an even and constant force, whether mounting, outer-ring pulling or inner-ring pulling.
- The extension bars can be used where necessary for extra reach.

- Self-centering design of the inner puller always provides an even force and prevents jaws sliding off during operation.

Safe

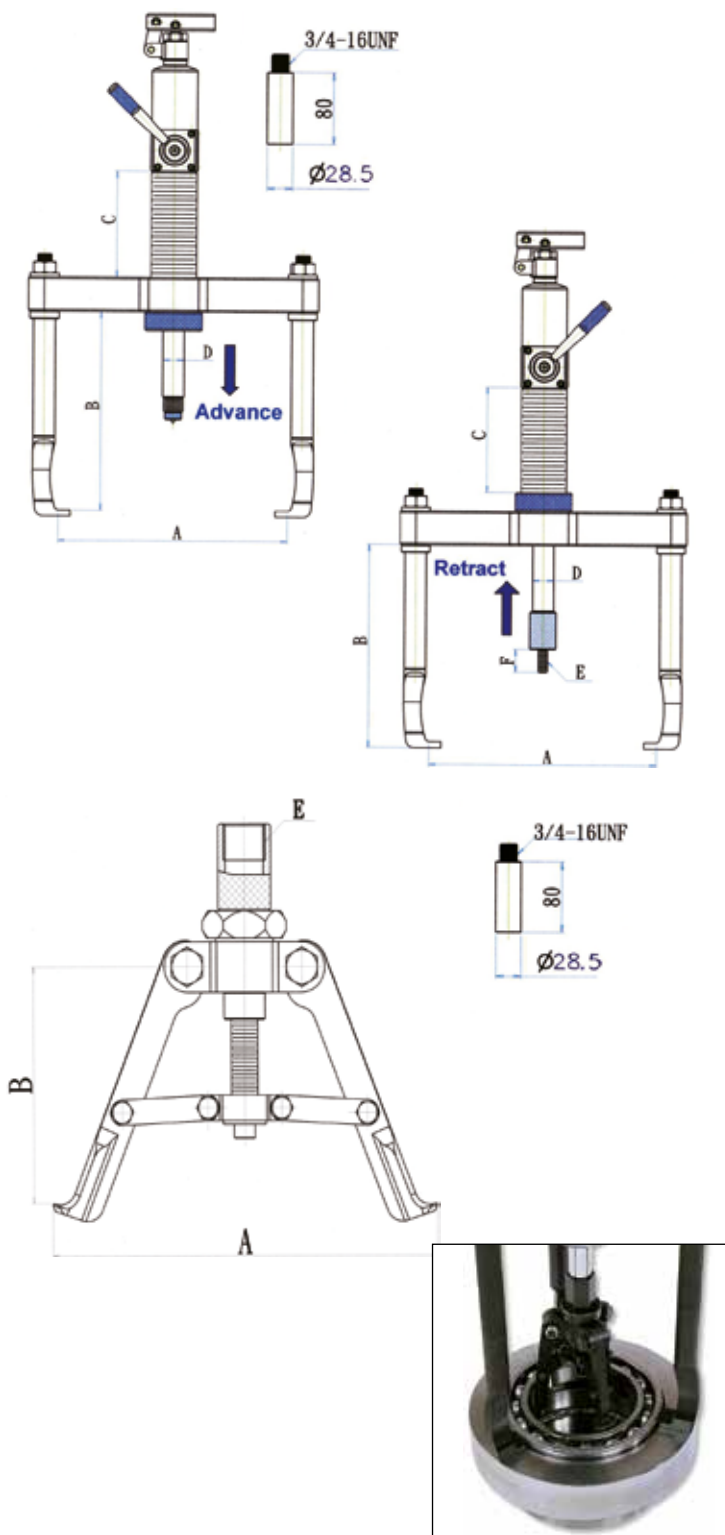
- The built-in safety valve ensures user safety and prevents damage to tool and job, prevents overload and ensures that you never exceed the maximum power capacity.
- Most parts are forged SCM440 alloy steel, creating a very safe and durable product.

Cost-reducing

- Three-in-one design reduces preparation, tool-reset time and duration of operation.
- This push puller is ideal for fitting and removing a wide variety of press-fit parts, including bushings, wheels, bearings, gears and pulleys.

HYDRAULIC PULLERS

BETEX HPP, self-centering 3-in-1 PUSH PULLER



BETEX Push Puller / 3-in-1

TIP! Use in combination with: page 60 + 61.

| Type | Art. no. | Operations | Output ton | A mm | B mm | C mm | D mm | E | F mm | Weight Kg |
|---------|----------|---------------|------------|----------|----------|------|------|-----------|------|-----------|
| HPP 123 | 794200 | Installing | 8 | 44 -280 | 270 | 140 | 28 | M12-P1.75 | 30 | 19.5 |
| | | Outer pulling | 12 | 85 -300 | 260 | 140 | 28 | - | - | |
| | | Inner pulling | 8 | 110 -210 | 130 -150 | - | - | 1"-12UNF | - | |

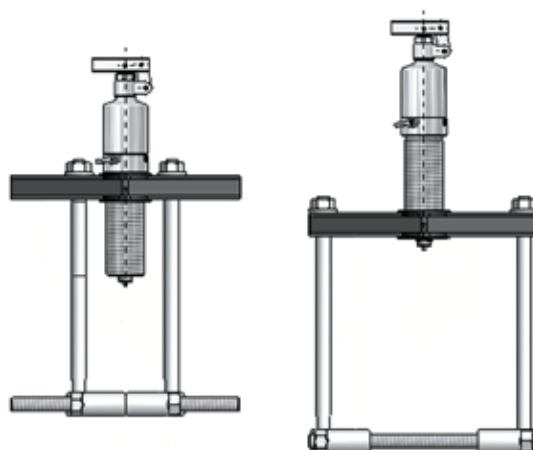
ACCESSORY SETS

BETEX BEARING SPLITTERS

This accessory set consists of:

- 1 puller block
- 2 connection rods (legs)
- 2 sets of bearing splitters for a min./max. Ø15-290 mm

You can use the cylinder from the HP/HSP/HXP series.



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

| Type | Art. no. | Cap. ton | Shaft length mm | Min/max spread mm | Weight kg |
|--|----------|----------|-----------------|-------------------|-----------|
| Acc. Set HP 43, HSP 43 | 791100 | 4 | 250 | Ø 15-110 | 8.5 |
| Acc. Set HP 63, HSP 63, | 792100 | 6 | 270 | Ø 25-180 | 11.5 |
| Acc. Set HP 83, HSP 83, HXP 83 | 793100 | 8 | 270 | Ø 40-220 | 12.6 |
| Acc. Set HP 123, HSP 123, HXP 123, HPP 123 | 794100 | 12 | 380 | Ø 45-290 | 18.0 |

ACCESSORY SETS

BETEX TRI-SECTION PLATES

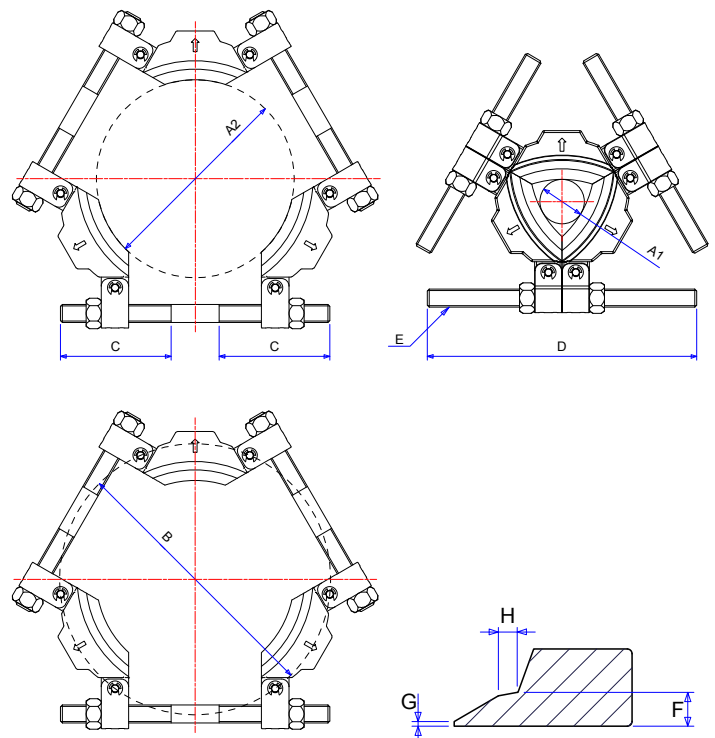


The tri-section plates are specially designed to be used in conjunction with the three-armed hydraulic pullers. The unique and patented swivel design creates maximum spread and applies even force at the most efficient point. The plates grip behind the inner and outer rings of the bearing, preventing the pulling force from being transmitted through the moving parts, minimizing the risk of bearing damage.

User-friendly

- Unique, patented swivel design creates maximum spread.
- The tri-section construction provides even-force distribution, preventing bearings from locking and/or tilting on the shaft during removal.
- Suitable for use in conjunction with all three-armed hydraulic pullers.
- Available in a wide range, covering the most common shaft sizes.

The Tri-section plates series consists of 4 different sizes of tri-section plates that are suitable for shafts ranging from 26 to 495 mm (2" to 19.5").



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

| Type | Art. no. | Cap. ton | Available shaft diam | | Spread B (mm max) | C mm | D mm | E | F mm | G mm | H mm | Weight 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 3/4" -12UNF | 20 | 2 | 12 | 45 |

MOBILE HYDRAULIC PULLER

BETEX MOBIPULLER

**25
OR
50
TON**



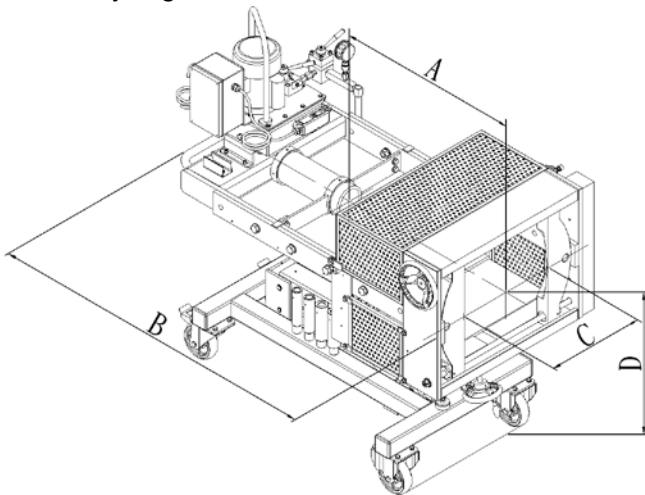
MOBILE HYDRAULIC PULLER

BETEX MOBIPULLER

THE BETEX MOBIPULLER is a heavy duty, mobile hydraulic puller. It is used for dismantling bearings, couplings, gears and other parts, with relative speed and ease. The Mobipuller excels through functional and ergonomic operation. It is stable, mobile and adjustable in height. A maximum tractive force of either 25 or 50 tons can be applied with diameters of up to 430 mm. To ensure safe and easy operation the electrical models are equipped with remote control, safety cage and pressure gauge.

All models are standard equipped with

- an oil-filled pressure gauge
- 4 adaptors with an ID of 40 mm (2pcs) and 50 mm (2pcs)
- 4 stable wheels with polyurethane tires, 2 swiveling wheels with double functioning brake
- Safety cage



| | | |
|----|-----------------------------------|--------------|
| A: | In standard position mm: | see table |
| A: | In extended position mm: | see table |
| B: | Frame length in standard pos. mm: | 1560 |
| B: | Frame length in extended pos. mm: | 1940 |
| | Position low / high mm: | 1510/2040 |
| | Dimensions L x B mm: | 1570x990 |
| C: | Diameter of jaws mm: | 430 |
| D: | Set-up height mm: | 900/1430 |
| | Adaptors mm (155 mm): | 2xØ40, 2xØ50 |



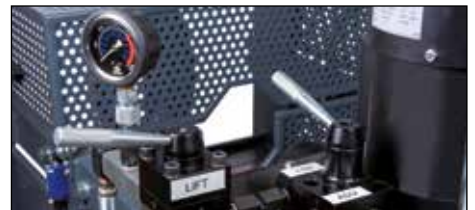
Auxiliary tools for dismantling of inner rings and delicate components (option).

| Meaning of codes: | | Type | Art. no. | Cap. ton | Stroke cylinder | Pump hydraulic manual/electrical | In standard position A1 mm | In extended position A2 mm | Weight kg |
|-------------------|------------------------|-------------------|----------|----------|-----------------|----------------------------------|----------------------------|----------------------------|-----------|
| 25-50 | tractive force in tons | 25 HV 430 S 260 | 700001 | 25 | 260 | manual | 770 | 1150 | 415 |
| 430 | max. diameter in mm | 25 EVA 430 S 260 | 700002 | 25 | 260 | single acting electrical | 770 | 1150 | 430 |
| H | manual hydraulic | 50 HV 430 S 260 | 700003 | 50 | 260 | manual | 740 | 1120 | 435 |
| E | electrical hydraulic | 50 EVA 430 S 260 | 700004 | 50 | 260 | single acting electrical | 740 | 1120 | 450 |
| V | mobile | 50 EVA 430 S 340 | 700005 | 50 | 340 | single acting electrical | 660 | 1040 | 455 |
| A | remote control | 50 EVAD 430 S 340 | 700006 | 50 | 340 | double acting electrical | 615 | 995 | 470 |
| S | max. stroke in mm | 50 EVAD 430 S 460 | 700007 | 50 | 460 | double acting electrical | 470 | 850 | 485 |
| D | double acting | | | | | | | | |

Double acting electric



Single acting electric



Single acting manual



MOBILE HYDRAULIC PULLER

BETEX HXPC 2/3-arm puller, **self-centering**, with crane, 50 ton capacity



50 TON

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

- **Practical**
The puller is self-centering, easy to manoeuvre and adjustable in height. Easy to convert to 2- or 3-arm puller. The arms slide inwards or outwards simultaneously.
- **Fast**
The complete stroke is 159 mm. Two adapters (extensions) for a total length of 310 mm are included.
- **Strong**
The greater the pulling force, the tighter the jaws grip the object concerned! There is no possibility of the arms bending or deflecting.
- **Safe**
Integral safety release valve prevents overload and ensures you never exceed maximum power capacity.

Advantages

- Prevent damage to shaft and component
- Easily operated by one person.
- Efficient and saves time
- Can be used in any position
- Including 2 adapters
- Including remote control
- Including safety blanket

MOBILE HYDRAULIC PULLER

BETEX HXPC 2/3-arm puller, **self-centering**, with crane, 50 ton capacity

- Electro-hydraulic pump, 230V - 700 bar, operates the cylinder. This is a 2-stage pump with oil delivery 4.2 liters/minute at 7 bar pressure
- The design prevents the puller jaws from slipping or deflecting
- The crane has two swivel castors {self-locking} and two rigid castors
- The hydraulic cylinder is of spring-return type with a max. working pressure of 700 bar (50 tons).
- Two adapters (extensions) with a total length of 310 mm are included



Adapters



Valve block

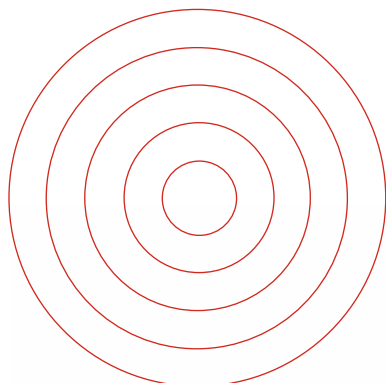
| Type | HXPC 50 |
|---|--|
| Art.no. | 700016 |
| Capacity ton | 50 |
| Max. stroke length mm | 159 |
| Max. spread mm | 830 |
| Min. spread mm | 140 |
| Max. shaft length mm | 455 |
| Operation: - Main cylinder - Height adjustment | electro-hydraulic pump EP18S, 230V, 5A, 50 Hz, with remote control |
| Operating self-centering jaws | manual |
| Adapters 2 items 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 |
| Gauge bar | 700 |
| Dimensions LxWxH mm | 1850 x 970 x 1550 |
| Weight kg | 280 |



Also available without crane, HXP503
See page 56

MOBILE HYDRAULIC PULLER

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



50 TON

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

- **Practical**
The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- **Fast**
The complete stroke is 330 mm. Four adapters (extensions) with a total length of 620 mm are included.
- **Strong**
The greater the pulling force, the tighter the jaws grip the object concerned! The arms cannot bend or deflect.
- **Safe**
Integral safety release valve prevents overload and ensures you never exceed maximum power capacity.

Advantages

- Prevent damage to shaft and component
- Easily operated by one person.
- Efficient and saves time
- Including 4 adapters
- Including remote control
- Including safety blanket

MOBILE HYDRAULIC PULLER

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

- Double-acting cylinder for holding, opening and closing the arms for safe, secure grip on job
- Electro-hydraulic pump, 230V - 700 bar, operates the cylinder
This is a 2-stage pump with oil delivery 4.2 liters/minute at 7 bar pressure
- The design prevents the puller jaws from slipping or deflecting
- The cart has two swivel castors (self-locking) and two rigid castors
- The hydraulic cylinder is of spring-return type with a max. working pressure of 700 bar (50 tons)
- Four adapters (extensions) with a total length of 620 mm are included



Valve block



Adapters

| Type | HXPM 50 - 2 arm |
|---|--|
| Art. no. | 700019 |
| Capacity ton | 50 |
| Max. stroke length mm | 330 |
| Max. spread mm | 1250 |
| Min. spread mm | 200 |
| Max. shaft length mm | 780 |
| Operation: - Main cylinder - Height adjustment | electro-hydraulic pump EP18S, 230V - 5A, 50 Hz, with remote control |
| Operating self-centering jaws | hand pump, double acting |
| Adapters 4 items 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 |
| Gauge bar | 700 |
| Dimensions LxWxH mm | 2700 x 655 x 900 |
| Weight kg | 315 |

MOBILE HYDRAULIC PULLER

BETEX HXPM 50 - 2/3-arm puller, **self-centering**, 50 ton capacity



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

- **Practical**
The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- **Fast**
The complete stroke is 330 mm. Four adapters (extensions) with a total length of 620 mm are included.
- **Strong**
The greater the pulling force, the tighter the jaws grip the object concerned! The arms cannot bend or deflect.
- **Safe**
Integral safety release valve prevents overload and ensures you never exceed maximum power capacity.

Advantages

- Prevent damage to shaft and component
- Easily operated by one person.
- Efficient and saves time
- Including 4 adapters
- Including remote control
- Including safety blanket

MOBILE HYDRAULIC PULLER

BETEX HXPM 50 - 2/3-arm puller, **self-centering**, 50 ton capacity

- Double-acting cylinder for holding, opening and closing the jaws for safe, secure grip on job
- Electro-hydraulic pump, 230V - 700 bar, operates the cylinder.
This is a 2-stage pump with oil delivery 4.2 liters/minute at 7 bar pressure
- The design prevents the puller jaws from slipping or deflecting
- The puller is easy to convert into a 2- or 3-arm version
- The puller is adjustable 5° vertically
- The cart has two swivel castors (self-locking) and two rigid castors
- The hydraulic cylinder is of spring-return type with a max. working pressure of 700 bar (50 tons)
- Four adapters (extensions) are included with a total length of 620 mm



Valve block



Adapters

| Type | HXPM 50 - 2/3 arm SHORT | HXPM 50 - 2/3 arm LONG |
|---|--|------------------------|
| Art. no. | 700017 | 700014 |
| Capacity ton | 50 | 50 |
| Max. stroke length mm | 330 | 330 |
| Max. spread mm | 950 | 1250 |
| Min. spread mm | 200 | 200 |
| Max. shaft length mm | 500 | 780 |
| Operation: - Main cylinder - Height adjustment | electro-hydraulic pump EP18S, 230V - 5A, 50 Hz, with remote control | |
| Operating self-centering jaws | hand pump, double acting | |
| Adapters 4 items total length: 620 mm | 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 |
| Gauge bar | 700 | 700 |
| Dimensions LxWxH mm | 2245 x 800 x 1155 | 2545 x 800 x 1155 |
| Weight kg | 385 | 400 |



HXPM 50 - 2/3 arm SHORT



HXPM 50 - 2/3 arm LONG

MOBILE HYDRAULIC PULLER

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



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

- **Practical**
The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- **Fast**
The complete stroke is 270 mm. Seven adapters (extensions) with a total length of 1125 mm are included.
- **Strong**
The greater the pulling force, the tighter the jaws grip the object concerned! The arms cannot bend or deflect.
- **Safe**
The safety release valve prevents overloading and ensures you never exceed maximum force.

Advantages

- Prevent damage to shaft and component
- Easily operated by one person.
- Efficient and saves time
- Including 7 adapters
- Including remote control

MOBILE HYDRAULIC PULLER

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

- Double-acting cylinder for holding, opening and closing the jaws for safe, secure grip on job
- Electro-hydraulic pump, 400V - 700 bar, operates the cylinder This is a 2-stage pump with oil delivery 9.5 liters/minute at 7 bar pressure
- The design prevents the puller jaws from slipping or deflecting
- The cart has two swivel castors (self-locking) and two rigid castors
- The hydraulic cylinder is of spring-return type with a max. working pressure of 700 bar (100 tons).
- Seven adapters (extensions) with a total length of 1125 mm are included
- Adjustable jaw tips for optimal grip



Adapters



Adjustable jaw tips for extra grip



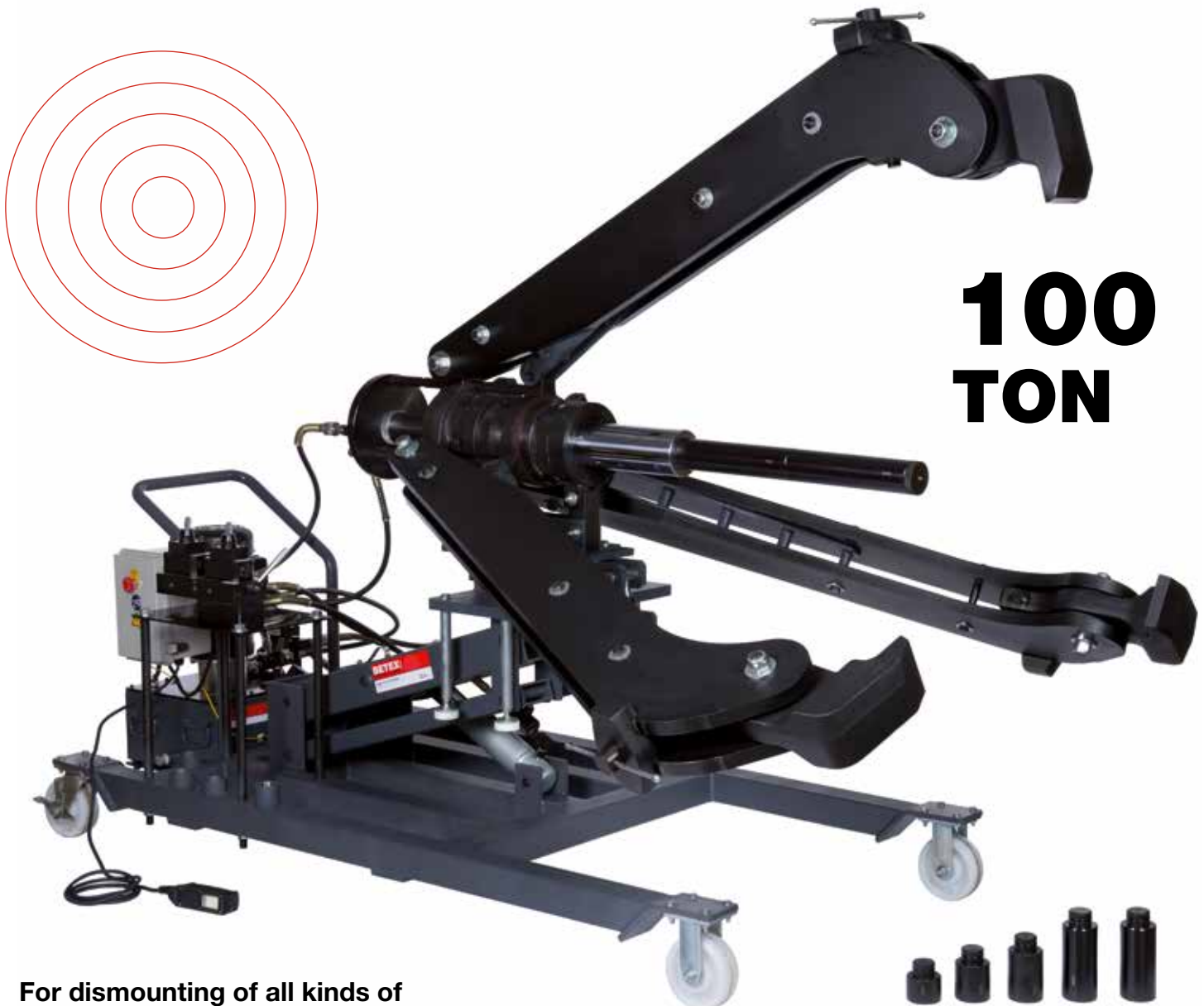
Valve block

TIP: use in combination with UHAP2800 high pressure pump, see page 107.

| Type | HXPM 100 - 2-arm |
|--|--|
| Art. no. | 700021 |
| Capacity ton | 100 |
| Max. stroke length mm | 270 |
| Max. spread mm | 1500 |
| Min. spread mm | 200 |
| Max. shaft length mm | 1215 |
| Operation: - Main cylinder - Height adjustment - self-centering jaws | electro-hydraulic pump EP420D, 400V - 6A, 50 Hz, with remote control |
| Seven adapters mm | 2x Ø70 L=300 mm, 2x Ø70 L=150 mm |
| Total length: 1125 mm | 1x Ø70 L=100 mm, 1x Ø70 L=75 mm, 1x Ø70 L=50 mm |
| Min. height from centre mm | 320 |
| Max. height from centre mm | 790 |
| Gauge bar | 700 |
| Dimensions LxWxH mm | 2450 x 1350 x 1200 |
| Weight kg | 870 |

MOBILE HYDRAULIC PULLER

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



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

- **Practical**
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.
- **Fast**
The complete stroke is 270 mm. Seven adapters (extensions) with a total length of 1125 mm are included.
- **Strong**
The greater the pulling force, the tighter the jaws grip the object concerned! The arms cannot bend or deflect.
- **Safe**
Integral safety release valve prevents overload and ensures you never exceed maximum power capacity.

Advantages

- Prevent damage to shaft and component
- Easily operated by one person.
- Efficient and saves time
- Including 7 adapters
- Including remote control

MOBILE HYDRAULIC PULLER

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

- Double-acting cylinder for holding, opening and closing the jaws for safe, secure grip on job
- Electro-hydraulic pump, 400V - 700 bar, operates the cylinder. This is a 2-stage pump with oil delivery 9.5 liters/minute at 7 bar pressure
- Self-centering: the arms slide inwards or outwards simultaneously
- The design prevents the puller jaws from slipping or deflecting
- The puller is easy to convert into a 2- or 3-arm version
- The puller is adjustable 5° vertically
- The cart has two swivel castors (self-locking) and two rigid castors
- The hydraulic cylinder is 2-stage, spring-return type with a max. working pressure of 700 bar (100 tons)
- Seven adapters (extensions) are included with a total length of 1125 mm
- Adjustable jaw tips for optimal grip

TIP: use in combination with UHAP2800 high pressure pump, see page 107.



