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BEGA SPECIAL TOOLS

ANNO 1978

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®

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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).

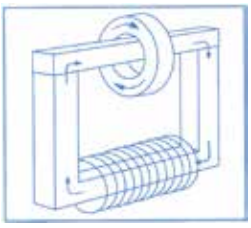
DEMAGNETISATION
Fail-safe demagnetisation is essential for bearings and transmission parts. The proven quality of BETEX® induction heaters guarantees maximum demagnetisation (< 2A/cm). This has a major positive effect on the life span of bearings, gears, etc.

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 dismounting 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.



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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. -- -- -- -- --						
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)

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 polution. 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

Technical details *page 10*

Flexible inductor for heating different kinds of parts

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 29

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 29

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: 135 mm
- Automatic demagnetisation
- Automatic power reduction.
- Including 5 yokes

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

Technical details page 29

AREAS OF APPLICATION:

- Technical services
- MRO organisation

✓ High output, energy efficient!

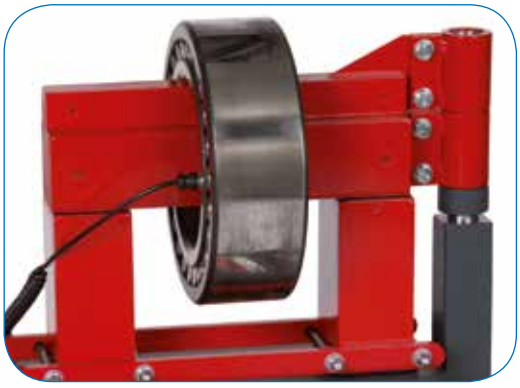
The TURBO effect only works when the component is in a horizontal position

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**

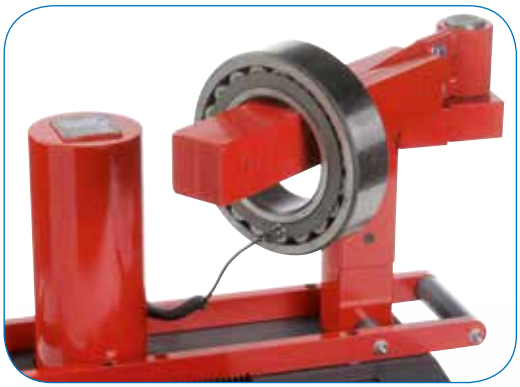
Technical details page 30

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 30

✓ High output, energy efficient!

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

STANDARD Benchtop

BETEX 38 ESDi - 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 30

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 30

✓ 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 31

◀ *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

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 31

✓ High output, energy efficient!

◀ *Folding operating panel from ZFD/RMD/RSD 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 31

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 31

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 31

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

Heavy duty heaters.

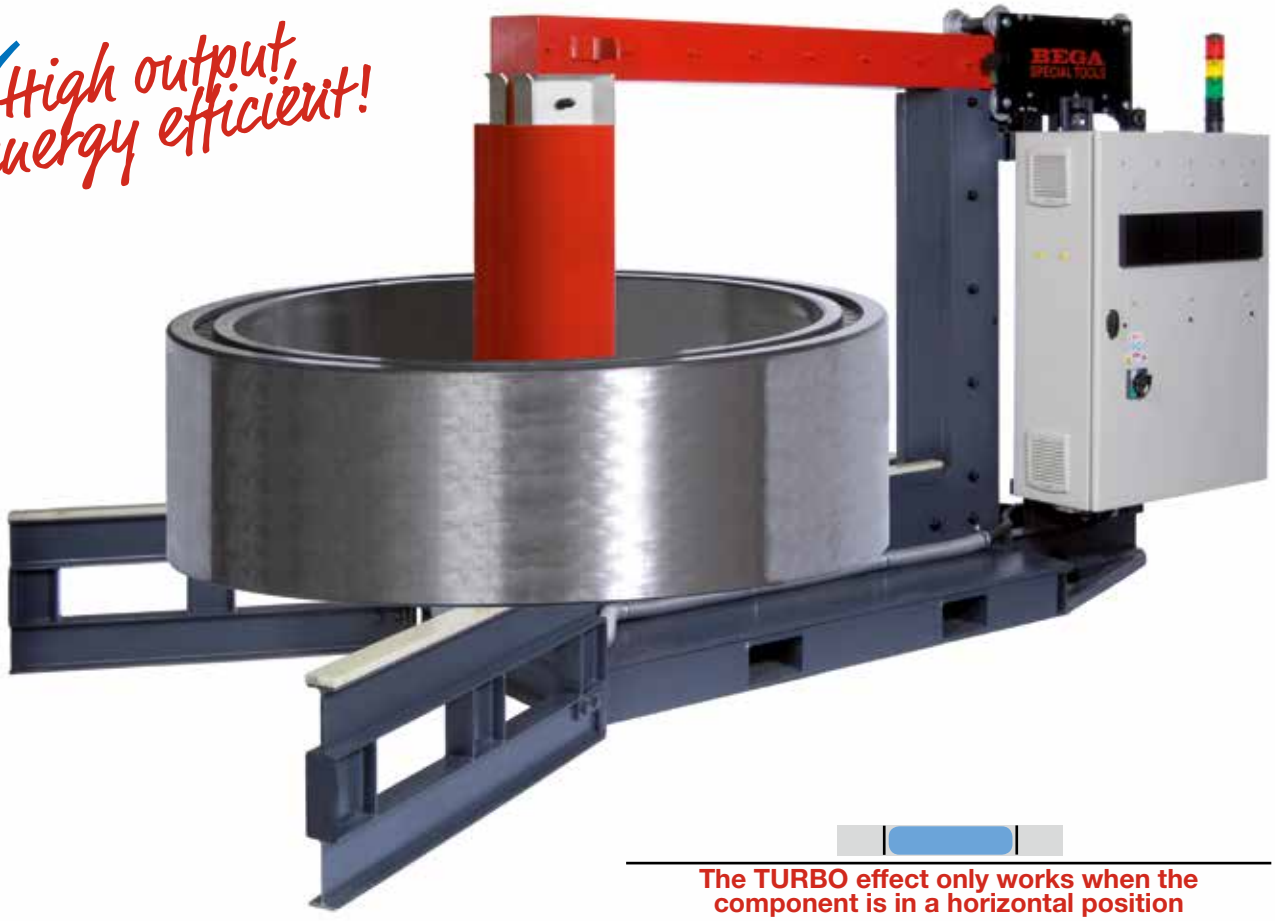
- Min. ID Ø: 115 - 240 mm
- Max. OD Ø: 1400-2500 mm.
- Max. width: 450-1020 mm.
- Automatic demagnetisation
- Automatic power reduction
- Including 1 yoke

- 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 31

High output, energy efficient!



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

INDUCTION HEATER FOR MOUNTING & DISMOUNTING

BETEX MF QUICK-HEATER - middle frequency technology

For mounting & dismounting of powertransmission components in MRO and OEM companies: bearings, labyrinth rings, bearing rings, sleeves, 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. It 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.

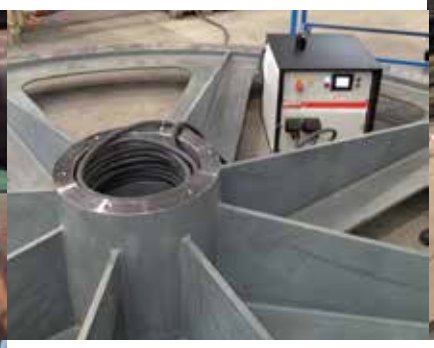
There is a choice of 2 inductors:
- **Fixed inductors** can be used in serial work.
- **Flexible inductors** can be used multifunctional. Ideal when there are different designs or sizes.

Each heater is customised to your needs and supplied with required size(s) of inductors.