Valve block



Pump detail



Adjustable jaw tips for more grip

| Type | HXPM 100 - 2/3-arm |
|--|--|
| Art. no. | 700015 |
| Capacity ton | 100 |
| Max. stroke mm | 270 |
| Max. spread mm | 1500 |
| Min. spread mm | 200 |
| Max. shaft length mm | 1215 |
| Operation: - Main cylinder - Height adjustment - self-centering jaws | electro-hydraulic pump EP420D, 400V - 6A, 50 Hz, with remote control |
| Seven adapters mm | 2x Ø70 L=300 mm, 2x Ø70 L=150 mm |
| Total length: 1125 mm | 1x Ø70 L=100 mm, 1x Ø70 L=75 mm, 1x Ø70 L=50 mm |
| Min. height from centre mm | 820 |
| Max. height from centre mm | 1320 |
| Gauge bar | 700 bar |
| Dimensions LxWxH mm | 2790 x 1030 x 1410 |
| Weight kg | 1120 |



MOBILE HYDRAULIC PULLER

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



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

- **Practical**
The puller is self-centering, easy to manoeuvre and adjustable in height. The arms slide inwards or outwards simultaneously.
- **Fast**
The complete stroke is 325 mm. Seven adapters (extensions) with a total length of 1125 mm are included.
- **Strong**
The greater the pulling force, the tighter the jaws grip the object concerned! The arms cannot bend or deflect.
- **Safe**
Integral safety release valve prevents overload and ensures you never exceed maximum power capacity.

Advantages

- Prevent damage to shaft and component
- Easily operated by one person.
- Efficient and saves time
- Including 7 adapters
- Including remote control

MOBILE HYDRAULIC PULLER

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

- Double-acting cylinder for holding, opening and closing the jaws for safe, secure grip on job
- Electro-hydraulic pump, 400V - 700 bar, operates the cylinder. This is a 2-stage pump with oil delivery 9.5 liters/minute at 7 bar pressure
- The design prevents the puller jaws from slipping or deflecting
- The cart has two swivel castors (self-locking) and two rigid castors
- The hydraulic cylinder is of spring-return type with a max. working pressure of 700 bar (150 tons)
- Seven adapters (extensions) with a total length of 1125 mm are included
- Adjustable jaw tips for extra grip

TIP: use in combination with UHAP2800 high pressure pump, see page 107.



Valve block

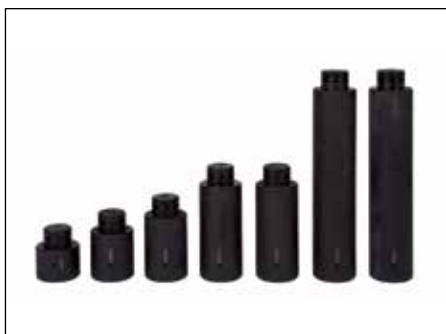


Pump block



Adjustable jaw tips for extra grip

| Type | HXPM 150 - 3-arm |
|--|--|
| Art. no. | 700025 |
| Capacity ton | 150 |
| Max. stroke length mm | 325 |
| Max. spread mm | 1600 |
| Min. spread mm | 250 |
| Max. shaft length mm | 1150 |
| Operation: - Main cylinder - Height adjustment - self-centering jaws | electro-hydraulic pump EP420D, 400V - 6A, 50 Hz, with remote control |
| Seven adapters mm | 2x Ø70 L=300 mm, 2x Ø70 L=150 mm |
| Total length: 1125 mm | 1x Ø70 L=100 mm, 1x Ø70 L=75 mm, 1x Ø70 L=50 mm |
| Min. height from centre mm | 830 |
| Max. height from centre mm | 1330 |
| Gauge bar | 700 |
| Dimensions LxWxH mm | 2990 x 1030 x 1390 |
| Weight kg | 1200 |



Adapters

MOBILE HYDRAULIC PULLER-INSTALLER

BETEX BPP BEARING PULLER PUSHER, MAX. 100 T CAP.



INSTALLATION AND REMOVAL OF RAILWAY AND METRO BEARINGS

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**.

| Type | BPP 100 |
|---|--|
| Art. no. | 700018: incl. manual valve / excl. accessories 700020: incl. solenoid valve / excl. accessories |
| Pulling capacity, dismantling tons | adjustable to 100 t max. |
| Pushing capacity, mounting tons | adjustable to 68 t max. |
| Max. stroke mm | 398 |
| Max. shaft diameter mm depending on accessories | 178 |
| Min. shaft diameter mm depending on accessories | 120 |
| Operating main cylinder & height adjustment | electro-hydraulic pump BETEX EP211D, 230V, 12A, 50Hz, with remote control |
| Min. height centre line towards floor mm | 380 |
| Max. height centre line towards floor mm | 1050 |
| Gauge bar | 700 |
| 4 castors | 2 rigid castors, 2 swivel castors |
| Dimensions LxWxH mm | 1300 x 520 x 905 |
| Weight kg | 560 |

MOBILE HYDRAULIC PULLER-INSTALLER

BETEX BPP BEARING PULLER PUSHER, MAX. 100 T CAP.

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



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



BETEX BPP BEARING PULLER PUSHER

- Mobile and easy to use by one person
- Pulling capacity (dismantling) 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 dismantling 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)



ACCESSORY SET

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

- Bearing number and manufacturer number
- Drawing of bearing and shaft (ask for the questionnaire)
- Railroad name and location

Request our product questionnaire for sound advice and quotations.

VALVES

You can choose from 2 models which are equipped with a **manual valve** or a **solenoid valve**



Manual valve



Solenoid valve

For more information and videos visit our website www.begaspecialtools.com

MOBILE HYDRAULIC PULLER-INSTALLER

BETEX BPPS BEARING PULLER PUSHER, **SIDE-SHIFT**, MAX 100 T CAP.



INSTALLATION AND REMOVAL OF RAILWAY AND METRO BEARINGS

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**.

The BPPS Side-Shift model is compact and easy to roll around because of the four swivelling castors.

| Type | BPPS SIDE-SHIFT |
|---|--|
| Art. no. | 700023: incl. manual valve & side shift / excl. accessories 700024: incl. solenoid valve & side shift / excl. accessories |
| Pulling capacity, dismantling tons | adjustable to 100 t max. |
| Pushing capacity, mounting tons | adjustable to 68 t max. |
| Max. stroke mm | 255 |
| Max. shaft diameter mm depending on accessories | 178 |
| Min. shaft diameter mm depending on accessories | 90 |
| Operating main cylinder & height adjustment | electro-hydraulic pump BETEX EP211D, 230V, 12A, 50Hz, with remote control |
| Min. height centre line towards floor mm | 435 |
| Max. height centre line towards floor mm | 780 |
| Gauge bar | 700 |
| 4 castors | 4 swivel castors |
| Dimensions LxWxH mm | 1300 x 520 x 955 |
| Weight kg | 400 |

MOBILE HYDRAULIC PULLER-INSTALLER

BETEX BPPS BEARING PULLER PUSHER, **SIDE-SHIFT**, MAX 100 T CAP.

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



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



BETEX BPPS BEARING PULLER PUSHER

- Mobile and easy to use by one person
- Pulling capacity (dismantling) 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 dismantling 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 an extra compact model and easy to roll around because of the 4 swivel castors



ACCESSORY SET

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

- Bearing number and manufacturer number
- Drawing of bearing and shaft (ask for the questionnaire)
- Railroad name and location

Request our product questionnaire for sound advice and quotations.

VALVES

You can choose from 2 models which are equipped with a **manual valve** or a **solenoid valve**



Manual valve



Solenoid valve

For more information and videos visit our website www.begaspecialtools.com

EXPLANATION CYLINDERS



FEATURES:

1. Betex® offers a wide selection of cylinder design, capacity and stroke to match your daily requirements.
2. Built for Rugged Industrial/Construction use. All Betex® cylinders meet worldwide safety standards.
3. Stop rings, plated pistons and heavy duty construction provide trouble-free operation and long life.
4. 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 cylinder life.
5. Threaded collars and internal plunger threads withstand full loading for maximum flexibility in fixturing.
6. 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.
7. Rod wiper cleans the rod surface during retraction, protecting the inner cylinder assembly from dirt moisture and other contaminants.
8. Most Betex® cylinders have a black nitride coating, which provides sustainable protection against moisture and other contaminants. All aluminium cylinders have a hard anodized finish.

Cylinders overview

| Series | Description | Type | Capacity ton | Stroke mm | Page |
|--------|----------------------------------|---------------|--------------|-----------|------|
| NSSS | General purpose, spring return | Single acting | 4.5 -100 | 25.4 -406 | 81 |
| NSLS | Low profile, spring return | Single acting | 5 -150 | 6 -17 | 82 |
| NSCS | Compact, spring return | Single acting | 10 -100 | 38 -62 | 83 |
| NSHS | Hollow, spring return | Single acting | 12 -100 | 8 -160 | 84 |
| JLLC | Lock nut, load return | Single acting | 50 -1000 | 50 -300 | 85 |
| JLPC | Lock nut, load return | Single acting | 60 -520 | 45 -50 | 86 |
| NDAC | General purpose | Double acting | 10 -100 | 150 -470 | 87 |
| NDAH | Hollow | Double acting | 30 -100 | 76 -257 | 88 |
| SSA | Aluminium, spring return | Single acting | 20 -100 | 50 -250 | 89 |
| ACHC | Aluminium, hollow, spring return | Single acting | 30 -60 | 50 -150 | 90 |
| ADHC | Aluminium, hollow | Double acting | 30 -60 | 50 -250 | 91 |
| ALNC | Aluminium, lock nut, load return | Single acting | 20 -100 | 50 -250 | 92 |

CYLINDERS

BETEX NSSS series, standard cylinder, spring return, single acting



Model : NSSS series

Capacity : 4.5 - 100 ton
 Stroke : 25.4 - 406 mm
 Max. operating pressure : 700 bar

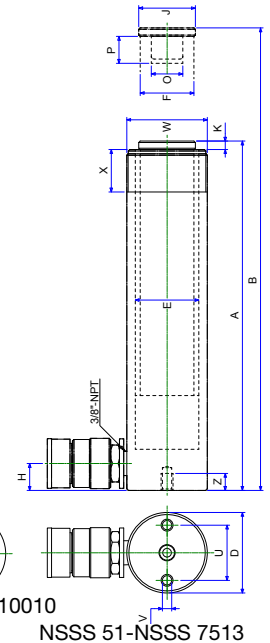
- All rams are single acting with spring return. Pistons hard chromed.
- Rams inside roll-polished, outside blasted with black nitride coating.

Power sources:

Handpumps, footpumps and air/hydraulic pumps and electric pumps.

Pump and cylinder sets:

All cylinders are available as sets: cylinder, gauge, couplers, hose and pump, for your ordering convenience.



NSSS 1006-NSSS 10010

NSSS 51-NSSS 7513

NSSS series

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

| Type | Cap. ton | Stroke mm | Oil cap cm ³ | A Height | | D mm | E mm | F mm | H mm | J mm | K mm | O ø un | P mm | U mm | V ø UNC | W ø un | X mm | Z mm | Weight Kg |
|------------|----------|-----------|-------------------------|----------|-------|------|------|------|------|------|------|-----------|------|------|----------|------------|------|------|-----------|
| | | | | Min. | Max. | | | | | | | | | | | | | | |
| NSSS 51 | 4.5 | 26 | 17 | 110 | 136 | | 28.6 | | | | | | 14 | | | | | | 1 |
| NSSS 53 | 5 | 76 | 54 | 165 | 241 | | 30 | | | | | 14 | | | | | | | 1.5 |
| NSSS 55 | 5 | 127 | 90 | 216 | 343 | 38 | 30 | 25.4 | 19 | 25 | 6 | 3/4"-16 | 14 | 25 | 1/4"-20 | 1 1/2"-16 | 28 | 14 | 1.9 |
| NSSS 57 | 5 | 183 | 129 | 273 | 456 | | 30 | | | | | | 16 | | | | | | 2.4 |
| NSSS 59 | 5 | 232 | 164 | 324 | 556 | | 30 | | | | | | 16 | | | | | | 2.8 |
| NSSS 101 | | 25.4 | 36.5 | 90 | 115.4 | | 42.8 | | | - | - | #10-24un | 6.5 | | | | | | 1.8 |
| NSSS 102 | | 51 | 73 | 121 | 172 | | 42.8 | | | 40 | 6 | 1"-8 | 19 | | | | | | 2.3 |
| NSSS 104 | | 101 | 145 | 171 | 272 | | 42.8 | | | 40 | 6 | 1"-8 | 19 | | | | | | 3.3 |
| NSSS 106 | 10 | 152.5 | 242 | 247 | 399.5 | 57 | 45 | 38 | 19 | 40 | 6 | 1"-8 | 19 | 39 | 5/16"-18 | 2 1/4"-14 | 30 | 13 | 4.4 |
| NSSS 108 | | 203.5 | 323 | 298 | 501.5 | | 45 | | | 40 | 6 | 1"-8 | 19 | | | | | | 5.4 |
| NSSS 1010 | | 255.5 | 406 | 350 | 605.5 | | 45 | | | 40 | 6 | 1"-8 | 19 | | | | | | 6.4 |
| NSSS 1012 | | 305.5 | 486 | 400 | 705.5 | | 45 | | | 40 | 6 | 1"-8 | 19 | | | | | | 6.8 |
| NSSS 1014 | | 356.5 | 567 | 451 | 807.5 | | 45 | | | 40 | 6 | 1"-8 | 19 | | | | | | 8.2 |
| NSSS 151 | | 26.5 | 63 | 124 | 150.5 | | | | 19 | | | | | | | | | | 3.3 |
| NSSS 152 | | 52.5 | 125 | 149.6 | 202.1 | | | | 19 | | | | | | | | | | 4.1 |
| NSSS 154 | | 102.5 | 243 | 200 | 302.5 | | | | 19 | | | | | | | | | | 5.0 |
| NSSS 156 | 15 | 153 | 363 | 271.6 | 424.6 | 73 | 55 | 40 | 25 | 38 | 9.6 | 1"-8 | 25.4 | 47.7 | 3/8"-16 | 2 3/4"-16 | 30 | 13 | 6.8 |
| NSSS 158 | | 203.5 | 483 | 322 | 525.5 | | | | 25 | | | | | | | | | | 8.2 |
| NSSS 1510 | | 254.5 | 604 | 373 | 627.5 | | | | 25 | | | | | | | | | | 9.5 |
| NSSS 1512 | | 305 | 724 | 424 | 729 | | | | 25 | | | | | | | | | | 10.9 |
| NSSS 1514 | | 355.7 | 845 | 474.6 | 830.3 | | | | 25 | | | | | | | | | | 11.8 |
| NSSS 1516 | | 406 | 824 | 523 | 829 | | | | 25 | | | | | | | | | | 12.8 |
| NSSS 251 | | 25.5 | 98 | 139.5 | 165 | | | | | | | | | | | | | | 5.9 |
| NSSS 252 | | 51 | 196 | 165 | 216 | | | | | | | | | | | | | | 6.4 |
| NSSS 254 | | 102 | 392 | 216 | 318 | | | | | | | | | | | | | | 8.2 |
| NSSS 256 | 25 | 158.5 | 610 | 273 | 431.5 | 88 | 70 | 55 | 25 | 50 | 10.5 | 1 1/2"-16 | 25.4 | 58 | 1/2"-13 | 3 5/16"-12 | 50 | 19 | 10 |
| NSSS 258 | | 209.5 | 806 | 324 | 533.5 | | | | | | | | | | | | | | 12.2 |
| NSSS 2510 | | 260.5 | 1002 | 375 | 636.5 | | | | | | | | | | | | | | 14.1 |
| NSSS 2512 | | 311 | 1196 | 425.5 | 736.5 | | | | | | | | | | | | | | 16.3 |
| NSSS 2514 | | 361.5 | 1390.5 | 476 | 837.5 | | | | | | | | | | | | | | 17.7 |
| NSSS 308 | 30 | 209.5 | 925 | 387.5 | 597 | 103 | 75 | 60 | 57 | 50 | 10.5 | 1 1/2"-16 | 25.4 | - | - | 4"-12 | 50 | - | 18.1 |
| NSSS 502 | | 51 | 361 | 177 | 228 | | | | | | | | | | | | | | 15 |
| NSSS 504 | | 101.5 | 719 | 229 | 330.5 | | | | | | | | | | | | | | 19.1 |
| NSSS 506 | 50 | 157.5 | 1116 | 283 | 440.5 | 127 | 95 | 80 | 33 | 70 | 3 | - | - | 95 | 1/2"-13 | 5"-12 | 55 | 19 | 23.1 |
| NSSS 508 | | 203 | 1446 | 349 | 552 | | | | | | | | | | | | | | 27.1 |
| NSSS 5010 | | 260 | 1853 | 385 | 645 | | | | | | | | | | | | | | 30.4 |
| NSSS 5013 | | 335.5 | 2377 | 461 | 796.5 | | | | | | | | | | | | | | 37.6 |
| NSSS 756 | 75 | 155 | 1752 | 285 | 440 | 152 | 120 | 95 | 30 | 70 | 3 | - | - | - | - | 5 3/4"-12 | 45 | - | 29.5 |
| NSSS 7513 | | 333.5 | 3770 | 491 | 824.5 | | | | | | | | | | | | | | 59 |
| NSSS 1006 | 100 | 170 | 2432 | 358 | 528 | 177 | 135 | 105 | 40 | 70 | 3 | - | - | 139 | 3/4"-10 | 6 7/8"-12 | 45 | 25 | 59 |
| NSSS 10010 | | 260 | 3720 | 448 | 708 | | | | | | | | | | | | | | 72.6 |

CYLINDERS

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

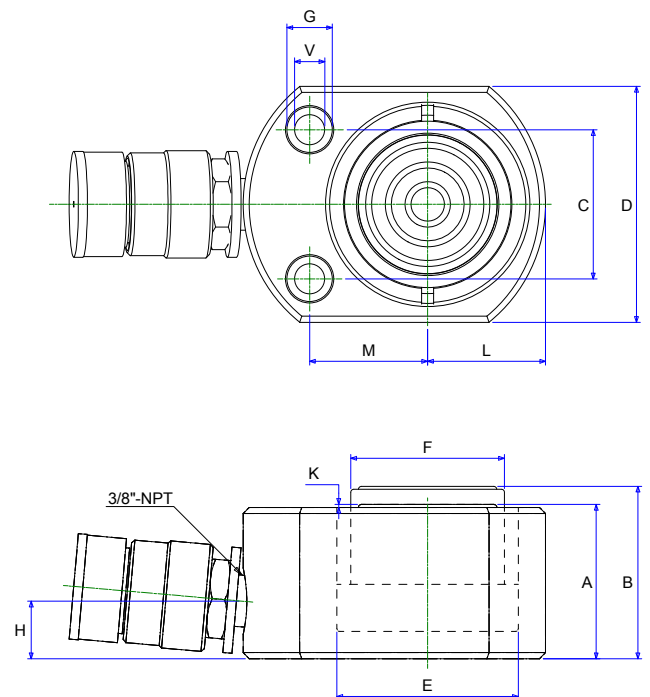


Model: NSLS series

Capacity : 5 - 150 ton
 Stroke : 6 - 17 mm
 Max. operating pressure : 700 bar

- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished, outside blasted with black nitride coating.

NSLS series

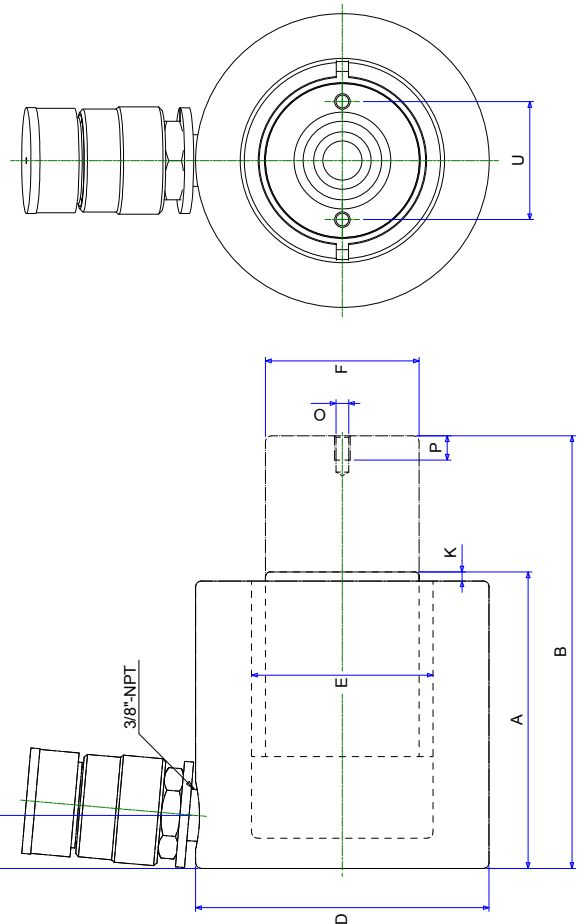


TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

| Type | Cap. ton | Stroke mm | Oil cap cm ³ | Height | | 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 |
|-----------|----------|-----------|-------------------------|--------|------|------|----------|--------|--------|--------|------|------|------|------|--------|--------|------|--------|-----------|
| | | | | Min. | Max. | | | | | | | | | | | | | | |
| NSLS 50 | 5 | 6 | 4.5 | 33 | 39 | 28.5 | 58.5x44 | 31 | 25.4 | 9.5 | 16 | 1 | 22 | 22 | - | - | - | 5.3 | 1.0 |
| NSLS 100 | 10 | 12 | 18.0 | 42 | 54 | 36.5 | 82.5x60 | 44 | 38 | 11 | 19 | 1 | 30 | 34 | - | - | - | 7.5 | 1.4 |
| NSLS 200 | 20 | 12 | 34.0 | 51 | 63 | 49.3 | 100x78 | 60 | 50.8 | 15 | 19 | 1 | 39 | 39 | - | - | - | 10 | 3.1 |
| NSLS 300 | 30 | 13 | 54.0 | 58 | 71 | 52.3 | 117.5x95 | 73 | 63.5 | 16 | 19 | 2 | 47.5 | 47.5 | - | - | - | 10 | 4.5 |
| NSLS 500 | 50 | 16 | 113.0 | 66 | 82 | 66.5 | 145x115 | 95 | 70 | 19 | 19 | 2 | 57.5 | 58 | - | - | - | 11 | 6.8 |
| NSLS 750 | 75 | 16 | 180.0 | 79 | 95 | 76.2 | 170x145 | 120 | 82.5 | 20.5 | 19 | 2 | 72.5 | 70 | - | - | - | 13.5 | 11.3 |
| NSLS 1000 | 100 | 16 | 229.0 | 85 | 101 | 76.2 | 185x160 | 135 | 92 | 20.5 | 19 | 2 | 80 | 78 | - | - | - | 13.5 | 14.5 |
| NSLS 1500 | 150 | 17 | 363.0 | 100 | 117 | 117 | 225x195 | 165 | 115 | 20.5 | 23 | 2 | 97.5 | 85 | - | - | - | 13.5 | 26.3 |

CYLINDERS

BETEX NSCS series, low height cylinder, short stroke, spring return, single acting



Model: NSCS series

Capacity : 10 - 100 ton
 Stroke : 38 - 62 mm
 Max. operating pressure : 700 bar

- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished, outside blasted with black nitride coating.

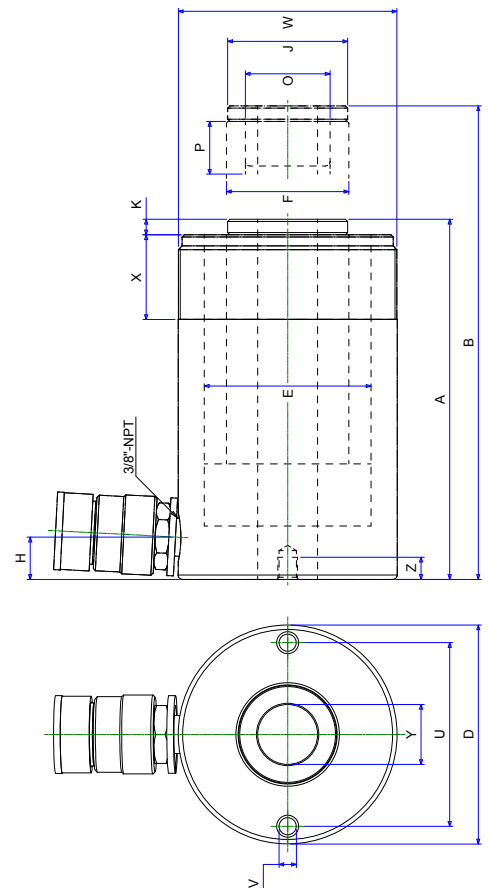
NSCS series

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

| Type | Cap. ton | Stroke mm | Oil cap cm ³ | A Min. | B Max. | 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 |
|-----------|----------|-----------|-------------------------|--------|--------|------|------|--------|--------|--------|------|------|------|------|--------|--------|------|--------|-----------|
| 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 |

CYLINDERS

BETEX NSHS series, hollow cylinder, spring return, single acting



Model: NSHS series

Capacity : 12 - 100 ton

Stroke : 8 - 158 mm

Max. operating pressure : 700 bar

- All cylinders are single acting with spring return.
- Pistons hard chromed.
- Cylinders inside roll-polished, outside blasted with black nitride coating.



TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

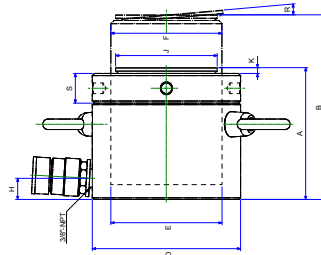
NSHS series

centre hole

| Type | Cap. ton | Stroke mm | Oil cap cm ³ | A Height | | D ø 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 un | X mm | Y ø mm | Z mm | Weight Kg |
|-----------|----------|-----------|-------------------------|----------|-------|--------|--------|--------|------|------|------|------------|------|------|----------|-----------|------|--------|------|-----------|
| | | | | 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 9/16"-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 9/16"-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 LOCK NUT

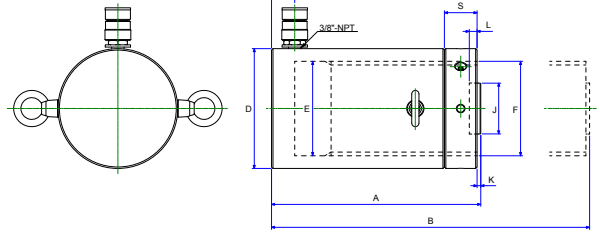
BETEX JLLC series, high tonnage cylinder, load return, single acting



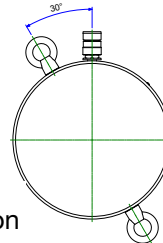
Optional Tilt Saddle (TSA)

Model: JLLC series

Capacity : 50-1000 ton
Stroke : 50-300 mm.
Max. operating pressure : 700 bar



Model JLLC50-200T



Model JLLC300-1000T

- Single-acting, load return
- 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 on all models
 - Cylinders outside blasted with black nitride coating.

JLLC series

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

| Type | Cap. ton | Stroke mm | Oil cap. cm ³ | Overall 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 | | |
|-------------|----------|-----------|--------------------------|-------------------|------|--------|--------|---------|------|------|------|------|------|-----------|----------------------|-------|----------|
| | | | | Min. | Max. | | | | | | | | | | J1 mm | K1 mm | Type |
| 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 |
| JLLC 1506 | 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 LOCK NUT

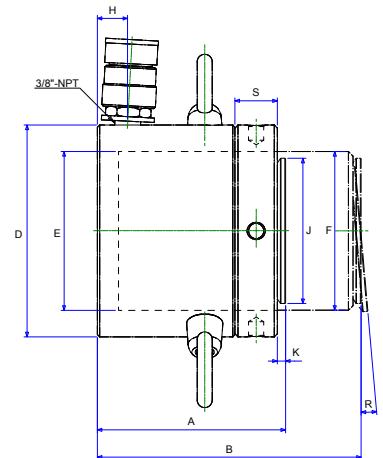
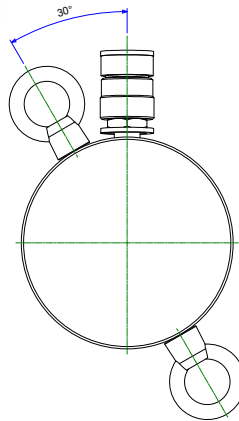
BETEX JLPC series, high tonnage cylinder, load return, compact, single acting



Model: JLPC series

Capacity : 60 - 520 ton
Stroke : 45 - 50 mm
Max. operating pressure : 700 bar

- Extremely low height for use in confined areas
- Single-acting, load return
- 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
- Overflow port functions as a stroke limiter
- High flow coupler and dust cap included on all models
- Cylinders inside roll-polished, outside blasted with black nitride coating.



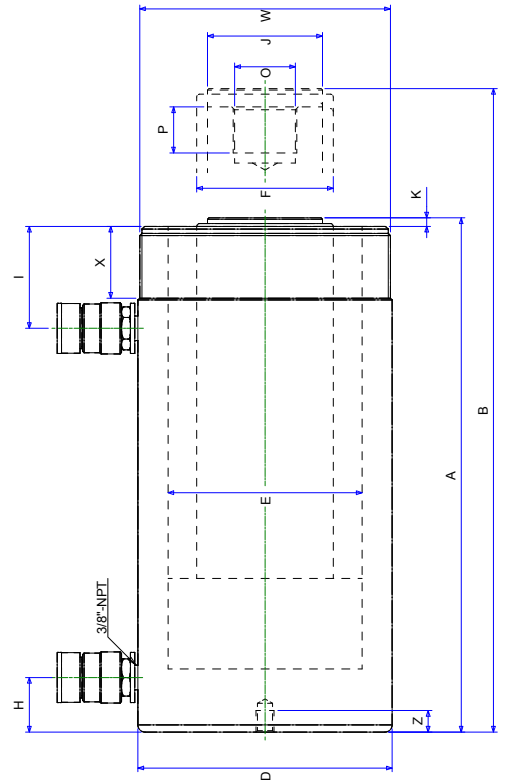
TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

JLPC series

| Type | Cap. ton | Stroke mm | Oil cap cm ³ | Overall height mm | | D mm | E ø mm | F ø mm | H mm | J ø mm | K mm | R mm | S mm | Weight Kg |
|-----------|----------|-----------|-------------------------|-------------------|------|------|--------|---------|------|--------|------|------|------|-----------|
| | | | | Min. | Max. | | | | | | | | | |
| JLPC 602 | 60 | 50 | 433 | 124 | 174 | 140 | 105 | Tr105x6 | 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 |

CYLINDERS

BETEX NDAC series, double acting



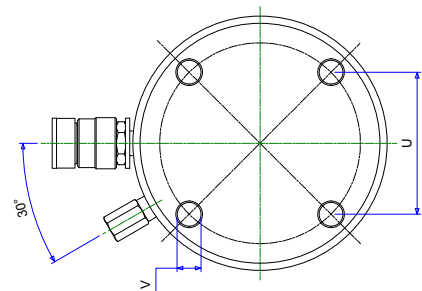
Model: NDAC series

Capacity : 10 - 100 ton
 Stroke : 150 - 470 mm
 Max. operating pressure : 700 bar

- Perfect for construction, shil yards, utilities, mining and maintenance shops.
- Pistons hard chromed.
- Ram inside roll-polished, outside blasted with black nitride coating.



Overpressure valve



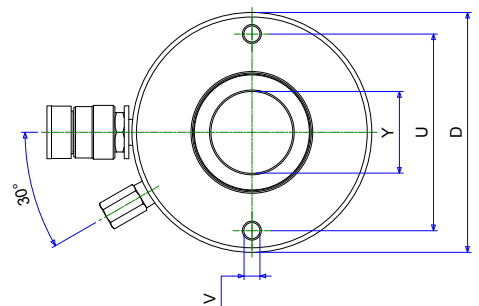
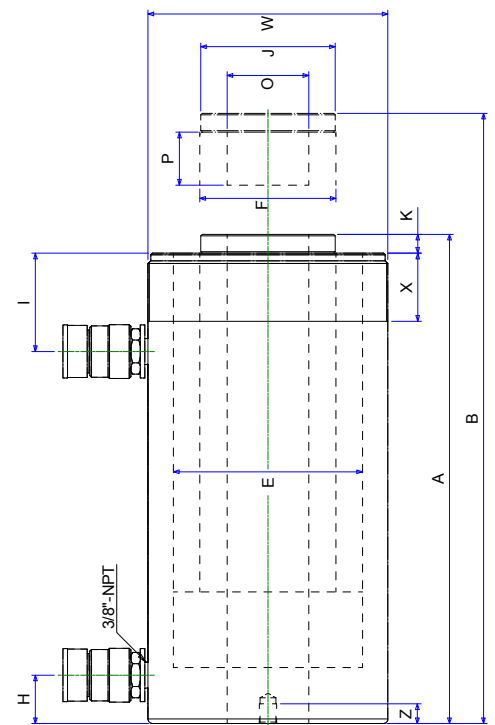
NDAC series

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

| Type | Cap. ton | | Stroke mm | Oil cap cm ³ | | A Height | | D ø mm | E ø mm | F ø mm | H mm | I mm | J ø mm | K mm | O ø un | P mm | U mm | V ø unc | Z mm | W ø un | 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 | 1/2"-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 | 14 | 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 |

CYLINDERS

BETEX NDAH series, hollow cylinder, double acting



Model: NDAH series

Capacity : 30-100 ton
 Stroke : 76-257 mm.
 Max. operating pressure : 700 bar

- All cylinders are hollow and double acting
- Hard chromed pistons
- Cylinders inside roll-polished, outside blasted with black nitride coating.
- Perfect for construction, ship yards, utilities, mining and equipment maintenance

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

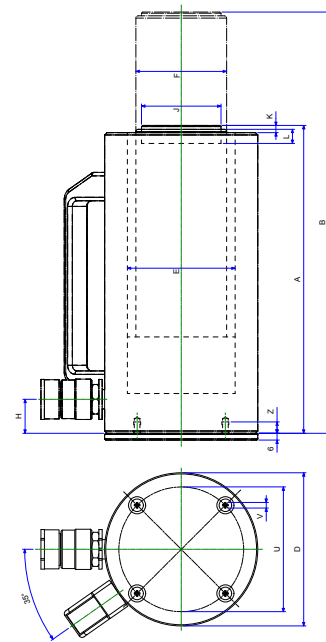
NDAH series

| Type | Cap. ton | | Stroke mm | Oil cap cm ³ | | A Height mm | | D ø mm | E ø mm | F ø mm | H mm | I mm | J ø mm | K mm | O ø un | P mm | U mm | V mm | Z mm | W ø un | X mm | Y ø mm | Weight Kg |
|------------|----------|------|-----------|-------------------------|------|-------------|-------|--------|--------|--------|------|------|--------|------|-----------|------|------|---------|------|-----------|------|--------|-----------|
| | Push | Pull | | Push | Pull | Min. | Max. | | | | | | | | | | | | | | | | |
| 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 |

Centre Hole

ALUMINIUM CYLINDERS

BETEX SSA series, light weight aluminium cylinder, spring return, single acting



Capacity : 20-100 ton
 Stroke : 50-250 mm.
 Max. operating pressure : 700 bar

Model: SSA series

- 8 standard models available for 50 to 100 tons.
- Up to 60% lighter than steel cylinders.
- Heavy duty spring for easy and full retraction.
- Large saddle surface for angle load protection.
- High-flow quality couplers.
- Models are provided with carrying handles.
- Rod wiper protects inner rod from dirt.
- Black hard-anodized housing and piston reduce wear and corrosion.

Base Plate Mounting holes dimensions (mm)

| Model cylinder/ cap. ton | Bolt circle U mm | Thread V mm | Thread Dept X mm |
|-----------------------------|------------------------|-------------------|------------------------|
| SSA-20 | 70 | M6 x 1.0 | 10 |
| SSA-30 | 80 | M6 x 1.0 | 10 |
| SSA-50 | 110 | M6 x 1.0 | 10 |
| SSA-100 | 160 | M6 x 1.0 | 10 |

Custom stroke lengths and capacities are available.

SSA series

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

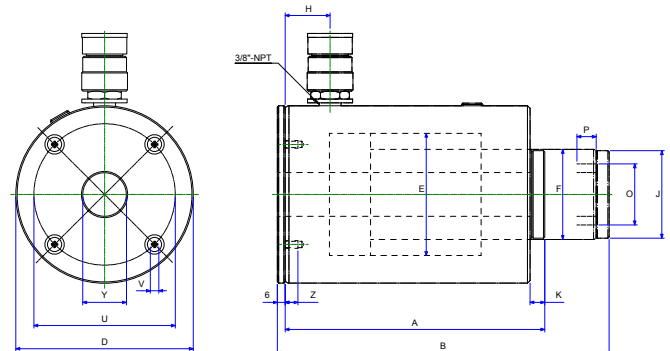
| Type | Cap. ton | Stroke mm | Oil cap cm ³ | A Overall height | | D ø mm | E ø mm | F ø mm | H ø mm | J ø mm | K mm | L mm | Weight Kg |
|-----------|----------|-----------|-------------------------|------------------|---------|--------|--------|--------|--------|--------|------|------|-----------|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

ALUMINIUM CYLINDERS

BETEX ACHC series, light weight aluminium cylinder, hollow, spring return, single acting



Model ACHC 30-60T



Model: ACHC series

- Half the weight of steel cylinders
- Heavy duty spring for fast & full return
- Chrome plated centre hole for extra protection
- Large bearing surfaces for side load protection
- Carrying handles standard on some models
- Black hard-anodized coating reduces wear & corrosion
- Stop rings for piston blow-out protection
- Rod wiper protects inner rod from dirt

Capacity : 30 & 60 ton
 Stroke : 50-150 mm.
 Max. operating pressure : 700 bar

Base Plate Mounting holes dimensions (mm)

| Model cylinder/cap. ton | Bolt circle U mm | Thread V mm | Thread Dept Z mm | Centre hole Y ø mm |
|-------------------------|------------------|-------------|------------------|--------------------|
| ACHC-30 | 110 | M6 x 1.0 | 10 | 34 |
| ACHC-60 | 160 | M6 x 1.0 | 10 | 54 |

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

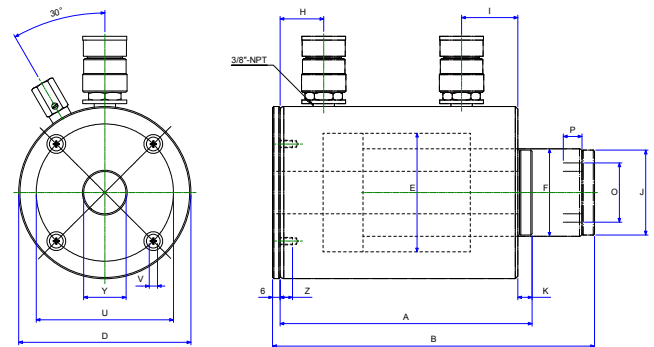
| Type | Cap. ton | Stroke mm | Oil cap cm ³ | A Overall height mm Min. | B Overall height mm Max. | D ø mm | E ø mm | F ø mm | H mm | J ø mm | K mm | O Ø un | P mm | Weight Kg |
|----------|----------|-----------|-------------------------|--------------------------|--------------------------|--------|--------|--------|------|--------|------|-----------|------|-----------|
| ACHC 302 | 30 | 50 | 275 | 202 | 252 | 138 | 95 | 70 | 35 | 68 | 11.5 | 1 7/8"-16 | 25 | 10 |
| ACHC 306 | 30 | 150 | 825 | 327 | 477 | 138 | 95 | 70 | 35 | 68 | 11.5 | - | 25 | 14 |
| ACHC 602 | 60 | 50 | 447.5 | 250 | 300 | 200 | 125 | 100 | 50 | 89 | 14 | 2 3/4"-16 | 25 | 19.5 |
| ACHC 606 | 60 | 150 | 1342 | 350 | 500 | 200 | 125 | 100 | 50 | 89 | 14 | - | 25 | 25 |

ALUMINIUM CYLINDERS

BETEX ADHC series, light weight aluminium cylinder, hollow, double acting



Model ADHC cylinders 30-60T



Model: ADHC series

- Half the weight of steel cylinders
- Steel piston for protection against load damage
- Cylinders inside roll-polished, outside blasted with black nitride coating
- All models are provided with carrying handles
- Black hard-anodized coating reduces wear and corrosion
- Stop rings for piston blow-out protection
- Rod wiper protects inner rod from dirt

Capacity : 30-60 ton
 Stroke : 50-250 mm.
 Max. operating pressure : 700 bar

Base Plate Mounting holes dimensions (mm)

| Model cylinder/cap. ton | Bolt circle U mm | Thread V mm | Thread Dept Z mm |
|-------------------------|------------------|-------------|------------------|
| ADHC-30 | 110 | M6 x 1.0 | 10 |
| ADHC-60 | 160 | M6 x 1.0 | 10 |

ADHC series

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

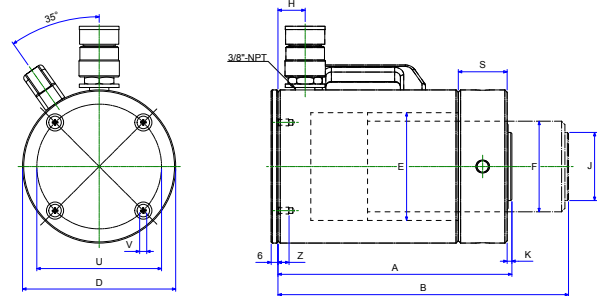
| Type | Cap. ton | Stroke mm | Cap. ton Push | Cap. ton Pull | Oil cap cm ³ Push | Oil cap cm ³ Pull | Overall height mm | | D ø mm | E ø mm | F ø mm | H mm | I mm | J ø mm | K mm | P mm | Centre hole | | Weight Kg |
|-----------|----------|-----------|---------------|---------------|------------------------------|------------------------------|-------------------|------|--------|--------|--------|------|------|--------|------|------|-------------|--------|-----------|
| | | | | | | | Min. | Max. | | | | | | | | | Ø un | Y ø mm | |
| 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 | 34 | 9.3 |
| ADHC 306 | 30 | 150 | 38.5 | 22.7 | 825 | 486 | 327 | 477 | 138 | 95 | 70 | 35 | 45 | 68 | 11.5 | 25 | - | 34 | 13 |
| ADHC 3010 | 30 | 250 | 38.5 | 22.7 | 1374 | 810 | 430 | 680 | 138 | 95 | 70 | 35 | 45 | 68 | 11.5 | 25 | - | 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 | 54 | 15.5 |
| ADHC 606 | 60 | 150 | 62.6 | 31 | 1342 | 662 | 350 | 500 | 200 | 125 | 100 | 50 | 50 | 89 | 14 | 25 | - | 54 | 23 |
| ADHC 6010 | 60 | 250 | 62.6 | 31 | 2237 | 1104 | 433 | 683 | 200 | 125 | 100 | 50 | 50 | 89 | 14 | 25 | - | 54 | 30.5 |

ALUMINIUM CYLINDERS WITH LOCK NUT

BETEX ALNC series, light weight aluminium-cylinder, load return, single acting



Model ALNC cylinders 50-100T



Capacity : 20-100 ton
Stroke : 50-250 mm.
Max. operating pressure : 700 bar

Model: ALNC series

- Half the weight of steel cylinders
- Locknut for positive and safe load holding over a long period of time.
- Large bearing surfaces for side load protection
- All models are provided with carrying handles
- Black hard-anodized coating reduces wear & corrosion
- Stop rings for piston blow-out protection

Base Plate Mounting holes dimensions (mm)

| Model cylinder/ cap. ton | Bolt circle U mm | Thread V mm | Thread Depth X mm |
|-----------------------------|------------------------|-------------------|-------------------------|
| ALNC-20 | 70 | M6 x 1.0 | 10 |
| ALNC-30 | 80 | M6 x 1.0 | 10 |
| ALNC-50 | 110 | M6 x 1.0 | 10 |
| ALNC-100 | 160 | M6 x 1.0 | 10 |

TIP! Use in combination with hand and foot pumps, pages 93-105. Accessories, pages 108-112

ALNC series

| Type | Cap. ton | Stroke mm | Oil cap cm ³ | A Overall height mm | | D Ø mm | E Ø mm | F Ø mm | H Ø mm | J Ø mm | K mm | L mm | Weight Kg |
|------------|----------|-----------|-------------------------|---------------------|------|--------|--------|---------|--------|--------|------|------|-----------|
| | | | | Min. | Max. | | | | | | | | |
| ALNC 202 | 20 | 50 | 166 | 212 | 262 | 92 | 65 | Tr55×3 | 25 | 40 | 3 | 25 | 4.8 |
| ALNC 204 | | 100 | 332 | 262 | 362 | 92 | 65 | Tr55×3 | 25 | 40 | 3 | 25 | 5.5 |
| ALNC 206 | | 150 | 498 | 312 | 462 | 92 | 65 | Tr55×3 | 25 | 40 | 3 | 25 | 6.3 |
| ALNC 208 | | 200 | 664 | 412 | 612 | 92 | 65 | Tr55×3 | 25 | 40 | 3 | 25 | 6.9 |
| ALNC 302 | 30 | 50 | 221 | 205 | 255 | 110 | 75 | Tr60×3 | 25 | 40 | 3 | 30 | 6.9 |
| ALNC 304 | | 100 | 442 | 255 | 355 | 110 | 75 | Tr60×3 | 25 | 40 | 3 | 30 | 7.7 |
| ALNC 306 | | 150 | 663 | 305 | 455 | 110 | 75 | Tr60×3 | 25 | 40 | 3 | 30 | 7.6 |
| ALNC 308 | | 200 | 884 | 355 | 555 | 110 | 75 | Tr60×3 | 25 | 40 | 3 | 30 | 9.6 |
| ALNC 502 | 50 | 50 | 354 | 212 | 262 | 135 | 95 | Tr80×4 | 30 | 60 | 3 | 43 | 9.3 |
| ALNC 504 | | 100 | 708 | 262 | 362 | 135 | 95 | Tr80×4 | 30 | 60 | 3 | 43 | 10.7 |
| ALNC 506 | | 150 | 1062 | 312 | 462 | 135 | 95 | Tr80×4 | 30 | 60 | 3 | 43 | 13.7 |
| ALNC 508 | | 200 | 1418 | 362 | 562 | 135 | 95 | Tr80×4 | 30 | 60 | 3 | 43 | 14.5 |
| ALNC 5010 | | 250 | 1770 | 412 | 662 | 135 | 95 | Tr80×4 | 30 | 60 | 3 | 43 | 16.5 |
| ALNC 1002 | 100 | 50 | 715 | 235 | 285 | 200 | 135 | Tr105×6 | 45 | 70 | 3 | 51 | 21.7 |
| ALNC 1004 | | 100 | 1430 | 285 | 385 | 200 | 135 | Tr105×6 | 45 | 70 | 3 | 51 | 25.2 |
| ALNC 1006 | | 150 | 2145 | 335 | 485 | 200 | 135 | Tr105×6 | 45 | 70 | 3 | 51 | 29.2 |
| ALNC 1008 | | 200 | 2860 | 385 | 585 | 200 | 135 | Tr105×6 | 45 | 70 | 3 | 51 | 33 |
| ALNC 10010 | | 250 | 3575 | 435 | 685 | 200 | 135 | Tr105×6 | 45 | 70 | 3 | 51 | 35.4 |

HAND PUMPS

BETEX PB / HC SERIES, STEEL HAND PUMPS, HEAVY DUTY, 700 BAR



- Our 2-speed hand pumps are characterized by their rugged construction and easy-operation handles.
- The rugged welded construction effectively prevents collision damage and deformation.
- The professional choice for a wide range of industrial applications.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- External control and locking of maximum pressure.
- Carrying handles for easy portability.

Also available as **HAND PUMP SET**, including:

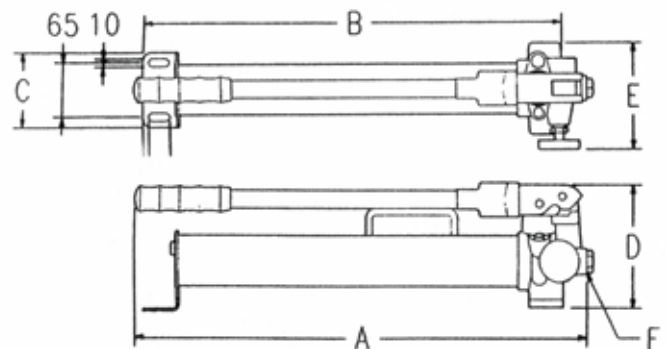
- T-adapter
- gauge
- hose 1.5 mtr
- high-flow quality couplers
- steel storage case
- except HC 2500, this is not available as a set



Combi-set PB 700

PB/HC series

| Hand pump | | Hand pump set | |
|-----------|----------|---------------|----------|
| Type | Art. no. | Type | Art. no. |
| PB 350 | 7262350 | PB 350 | 7262351 |
| PB 600 | 7262600 | PB 600 | 7262601 |
| PB 700 | 7262700 | PB 700 | 7262701 |
| HC 1500 | 72621500 | HC 1500 | 72621501 |
| HC 2000 | 72622000 | HC 2000 | 72622001 |
| HC 2500 | 72622500 | | |



TIP! Use in combination with accessories page 108 -112

| Type | Pressure rating (bar) | | Usable oil capacity cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | Oil port thread F | Weight Kg |
|---------|-----------------------|-----------|-------------------------------------|---------------------------------------|-----------|------|------|------|------|------|-------------------|-----------|
| | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | |
| PB 350 | 13.8 | 700 | 350 | 13.0 | 2.8 | 335 | 303 | 90 | 146 | 128 | 3/8"-NPT | 5.5 |
| PB 600 | 13.8 | 700 | 600 | 13.0 | 2.8 | 543 | 480 | 90 | 146 | 142 | 3/8"-NPT | 7.3 |
| PB 700 | 13.8 | 700 | 700 | 13.0 | 2.8 | 632 | 541 | 90 | 146 | 128 | 3/8"-NPT | 7.6 |
| HC 1500 | 13.8 | 700 | 1500 | 13.0 | 2.8 | 633 | 551 | 106 | 200 | 142 | 3/8"-NPT | 11.2 |
| HC 2000 | 13.8 | 700 | 2000 | 13.0 | 2.8 | 580 | 523 | 140 | 189 | 148 | 3/8"-NPT | 11.5 |
| HC 2500 | 13.8 | 700 | 2500 | 13.0 | 2.8 | 713 | 632 | 106 | 200 | 142 | 3/8"-NPT | 12 |

HAND PUMPS

BETEX AHP SERIES, LIGHTWEIGHT ALUMINIUM HAND PUMPS, 700 BAR



- Our 2-speed hand pumps are characterized by their rugged construction and easy-operation handles.
- Aluminium alloy construction and handy release knobs with locking mechanism are perfect for industrial applications and daily operations.
- The lightweight design makes it an easily portable and portability
- Double-acting design on AHP703D is ideal for double-acting cylinders, without the need for extra control valve and adaptors.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.

Also available as **HAND PUMP SET**, including:

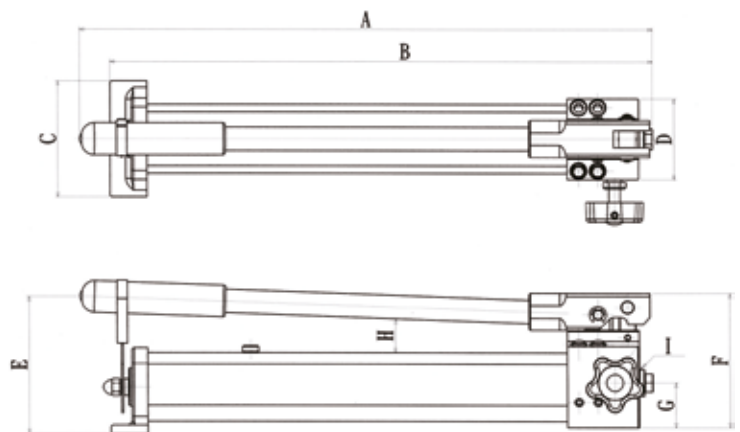
- T-adapter
- gauge
- hose 1.5 mtr
- couplings
- steel storage case



Combi-set AHP 702

AHP series

| Hand pump | | Hand pump set | |
|-----------|----------|---------------|----------|
| Type | Art. no. | Type | Art. no. |
| AHP 701 | 7265500 | AHP 701 | 7265501 |
| AHP 702 | 7265700 | AHP 702 | 7265701 |
| AHP 703 | 7265750 | AHP 703 | 7265751 |
| AHP 703D | 7265760 | AHP 703D | 7265761 |



TIP! Use in combination with accessories page 108 -112

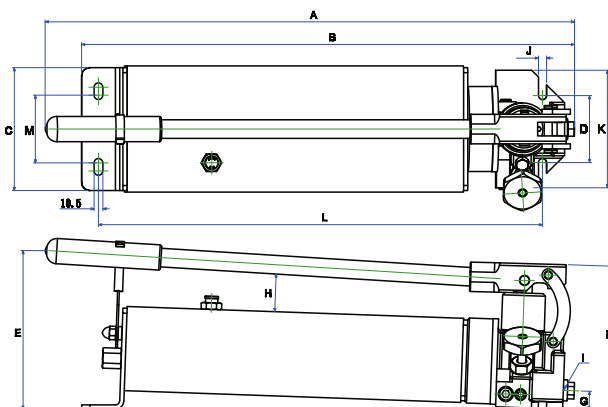
| Type | Pressure rating (bar) | | Usable oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I | Weight Kg |
|----------|-----------------------|-----------|---------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|-------|------|-----------|-----------|
| | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | |
| AHP 701 | 13.8 | 700 | 350 | 12.9 | 1 | 391 | 361 | 110 | 77 | 140 | 127 | 42.5 | 37 | 3/8" -NPT | 2.3 |
| AHP 702 | 13.8 | 700 | 1000 | 12.9 | 2.3 | 542 | 513 | 110 | 77 | 130 | 127 | 42.5 | - | 3/8" -NPT | 3.5 |
| AHP 703 | 13.8 | 700 | 2000 | 12.9 | 2.3 | 623 | 556 | 150 | 102 | 135 | 135 | 50 | - | 3/8" -NPT | 6 |
| AHP 703D | 13.8 | 700 | 2000 | 12.9 | 2.3 | 623 | 556 | 150 | 102 | 135 | 135 | 24/37 | - | 3/8" -NPT | 7.0 |

HAND PUMPS

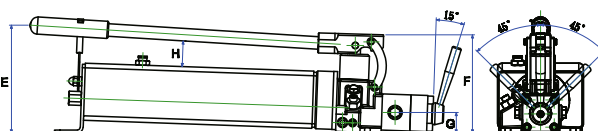
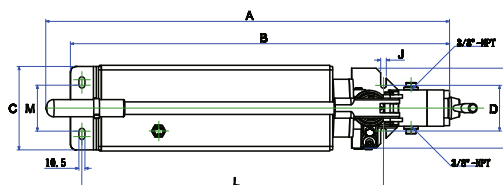
BETEX HP 35 SERIES, STEEL HAND PUMPS, HEAVY-DUTY, 3.5 LITER, 700 BAR



- Max. working pressure: 700 bar.
- Large 3/8" pressure port for maximum flow.
- Low handle effort for easy operation.
- Two-speed pump provides rapid pumping to load the cylinder quickly.
- Our hand pumps are characterized by their rugged steel construction and easy-operation handles.
- The handy release knobs with locking mechanism are perfect for industrial applications and daily operations.
- Specially designed HP 35D for double-acting cylinders without the need for extra control valve and adapters.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.