BETEX INDUCTION POWER TOOLS®

THE SMART, ECO-FRIENDLY WAY OF HEATING

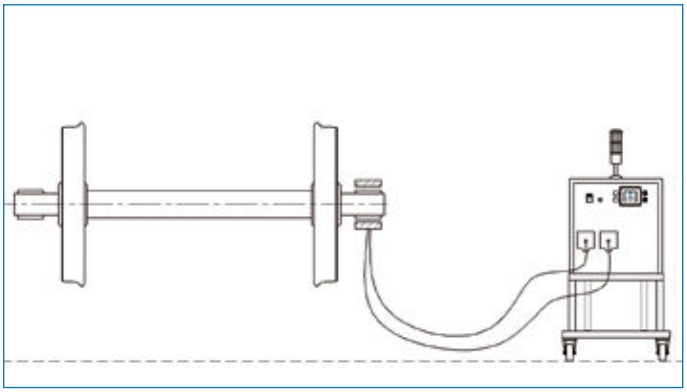
- **Economic:** One device for Mounting and Dismounting.
- **Choice between two standard generators:** 22 or 44 kW. Low connection power (32/63 Amp).
- **Choice** between fixed and flexible inductors.
- **Safe:** Temperature controlled heating: overheating is not possible because demand is constantly monitored and if necessary adjusted. 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 part is connected for a second time to the inductor, the correct settings are selected automatically. Simply press the START button to get the job done.
- **Air-cooled:** No water cooling needed.
- **Automatic demagnetisation**

✓ For mounting, dismounting, preheating
✓ Controlled heating
✓ Low connection power (32/63 Amp)
✓ Generators are 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.

HEATING METHODS

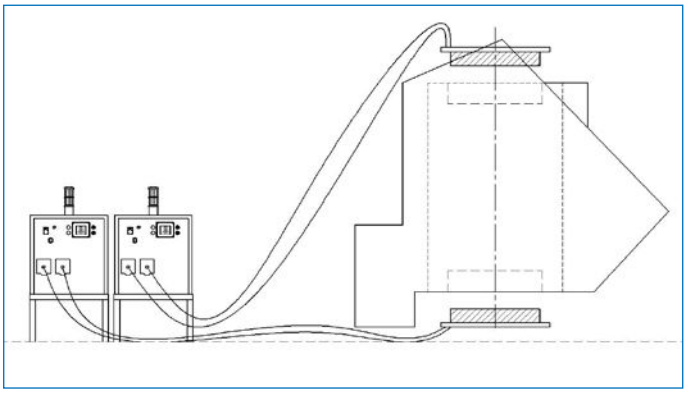


Method 1

• Fixed inductor

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

For bearing rings, pipes and rings.

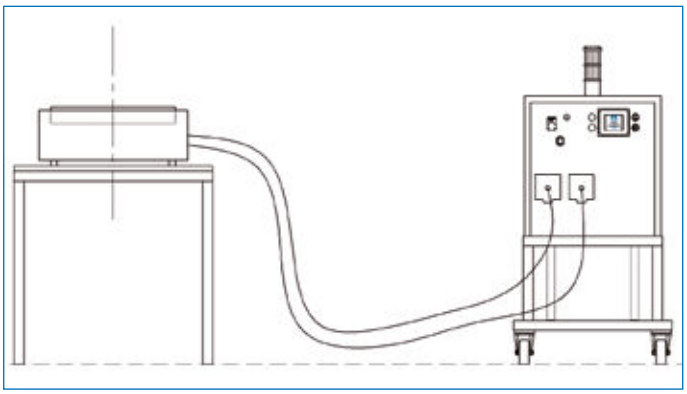


Method 2

• Fixed inductor

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

For bored holes for gearboxes, bearing bores in housings.

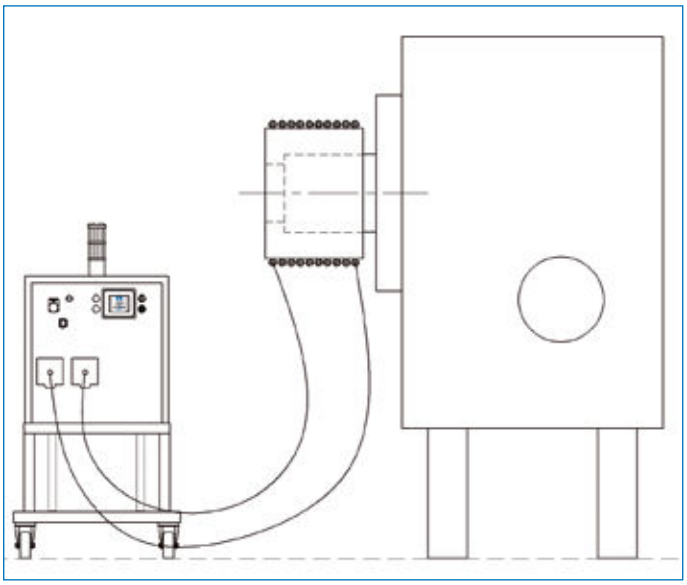


Method 3

• Table inductor

The part is on an inductor table and 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 38

BETEX INDUCTION POWER TOOLS®

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

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 out-sourced. This was not very efficient as it involved transport back and forward, costs for the getting the job done etc etc.
The customer can now do the job on location with their own MF Quick-Heater and is rapidly earning back the investment.

Steel industry (Rolling mill)
In this example the MF Quick-Heater is used to dismantle bearing inner rings.
This method generates enormous time saving, prevents damage and improves productivity.

Rail/Metro industry
Easy dismantling of inner rings, NU-NJ bearings, labyrinth rings. Perfectly even heating results in a safe, fast and clean job.

Machine building, gear & drive systems
Using the flexible inductors, the bore of a this giant cable pulley is heated so the bearing can be installed properly.

Drive technology
This gear (3.5 t) is heated up to 165 °C in 2 hours time.
Customer is saving time, energy and has greatly improved work efficiency by reducting heating time from 8 to 2 hours.

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!

FIND MORE APPLICATION EXAMPLES ON OUR WEBSITE

www.begaspecialtools.com

Areas of application:
• Steel • Paper • Wind • Transport • Rail/Metro • Chemical • Power plants • Gearbox manufacturing • Machine building • MRO/OEM and more …….

Design and manufacturing: by Bega International BV, Vaassen, The Netherlands

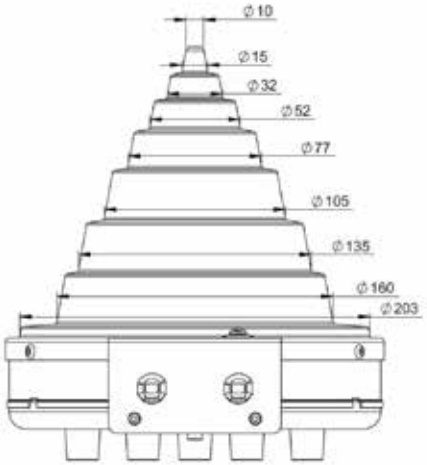
BETEX CONE HEATER, CH SERIES

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:

Type CHU: Standard unit
Type CHC: With **temperature preset** to 120°C / 248°F.
Controlled temperature: the unit will keep the bearing at a 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

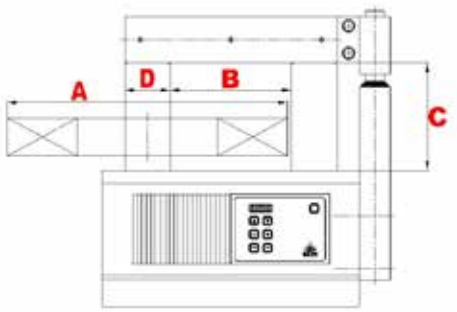
Type BETEX Cone Heater	CHU	CHC
Power	725W	725W
Voltage/Amp;	120V / 6A 230V / 3.2A	120V / 6A 230V / 3.2A
Frequency Hz	50/60Hz	50/60Hz
Max. weight ± kg	5-7 kg	5-7 kg
Min. ID Ø, mm	10	10
Max. ID Ø, mm	203	203
Max. OD Ø, mm /	305	305
Temperature control in °C and °F Fixed temperature	-	120°C / 248°F
Heat retention function	-	Yes
Dimensions mm / " LxWxH	365x220x240	365x220x240
Weight heater kg / lbs	2.4 kg	2.6 kg

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	135	
Max. width at horizontal heating, mm	*B	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 (lxwxh)		460x240x280	460x240x280	600x220x275	
Weight heater kg excl. Yokes		7	21 (incl. yokes)	23 (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!

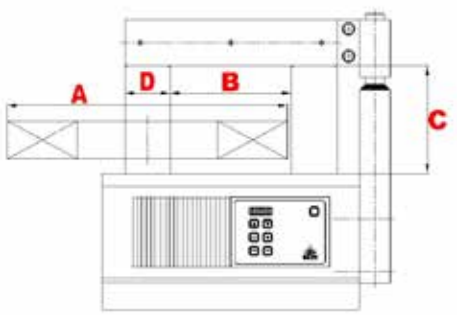


TECHNICAL DETAILS - Workshop models

Type BETEX		**22 ELDi**	**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	400V/20A	400V/20A
Voltage/Amp*: optional		120V/15A	120V/15A	500V/20A	500V/20A
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	200	200	315
Max. width at horizontal heating, mm	*B	125	230	180	280
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 excl. Yokes		31	37	53	65/105
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!



BETEX INDUCTION POWER TOOLS®

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 400V/30A	12 kVA 400V/30A	24 kVA 400V/60A	24 kVA 400V/60A	40 kVA 400V/100A	48, 100 kVA 400V/120.250A	40, 48, 100kVA 400V/100,120,250A
500V/30A	500V/30A	500V/60A	500V/60A	500V/100A	500V/120.250A	500V/100,120,250A
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 320 fixed supports	390/690*3	600	440/730*3	730/990*3	450/1000*3
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
yes	yes	yes	yes	yes	yes	yes
1200x640x1000	1200x640x1000	1000x500x1350*3	1600x700x1300	1750x600x1470*3	2150x900x2210*3	2350x1000x1875*3
125	205 adj. supports 185 fixed supports	220/320 kg*3	450 kg (incl. yoke)	660/800 kg*3	800/1700 kg*3	1800 kg*3
-	-	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	**22 kW**	**44 kW**
Cooling	forced air cooling	forced air cooling
Active power	2.5 - 22 kW	2.5 - 44 kW
Frequency	10-20 kHz	10-20 kHz
Mains voltage	3x 400V / 50 Hz	3x 400V / 50 Hz
Connection (plug)	32A	63A
Main fuse	32A	63A
Temperature measurement	for type K thermo couple	for type K thermo couple
Inductor recognition	yes	yes
Temperature sensor	yes, for max 300°C	yes, for max 300°C
Dimensions generator LxWxH	553 x 500 x 700 mm	640 x 1050 x 1856 mm
Weight incl trolley	135 kg	185 kg
Operation:		
Setpoint power	via touchscreen	via touchscreen
Setpoint temperature	via touchscreen	via touchscreen
Setpoint timer	via touchscreen	via touchscreen
Selection time or temperature 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
Signaling by:		
Ready message	green continuous light	green continuous light
Installation in operational state	green flash light	green flash light
Ready message	green continuous light	green continuous light
Error message	red continuous light	red continuous light

Min. winding diameter flexible inductors 22 kW		
Type m¹ / °C	**Diameter cable**	**Min. winding diameter**
15/20/25/30m1/180°C	Ø 12 mm	ca. 75 mm
15/20/25/30m1/180°C	Ø 15 mm	ca. 100 mm
15/20/25/30m1/300°C	Ø 20 mm	ca. 120 mm

Min. winding diameter flexible inductors 44 kW		
Type m¹ / °C	**Diameter cable**	**Min. winding diameter**
15/20/25/30m¹/180°C	Ø 19 mm	ca. 140 mm
15/20/25/30m¹/300°C	Ø 28 mm	ca. 220 mm

BETEX INDUCTION POWER TOOLS®

RAIL
TRANSPORT

WIND
ENERGY

MACHINE
BUILDING

CUSTOM
MADE

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

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.

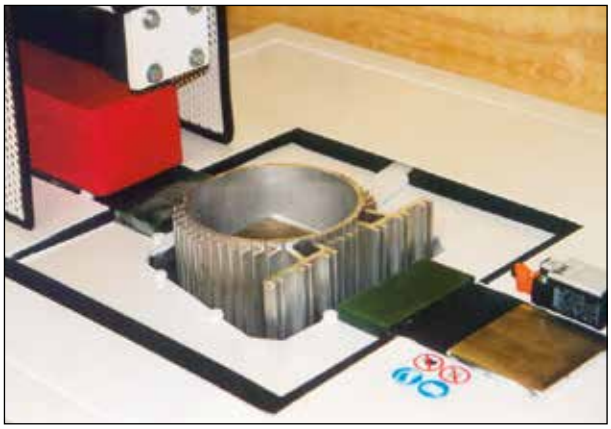
◀ **BETEX GIGANT DL-1000**

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.



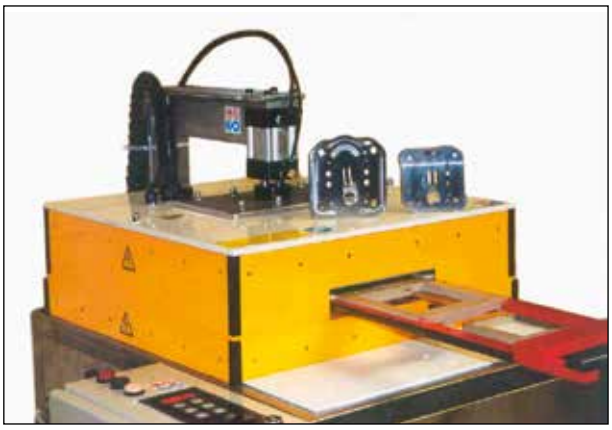
When fast and accurate heating is imperative, these ‘Specials’ offer surprising solutions. For example, it is possible to integrate them into fully automated production processes, even with a pick-and-place unit if desired.
A huge advantage is the use of low frequency (50/60Hz), which costs much less 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).

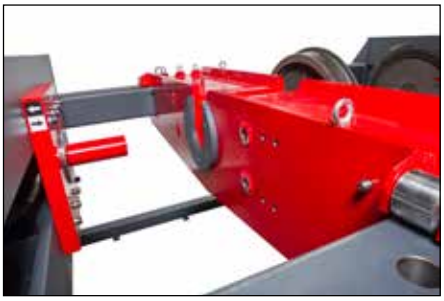
Specials - Rail workshop tools

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



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
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

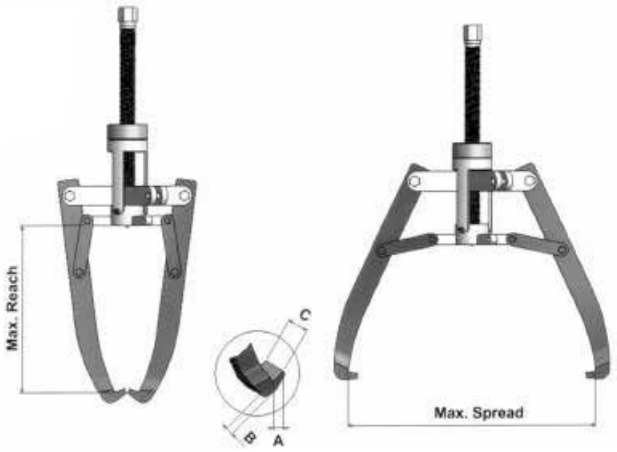
MECHANICAL PULLERS

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

Safe and easy dismounting 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.