HP 35 model



HP 35D model (double-acting)

HP 35 series

| Type | Art. no. |
|--------|----------|
| HP 35 | 7200056 |
| HP 35D | 7200057 |

TIP! Use in combination with accessories page 108 -112

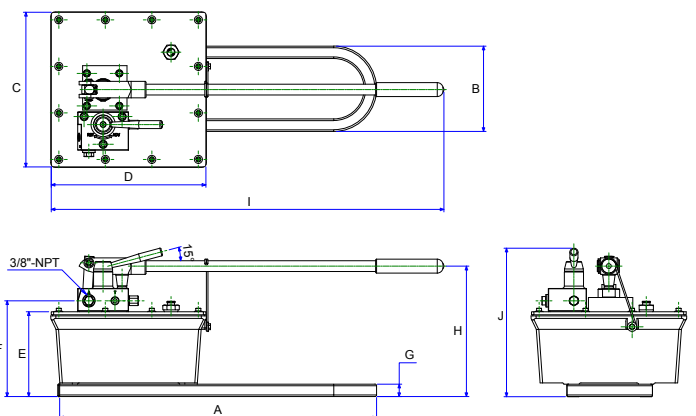
| Type | Pressure rating (bar) | | Usable oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I | Weight Kg |
|--------|-----------------------|-----------|---------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|-------|------|-----------|-----------|
| | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | |
| HP 35 | 28 | 700 | 3500 | 40 | 3 | 629 | 586 | 146 | 79.7 | 79.7 | 79.7 | 22.35 | 45 | 3/8" -NPT | 16.5 |
| HP 35D | 28 | 700 | 3500 | 40 | 3 | 706 | 663 | 146 | 79.7 | 79.7 | 79.7 | 36 | 45 | 3/8" -NPT | 16.8 |

HAND PUMPS

BETEX HP 80 SERIES, STEEL HAND PUMPS, HEAVY-DUTY, 8 LITER, 700 BAR



- Forged construction made of steel
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- New inlet/outlet design features slow deflation function reducing noise, and allows multi-directional operation.
- Two-speed pumps provide rapid pumping to load the cylinder quickly
- Specially designed HP 80D for double-acting cylinders without the need for extra control valve and adapters.



HP 80 series

| Type | Art. no. |
|--------|----------|
| HP 80 | 7200063 |
| HP 80D | 7200064 |

TIP! Use in combination with accessories page 108 -112

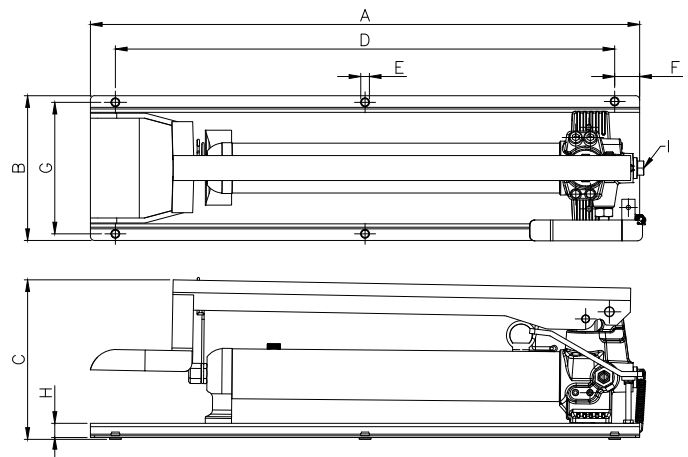
| Type | Pressure rating (bar) | | Usable oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | I mm | J mm | Weight Kg |
|--------|-----------------------|-----------|---------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|------|------|------|------|-----------|
| | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | | |
| HP 80 | 27.5 | 700 | 8000 | 113 | 4 | 635 | 171 | 310 | 310 | 170 | 192 | 25 | 261 | 787 | 298 | 25 |
| HP 80D | 27.5 | 700 | 8000 | 113 | 4 | 635 | 171 | 310 | 310 | 170 | 194 | 25 | 261 | 787 | 318 | 25 |

FOOT PUMPS

BETEX FHB SERIES, STEEL FOOT PUMPS, 700 BAR



- Max. working pressure: 700 bar
- Large 3/8" pressure port for maximum flow.
- Betex® innovative foot pumps are not only attractively designed, but are also durable and stable.
- Foot-operated pump and release pedal, providing accurate control for operating in different conditions
- Available as two-speed operation in forged steel construction.
- Spring-loaded foot pedal is convenient and easy to operate.
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.



FHB series

| Type | Art. no. |
|---------|----------|
| FHB 350 | 7200058 |
| FHB 600 | 7200059 |
| FHB 700 | 7200060 |

TIP! Use in combination with accessories page 108 -112

| Type | Pressure rating (bar) | | Usable oil cap. cm ³ | Oil volume per stroke cm ³ | | A mm | B mm | C mm | D mm | E ø mm | F mm | G mm | H mm | I | Weight Kg |
|---------|-----------------------|-----------|---------------------------------|---------------------------------------|-----------|------|------|------|------|--------|------|------|------|----------|-----------|
| | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | |
| FHB 350 | 20 | 700 | 350 | 13 | 2.8 | 474 | 174 | 192 | 414 | 10.6 | 30 | 158 | 17 | 3/8"-NPT | 8.5 |
| FHB 600 | 20 | 700 | 600 | 13 | 2.8 | 660 | 174 | 192 | 600 | 10.6 | 30 | 158 | 17 | 3/8"-NPT | 10.8 |
| FHB 700 | 20 | 700 | 700 | 13 | 2.8 | 708 | 174 | 192 | 648 | 10.6 | 30 | 160 | 17 | 3/8"-NPT | 11.1 |

AIR PUMPS

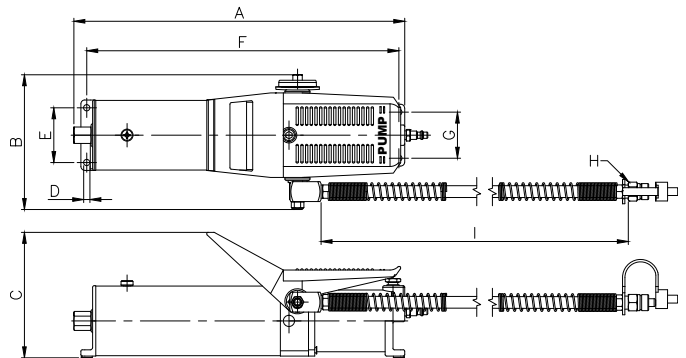
BETEX AP 921 SERIES, AIR-HYDRAULIC FOOT PUMP, 700 BAR



- The air-driven hydraulic pump is designed for use with single-acting cylinders and tools like the Betex cylinder series.
- Rugged construction: most components are made of aluminium alloy and are built for long service life, easy operation and portability
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation.
- New inlet/outlet design features slow deflation function reducing noise.

AP series

| Type | Art. no. |
|--------|----------|
| AP 921 | 7200061 |



AP 921

TIP! Use in combination with accessories page 108 -112

| Type | Pressure rating max. (bar) | Usable oil cap. cm ³ | Oil volume per cm ³ /min | | Air pressure bar | A mm | B mm | C mm | D ø mm | E mm | F mm | G mm | H | I m | Weight Kg |
|--------|----------------------------|---------------------------------|-------------------------------------|-----------|------------------|------|------|------|--------|------|------|------|----------|-----|-----------|
| | | | 1st stage | 2nd stage | | | | | | | | | | | |
| AP 921 | 700 | 750 | 700 | 100 | 7 -10 | 423 | 170 | 160 | 8 | 70 | 399 | 59 | 1/4"-NPT | 1.5 | 5.4 |

AIR PUMPS

BETEX AP 1600/3000 SERIES, AIR-HYDRAULIC FOOT PUMP, 700 BAR



AP 1600S



AP 3000S



AP 1600D

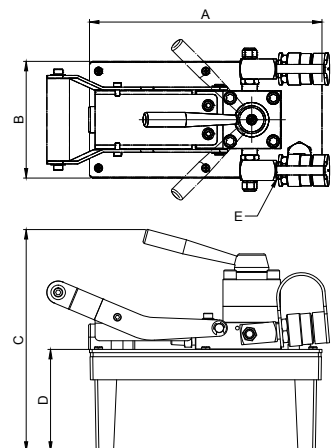


AP 3000D

- The air-driven hydraulic pump is designed for use with single-acting cylinders and tools like the Betex cylinder serie.
- Rugged construction: most components are made of aluminium alloy and are built for long service life, easy operation and portability
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation
- New inlet/outlet design features slow deflation function reducing noise,
- The D models have been specially designed for double-acting cylinders without the need for extra control valve and adapters.
- The AP 1600S is also available as set.

AP series

| Type | AP 1600D | AP 3000S | AP 3000D | AP 1600S Set |
|----------|----------|----------|----------|--------------|
| Art. no. | 72000621 | 72000622 | 72000623 | 72000626 |



TIP! Use in combination with accessories page 108 -112

| Type | Function | Pressure rating max. (bar) | Usable oil cap. cm ³ | Oil volume per cm ³ /min | | Air supply (bar) | A mm | B mm | C mm | D mm | E | Weight Kg |
|----------|----------|----------------------------|---------------------------------|-------------------------------------|-----------|------------------|------|------|------|-------|----------|-----------|
| | | | | 1st stage | 2nd stage | | | | | | | |
| AP 1600S | single | 700 | 1600 | 1250 | 193 | 7 -10 | 257 | 129 | 205 | 112.6 | 3/8"-NPT | 7.5 |
| AP 1600D | double | 700 | 1600 | 1250 | 193 | 7 -10 | 257 | 129 | 245 | 112.6 | 3/8"-NPT | 8.3 |
| AP 3000S | single | 700 | 3000 | 1250 | 193 | 7 -10 | 325 | 160 | 205 | 113.5 | 3/8"-NPT | 10.0 |
| AP 3000D | double | 700 | 3000 | 1250 | 193 | 7 -10 | 325 | 160 | 246 | 113.5 | 3/8"-NPT | 10.3 |

AIR PUMPS

BETEX AP 8000 SERIES, AIR-HYDRAULIC PUMPS, 700 BAR



AP 8000D

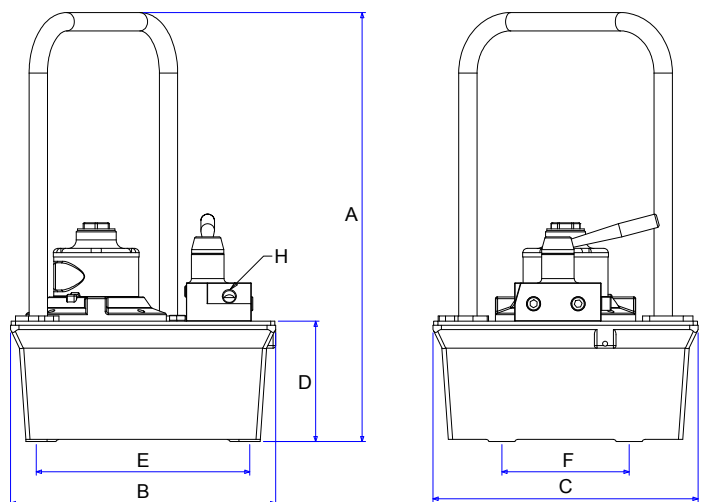


AP 8000S

- Two speed operation for fast cylinder advance
- 8L durable aluminium reservoir
- Air motor capable of starting under full load
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation
- Specially designed AP 8000D is for double-acting cylinders without the need for extra control valve and adapters

AP series

| Type | Art. no. |
|----------|----------|
| AP 8000S | 72000624 |
| AP 8000D | 72000625 |

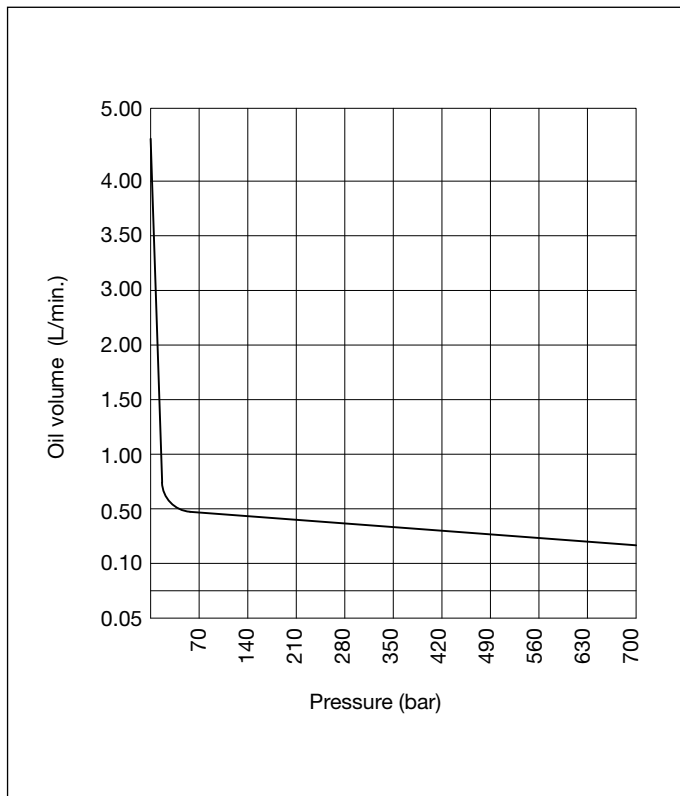


TIP! Use in combination with accessories page 108 -112

| Type | Function | Pressure rating max. (bar) | Usable oil cap. cm ³ | Oil volume per cm ³ /min | | A mm | B mm | C mm | D mm | E mm | F mm | H | Weight Kg |
|----------|----------|----------------------------|---------------------------------|-------------------------------------|-----------|------|------|------|------|------|------|----------|-----------|
| | | | | 1st stage | 2nd stage | | | | | | | | |
| AP 8000S | single | 700 | 8000 | 4700 | 280 | 505 | 312 | 312 | 142 | 251 | 149 | 3/8"-NPT | 20 |
| AP 8000D | double | 700 | 8000 | 4700 | 280 | 505 | 312 | 312 | 142 | 251 | 149 | 3/8"-NPT | 20 |

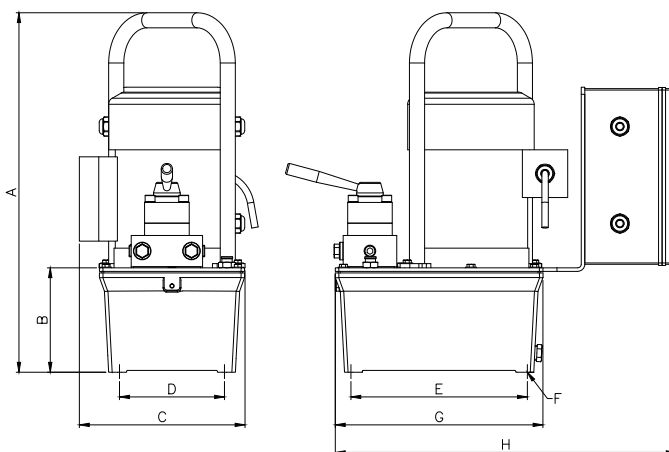
ELECTRIC PUMPS

BETEX EP 13 SERIES, ELEKTRIC HYDRAULIC PUMPS, 3 LITER, 700 BAR



EP 13S

- Electric pump, 120/230V, 5A, 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
- Specially designed EP 13D for double-acting cylinders without the need for extra control valve and adapters



EP 13 series

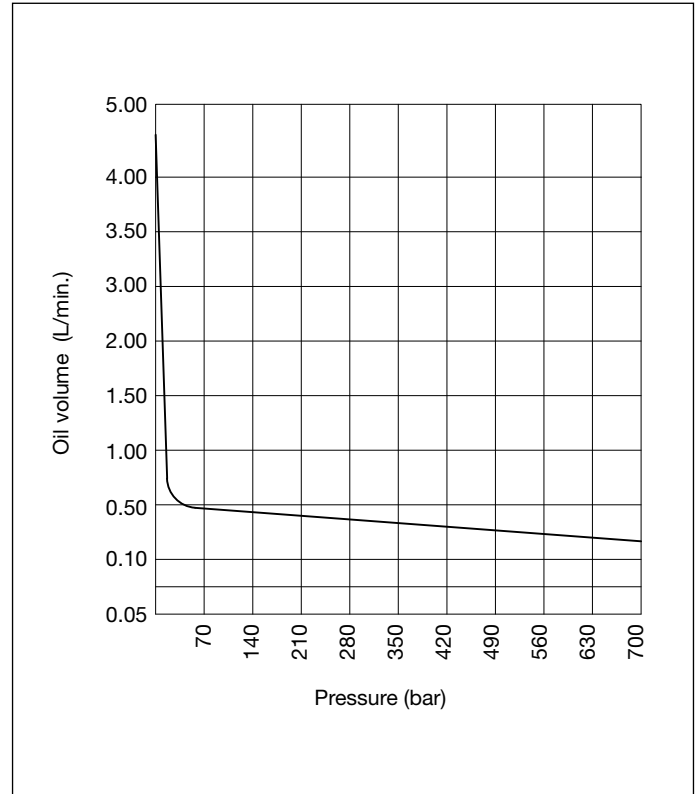
| Type | Art. no. | Voltage | Valve | Valve function | Motor |
|--------|----------|---------|---------|--------------------------|---|
| EP 13S | 8300010 | 120V | 2 pos./ | Hold / return | 0.37kW, 120V/10A-230V/5A 50/60Hz, single phase |
| EP 13S | 8300012 | 230V | 2-way | | |
| EP 13D | 8300011 | 120V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

TIP! Use in combination with accessories page 108 -112

| Type | Function | Content reservoir (liter) | Usable oil (liter) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) | | | | A mm | B mm | C mm | D mm | E mm | F | G mm | H mm | Weight Kg |
|--------|----------|---------------------------|--------------------|---------------------|---|-------|---------|---------|------|------|------|-------|------|------------------------|------|------|-----------|
| | | | | | 0 bar | 7 bar | 350 bar | 700 bar | | | | | | | | | |
| EP 13S | single | 3 | 2.8 | 700 | 4200 | 2800 | 330 | 300 | 512 | 149 | 236 | 149.5 | 251 | 1/4"- 20UNF 10 deep | 296 | 485 | 26.5 |
| EP 13D | double | 3 | 2.8 | 700 | 4200 | 2800 | 330 | 300 | 512 | 149 | 236 | 149.5 | 251 | 1/4"- 20UNF 10 deep | 296 | 485 | 26.5 |

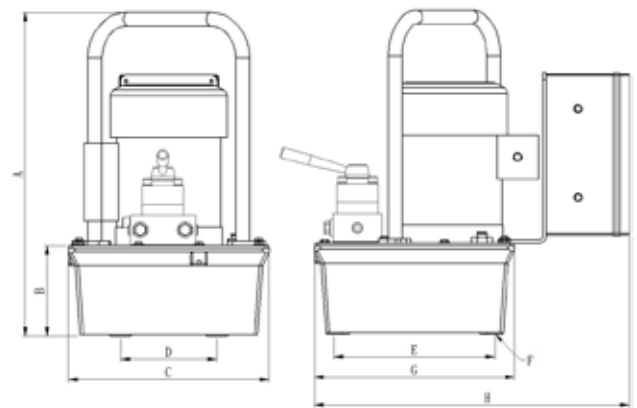
ELECTRIC PUMPS

BETEX EP 18 SERIES, ELECTRO-HYDRAULIC PUMPS, 8 LITER, 700 BAR



EP18DS

- Electric pump, 120/230V, 5A, 50/60Hz universal motor, thermal protected
- Very quiet (about 80dBA at 700 bar)
- Remote control incl. cord (3 mtr)
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation
- The EP 18D has been specially designed for double-acting cylinders without the need for extra control valve and adapters
- Type EP 18SS and EP 18DS are fitted with a solenoid valve



EP 18 series

| Type | Valve | Valve function | Motor |
|------------|------------------|--------------------------|-----------------------------|
| EP 18S(S)* | 2 pos./ 2-way | Hold / return | 0.37kW, 120V/10A-230V/5A |
| EP 18D(S)* | 3 pos./ 4-way | Advance / hold return | 50/60Hz, single phase |

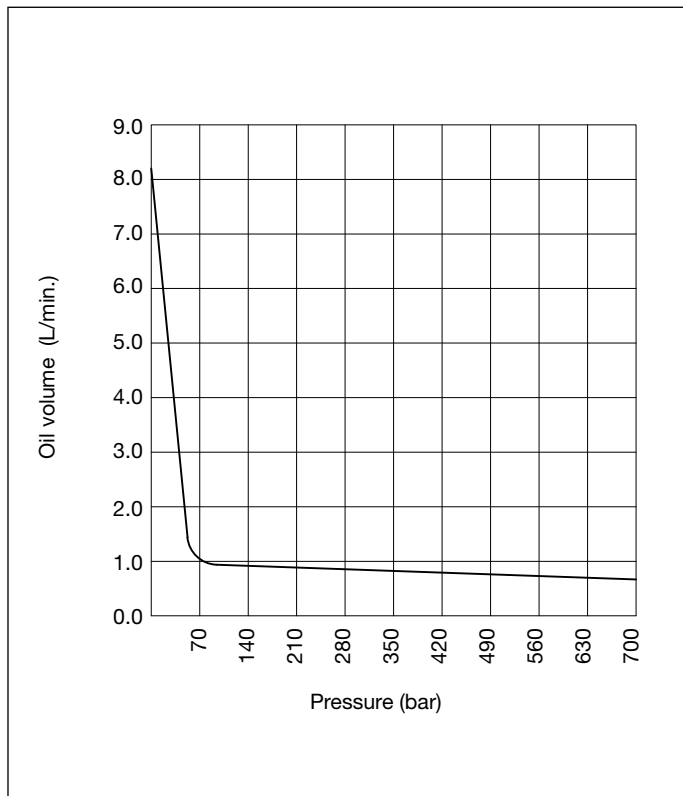
TIP! Use in combination with accessories page 108 -112

| Type | Art. no. | Voltage* | Function | Content reservoir (liter) | Usable oil (liter) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | A mm | B mm | C mm | D mm | E mm | F | G mm | H mm | Weight kg |
|------------------------|--------------------|--------------|----------|---------------------------|--------------------|---------------------|--|------|-----|-----|------|------|------|-------|------|-----------------------|------|------|-----------|
| | | | | | | | 0 | 7 | 350 | 700 | | | | | | | | | |
| EP 18S EP 18S | 8300021 8300031 | 120V 230V | single | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 505 | 142 | 312 | 149.5 | 251 | 1/4"-20UNF 15 deep | 312 | 492 | 31 |
| EP 18D EP 18D | 8300023 8300033 | 120V 230V | double | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 505 | 142 | 312 | 149.5 | 251 | 1/4"-20UNF 15 deep | 312 | 492 | 31 |
| EP 18SS** EP 18SS** | 8300022 8300032 | 120V 230V | single | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 505 | 142 | 312 | 149.5 | 251 | 1/4"-20UNF 15 deep | 312 | 492 | 31 |
| EP 18DS** EP 18DS** | 8300024 8300034 | 120V 230V | double | 8 | 6 | 700 | 4200 | 2800 | 330 | 300 | 505 | 142 | 312 | 149.5 | 251 | 1/4"-20UNF 15 deep | 312 | 492 | 31 |

* 120V models also available ** model with solenoid valve

ELECTRIC PUMPS

BETEX EP 211 SERIES, ELECTRO-HYDRAULIC PUMPS, 11 LITER, 700 BAR

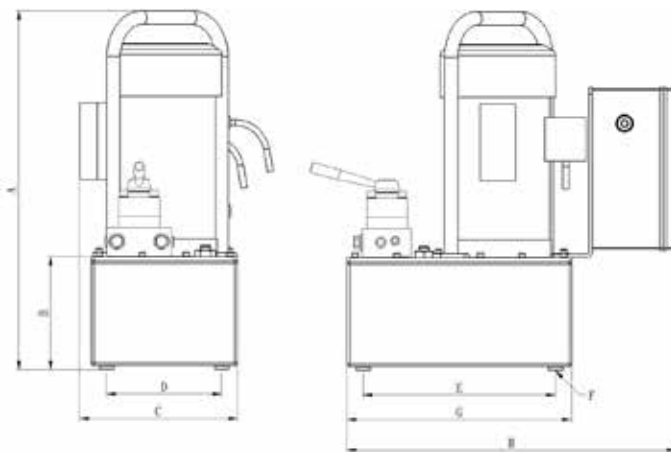


EP 211D

- Electric pump, 120/230V, 5A, 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 has been specially designed for double-acting cylinders without the need for extra control valve and adapters
- Type EP 211SS and EP 211DS are fitted with a solenoid valve

EP 211 series

| Type | Valve | Valve function | Motor |
|-------------|---------------|-----------------------|---------------------------|
| EP 211S(S)* | 2 pos./ 2-way | Hold / return | 1.12kW, 120V/23A-230V/12A |
| EP 211D(S)* | 3 pos./ 4-way | Advance / hold return | 50/60Hz, single phase |