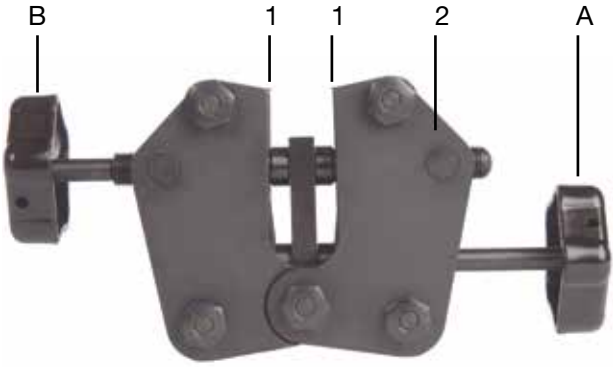
2, 3, 5, 8, 10 en 12 ton capacity!

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

Type	Art. no.	Cap. ton	Max. shaft length mm	Max. spread mm 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 from 5 mm 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.	Min. Spread mm	Max. Spread mm	Weight kg
KZZ	4900011	5	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

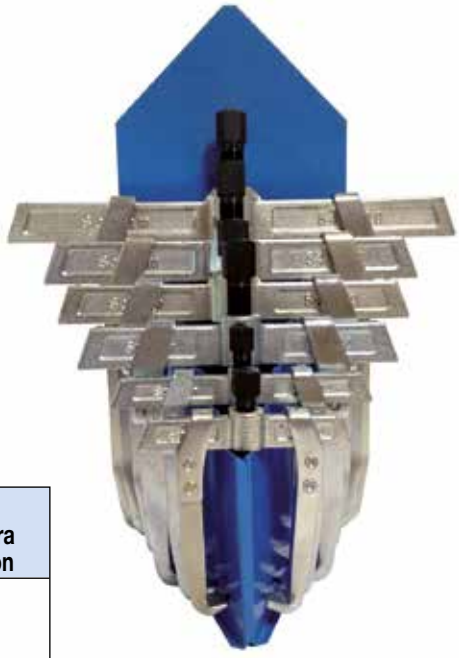
MECHANICAL PULLERS

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 56 -120 56 -220	056020 056120 056220	65 90 150	3 sets 5 sets 5 sets	12 30 24
Set	**Ball-bearing 6000**	**Ball-bearing 6200**	**Ball-bearing 6300**	**Ball-bearing 6400**
56 -020 56 -120 56 -220	6004 to 6006 6007 to 6020 6021	6200 6205 6206 6212 6213 6219	6300 6302 6303 6308 6309 6319	- 6403 6405 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

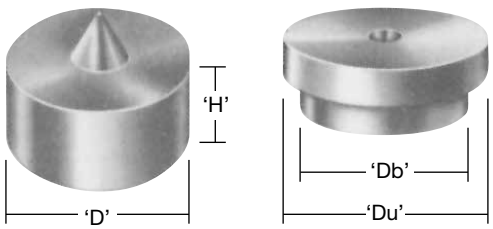
'D' min.	=	Ø 19 mm	'H' min.	=	Ø 16 mm
'D' max.	=	Ø 38 mm	'H' max.	=	Ø 19 mm

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 marger 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 -005	5 -7	35	*	****
	62 -030	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 -040	40 -50	95	**	****
	62 -070	62 -050	50 -60	95	**	****
		62 -060	60 -70	95	**	****
62-200/62-300	62-070➔	62 -070	70 -80	95	**	****
	62 -0125	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

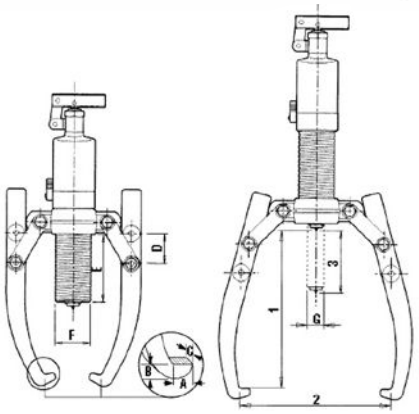
Principle 4: grip in or behind inner bearing, or behind outer bearing ring.

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. Appllications for HP-pullers will be found in motor repair shops, service companies, maintenance shops, industry, mining, paper milis, chemical plants, shipping, offshore, etc.
- **Compact!**
  The self contained hydraulic pump and cylinder save space, as you don't need a separate pump, hose or puller.
- **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 56-57

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

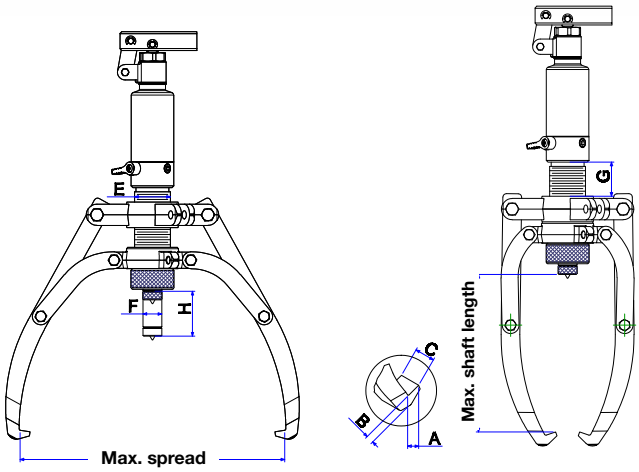
* incl. safety net ** incl. safety blanket

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 and cylinder save space, as you don't need a separate pump, hose or puller.
- **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 56-57

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

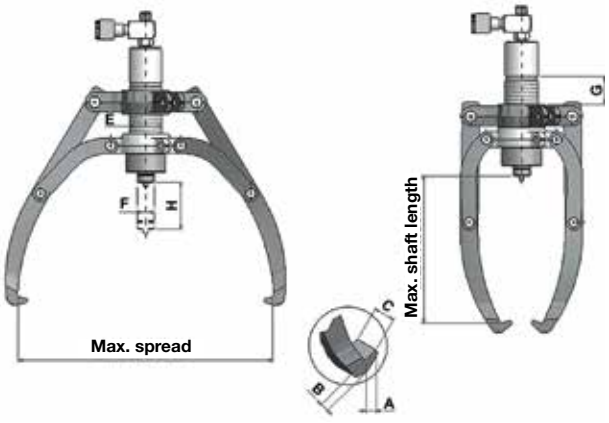
HYDRAULIC PULLERS

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

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

Separate 2-stage handpump available

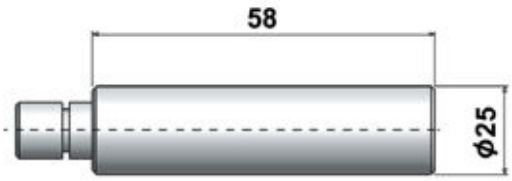
- **Practical!**
  Self-centering, easy to convert 2- or 3-arm puller. The arms slide inwards or outwards simultaneously.
- **Safe!**
  Arms can never deflect!
- **Economical!**
  2- or 3-arm combination puller. Two pullers for the price of one.
- **Strong!**
  The greater the pulling force, the tighter the jaws grip! The arms cannot bend or deflect.
- HXP503 also available with mobile crane (see page 60 + 61).



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 56-57 and hand and foot pump sets, from page 89.

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/dismount 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.

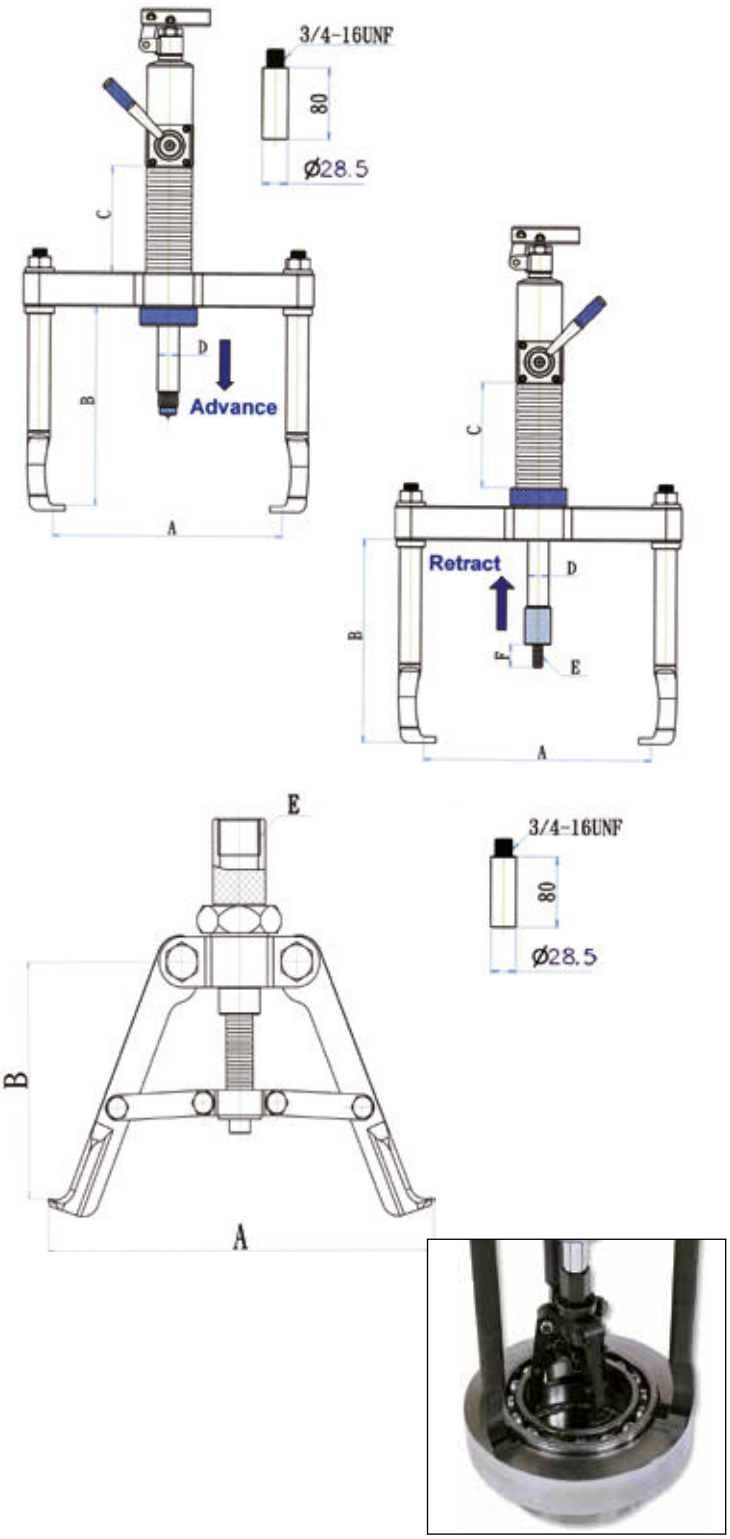
User-friendly
- Unique, patented double-acting cylinder.
- Unique jaw design for mounting and outer ring pulling without removing and changing.
- Three-jaw structure always provides an even and constant force, whether mounting, outer-ring pulling or inner-ring pulling.
- The extension bars can be used where necessary for extra reach.
- Self-centring 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 56 +57.

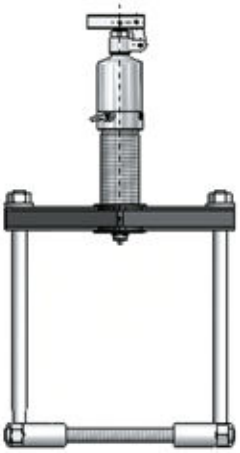
Type	Art. no.	Operations	Output ton	A mm	B mm	C mm	D mm	E	F mm	Weight Kg
HPP 123	794200	Installing Outer pulling Inner pulling	8 12 8	44 -280 85 -300 110 -210	270 260 130 -150	140 140 -	28 28 -	M12-P1.75 - 1”-12UNF	30 - -	19.5

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.



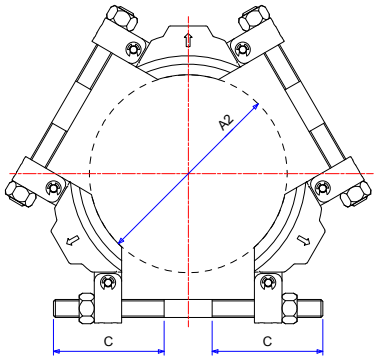
Accessory sets for 4,6, 8,12 ton pullers HP, HSP, HXP, HPP

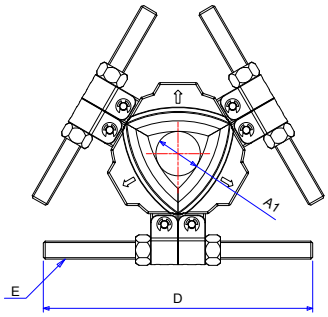
Type	Art. no.	Cap. ton	Shaft length mm	Min/max spread mm	Weight kg
Acc. Set HP 43, HSP 43	791100	4	250	Ø 15-110	8.5
Acc. Set HP 63, HSP 63,	792100	6	270	Ø 25-180	11.5
Acc. Set HP 83, HSP 83, HXP 83	793100	8	270	Ø 40-220	12.6
Acc. Set HP 123, HSP 123, HXP 123, HPP 123	794100	12	380	Ø 45-290	18.0

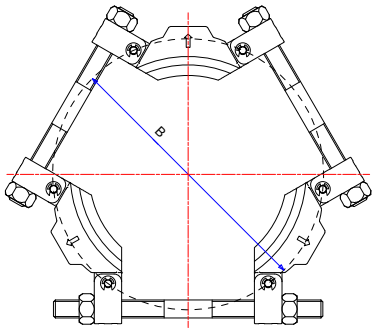
ACCESSORY SETS

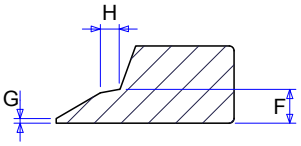
BETEX TRI-SECTION PLATES

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. De 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 A1 mm	A2 mm	Spread B (mm max)	C mm	D mm	E	F mm	G mm	H mm mm	Weight kg
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

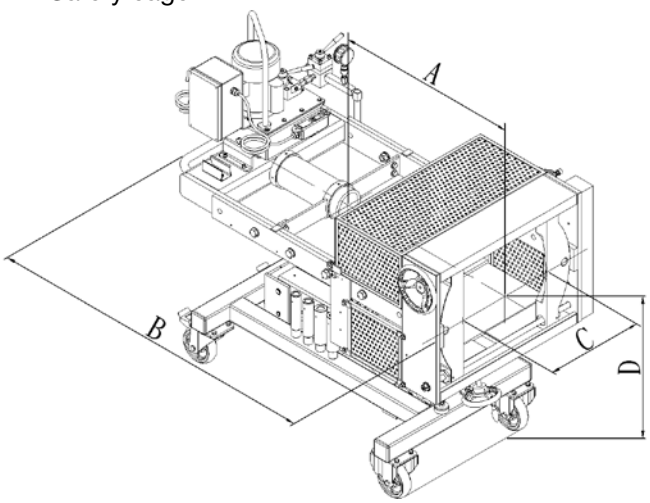
MOBILE HYDRAULIC PULLER

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
	Adapters mm (155 mm):	2xØ40, 2xØ50