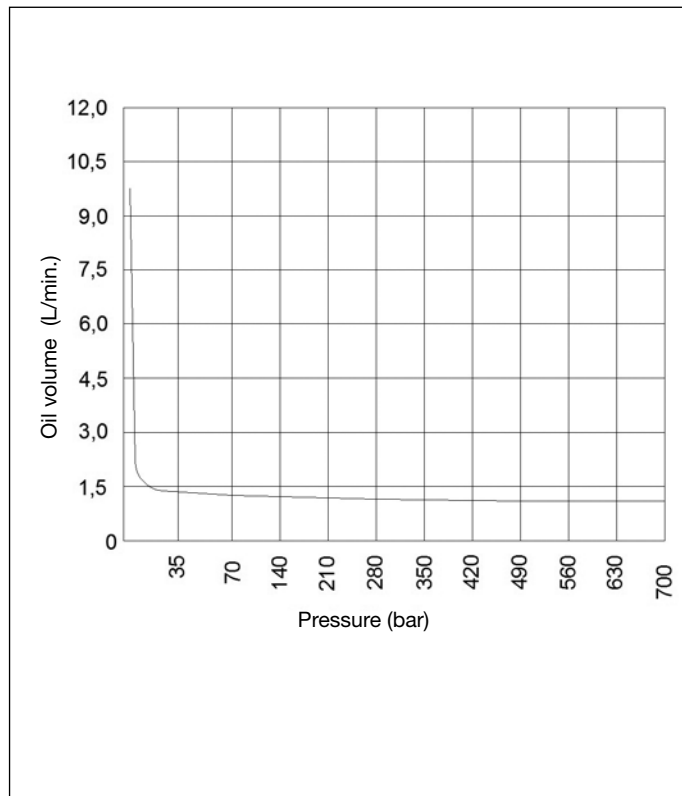
TIP! Use in combination with accessories page 108 -112

| Type | Art. no. | Voltage* | Function | Content reservoir (liter) | Usable oil (liter) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) in bar | | | | A mm | B mm | C mm | D mm | E mm | F | G mm | H mm | Weight kg |
|------------------------|--------------------|--------------|----------|---------------------------|--------------------|---------------------|--|------|-----|-----|------|------|------|------|------|-----------------------|------|-------|-----------|
| | | | | | | | 0 | 7 | 350 | 700 | | | | | | | | | |
| EP 211S EP 211S | 8300041 8300051 | 120V 230V | single | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 560 | 176 | 247 | 180 | 300 | 1/2"-20UNF 15 deep | 350 | 512.5 | 37 |
| EP 211D EP 211D | 8300043 8300053 | 120V 230V | double | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 560 | 176 | 247 | 180 | 300 | 1/2"-20UNF 15 deep | 350 | 512.5 | 37 |
| EP211SS** EP211SS** | 8300042 8300052 | 120V 230V | single | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 560 | 176 | 247 | 180 | 300 | 1/2"-20UNF 15 deep | 350 | 512.5 | 37 |
| EP211DS** EP211DS** | 8300044 8300054 | 120V 230V | double | 11 | 8.5 | 700 | 8200 | 7400 | 840 | 750 | 560 | 176 | 247 | 180 | 300 | 1/2"-20UNF 15 deep | 350 | 512.5 | 37 |

* 120V models also available ** model with solenoid valve

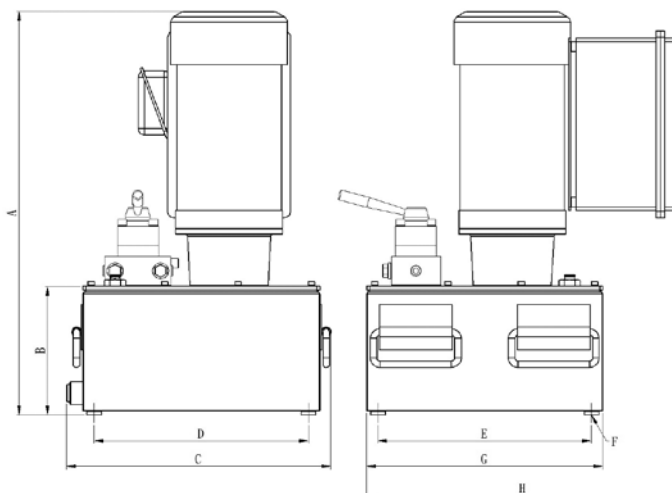
ELECTRIC PUMPS

BETEX EP 320 SERIES, ELECTRO-HYDRAULIC, 20 LITER, 700 BAR



EP 320S

- Electric pump, 230/400V, 5A, 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
- Specially designed EP 13D for double-acting cylinders without the need for extra control valve and adapters



EP320 series

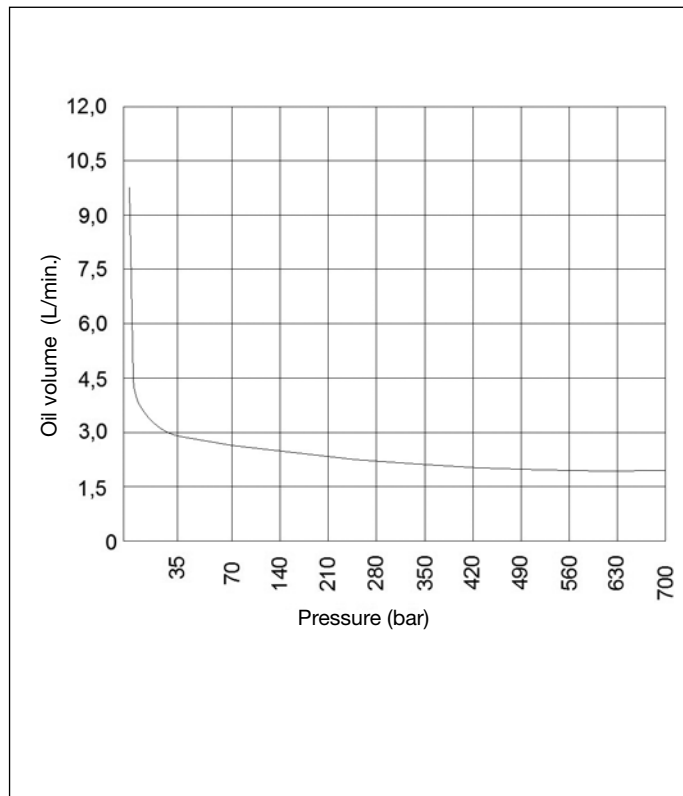
| Type | Art. no. | Valve | Valve function | Motor |
|---------|----------|------------------|--------------------------|---|
| EP 320S | 8300061 | 2 pos./ 2-way | Hold / return | 1.49kW 230V/7.5A-400V/5A 50/60Hz 3 phase |
| EP 320D | 8300063 | 3 pos./ 4-way | Advance / hold return | |

TIP! Use in combination with accessories page 108 -112

| Type | Function | Content reservoir (liter) | Usable oil (liter) | Max. pressure (bar) | Oil volume (cm ³ /min. @60Hz) | | | | A mm | B mm | C mm | D mm | E mm | F | G mm | H mm | Weight Kg |
|---------|----------|---------------------------|--------------------|---------------------|--|--------|---------|---------|------|------|------|------|------|------------------------|------|------|-----------|
| | | | | | 7 bar | 70 bar | 350 bar | 700 bar | | | | | | | | | |
| EP 320S | single | 20 | 15 | 700 | 9500 | 1100 | 1060 | 980 | 630 | 199 | 407 | 330 | 330 | 1/2"- 20UNF 19 deep | 365 | 483 | 54 |
| EP 320D | double | 20 | 15 | 700 | 9500 | 1100 | 1060 | 980 | 630 | 199 | 407 | 330 | 330 | 1/2"- 20UNF 19 deep | 365 | 483 | 54 |

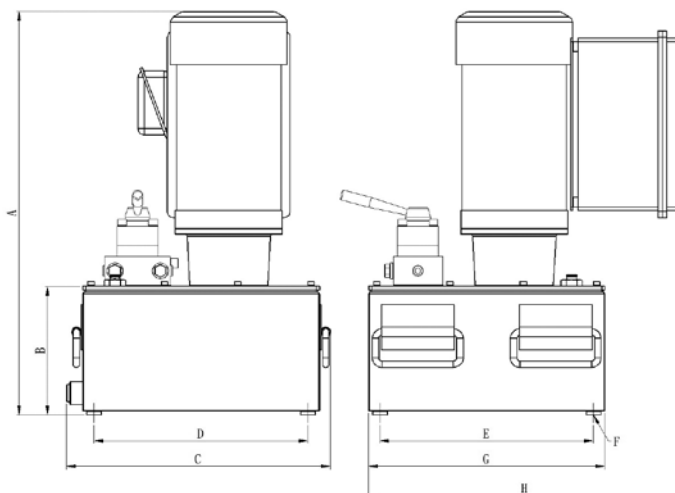
ELECTRIC PUMPS

BETEX EP 420 SERIES, ELECTRO-HYDRAULIC PUMPS, 20 LITER, 700 BAR



EP 420D

- Electric pump, 230/400V, 6A, 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
- Specially designed EP 420D for double-acting cylinders without the need for extra control valve and adapters



EP 420 series

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

TIP! Use in combination with accessories page 108 -112

| Type | Function | Content reservoir (liter) | Usable oil (liter) | Max. pressure (bar) | Oil volume (cm ³ /min.@60Hz) | | | | A mm | B mm | C mm | D mm | E mm | F | G mm | H mm | Weight Kg |
|---------|----------|---------------------------|--------------------|---------------------|---|--------|---------|---------|------|------|------|------|------|------------------------|------|------|-----------|
| | | | | | 7 bar | 70 bar | 350 bar | 700 bar | | | | | | | | | |
| EP 420S | single | 20 | 15 | 700 | 9500 | 2600 | 2100 | 1950 | 630 | 199 | 407 | 330 | 330 | 1/2"- 20UNF 19 deep | 365 | 483 | 59 |
| EP 420D | double | 20 | 15 | 700 | 9500 | 2600 | 2100 | 1950 | 630 | 199 | 407 | 330 | 330 | 1/2"- 20UNF 19 deep | 365 | 483 | 59 |

ULTRA HIGH PRESSURE PUMPS

**BETEX AHP/UHP SERIES, ULTRA HIGH PRESSURE - ALUMINIUM HAND PUMPS:
1000 / 1500 / 2800 BAR**



AHP 704



Hand pump set UHP 2800



UHP 2800



AHP 705

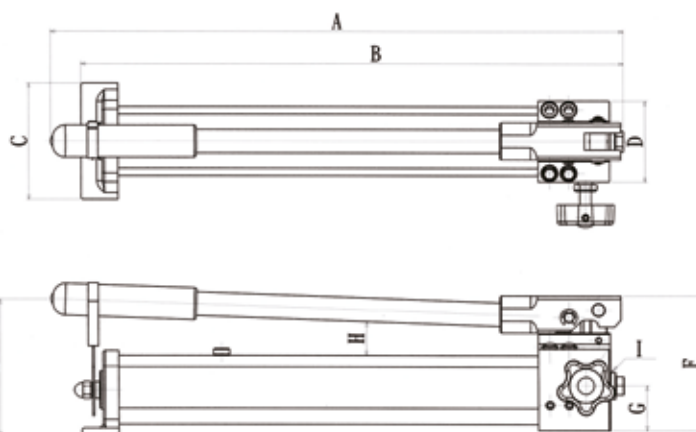
- AHP704: high working pressure up to 1000 / 1500 bar
- UHP 2800 light weight model for ultra high working pressure of 2800 bar for special applications
- Automatic overload-relief valve protects components in hydraulic systems and ensures safe operation

Also available as HAND PUMP SETS, which are supplied complete with:

- T-adapter
- gauge
- hose 1.8 mtr
- couplings
- steel storage case

AHP/UHP series

| Type | Art. no. |
|----------|----------|
| AHP 704 | 7265800 |
| AHP 705 | 7265900 |
| UHP 2800 | 7292800 |



| Type | Pressure rating (bar) | | Usable 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 | Weight Kg |
|----------|-----------------------|-----------|---------------------------------|---------------------------------------|-----------|------|------|------|------|------|------|------|------|-------------|-----------|
| | 1st stage | 2nd stage | | 1st stage | 2nd stage | | | | | | | | | | |
| AHP 704 | 13.8 | 1000 | 1000 | 12.9 | 1.65 | 539 | 501 | 110 | 77 | 145 | 127 | 42.5 | 37 | 3/8" - NPT | 3.5 |
| AHP 705 | 13.8 | 1500 | 2700 | 6.5 | 1.00 | 699 | 629 | 150 | 102 | 152 | 157 | 50 | 37 | 3/4" -16UNF | 6.7 |
| UHP 2800 | 14.0 | 2800 | 1000 | 12.9 | 0.65 | 620 | 488 | 80 | 140 | 108 | 157 | 26 | 37 | 3/4" -16UNF | 5.3 |

ULTRA HIGH PRESSURE AIR PUMPS

BETEX UHAP SERIES, ULTRA HIGH PRESSURE ALUMINIUM AIR PUMPS, 2800 BAR



General purpose air driven ultra high pressure hydraulic pump. Suitable for pumping water and oil up to 2800 bar.

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

Model: UHAP 2800
Capacity: 2800 bar
Oil capacity: 5 liter
Max. cap.: **0.43** liter p/min, at 7 bar air pressure

Model: UHAP 2800 ULTRA
Capacity : 2800 bar
Oil capacity: 5 liter
Max. cap.: **0.75** liter p/min, at 7 bar air pressure

Both pumps are inclusive:

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



UHAP series

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

ACCESSORIES Max. working pressure, 700 bar

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



CP 330B



CP 331B



CP 332B

COUPLER SETS

- BETEX supplies a variety of screw-set quick couplers in four 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 in either low- and/or high-pressure conditions.

| Couplers | End one | |
|----------|----------|-------------------------|
| CP 330B | 3/8" NPT | Standard coupler set |
| CP 331B | 3/8" NPT | Standard coupler female |
| CP 332B | 3/8" NPT | Standard coupler male |
| CP 430 | 3/8" NPT | No-spill coupler set |
| CP 431 | 3/8" NPT | No-spill coupler female |
| CP 432 | 3/8" NPT | No-spill coupler male |



CP 430



CP 431



CP 432

| Type hoses | End one | End two | Length (mm) | ID (mm) |
|---------------|----------|----------|-------------|---------|
| Rubber | | | | |
| HS 332 | 3/8" NPT | 3/8" NPT | 600 | 6.4 |
| HS 333 | 3/8" NPT | 3/8" NPT | 900 | 6.4 |
| HS 335 | 3/8" NPT | 3/8" NPT | 1500 | 6.4 |
| HS 336 | 3/8" NPT | 3/8" NPT | 1800 | 6.4 |
| HS 338 | 3/8" NPT | 3/8" NPT | 2400 | 6.4 |
| HS 3310 | 3/8" NPT | 3/8" NPT | 3000 | 6.4 |
| HS 3312 | 3/8" NPT | 3/8" NPT | 3600 | 6.4 |
| HS 3315 | 3/8" NPT | 3/8" NPT | 4500 | 6.4 |
| HS 3320 | 3/8" NPT | 3/8" NPT | 6000 | 6.4 |
| HS 3330 | 3/8" NPT | 3/8" NPT | 9000 | 6.4 |
| HS 3350 | 3/8" NPT | 3/8" NPT | 15000 | 6.4 |

| Rubber High-flow | | | | |
|-------------------------|----------|----------|------|---------------|
| HFHS 332-BG | 3/8" NPT | 3/8" NPT | 600 | 9.4 High-flow |
| HFHS 333-BG | 3/8" NPT | 3/8" NPT | 900 | 9.4 High-flow |
| HFHS 335-BG | 3/8" NPT | 3/8" NPT | 1500 | 9.4 High-flow |
| HFHS 336-BG | 3/8" NPT | 3/8" NPT | 1800 | 9.4 High-flow |
| HFHS 338-BG | 3/8" NPT | 3/8" NPT | 2400 | 9.4 High-flow |
| HFHS 3310-BG | 3/8" NPT | 3/8" NPT | 3000 | 9.4 High-flow |
| HFHS 3312-BG | 3/8" NPT | 3/8" NPT | 3600 | 9.4 High-flow |
| HFHS 3315-BG | 3/8" NPT | 3/8" NPT | 4500 | 9.4 High-flow |
| HFHS 3320-BG | 3/8" NPT | 3/8" NPT | 6000 | 9.4 High-flow |

| Polyurethane | | | | |
|---------------------|----------|----------|-------|-----|
| PHS 332 | 3/8" NPT | 3/8" NPT | 600 | 6.4 |
| PHS 333 | 3/8" NPT | 3/8" NPT | 1000 | 6.4 |
| PHS 335 | 3/8" NPT | 3/8" NPT | 1500 | 6.4 |
| PHS 336 | 3/8" NPT | 3/8" NPT | 1800 | 6.4 |
| PHS 338 | 3/8" NPT | 3/8" NPT | 2400 | 6.4 |
| PHS 3310 | 3/8" NPT | 3/8" NPT | 3000 | 6.4 |
| PHS 3312 | 3/8" NPT | 3/8" NPT | 3600 | 6.4 |
| PHS 3315 | 3/8" NPT | 3/8" NPT | 4500 | 6.4 |
| PHS 3320 | 3/8" NPT | 3/8" NPT | 6000 | 6.4 |
| PHS 3330 | 3/8" NPT | 3/8" NPT | 9000 | 6.4 |
| PHS 3350 | 3/8" NPT | 3/8" NPT | 15000 | 6.4 |



| Polyurethane High-flow | | | | |
|-------------------------------|----------|----------|------|---------------|
| HPHS 332 | 3/8" NPT | 3/8" NPT | 600 | 9.7 High-flow |
| HPHS 333 | 3/8" NPT | 3/8" NPT | 1000 | 9.7 High-flow |
| HPHS 335 | 3/8" NPT | 3/8" NPT | 1500 | 9.7 High-flow |
| HPHS 336 | 3/8" NPT | 3/8" NPT | 1800 | 9.7 High-flow |
| HPHS 338 | 3/8" NPT | 3/8" NPT | 2400 | 9.7 High-flow |
| HPHS 3310 | 3/8" NPT | 3/8" NPT | 3000 | 9.7 High-flow |
| HPHS 3312 | 3/8" NPT | 3/8" NPT | 3600 | 9.7 High-flow |
| HPHS 3315 | 3/8" NPT | 3/8" NPT | 4500 | 9.7 High-flow |
| HPHS 3320 | 3/8" NPT | 3/8" NPT | 6000 | 9.7 High-flow |
| HPHS 3330 | 3/8" NPT | 3/8" NPT | 9000 | 9.7 High-flow |

HOSES

- Heavy-duty hoses rated at 700 bar meet worldwide 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.



MANOMETER

| Type | Description | Dimensions mm |
|--------|--|--|
| M0031B |  | Liquid-filled, dampens needle vibration. Calibrated to read in bar, psi. External diameter gauge – 2 1/2"; Accuracy meets DIN standard, ±1.6% of full scale. |
| M0040 |  | All functions similar to M0031B except the dial 100 mm |

ACCESSORIES Max. working pressure, 700 bar


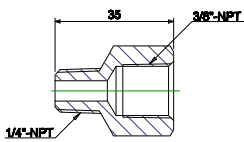

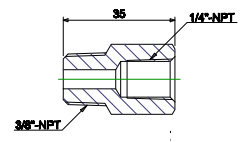

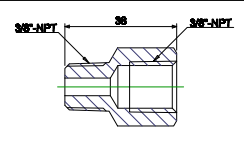

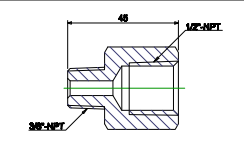

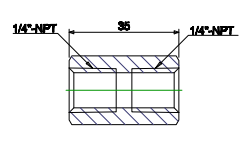

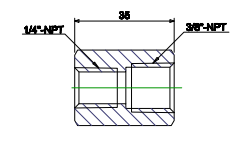

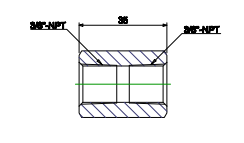

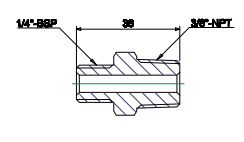

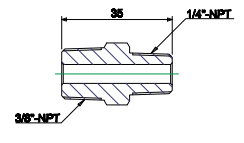

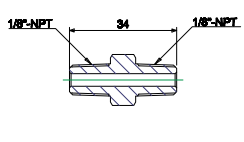

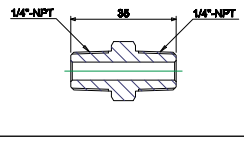
Accessories


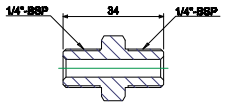

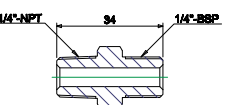

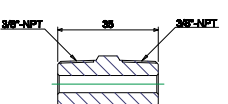

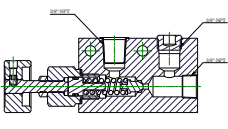

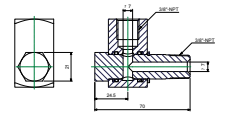
| Type | Description | Dimensions mm |
|-------|---------------------|---------------|
| JP64 | Manifold valve | |
| JP65 | Manifold valve | |
| JP65 | Manifold valve | |
| VB66 | Control valve | |
| VB101 | Control valve | |
| VC331 | Control valve | |
| VB201 | Manifold valve | |
| VB401 | Manifold valve | |
| E0567 | T-adapter for gauge | |
| E1336 | T-adapter for gauge | |
| E1343 | T-adapter for gauge | |
| E1745 | T-adapter for gauge | |

| Type | Description | Dimensions mm |
|--------|-------------------------------|---------------|
| ADG323 | T-adapter for gauge high-flow | |
| ADL101 | Corner | |
| ADL202 | Corner | |
| ADL303 | Corner | |
| ADC303 | Corner | |
| ADE303 | Corner | |
| ADT101 | T-piece | |
| ADT202 | T-piece | |
| ADT303 | T-piece | |
| ADG303 | T-piece | |
| ADF102 | Adapter | |

ACCESSORIES Max. working pressure, 700 bar

Accessories

| Type | Description | | Dimensions mm |
|---------|--------------------|---|---|
| ADF203 | Adapter |  |  |
| ADF302 | Adapter |  |  |
| ADF303 | Adapter |  |  |
| ADF304 | Adapter |  |  |
| ADI202 | Connector |  |  |
| ADI203 | Connector |  |  |
| ADI303 | Connector |  |  |
| ADO2031 | Reducing connector |  |  |
| ADO203 | Reducing connector |  |  |
| ADO101 | Hexagon nipple |  |  |
| ADO202 | Hexagon nipple |  |  |

| Type | Description | | Dimensions mm |
|--------|----------------------------|---|---|
| ADO204 | Hexagon nipple |  |  |
| ADO205 | Hexagon nipple |  |  |
| ADO303 | Hexagon nipple |  |  |
| BG9623 | Pressure regulator |  |  |
| BG9705 | High-flow swivel connector |  |  |

BETEX HYDRAULIC OIL

Premium hydraulic oil - GRADE NO. LPS 78

- 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 liters



| Art. no. | Description | Liter |
|----------|----------------------|-------|
| 789106 | Hydraulic Oil LPS 78 | 1.0 |
| 789107 | Hydraulic Oil LPS 78 | 2.0 |
| 789108 | Hydraulic Oil LPS 78 | 4.0 |
| 789109 | Hydraulic Oil LPS 78 | 5.0 |

| Grade no. | LPS 78 |
|------------------------------|---------|
| Gravity, API, 15.6°C | 29.5 |
| Viscosity, Kin, cSt @ 40°C | 70.0 |
| @ 100°C | 11.30 |
| Viscosity Index | 155 |
| Pour Point, °C | -39 |
| Flash Point, COC, °C | 244 |
| Color, D1500 | L2.0 |
| TAN, mgKOH/g | 0.60 |
| Carbon Residue, Rams.,% | 0.17 |
| Emulsion, 54°C, 40-37-3, min | 15 |
| | LA68068 |

JACKS

BETEX CJ series, with integrated pump + cylinders, with low build-in height



Spring-loaded

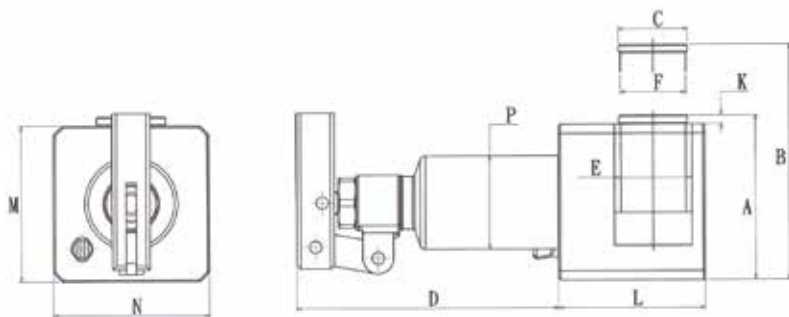
Available in 10 or 20 ton

Stroke : 41 mm

Max. operating pressure : 700 bar

Model: CJ series

- Hard chromed piston.
- Ram inside roll-polished.
- Perfect for jobs with limited space, like positioning machines, mounting tools or load tests.



CJ series

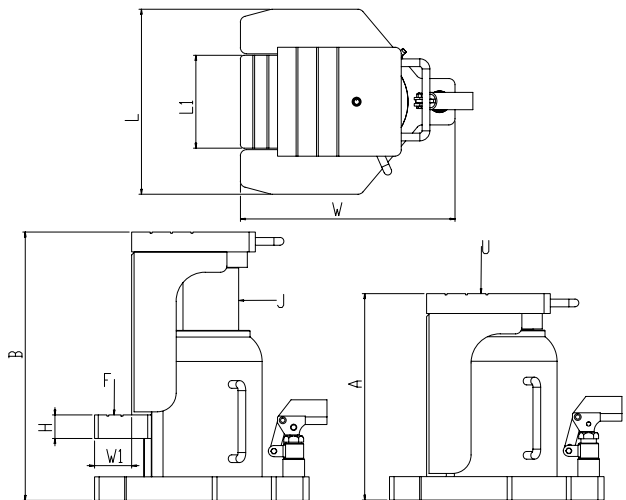
| Type | Art. no. | Cap. ton | Stroke mm | Oil cap cm ³ | Height | | C ø mm | D mm | E ø mm | F ø mm | H mm | K mm | L mm | M mm | N mm | P ø mm | | Weight Kg |
|--------|----------|----------|-----------|-------------------------|--------|------|--------|-------|--------|--------|-------|------|------|------|------|--------|---|-----------|
| | | | | | Min. | Max. | | | | | | | | | | | | |
| CJ 100 | 7270100 | 10 | 41 | 155 | 95 | 136 | 40 | 152.5 | 45 | 37.95 | 407.5 | 4.9 | 85 | 90 | 90 | 53.8 | - | 5.5 |
| CJ 200 | 7270200 | 20 | 41 | 250 | 95 | 136 | 40 | 152.5 | 65 | 50.8 | 407.5 | 4.9 | 110 | 90 | 110 | 69.5 | - | 8 |

TOE JACKS

BETEX TOE series, toe jacks



- 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 quickly by hand.
- Removable handle makes unit easier to operate.