Double acting electric

Single acting electric

Single acting manual

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

Meaning of codes:	
25-50	tractive force in tons
430	max. diameter in mm
H	manual hydraulic
E	electrical hydraulic
V	mobile
A	remote control
S	max. stroke in mm
D	double acting

Type	Art. no.	Cap. ton	Stroke cylinder	Pump hydraulic manual/electrical	In standard position A1 mm	In extended position A2 mm	Weight kg
25 HV 430 S 260	700001	25	260	manual	770	1150	415
25 EVA 430 S 260	700002	25	260	single acting electrical	770	1150	430
50 HV 430 S 260	700003	50	260	manual	740	1120	435
50 EVA 430 S 260	700004	50	260	single acting electrical	740	1120	450
50 EVA 430 S 340	700005	50	340	single acting electrical	660	1040	455
50 EVAD 430 S 340	700006	50	340	doucle acting electrical	615	995	470
50 EVAD 430 S 460	700007	50	460	doucle acting electrical	470	850	485

MOBILE HYDRAULIC PULLER

BETEX HXPC 2/3-arm puller, self-centering, with crane, 50 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 manoeuver 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 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 52

MOBILE HYDRAULIC PULLER

BETEX HXPM 50 - 2/3-arm puller, self-centering, 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 manoeuver 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 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 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 dismounting of all kinds of transmission parts such as bearings, couplings, gears, wheels etc.

- **Practical**
  The puller is self-centering, easy to manoeuver 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 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

Valve block

- 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

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 manoeuver 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

TIP: use in combination with UHAP2800 high pressure pump.

Adapters

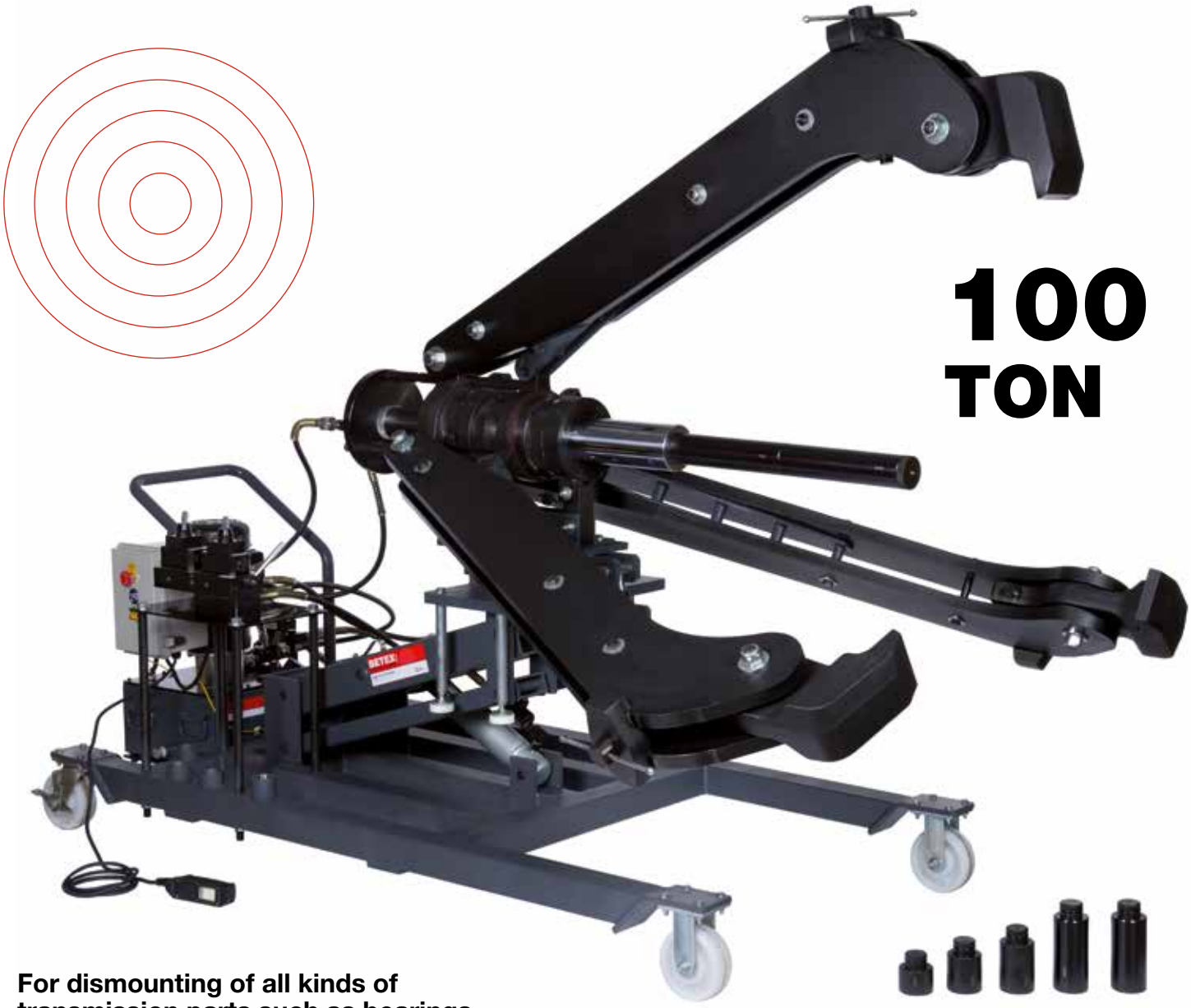
Adjustable jaw tips for extra grip

Valve block

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 Total length: 1125 mm	2x Ø70 L=300 mm, 2x Ø70 L=150 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	2450 x 1350 x 1200
Weight kg	870

MOBILE HYDRAULIC PULLER

BETEX HXPM 100 - 2/3-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 manoeuver 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 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.

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 Total length: 1125 mm	2x Ø70 L=300 mm, 2x Ø70 L=150 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 dismounting of all kinds of transmission parts such as bearings, couplings, gears, wheels etc.

- **Practical**
  The puller is self-centering, easy to manoeuver 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 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.

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 Total length: 1125 mm	2x Ø70 L=300 mm, 2x Ø70 L=150 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

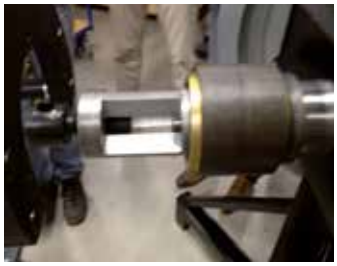
Specially for rail- and metro workshops. Use the right equipment to remove or install tapered roller bearings. This hydraulic aid will allow you to save valuable time and help you work safely and efficiently. Easy to use roll-around model for both **mounting**and **dismounting.**

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 dismounting of e.g. TBU, SP and TAROL bearing sets
- Wide range of accessories available. The accessory sets are available in various sizes, metric and inch versions (housing-type locomotives and passenger cars)

Accessory set

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

Quotation for adaptor or different adaptor sizes are on request.

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.**

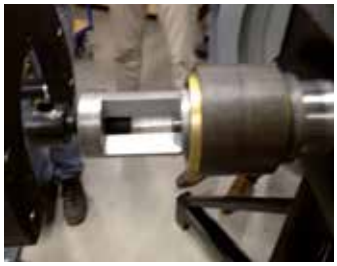
TheBPPS Side-Shift model is compact and easy to roll around because of the four swivelling castors.

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 dismounting of e.g. TBU, SP and TAROL bearing sets
- Wide range of accessories available. The accessory sets are available in various sizes, metric and inch versions (housing-type locomotives and passenger cars)
- The side-shift model is an extra compact model and easy to roll around because of the 4 swivel castors

Accessory set

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

Quotation for adaptor or different adaptor sizes are on request.