Toe jacks

| Type | Art. no. | Top cap. U (tons) | Top-lift cap. F (tons) | Stroke mm | Min. height A mm | Max. height B mm | Piston rod diam. J mm | Base dimensions LxW mm | Height H mm | Top-lift L1xW1 mm | Weight kg |
|---------|----------|-------------------|------------------------|-----------|------------------|------------------|-----------------------|------------------------|-------------|-------------------|-----------|
| TOE-025 | 731025 | 2.5 | 1.2 | 100 | 194 | 294 | 19 | 140x190 | 19 | 65x50 | 6.5 |
| TOE-040 | 731040 | 4 | 2 | 110 | 204 | 314 | 25 | 150x200 | 19 | 65x50 | 8 |
| TOE-060 | 731060 | 6 | 3 | 110 | 212 | 322 | 36 | 160x217 | 19 | 65x50 | 10 |
| TOE-100 | 731100 | 10 | 5 | 130 | 258 | 388 | 40 | 189x242 | 22 | 75x55 | 11.9 |
| TOE-160 | 731160 | 16 | 8 | 131 | 275 | 406 | 52 | 211x256 | 25 | 90x55 | 23 |
| TOE-200 | 731200 | 20 | 10 | 140 | 303 | 443 | 56 | 228x274 | 25 | 100x60 | 31 |
| TOE-300 | 731300 | 30 | 15 | 147 | 322 | 469 | 70 | 259x305 | 32 | 110x60 | 47.3 |
| TOE-500 | 731500 | 50 | 25 | 148 | 333 | 481 | 90 | 299x347 | 38 | 150x60 | 77.5 |

PORTABLE POWER KITS

BETEX PPK series, Portable Power Kits



Set PPK 4
incl. 4 tons cylinder, 100 mm stroke in handy carrying case

Set PPK 10
incl. 10 tons cylinder, 150 mm stroke in handy carrying case on wheels

TIP! Use in combination with Betex shims, page 140-142

- 'Snap-on' design for quick and easy assembly and disassembly.
- Extra thick extension rods 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 through many different accessories!
- All parts are made of forged steel.

| Type: PPK 4 Art.no.: 7560804 | Description 4 t | Type: PPK 10 Art.no.: 7560810 | Description 10 t |
|---------------------------------|--------------------------------------|----------------------------------|---------------------------------------|
| PA351 | heavy duty hydraulic hand pump | PA603 | heavy duty hydraulic hand pump |
| HS236 | HD slang, 1.8 mtr | HS236 | HD slang, 1.8 mtr |
| PA404 | 4-tons cylinder with 101,6 mm stroke | PA106A | 10-tons cylinder with 152,4 mm stroke |
| SR05A | spreader 0,5 ton | SR05A | spreader 0,5 ton |
| B0523 | extension rod 406.4 mm | B0519 | extension rod 482.6 mm |
| B0524 | extension rod 304.8 mm | B0520 | extension rod 355.6 mm |
| B0525 | extension rod 203.2 mm | B0521 | extension rod 254 mm |
| B0526 | extension rod 101.6 mm | B0522 | extension rod 127 mm |
| B0467 | male connector | B0406 | male connector |
| F0180 | flat base | F0174 | flat base |
| F0181 | 90 degree V base | F0175 | 90 degree V base |
| F0182 | spreader | F0176 | spreader |
| F0183 | plunjer toe | F0177 | plunjer toe |
| F0184 | ram toe | F0178 | ram toe |
| B0540 | rubber flexible head | B0541 | rubber flexible head |
| F0179 | serrated saddle | F0173 | serrated saddle |
| G0026 | transport case | G0021 | transport case on wheels |

HYDRAULIC SPREADERS / LIFTING WEDGES

BETEX 15 TL / 15 TLS / 25 TLS HYDRAULIC SPREADERS / LIFTING WEDGES



15 TL spreader



25 TLS lifting wedge / spreader



15 TLS lifting wedge / spreader

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
- Suitable for spaces of 5 to 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



Sets

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

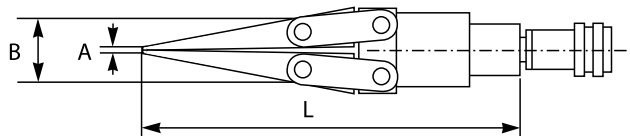
- Hydraulic spreaders or lifting wedge
- Lightweight, 2-stage hand pump
- Hose, 1.5 mtr
- Stepped safety block
- Manometer, T-adapter
- Male (hose) half coupler, complete quick coupler
- Steel storage case



Duo-sets

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

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



TIP! Use in combination with Betex shims, page 140 -142

| Type | Art. no. | Function | Max. cap ton | Pump type | Max. 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 HYDRAULIC VERTICAL LIFTING WEDGE - 18 TON

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 the stepped blocks.
- Safe, saves time and costs, ergonomic design.
- Single-acting piston, spring return.
- Applicable at minimum openings of 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(l) or duo-set).
- With safety block to secure the load and remove the lifting wedge



Sets

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

- Hydraulic lifting wedge
- 2-stage hand pump
- Hose 2.1 mtr
- Stepped safety block + multi-stage block
- Manometer, T-adaptor
- Male (hose) half coupler, complete quick coupler
- PE case

Duo-sets

For more working accuracy, we supply duo-sets with two lifting wedges and a pump with manifold for separate oil flow:

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



HLW 18TI hydraulic lifting wedge with integrated pump

Type HLW 18TI has a built-in hydraulic system for which a separate hose, coupler and hand pump are not necessary. The spreader is supplied in a case. Not available as duo-set.

Lifting height:

- 9.5 mm – 29.5 mm by using the first step
- 9.5 mm – 51 mm using 4 steps (without multi-stage blocks)
- 39.5 – 67.5 mm (using multi-stage blocks)

BETEX HLW 18T

| Type | Art. no. | max. cap.: ton | Spread mm | Pump type | Max. 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 |
| HLW 18TI with integrated pump (complete in case) | 789504 | 18 | 9.5 – 67.5* | single-acting | 700 | 16 |

* using multi-stage block

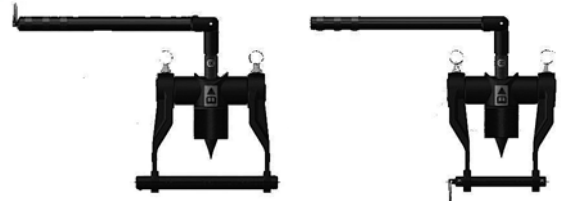
MECHANICAL FLANGE SPREADER

BETEX MFS 7T MECHANICAL FLANGE SPREADER



For use on small flanges with a minimum opening of 2.0 mm. This flange spreader generates a spreading force of 7 ton.

- Innovative design with reversible claws gives a greater range of applications.
- Ergonomic design, lightweight but robust.
- Minimum access gap of 2.0 mm.



Innovative design with reversible claws

Advantages

Locks onto the flanged joint

- Safe to use
- Easy to operate
- Saves time and costs
- Portable
- In compact PE-case

Capacity

- Use as single piece: 7 ton
- Use in pair (2 pieces): 14 ton (recommended, larger spreading force)
- Flange opening: min. 2.00 mm
- Weight incl. case: 7 kg



BETEX MFS 7T

| Type | Art. no. | Spreading force ton | Bolt size | Standard wedge mm | Claw width mm | Weight incl. case Kg |
|--------|----------|---------------------|-----------|-------------------|---------------|----------------------|
| MFS 7T | 789400 | 7 | M16 / M20 | 2 - 27 | 91 - 152 | 7 |

HYDRAULICAL FLANGE SPREADERS

BETEX PFS 10T HYDRAULIC FLANGE SPREADERS



PFS 10T



PFS 10TI with integrated pump

- For safe and easy flange spreading.
- 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 claw widths from 104 mm to 216 mm for a large number of applications.
- Special wedge for lager spread.
- Usable 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.



Safety block



PFS 10T Set

Sets

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

- Hydraulic flange spreader
- 2-stage hand pump
- Hose 1.5 mtr
- Safety block
- Manometer, T-adaptor
- Male (hose) half coupler, complete quick coupler
- Steel storage case



PFS 10T Duo-set

Duo-sets

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

- The spreading capacity is doubled
- Parallel spreading: the spreading force is divided evenly and more accurately

PFS 10TI hydraulic flange spreader with integrated pump

Type PFS 10TI has a built-in hydraulic system for which a separate hose, coupler and hand pump are not necessary. The spreader is supplied in a case. Not available as duo-set.

BETEX PFS 10T

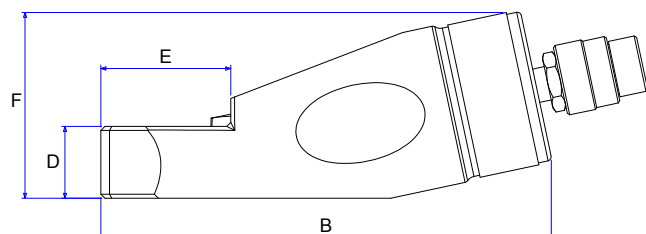
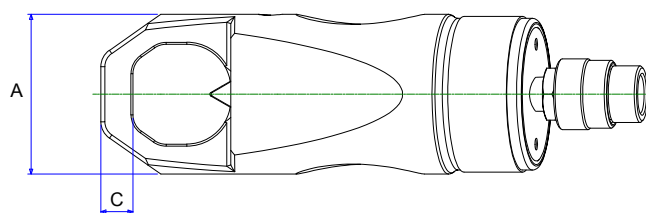
| Type | Art. no. | Spreading force ton | Bolt size | Standard wedge | Claw width mm | Pump type | Weight Kg |
|--|----------|---------------------|-----------|----------------|---------------|---------------|-----------|
| PFS 10T | 789410 | 10 | M33 | 3.3 - 28.7 | 104 - 216 | single-acting | 15 |
| 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 |

NUT SPLITTERS

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 popular models applicable to cover the largest range of nut sizes.



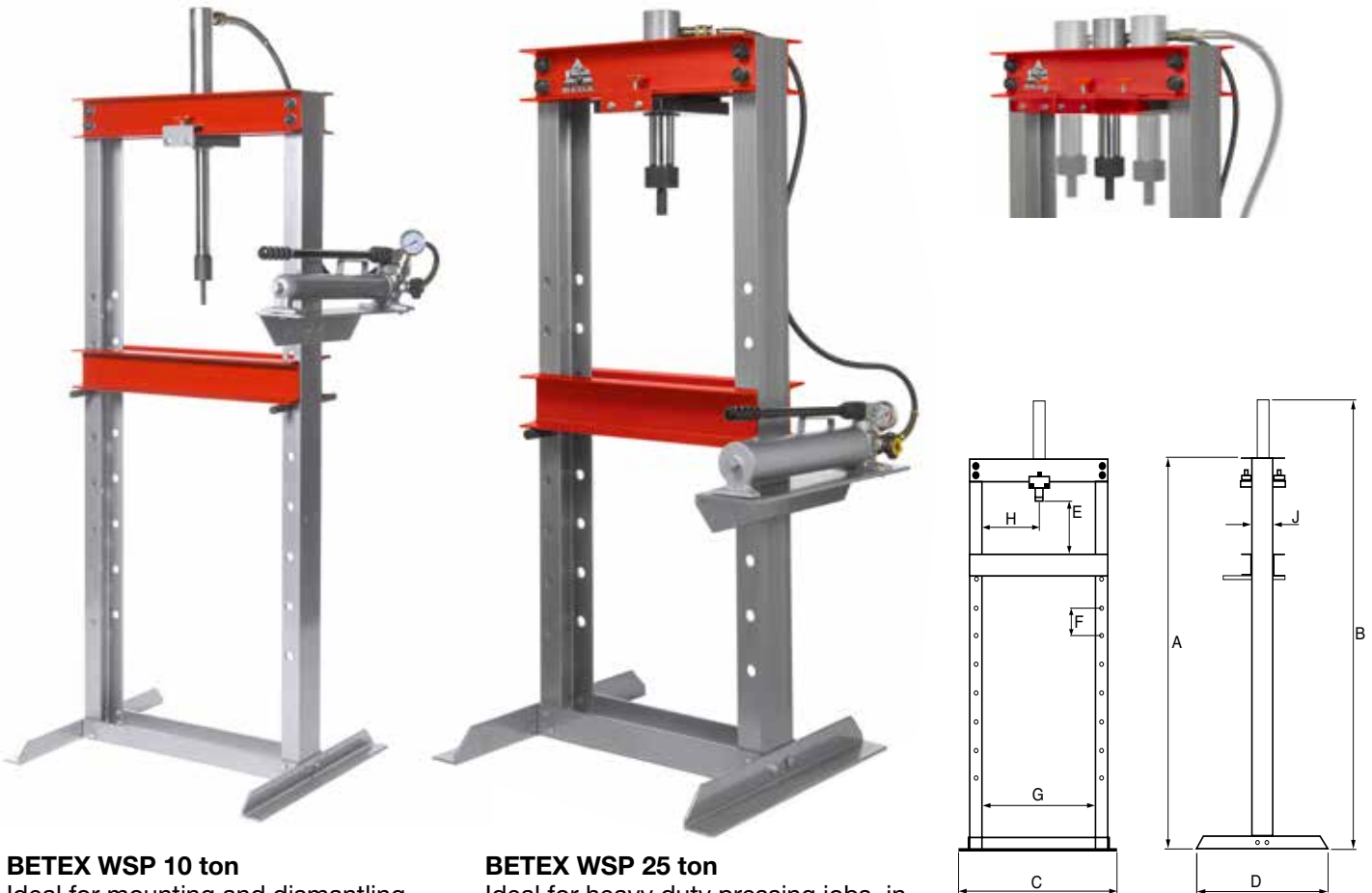
TIP! Use in combination with hand pumps, page 93 -95

| Type | Art. no. | Bolt size | Bolt range mm | Cap. ton | 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, PROFESSIONAL WORKSHOP PRESSES WITH HAND, AIR OR ELECTRIC PUMP

- Robust steel frame ensures maximum stability and prevents bending.
- Multiple working positions for press bed.
- Steel crossbars prevent the frame from bending when loaded.
- Available in 2 models: 10 and 25 tons.
- Includes gauge for precise control of the press force.
- Single-acting and spring-return ram with 10" stroke is horizontally moveable on head channel.
- Also available with hand, electric- or air-hydraulic pump.



BETEX WSP 10 ton

Ideal for mounting and dismantling jobs, like repairing motors, transmissions, removal and installation of gears, bearings and other parts.

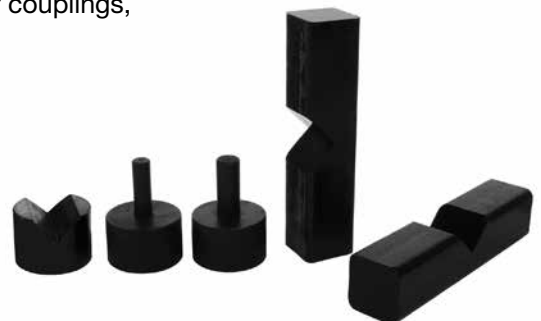
BETEX WSP 25 ton

Ideal for heavy duty pressing jobs, in garages, industrial work shops, for mounting and dismantling of couplings, bearings and other parts.

| Type | Art. no. | Cap.* ton | Stroke mm | Type pump | Pressure rating bar | Type cylinder | Weight 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 |

*capacity up to and including 200 ton available.

| Type | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm 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 |



WSP shop presses are including adapters and accessories to support work.

WORKSHOP PRESSES

BETEX WSPM WORKSHOP PRESSES, WITH HAND OR FOOT PUMP, 15, 30, AND 50 TON

These robust hydraulic workshop presses are suited for professional assembly work, or for professional testing of a wide range of components. 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.

| Models | |
|---------------|---------------------------|
| WSPM15 | 15 ton, fixed cylinder |
| WSPM30 | 30 tons, movable cylinder |
| WSPM50 | 50 tons, movable cylinder |

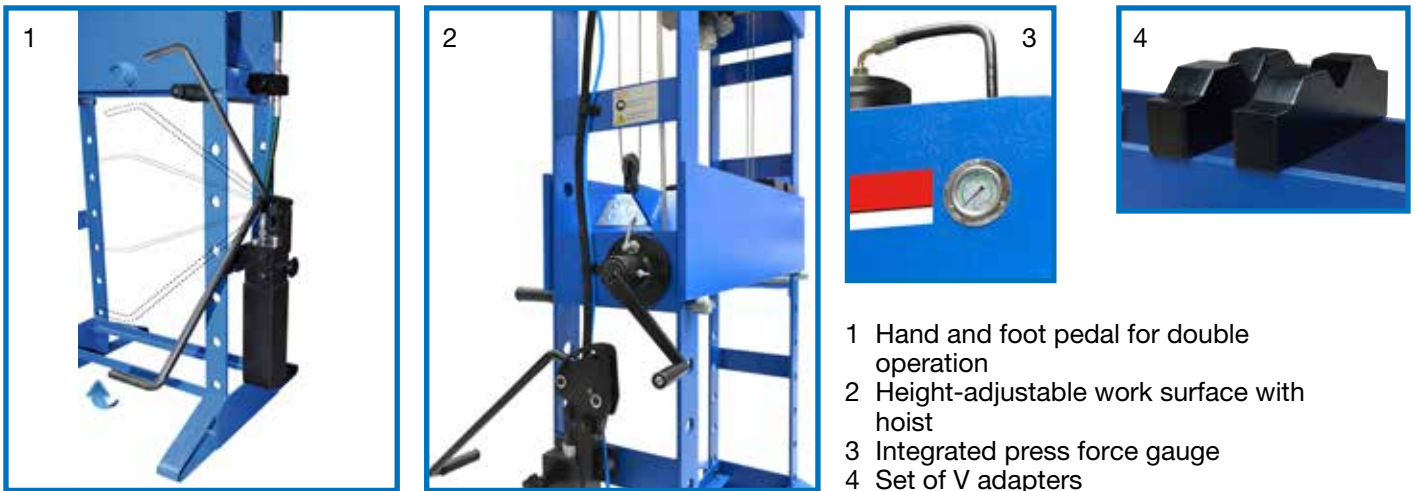
- High quality! The robust steel frame is welded for maximum stability and a long life span.
- The worktable offers easy height adjustability.
- Extremely suitable for high-precision work.
- The 50-ton version of the press is equipped with a hoist.
- Chrome-plated piston with automatic return.
- Single-acting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



Betex WSPM50

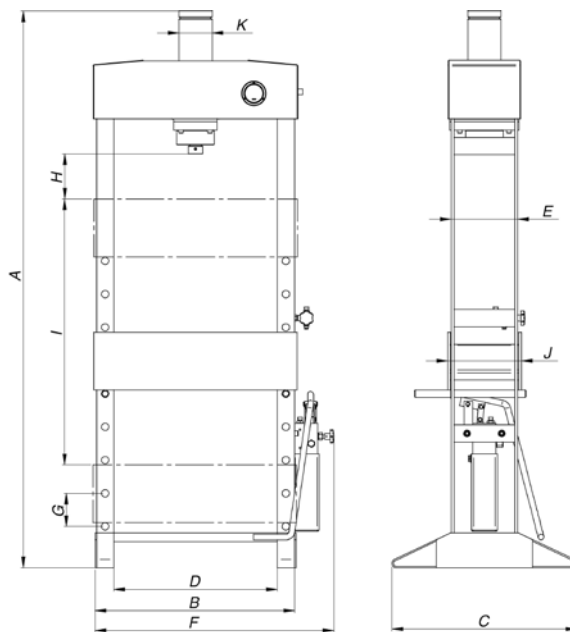
WORKSHOP PRESSES

BETEX WSPM WORKSHOP PRESSES, WITH HAND OR FOOT PUMP, 15, 30, AND 50 TON



- 1 Hand and foot pedal for double operation
- 2 Height-adjustable work surface with hoist
- 3 Integrated press force gauge
- 4 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 |
| Capacity | ton | 15 | 30 | 50 |
| Maximum pressure | bar | 382.2 | 374.6 | 399.5 |
| Cylinder stroke | mm | 160 | 160 | 160 |
| Oil tank capacity | ltr | 1.65 | 1.65 | 2.5 |
| Fixed cylinder | | yes | no | no |
| Movable cylinder | | no | yes | yes |
| Work surface width | mm | 560 | 565 | 750 |
| Weight | 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 WORKSHOP PRESSES, ELECTRIC, 30 - 300 TON

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

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 life span.
- 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 gauge for exact press force 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.

Optional:

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

Betex WSPE60



| 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 (kg) | 15 | 25 | 35 | 50 |

| Models | |
|--------------------------|--|
| WSPE30 | 30 tons, fixed cylinder, electric and manual operation, 2 speeds |
| WSPE60 | 60 tons, moveable cylinder, electric and manual operation, 2 speeds |
| WSPE100 | 100 tons, moveable cylinder, electric and manual operation, 2 speeds |
| WSPE100 D=1500 mm | 100 tons, moveable cylinder, electric and manual operation, 2 speeds and extra-wide work surface |
| WSPE160 | 160 tons, moveable cylinder, electric and manual operation, 2 speeds |
| WSPE160 D=1500 mm | 160 tons, moveable cylinder, electric and manual operation, 2 speeds and extra wide work surface |
| WSPE200 | 200 tons, moveable cylinder, electric and manual operation, 2 speeds |
| WSPE300 D=1750mm | 300 tons, moveable cylinder, electric operation, 2 speeds |

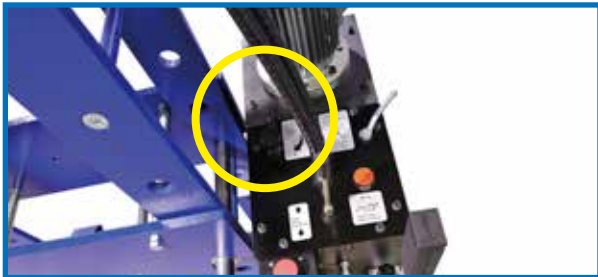
WORKSHOP PRESSES

BETEX WSPE WORKSHOP PRESSES, ELECTRIC, 30 - 300 TON

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 table. Use the joystick to raise or lower the work surface, using the pins to lock the work surface in place.



Cylinder position:

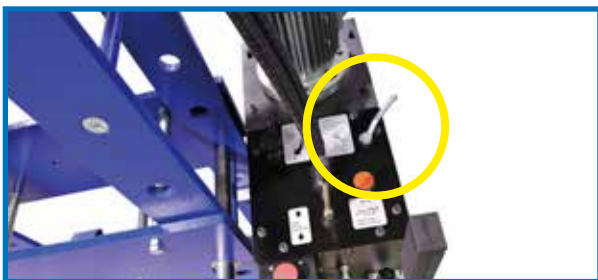
Positioning the cylinder is extremely fast (takes under 10 seconds). Move the cylinders to the left or the right by turning the levers and gripping the handle with your hand. Tighten the levers as soon as the cylinder is positioned the way you want it.



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.

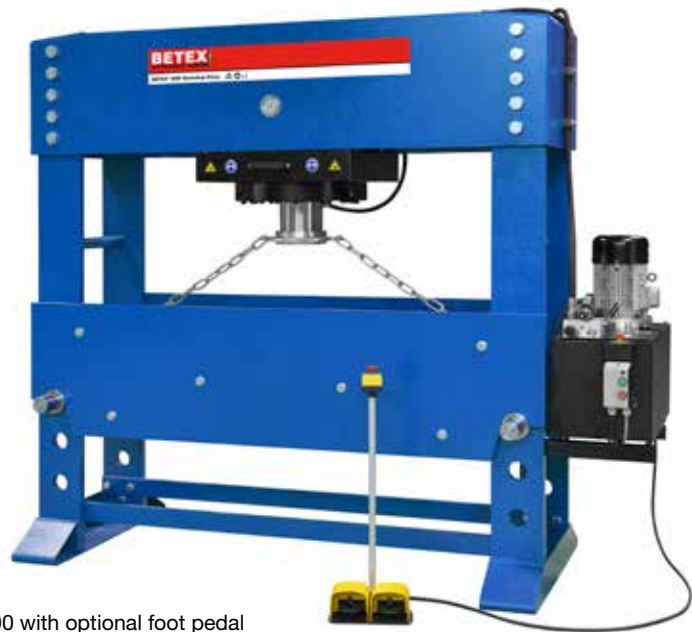


Hand pump:

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.

WORKSHOP PRESSES

BETEX WSPE WORKSHOP PRESSES, ELECTRIC, 30 - 300 TON

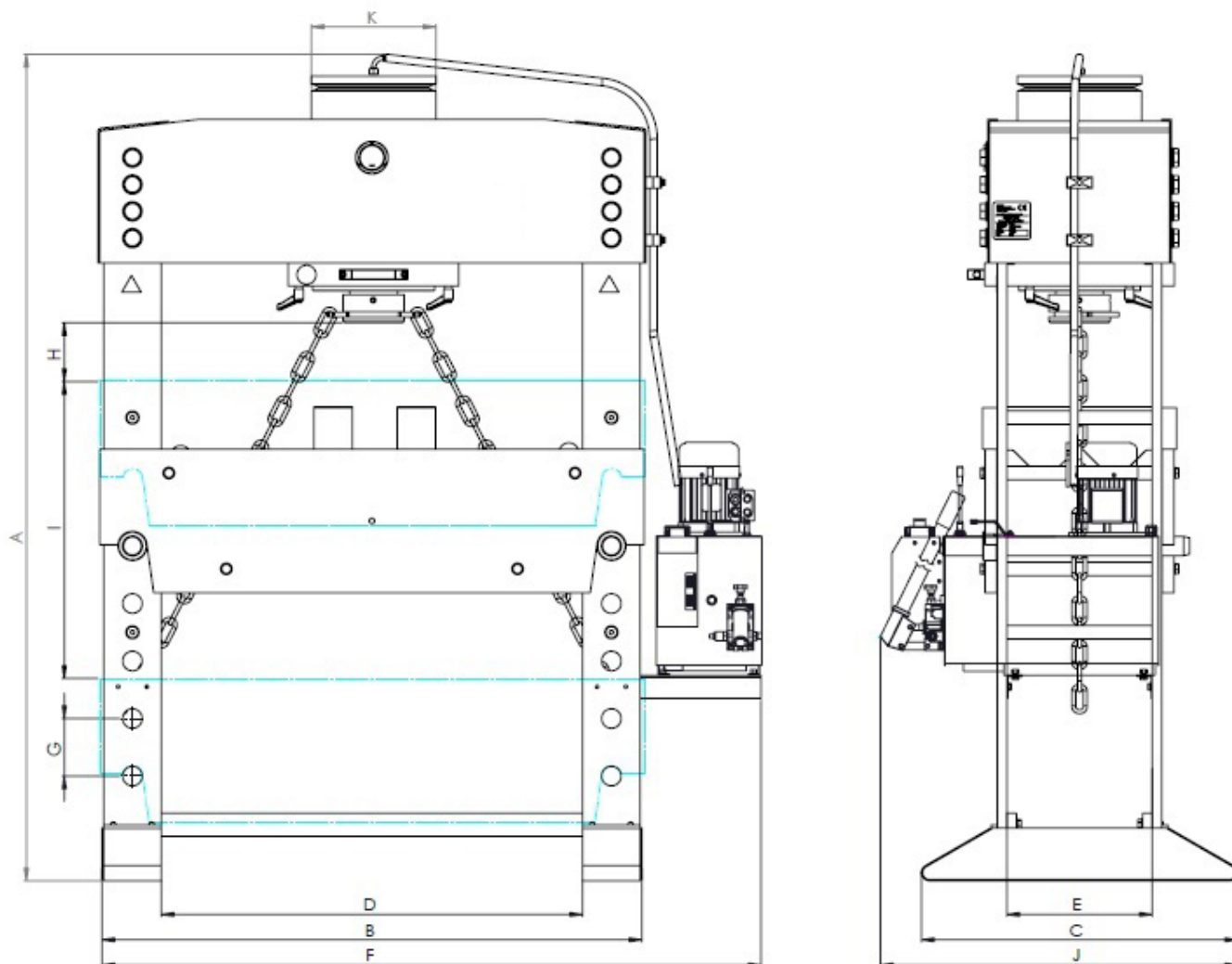


Betex WSPE300 with optional foot pedal

| Type | | WSPE30 S380 W750 | WSPE60 S380 W750 | WSPE100 S380 W1100 | D=1500 WSPE100 S380 W1500 | WSPE160 S400 W1100 | D=1500 WSPE160 S400 W1500 | WSPE200 S400 W1300 | D=1750 WSPE300 S480 W1750 |
|--------------------------------|------------|---------------------|---------------------|-----------------------|---------------------------------|-----------------------|---------------------------------|-----------------------|---------------------------------|
| Art. nr. 400 Volt | | 7513004 | 7513005 | 7513006 | 7513007 | 7513008 | 7513009 | 7513010 | 7513011 |
| Art. nr. 220 Volt | USA | 7513016 | 7513017 | 7513018 | 7513019 | 7513020 | 7513021 | 7513022 | 7513023 |
| Capacity | ton | 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 delivery | 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 | ltr | 37 | 41 | 46 | 46 | 57 | 57 | 64 | 100 |
| Working 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 |
| Motor | 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 torque | 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 |
| 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 |
| Work surface width | mm | 750 | 750 | 1100 | 1500 | 1100 | 1500 | 1300 | 1750 |
| Weight | 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 WSPE WORKSHOP PRESSES, ELECTRIC, 30 - 300 TON



| 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 |

WORKSHOP PRESSES

BETEX PFPE PORTAL PRESSES, 80 - 300 TON

These robust hydraulic portal presses are made of high-grade steel and 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 guideways 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.

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.

Made of ST-52 3 steel.

PFPE80:

- Frame and cylinder can be adjusted manually.
- Operate the piston using a lever on the electric panel (this panel also includes an emergency stop with interlock).

Options:

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



Betex PFPE80

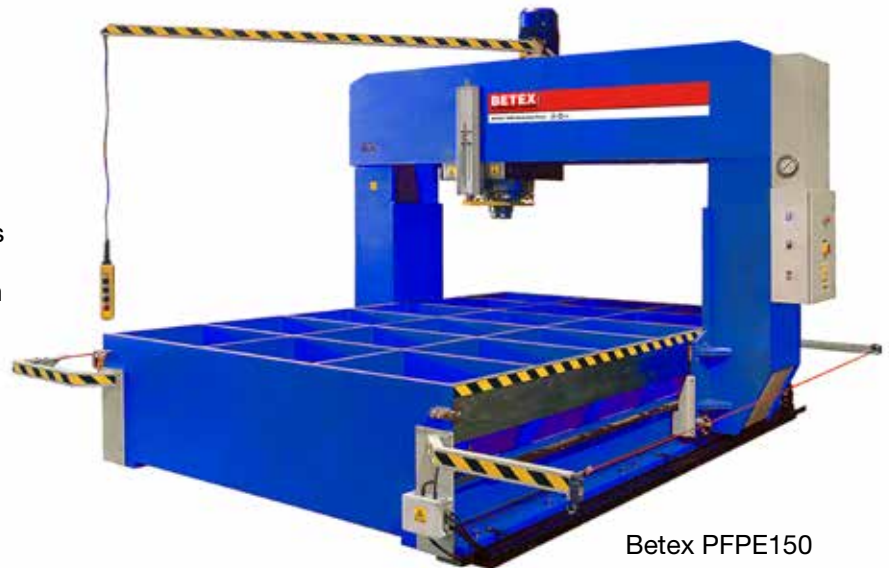
| Type | | PFPE80 S500 W1050 | PFPE150 S450 W1565 | PFPE220 S450 W2060 | PFPE300 S450 W2560 |
|---------------------------------|--------|----------------------|-----------------------|-----------------------|-----------------------|
| Art. no. | | 7513012 | 7513013 | 7513014 | 751305 |
| Press force | ton | 80 | 150 | 220 | 300 |
| Motor power | kW | 4 | 4 | 5,5 | 7,5 |
| Working speed | mm/sec | 3,8 | 2 | 2,2 | 2 |
| Approaching speed | mm/sec | 10 | 9,9 | 9 | 9,9 |
| Return speed | mm/sec | 17 | 15,4 | 16,2 | 14,7 |
| Maximum pressure | bar | 315 | 315 | 315 | 315 |
| Cylinder stroke | mm | 500 | 450 | 450 | 450 |
| Work surface dimensions [l x w] | mm | 1730 x 1015 | 3000 x 1550 | 3500 x 2045 | 4000 x 2545 |

WORKSHOP PRESSES

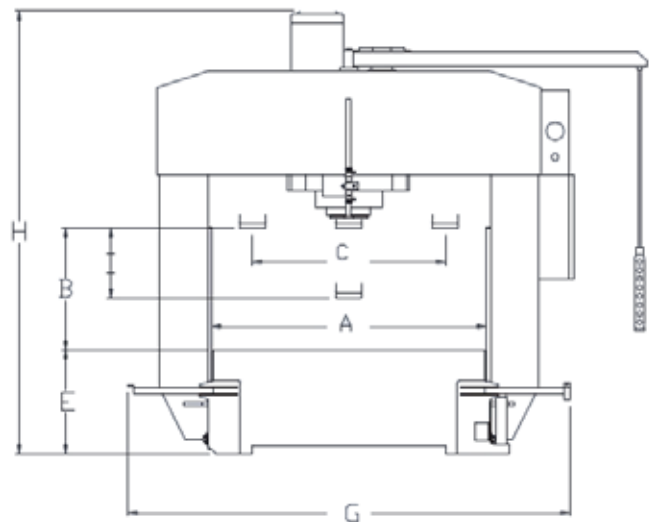
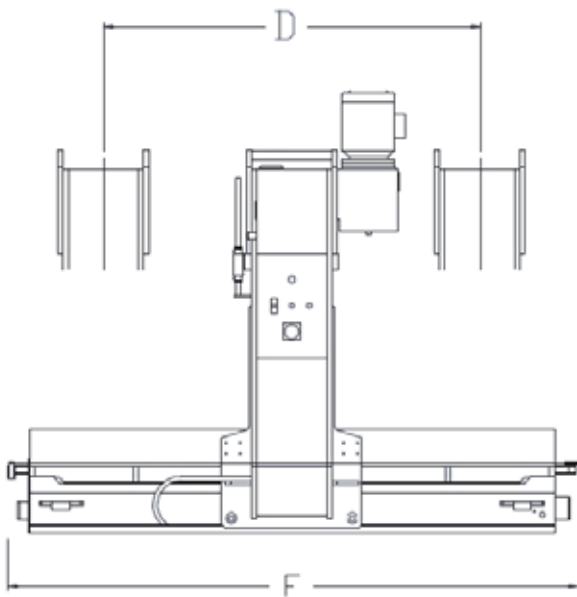
BETEX PFPE PORTAL PRESSES, 80 - 300 TON

PFPE150, PFPE220, and PFPE300:

- Frame and cylinder (double-acting) can be moved using an electric motor. The frame is moved lengthwise by a motor equipped with a frequency controller for highly precise positioning.
- Operate the piston using a “hanging” remote control. The remote control also lets you move the frame and the cylinder. It is also equipped with 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) and a switch for the required work speed (with 1 or 2 different speeds).



Betex PFPE150



| Type | | PFPE80 | PFPE150 | PFPE220 | PFPE300 |
|--------------------|----|-------------|-------------|-------------|-------------|
| Table size (l x w) | mm | 1730 x 1015 | 3000 x 1550 | 3500 x 2045 | 4000 x 2545 |
| A | mm | 1050 | 1565 | 2060 | 2560 |
| B | mm | 600 | 700 | 700 | 700 |
| C | mm | 730 | 1100 | 1550 | 2000 |
| D | mm | 1100 | 2150 | 2500 | 3000 |
| E | mm | 800 | 600 | 700 | 750 |
| F | mm | 1730 | 3260 | 3860 | 4360 |
| G | mm | 1726 | 2520 | 3430 | 3930 |
| H | mm | 2350 | 2640 | 3000 | 3100 |
| Weight | kg | 1240 | 6500 | 13000 | 16000 |

SPECIALS - RAIL WORKSHOP TOOLS

UNIVERSAL HYDRAULIC WHEELSET PRESS BETEX HWS 150 T

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

- Pressing force of 150 tons
- Stroke : 460 mm
- With press cylinders on opposite 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 wheel set
- Automatic recording of the course of the force, stroke and speed for each mounting/dismounting job
- With remote control
- *Other tonnage, design and functionality on request*



SPECIALS - RAILWAY WORKSHOP TOOLS

HYDRAULIC WHEEL RIM PRESS

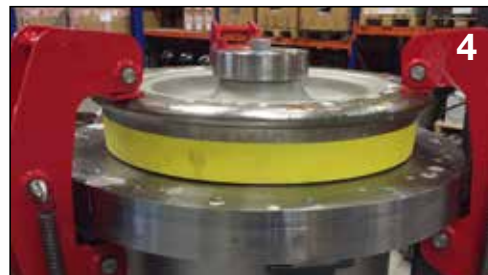
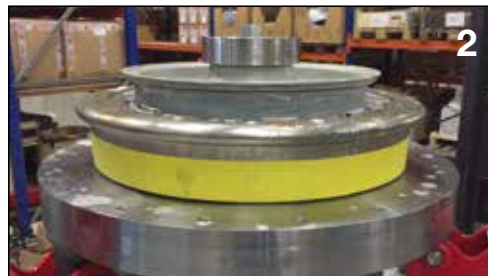
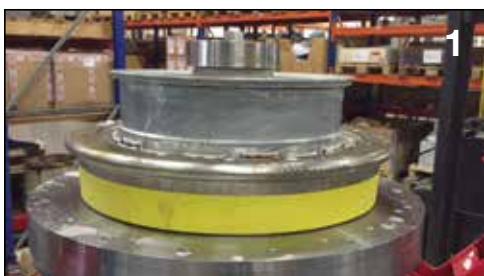
Assembly of wheel rims for metro and tram.

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.

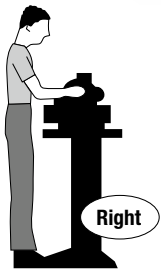
- 3 Clamping arms
- Automatic centring
- Operation: from separately placed operating panel
- *Other tonnage, design and functionality on request*



Notes

WORKBENCH

BETEX MOBILIFT



A correct working height and room for the feet allows for a good working posture, with back straight, the worktop close to the body.

Workbench too low. No room for feet under the worktop.

The Betex Mobilift is a modern design adjustable bench with a unique one-arm lifting principle. The bench is mobile yet stable. The use of a hydraulic pump means no cables on the work floor.

All these characteristics make the Mobilift very popular in workshops, so that it soon becomes indispensable.

The Mobilift work benches are available in 2 types: capacity 400 or 1000 kg.

ADVANTAGES:

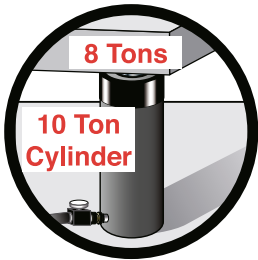
- Very stable, therefore very suitable as a workbench.
- Extra safe due to the lack of a 'scissors' movement.
- Wooden worktop prevents work from slipping.
- 2 lockable drawers.
- Easy operation
- **Promotes a good working posture!**

THE IDEAL WORKBENCH IN YOUR WORKSHOP

| Type Art. no. | H400 260400 | H1000 261000 |
|--|--|--|
| Carrying capacity | 400 kg | 1000 kg |
| Dimensions in lowest position (lxwxh) | 1500x950x620 | 1450x860x620 |
| Worktop dimensions (lxw) | 1220x800 | 1220x800 |
| Working height: minimum | 620 | 670 |
| maximum | 1160 | 1160 |
| Height adjustment | Hydraulic foot pump | Hydraulic foot pump |
| Security devices | check valve | check valve |
| Base/frame | 2 castors with brake 2 rigid casters Ø 160, wheel width 50 | 2 castors with brake 2 rigid casters Ø 160, wheel width 50 |
| Wheel basis width | 630 | 630 |
| length | 1080 | 1080 |
| Tool drawers (lxwxh) (2 pcs with padlock) (dimensions in mm) | 500x300x100 | 500x300x100 |

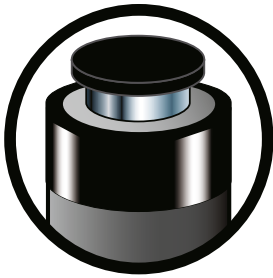
SAFETY TIPS

1. Choose the right ram.



You must know the weight of what you intend to lift and choose a ram 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. Turn them in for repair or replacement.

3. Safety instructions



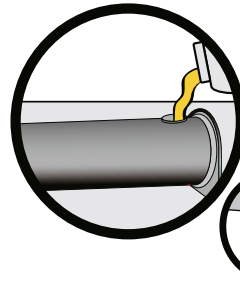
Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.

4. Fully support each jack or ram at its base.



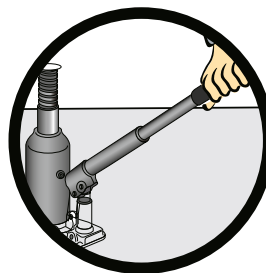
Every jack or ram, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.

5. Fill oil reservoirs with cylinder retracted.



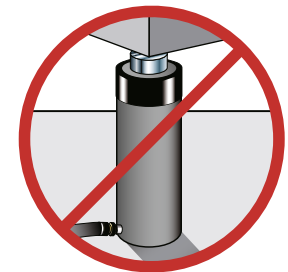
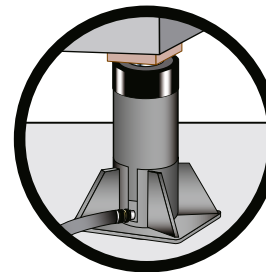
Fill pump to recommended level. Only fill when connected cylinder is fully retracted.

6. Know how your hydraulics work.



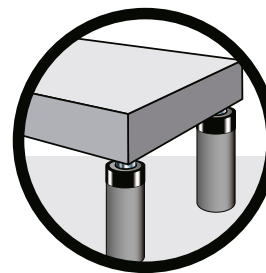
Do not use extensions or cheater bars on hydraulic jacks or hand pumps to raise a load.

7. Centre the load on the lifting point.



The load must be centred on the ram, or equally distributed on multiple rams. Off-centre loading can result in the ram slipping out and loss of the load.

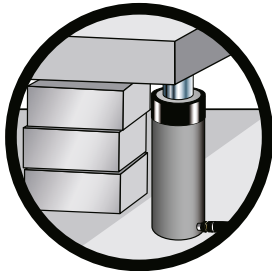
8. Distribute load evenly when using multiple rams.



For multiple ram 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 rams. This is called load balance. Size, centre of gravity and load geometry must be considered in order to correctly determine load balance.

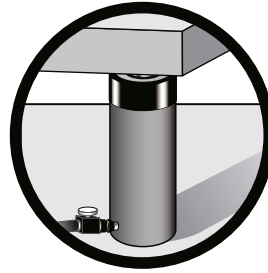
SAFETY TIPS

9. Support load.

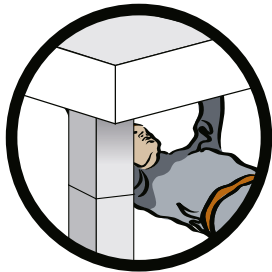


Place blocking or cribbing under the load as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body parts between the load and the cribbing.

13. Disconnecting the hydraulics.



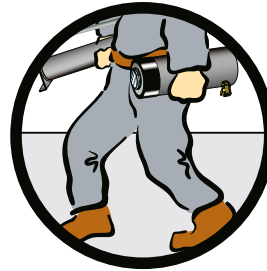
Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the ram, open the release screw on the hand pump and shift or open all hydraulic controls several times. If the system includes a gauge, double check the gauge to ensure pressure has been completely released.



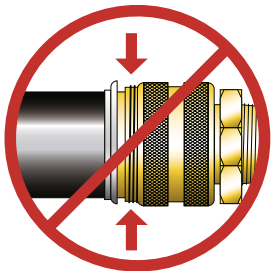
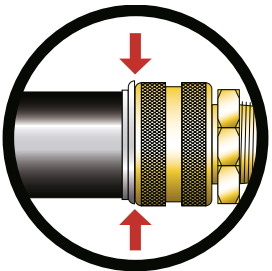
10. Do not use rams as permanent supports.

Hydraulic rams are not meant to be used as permanent supports, but are designed to lift and lower. If you need to hold the load for any length of time, cribbing or Betex locknut cylinders should be used.

14. Do not carry or drag pumps and rams by their hoses.



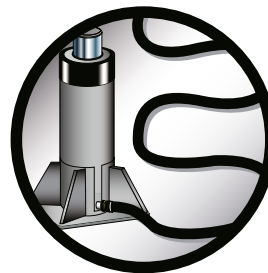
Dragging or carrying rams or pumps by a connected hose can damage the couplers and hoses. Using damaged couplers and hoses can be dangerous.



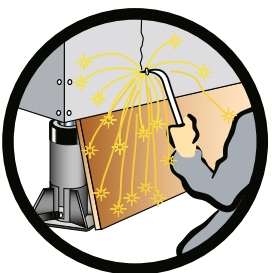
11. Connecting the hydraulics.

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 that may distort the fittings or strip the thread profile.

15. Keep hydraulic hoses free of obstructions.



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



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.

SELECTING THE RIGHT SETUP

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. What stroke length is required?
 4. Does the cylinder need to fit within limited-clearance work areas? What is the installation phase?
 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.

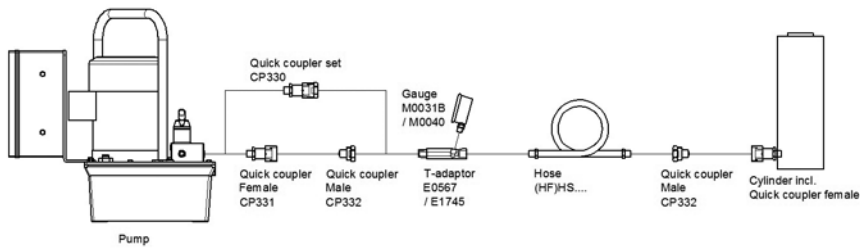
STEP 2: Choose a hydraulic pump, that matches the selected cylinder, consider:

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- or double-acting?
6. Is the weight of the pump important?
7. Available air- or electric supply?

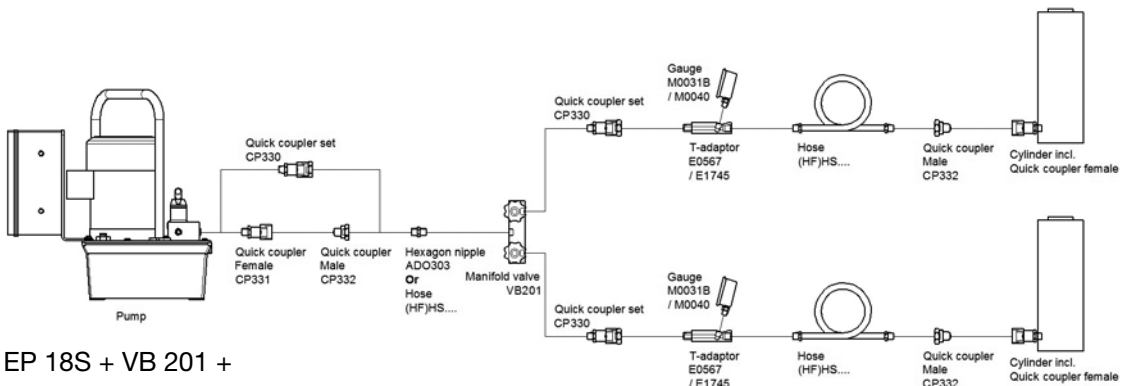
STEP 3: Choose necessary hydraulic accessories, consider:

1. Required hose length and number
2. Coupling sets for coupling and uncoupling
3. Gauge with T-adapter
4. Manifold valve
5. Extra hydraulic oil

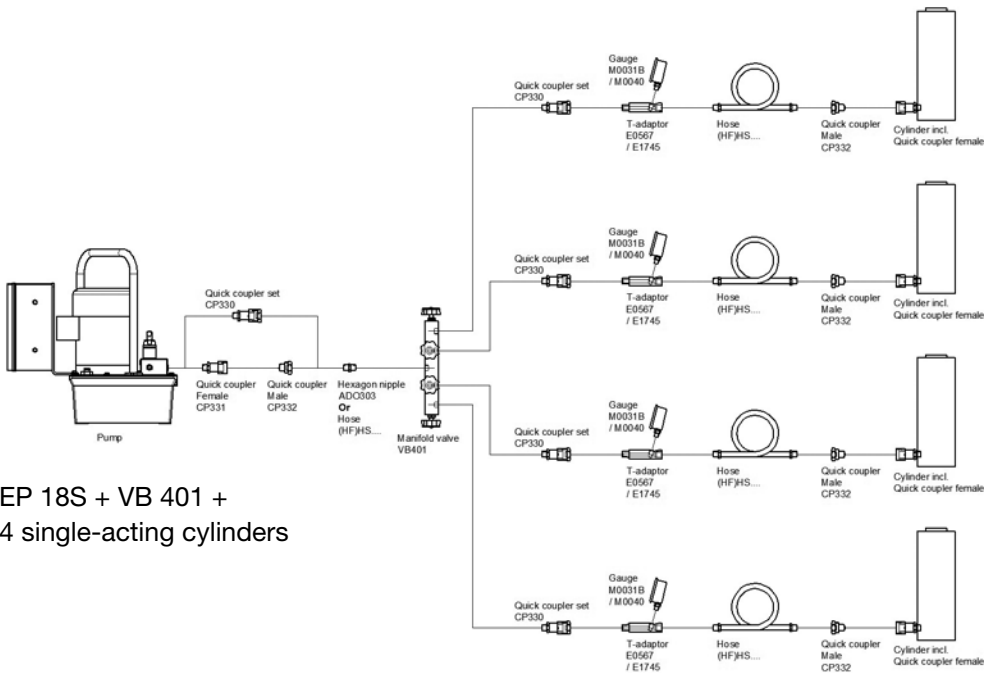
SELECTING THE RIGHT SETUP



EP 18S + single-acting cylinder

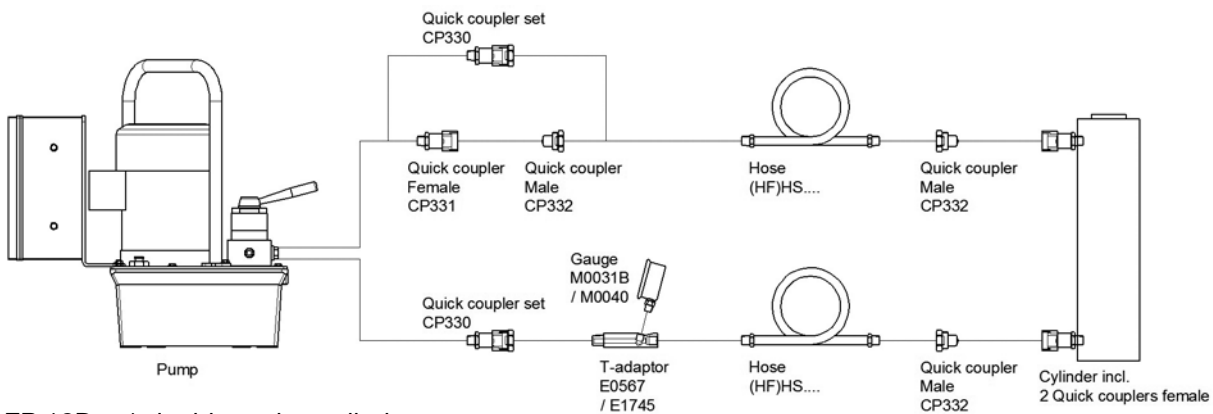


EP 18S + VB 201 +
2 single-acting cylinders

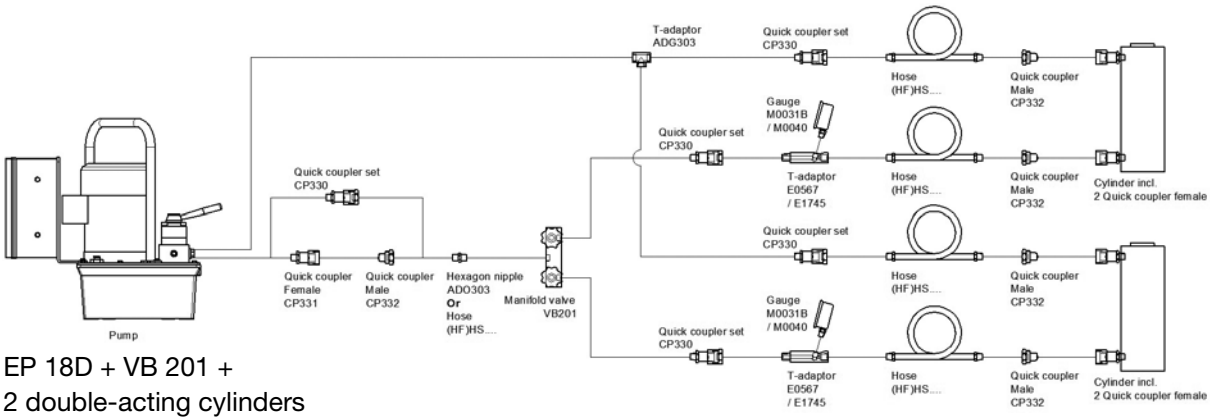


EP 18S + VB 401 +
4 single-acting cylinders

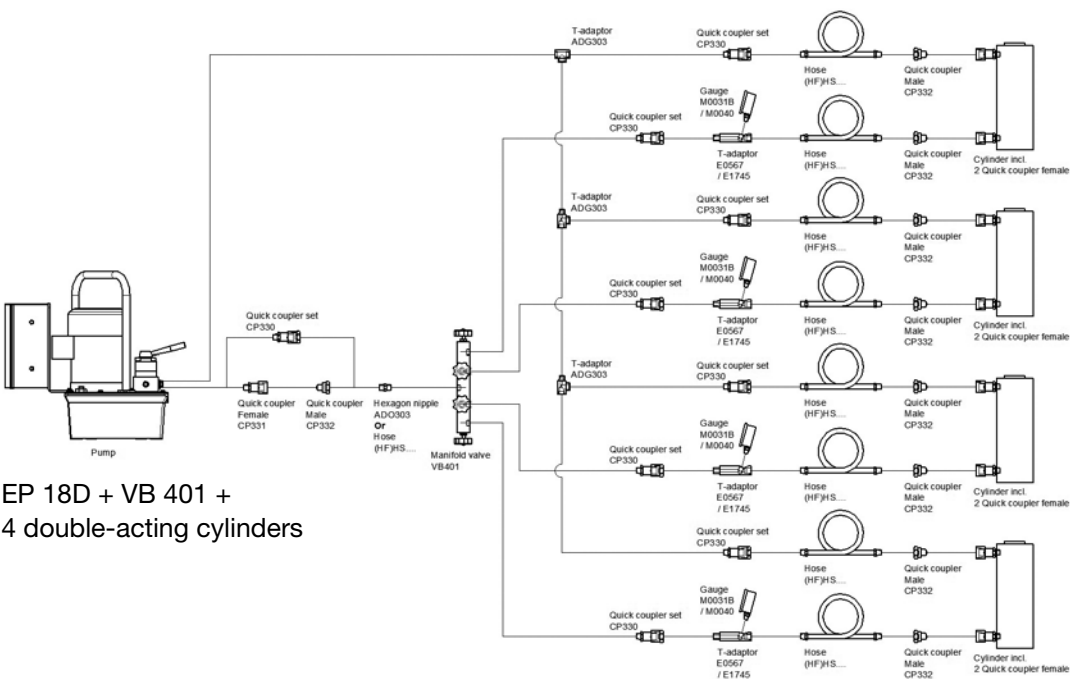
SELECTING THE RIGHT SETUP



EP 18D + 1 double-acting cylinder



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



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

SELECTING THE RIGHT SETUP

| Type | Oil cap. (cm3) | pressure stage | 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 | two stage | Green | Yellow | Green | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| PB 600 | 600 | two stage | Green | Green | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| PB 700 | 700 | two stage | Green | Green | Green | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HC 1500 | 1500 | two stage | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HC 2000 | 2000 | two stage | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HC 2500 | 2500 | two stage | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 701 | 350 | two stage | Green | Yellow | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 702 | 1000 | two stage | Green | Green | Green | Green | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 703 | 2000 | two stage | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AHP 703D | 2000 | two stage | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| HP 35 | 3500 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red |
| HP 35D | 3500 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red |
| HP 80 | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red |
| HP 80D | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red |
| FHB 350 | 350 | two stage | Green | Yellow | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| FHB 600 | 700 | two stage | Green | Green | Green | Green | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| FHB 700 | 700 | two stage | Green | Green | Green | Green | Green | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 921 | 750 | two stage | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 1600S | 1600 | two stage | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 1600D | 1600 | two stage | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red | Red | Red | Red |
| AP 3000S | 3000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red |
| AP 3000D | 3000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red | Red |
| AP 8000S | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red |
| AP 8000D | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red | Red |
| EP 13S | 3000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red |
| EP 13D | 3000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red | Red |
| EP 18S | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red |
| EP 18D | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red | Red |
| EP 18SS | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red |
| EP 18DS | 8000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Red | Red |
| EP 211S | 11000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 211D | 11000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 211SS | 11000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 211DS | 11000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 320S | 15000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 320D | 15000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 420S | 15000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |
| EP 420D | 15000 | two stage | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Yellow | Yellow | Yellow | Yellow | Yellow | Yellow |

Generally recommended
 Marginal, check requirements
 Not recommended for most applications

SHIMS

BETEX SOLID STAINLESS STEEL SHIMS

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

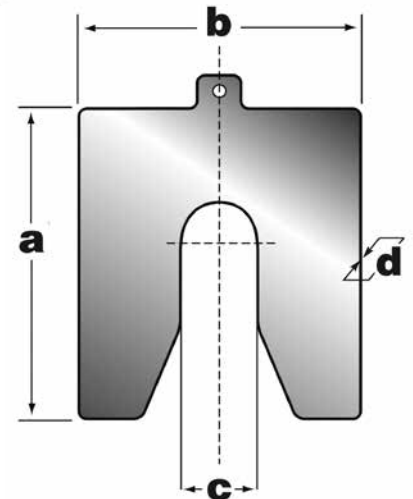
- Available in 6 difference sizes and 11 thicknesses.
- Packed in sets of 10 shims.
- High-quality, non-corroding material.
- The shim's thickness is etched on each shim.
- 31 standard combinations in handy carrying cases.
- Suitable for reuse.