Manual valve

Solenoid valve

VALVES

You can choose from 2 models which are equipped with a **manual valve** or a **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	77
NSLS	Low profile, spring return	Single acting	5 -150	6 -17	78
NSCS	Compact, spring return	Single acting	10 -100	38 -62	79
NSHS	Hollow, spring return	Single acting	12 -100	8 -160	80
JLLC	Lock nut, load return	Single acting	50 -1000	50 -300	81
JLPC	Lock nut, load return	Single acting	60 -520	45 -50	82
NDAC	General purpose	Double acting	10 -100	150 -470	83
NDAH	Hollow	Double acting	30 -100	76 -257	84
SSA	Aluminium, spring return	Single acting	20 -100	50 -250	85
ACHC	Aluminium, hollow, spring return	Single acting	30 -60	50 -150	86
ADHC	Aluminium, hollow	Double acting	30 -60	50 -250	87
ALNC	Aluminium, lock nut, load return	Single acting	20 -100	50 -250	88

CYLINDERS

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

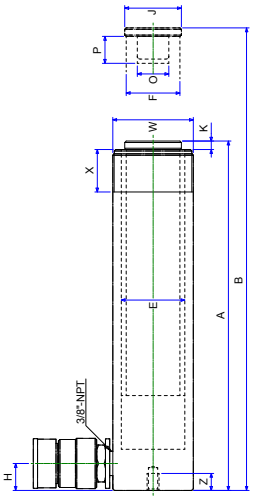
Model : NSSS series

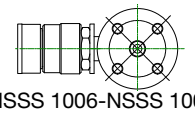
Capacity	: 4.5 - 100 ton
Stroke	: 25.4 - 406 mm
Max. operating pressure	: 700 bar

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

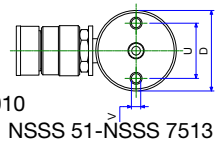
Power sources:
Handpumps, footpumps and air/ hydraulic pumps and electric pumps.

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

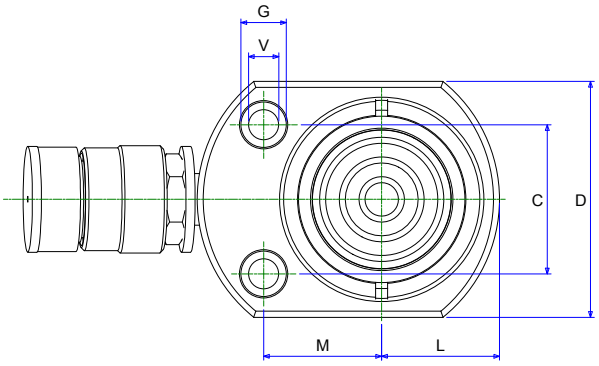
NSSS series

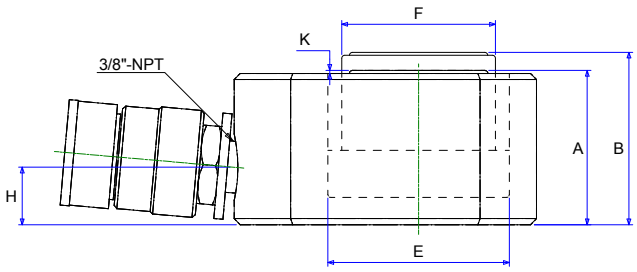
TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

Type	Cap. ton	Stroke mm	Oil cap cm^3	A Height Min.	B Height Max.	D mm	E mm	F mm	H mm	J mm	K mm	O ø un	P mm	U mm	V ø mm	W ø un	X mm	Z mm	Weight Kg
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"-20un	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"	2 1/4"-14	30	13	4.4
NSSS 108		203.5	323	298	501.5		45			40	6	1"-8	19		--18un				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"	2 3/4"-16	30	13	6.8
NSSS 158		203.5	483	322	525.5				25						-16un				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"	3 5/16"-12	50	19	10
NSSS 258		209.5	806	324	533.5										-13un				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"	5"-12	55	19	23.1
NSSS 508		203	1446	349	552										-13un				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"	6 7/8"-12	45	25	59
NSSS 10010		260	3720	448	708										-10un				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.

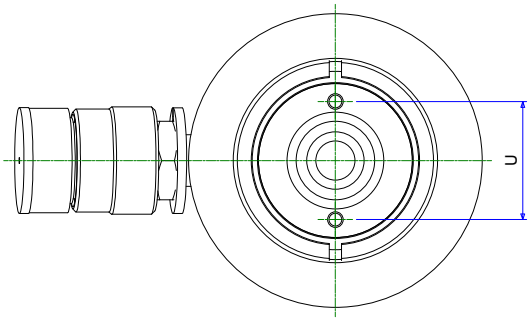
TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

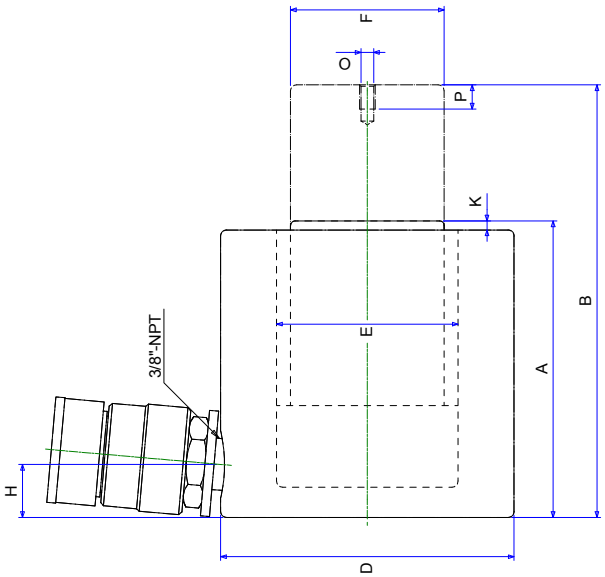
NSLS series

Type	Cap. ton	Stroke mm	Oil cap cm^3	A Height Min.	B Height Max.	C mm	D mm	E ø mm	F ø mm	G ø mm	H mm mm	K mm	L mm	M mm	O ø mm	P ø mm	U mm	V ø mm	Weight Kg
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.

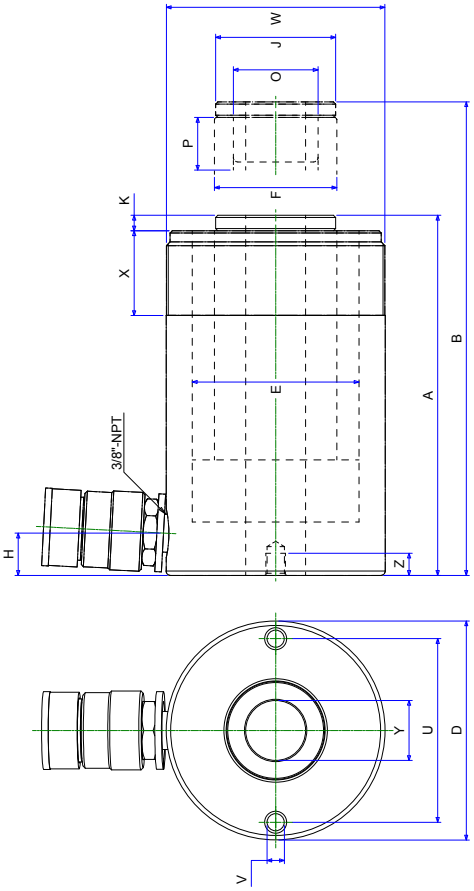
TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

NSCS series

Type	Cap. ton	Stroke mm	Oil cap cm3	A Height Min.	B Height Max.	C mm	D mm	E ø mm	F ø mm	G ø mm	H mm 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.