Your advantages:

- 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 is now simpler and easier to verify.
- **Now also available in 2 and 3 mm thickness!**



Packed in sets of 10 shims.



Sizes of solid shims (AISI 304)

| | Art. no. | package | a mm | b mm | c mm | d mm | bolt size |
|-------------|------------|---------|------|------|------|-------|-----------|
| MINI | B035005Mn | 10 | 35 | 30 | 9 | 0.05 | M8 |
| | B035010Mp | 10 | 35 | 30 | 9 | 0.10 | M8 |
| | B035020Mr | 10 | 35 | 30 | 9 | 0.20 | M8 |
| | B035025Ms | 10 | 35 | 30 | 9 | 0.25 | M8 |
| | B035040Mt | 10 | 35 | 30 | 9 | 0.40 | M8 |
| | B035050Mu | 10 | 35 | 30 | 9 | 0.50 | M8 |
| | B035070Mv | 10 | 35 | 30 | 9 | 0.70 | M8 |
| | B035100Mw | 10 | 35 | 30 | 9 | 1.00 | M8 |
| A | B0500025Ak | 10 | 50 | 50 | 13 | 0.025 | M12 |
| | B050005An | 10 | 50 | 50 | 13 | 0.05 | M12 |
| | B050010Ap | 10 | 50 | 50 | 13 | 0.10 | M12 |
| | B050020Ar | 10 | 50 | 50 | 13 | 0.20 | M12 |
| | B050025As | 10 | 50 | 50 | 13 | 0.25 | M12 |
| | B050040At | 10 | 50 | 50 | 13 | 0.40 | M12 |
| | B050050Au | 10 | 50 | 50 | 13 | 0.50 | M12 |
| | B050070Av | 10 | 50 | 50 | 13 | 0.70 | M12 |
| | B050100Aw | 10 | 50 | 50 | 13 | 1.00 | M12 |
| | B050200Ax | 10 | 50 | 50 | 13 | 2.00 | M12 |
| B050300Ay | 10 | 50 | 50 | 13 | 3.00 | M12 | |
| B | B0750025Bk | 10 | 75 | 75 | 21 | 0.025 | M20 |
| | B075005Bn | 10 | 75 | 75 | 21 | 0.05 | M20 |
| | B075010Bp | 10 | 75 | 75 | 21 | 0.10 | M20 |
| | B075020Br | 10 | 75 | 75 | 21 | 0.20 | M20 |
| | B075025Bs | 10 | 75 | 75 | 21 | 0.25 | M20 |
| | B075040Bt | 10 | 75 | 75 | 21 | 0.40 | M20 |
| | B075050Bu | 10 | 75 | 75 | 21 | 0.50 | M20 |
| | B075070Bv | 10 | 75 | 75 | 21 | 0.70 | M20 |
| | B075100Bw | 10 | 75 | 75 | 21 | 1.00 | M20 |
| | B075200Bx | 10 | 75 | 75 | 21 | 2.00 | M20 |
| | B075300By | 10 | 75 | 75 | 21 | 3.00 | M20 |

| | Art. no. | package | a mm | b mm | c mm | d mm | bolt size |
|-----------|------------|---------|------|------|------|-------|-----------|
| C | B1000025Ck | 10 | 100 | 100 | 32 | 0.025 | M30 |
| | B100005Cn | 10 | 100 | 100 | 32 | 0.05 | M30 |
| | B100010Cp | 10 | 100 | 100 | 32 | 0.10 | M30 |
| | B100020Cr | 10 | 100 | 100 | 32 | 0.20 | M30 |
| | B100025Cs | 10 | 100 | 100 | 32 | 0.25 | M30 |
| | B100040Ct | 10 | 100 | 100 | 32 | 0.40 | M30 |
| | B100050Cu | 10 | 100 | 100 | 32 | 0.50 | M30 |
| | B100070Cv | 10 | 100 | 100 | 32 | 0.70 | M30 |
| | B100100Cw | 10 | 100 | 100 | 32 | 1.00 | M30 |
| | B100200Cx | 10 | 100 | 100 | 32 | 2.00 | M30 |
| B100300Cy | 10 | 100 | 100 | 32 | 3.00 | M30 | |
| D | B1250025Dk | 10 | 125 | 125 | 45 | 0.025 | M42 |
| | B125005Dn | 10 | 125 | 125 | 45 | 0.05 | M42 |
| | B125010Dp | 10 | 125 | 125 | 45 | 0.10 | M42 |
| | B125020Dr | 10 | 125 | 125 | 45 | 0.20 | M42 |
| | B125025Ds | 10 | 125 | 125 | 45 | 0.25 | M42 |
| | B125040Dt | 10 | 125 | 125 | 45 | 0.40 | M42 |
| | B125050Du | 10 | 125 | 125 | 45 | 0.50 | M42 |
| | B125070Dv | 10 | 125 | 125 | 45 | 0.70 | M42 |
| | B125100Dw | 10 | 125 | 125 | 45 | 1.00 | M42 |
| | B125200Dx | 10 | 125 | 125 | 45 | 2.00 | M42 |
| B125300Dy | 10 | 125 | 125 | 45 | 3.00 | M42 | |
| E | B200005En | 10 | 200 | 200 | 55 | 0.05 | M52 |
| | B200010Ep | 10 | 200 | 200 | 55 | 0.10 | M52 |
| | B200020Er | 10 | 200 | 200 | 55 | 0.20 | M52 |
| | B200025Es | 10 | 200 | 200 | 55 | 0.25 | M52 |
| | B200040Et | 10 | 200 | 200 | 55 | 0.40 | M52 |
| | B200050Eu | 10 | 200 | 200 | 55 | 0.50 | M52 |
| | B200070Ev | 10 | 200 | 200 | 55 | 0.70 | M52 |
| | B200100Ew | 10 | 200 | 200 | 55 | 1.00 | M52 |
| | B200200Ex | 10 | 200 | 200 | 55 | 2.00 | M52 |
| | B200300Ey | 10 | 200 | 200 | 55 | 3.00 | M52 |



Case ABCD



Case ABC



Case ABC

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

| Art. no | Number of shims per series / case in various sizes in mm | | | | | | | | | | | | Total per case |
|---------|--|-------|------|------|------|------|------|------|------|------|------|------|----------------|
| | Thickness: | 0.025 | 0.05 | 0.10 | 0.20 | 0.25 | 0.40 | 0.50 | 0.70 | 1.00 | 2.00 | 3.00 | |
| | Case type: | | | | | | | | | | | | |
| 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 |

SHIMS

BETEX PEEL-OFF HARD BRASS OR STAINLESS STEEL SHIMS

- Laminated pre-cut shims (peel-off)
- 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

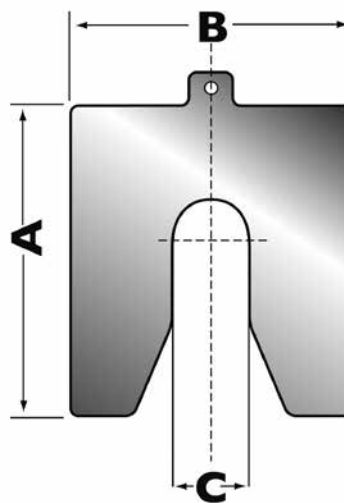
Size of peel-off shims in mm

| Art. no. | Material | Package | A mm | B mm | C mm | Bolt size |
|----------|----------|---------|------|------|------|-----------|
| 8125005 | HMS | 10 | 35 | 30 | 9 | M8 |
| 812502 | HMS | 10 | 50 | 50 | 13 | M12 |
| 8125035 | HMS | 10 | 75 | 75 | 21 | M18 |
| 812504 | HMS | 10 | 100 | 100 | 32 | M27 |
| 8125045 | HMS | 10 | 125 | 125 | 45 | M36 |
| 812506 | HMS | 10 | 200 | 200 | 55 | M52 |

| Art. no. | Material | Package | A mm | B mm | C mm | Bolt size |
|----------|-----------------|---------|------|------|------|-----------|
| 8125505 | STAINLESS STEEL | 10 | 35 | 30 | 9 | M8 |
| 812552 | STAINLESS STEEL | 10 | 50 | 50 | 13 | M12 |
| 812553 | STAINLESS STEEL | 10 | 75 | 75 | 21 | M18 |
| 812554 | STAINLESS STEEL | 10 | 100 | 100 | 32 | M27 |
| 8125545 | STAINLESS STEEL | 10 | 125 | 125 | 45 | M36 |
| 812556 | STAINLESS STEEL | 10 | 200 | 200 | 55 | M52 |

Size of peel-off shims in mm

| Art. no. | Material | Dimensions mm |
|----------|-----------------|-------------------|
| 812508 | HMS | 610 x 1220 x 1.00 |
| 812558 | STAINLESS STEEL | 610 x 1220 x 1.00 |



TIP!

Use in combination with:
 Toe jacks, page 113-114
 Spreaders, page 116
 Alignment computers: 143 -146

SHAFT ALIGNMENT COMPUTERS

LASER KIT SHAFT ALIGNMENT SYSTEM

The Fixturlaser Laser Kit consists of two wireless sensor units utilizing two line lasers. The use of line lasers minimizes setup time. To make it even easier, the sensors come pre-mounted on its fixtures 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, no language barriers to overcome.

The software leaves you without any doubt how your machine is aligned and when your job is completed. Reporting is automatic and contains all relevant information.

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



| Technical details | |
|-----------------------------|--|
| Art. nr.: | 780328 |
| Case: | |
| Weight incl. all parts case | 2.75 kg |
| Dimensions mm (l x w x h) | 357 x 305 x 96 mm |
| Displayed resolution | 0.01 mm |
| Sensor units: | |
| Weight | 156 g |
| Dimensions mm (l x w x h) | 139 x 79 x 40 mm |
| Measurement distance | 70 mm - 850 mm |
| Detector | PSD (single axis) |
| Detector area | 8.5 x 0.9 mm (0.3 x 0.4 inch) |
| Measurement accuracy | 3% +/- 0.01 mm |
| Inclinometer accuracy | +/- 2° |
| Wireless communication | Bluetooth transceiver with multi-drop capability |
| Shaft brackets: | |
| Shaft diameter | ø 30 - 150 mm |
| Rods | 2 pcs 150 mm |

TIP!

Use in combination with:
 Betex toe jacks, page 113 -114
 Betex spreaders, page 116
 Betex shims, page 140 -142

SHAFT ALIGNMENT COMPUTERS

EASY-LASER® E420

Easy-Laser® is used to align pumps and motors for all types of installations in a variety of industries. Correctly set-up and aligned machines are necessary to reduce energy consumption and achieve optimum service life.

Easy-Laser® E420 sets a new standard

in entry level laser systems for shaft alignment. Wireless measuring units, a large 5.7" colour display and an IP65-rated design that withstands harsh environments. These are the features you would normally only find in more expensive systems. Simply put, Easy-Laser® E420 has everything an entry level system should have, and more. Take the next step into wireless freedom! Using Easy-Laser® E420 makes it easy to measure both horizontal and vertical/flange-mounted machines.



What you can measure and align:

Horizontal machines: horizontally mounted machines often consist of a pump and a motor, but can also include other types of machines such as gearboxes and compressors.

Vertical/flange-mounted machines: vertical and flange-mounted machines, e.g. pumps, motors, gear boxes.

- Art nr.: 780326



Advantages E420 and E540:

- Easy to learn and use.
- Compact measuring units for use on most machine designs.
- All wireless units with integrated rechargeable battery.
- Large 5.7" colour display.
- Programs with both symbols and text = easy to understand.
- TruePSD technology with unlimited resolution.
- Dual PSD, dual laser beams and dual inclinometers for superior control and accuracy.

- 3 year warranty gives assurance.
- Fast service and support. 48-hours Express service if necessary.
- Low overall costs during the entire lifecycle of the product, for example calibration, accessories, etc.

Extra E540:

- Produce PDF reports directly from the Display unit and save to USB memory.
- Expandable / Adaptable. A range of accessories means that you can adapt the measurement system to your needs, now and in the future.

EASY-LASER® E540 wireless

Easy-Laser® is a cost effective investment that will pay itself back quickly by eliminating unplanned downtime, and reducing energy consumption and the need for spare parts. Simply efficient!

Easy-Laser® E540 is a precise and competent alignment system for your rotating machinery. Easy-Laser® E540 provides the ideal balance between performance and price allowing you to create the best conditions to operate your machinery economically and problem-free:

- Alignment of horizontal and vertical/flange mounted machines.
- Keep track of machinery status with vibration level check*.
- Check the prerequisites for a correct alignment before aligning, e.g. bearing play and soft foot.
- Measure and align in three easy steps.
- Document the result.
- Art nr.: 780317



BELT ALIGNMENT COMPUTERS

BTA EASY-LASER D90

Easy-Laser® D90 pulley alignment system is installed in a few seconds, and the laser line that is projected on the targets clearly shows how to adjust the machines. The laser line allows you to quickly ascertain and correct the misalignment. The tool has targets that can be read out "visually" and which give excellent degrees of accuracy that are sufficient for most users. If, in the future, you wish to have the option of digital readouts with the corresponding advantages, you can add a digital detector.



| Applications: Suitable for most types of belts/chain drives | |
|---|---------------------------|
| Art. no. | 7803103 |
| Dimensions (wxdxh) | 145 x 86 x 30 mm |
| Material | ABS plastic |
| Weight | 270 grams |
| Pulley diameters | 60 mm diameter and bigger |
| Operating range | maximum 10 metres |

BTA DIGITAL EASY-LASER E180

Wireless and digital system for the alignment of pulleys

The Easy-Laser® E180 allows even more accurate and efficient alignment of sheaves/pulleys! Easy-Laser® is unique to the market in being able to offer digital read off. Digital readings allow greater precision, and combined with one of our display units*, make it easier to follow the belt manufacturer's tolerances and results are documented directly as PDF. This is a unique characteristic that gives advantages in the long term, not least in the service life of belts and sheaves/pulley.



- Compared with old measurement methods, it is this way of more accurately and efficiently align, since both the horizontal and the vertical alignment take place at the same time.
- Easily operated by one person.
- For all types of drives/pulleys, such as:
V-belts, flat belts, timing belts and chain drives.
- Measure range: up to 3 meter between transmitter and detector.

TIP!

Use in combination with
Betex toe jacks, page 113 -114
Betex spreaders, page 116
Betex shims, page 140 -142

*The display unit is not supplied as standard with the Easy-Laser E180.

| Technical data Easy-Laser E180 BTA | | Art. no. 7803180 | |
|------------------------------------|---|----------------------------|---|
| 1 Laser transmitter | 1 Detector | | |
| 2 Targets | 1 Charger (100-240V AC) | | |
| 1 Carrying case | 270 x 225 x 80 mm (10.6"x8.8"x3.1) + 1 Manual | | |
| | | | |
| Laser transmitter | | Detector unit | |
| Sheave diameters | Ø60 mm (2.5") and larger | Measurement distance | Up to 3 m (9.8") between Transmitter + Detector |
| Laser class | 2 | Measurement range | Axial offset: ±3 mm (0.12"). Angular value: ±8° |
| Output power | < 1mW | Display type | Yellow OLED 96x96 pixels |
| Laser wavelength | 635 - 670nm | Connection | Bluetooth Wireless Technology |
| Beam angle | 60° | Battery type / operation | Li-Po / 5 hours continuously |
| Accuracy | Laser plane - Reference plane | Material | ABS-plastics / Anodized Aluminium |
| | Parallelity: <0.05°, Offset <0,2 mm (0.008") | Dimensions | WxHxD: 95x95x36 mm (3.7x3.7x1.4") |
| Battery type | 1xR6 (AA) 1,5 V (8 h battery operation) | Weight (without Batteries) | 190 g (6.7 oz) |
| Material | ABS-plastics/Hard anodized Aluminium | | |
| Dimensions | WxHxD: 145x86x30 mm | | |
| Weight | 270 g (9.5 oz) | | |

BELT ALIGNMENT COMPUTERS

PAT PULLEY ALIGNMENT LASER

The PAT pulley alignment laser is the definitive solution for all your pulley alignment jobs! Because the belts' grooves are used as reference points, you can see instantly whether the pulleys are correctly aligned or not.

The PAT is supplied with two spring-loaded laser units that can be mounted in the pulley grooves. The PAT also has standard tapers allowing the lasers to be mounted on most standard gauges (A-E 6 mm - 40 mm). Other gauges 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. You can see in no time whether your pulleys are correctly aligned.



| Specifications: | |
|------------------|-----------------------------|
| Art. no. | 780700 |
| Material | anodised aluminium |
| Dimensions | 61 x 76 x 60 mm (l x h x w) |
| Weight | 0.64 kg |
| Battery type | 2) AAA batteries |
| Operating range | from 15.2 mm to 609.6 mm |
| Laser | class 2 |
| Pulley diameters | 76 mm diameter and bigger |



TIP!

Use in combination with
Betex toe jacks, page 113 -114
Betex spreaders, page 116
Betex shims, page 140 -142

Monitoring

BETEX BEARING CHECKER



An economic three- in-one-instrument for on-site condition monitoring.

Bearing Checker is unique, being the first portable, pocket-size instrument (weight 185 g, size 158 x 62 x 30 mm) for evaluated shock pulse measurement. It can be operated using push buttons and you can enter the required data manually. Besides shock pulses, Bearing Checker measures machine surface temperature with infrared light, and can also be used as an electronic stethoscope for listening to machine sounds.

The instrument can be used on most rotating machinery, in a diversity of industrial environments,

such as:

- electric motors
- fans
- pumps

Bearing Checker – your affordable expert

Take your maintenance to the next level with this easy to use and affordable instrument for checking bearing condition.

ADVANTAGES:

- Proactive approach to maintenance
- Useful and economical complement to your maintenance toolbox
- No specialized training
- Potential problem sources can be detected well before damage is detectable by heat or vibration
- Easy-to-operate with clear symbols on display
- Art nr.: 80322



Monitoring

BETEX VIBCHECKER VIBRATION MONITORING



VibChecker: portable and user friendly vibration measurement

VibChecker is a light and compact-sized instrument for vibration measurement in the 10-1000 Hz. Measurement results are immediately and automatically evaluated against ISO standards. Green - yellow - red LEDs indicate vibration severity and a real time FFT spectrum is produced for easy pattern recognition. Results can be stored for documentation and follow-up.

With its built-in probe, easy button operation and clear symbols, VibChecker is an all set to go instrument; just point the probe and measure to locate vibration-related problems.

Vibration monitoring: a cost-effective strategy

Vibration monitoring is a cost-effective predictive maintenance tool. In most cases, vibration measurement can detect a problem long before damage to the machine is done. The repair of equipment failing while in service is many times costlier than planned repairs made possible through vibration monitoring.

VibChecker: minding your machinery

Machine vibration is the cause of many problems in industrial equipment. Integrated in your normal maintenance activities, periodic vibration measurement with VibChecker will go a long way to help keep your equipment operational. VibChecker combines handiness and ease of use with cost effectiveness and durability. Suited to both new and experienced users, VibChecker covers the basic vibration monitoring needs of your maintenance organization.

Art nr.: 780201



Monitoring

LASER THERMOMETERS

Our digital laser thermometers are ideal for fast and safe measurement of liquids, gases, and many other substances, also suitable for temperature measurements of motors, brake systems, heating systems, etc. The built-in laser pointer can determine the correct measuring point distance, measured value can then be within half a second read and recorded automatically.

The thermometers all have:

- Backlit display
- Precision 0.1°C
- Automatic "hold" function
- Readable temperature of 0.1°C
- Measurement in Celsius or Fahrenheit

BETEX 1220 – LASER THERMOMETER UP TO 300°C

- Measurement range: -50°C - 300°C
- Fast response time (within 0.9 sec.)
- Dimensions: 155 x 50 x 72mm
- Battery type: 2 AAA batteries (incl.)
- Weight: 68 gr
- Art nr.: 610020



BETEX 1230 – LASER THERMOMETER UP TO 380°C

- Measurement range: -50°C - 380°C
- Max. height: 1500mm
- Fast response time (within 0.5 sec.)
- Dimensions: 153 x 101 x 43 mm Incl. batteries
- Weight: 147.50 gr
- Art nr.: 610030



BETEX 1250 – LASER THERMOMETER UP TO 1000°C

- Measurement range: -50°C - 1000°C
- Max. height: 1500mm
- Fast response time (within 0.1 sec.)
- Dimensions: 260 x 155 x 54 mm
- Incl. 9V battery, carrying case, instruction manual
- Weight: 295 gr
- Art nr.: 610030



BETEX 1300 – LASER THERMOMETER UP TO 1370°C

- Measurement range: -100°C - 1370°C
- Also suitable for surface measurements
- Dimensions: 120 x 68 x 31mm
- Incl. 9V battery, canvas bag, instruction manual
- Weight: 112 gr
- Art nr.: 610002



Monitoring

DECIBEL METER / TACHOMETER / STETHOSCOPE

DECIBEL METER - SOUND METER

With this professional microprocessor controlled sound level meter you can accurately measure the volume. The meter is carried out in a robust ABS housing and is designed such that it is to handle comfortably. The instruments feature an extra large display with digit height 20 mm. The meters also have a hold function to hold the measurement data on the display and has the capability to carry out measurement interval, wherein the time between each measurement can be set up. In these measurements, the time, and sensitivity to be selected independently. Also, it is possible to store the highest value automatically.

BETEX 1500

- Measuring range: 30 - 130 dB (A)
- Frequency: 31.5 Hz - 8500 Hz
- Resolution: 0.1 dB
- AC adapter connector
- Dimensions: 260 x 69 x 32 mm
- Weight: 270 gr
- Art nr.: 610150

Includes:

- Microprocessor controlled sound meter
- Wind cap for microphone
- PE storage case and instruction guide
- Battery

BETEX 1510

- Measuring range: 40 - 130 dB (A)
- Frequency: 31.5 Hz - 8500 Hz
- Resolution: 0.1 dB
- AC adapter connector
- Dimensions: 260 x 69 x 32 mm
- Weight: 350 gr
- Art nr.: 610151

Includes:

- Microprocessor controlled sound meter
- Wind cap for microphone
- PE storage case and instruction guide
- Standard
- Battery



Betex 1620 – DIGITAL LASER TACHOMETER

This digital laser tachometer is very suitable for maintenance and servicing of engines, rotating equipment and machines.

- 5-digit 10 mm LCD display.
- Test range of measurement: 5 to 99,999 rpm.
- Display: 0.1 r.p.m. at 0.5 to 999,99 r.p.m.
- Display: 1.0 r.p.m. above 1000 r.p.m.
- Reading: 1 x second.
- Accuracy: +/- 0.5 %
- Measuring distance 50 to 300 mm.
- Memory: last, maximum and minimum measured value.
- Dimensions: 72 x 190 x 37 mm.
- Weight 250 gr
- Art nr.: 520820

Includes:

- 3 reflective strips.
- Carrying case and instruction manual.
- 9V battery



BETEX ELS14 ELECTRONIC STETHOSCOPE SET

A simple method to detect machine failure in a noisy environment. For preventive system maintenance with stethoscope. Applications include checking the operational status of valves, injectors, electric relays, pumps, lubrication systems, shafts, drivetrains and bearings.

The measuring probe tip is placed against the machine housing. The sound level can be adjusted. The speakers are integrated in a headphone which reduces the ambient noise effectively.

- Temperature range: 0°C to + 55°C.
- Strong housing in black ABS moulding.
- Lightweight, with 290 mm measuring probe tip, only 300 grams.
- Alkaline 9V battery provides a long operating time, approx. 30 hours in normal use.
- Includes: headphone and bag
- Measuring rod: 60 mm and 290 mm
- Dimensions: 205 x 50 x 40 mm
- Art nr.: 6500015



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