NSHS series

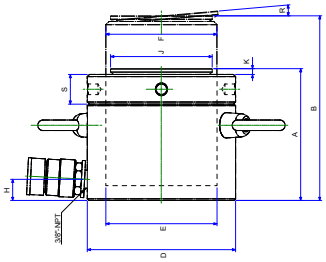
TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

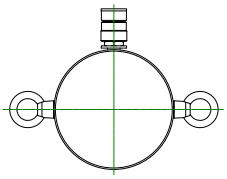
centre hole

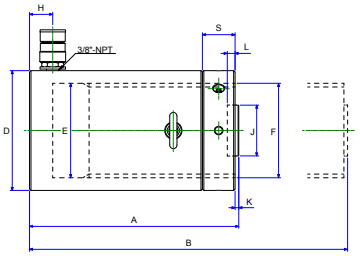
Type	Cap. ton	Stroke mm	Oil cap cm^3	A Height Min.	B Height Max.	D ø mm	E ø mm	F ø mm	H mm mm	J mm	K mm	O ø un	P mm	U mm	V ø unc	W ø un	X mm	Y ø mm	Z mm	Weight Kg
NSHS 120	12	8	14.8	60	68	73	54.1	35	12.5	-	-	3/4"-16	16	50.8	5/16"-18	2 3/4"-16	33	19.5	9	1.5
NSHS 121	12	42	79	120	162	73	55	35	19	-	-	-	-	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

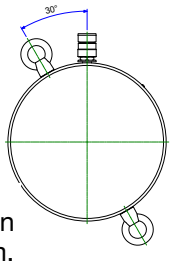
BETEX JLLC series, high tonnage cylinder, load return, single acting

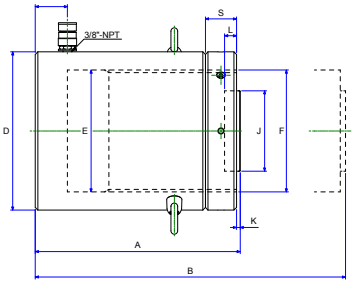






Model JLLC50-200T





Model JLLC300-1000T

Optional Tilt Saddle (TSA)

Model: JLLC series

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

- 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 89-101. Accessories, pages 104-108

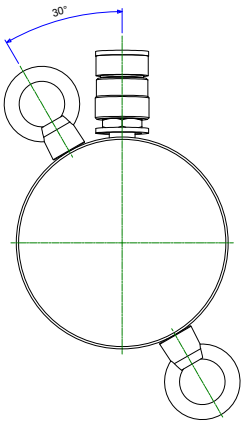
Type	Cap. ton	Stroke mm	Oil cap. cm³	A Overall height mm Min.	B Overall height mm Max.	D ø mm	E ø mm	F mm	H mm mm	J mm	K mm	L mm	S mm	Weight Kg	Optional Tilt Saddle J1 mm	Optional Tilt Saddle K1 mm	Optional Tilt Saddle Type
JLLC 502	50	50	354.5	164	214	125	95	Tr95x4	20	70	4	13	35	15	70	24	TSA-100
JLLC 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

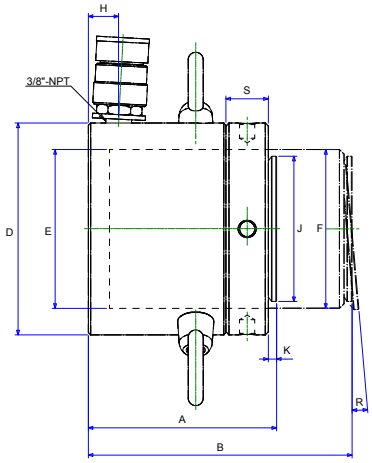
CYLINDERS WITH LOCK NUT

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.

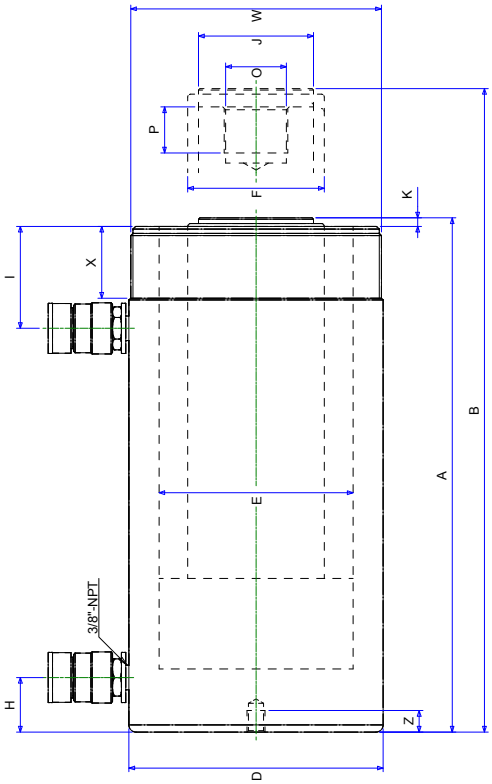
TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

JLPC series

Type	Cap. ton	Stroke mm	Oil cap cm^3	A Overall height mm Min.	B Overall height mm Max.	D mm	E ø mm	F ø mm	H mm mm	J ø mm	K mm	R mm	S mm	Weight Kg
JLPC 602	60	50	433	124	174		105	Tr105×6	20	96	5	5°	28	15
JLPC 1002	100	50	715	137	187		135	Tr135x6	21	126	8	5°	31	26
JLPC 1502	150	45	963	148	193		165	Tr165x6	27	150	9	5°	40	44
JLPC 2002	200	45	1273.5	155	200		190	Tr190x6	30	180	10	5°	43	57
JLPC 2502	250	45	1633	159	204		215	Tr215x6	32	200	11	5°	44	74
JLPC 4002	400	45	2574	178	223		270	Tr270x6	39	250	11	5°	55	134
JLPC 5002	520	45	3179	192	237		300	Tr300x6	48	285	10	5°	62	189

CYLINDERS

BETEX NDAC series, double acting

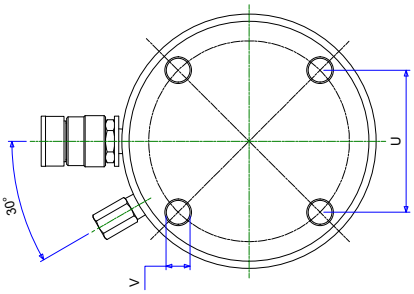


Model: NDAC series

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



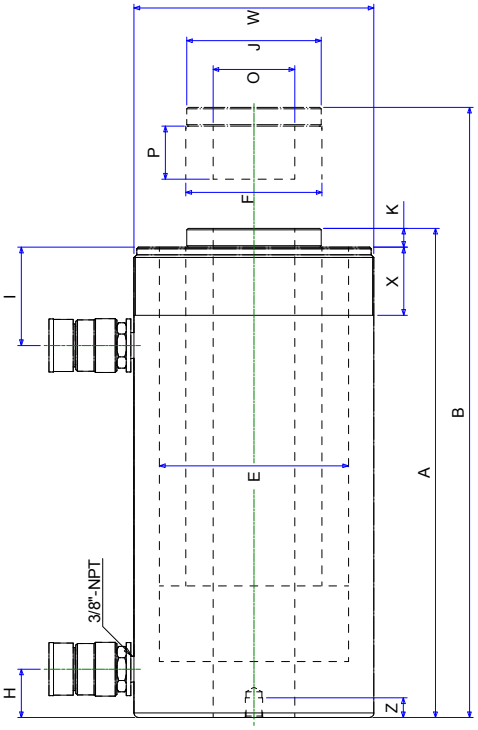
NDAC series

TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

Type	Cap. ton Push	Cap. ton Pull	Stroke mm	Oil cap cm³ Push	Oil cap cm³ Pull	A Height Min.	B Height Max.	D ø mm	E ø mm	F ø mm	H mm mm	I mm	J ø mm	K mm	O ø un	P mm	U mm	V unc	Z mm	W ø un	X mm	Weight Kg
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

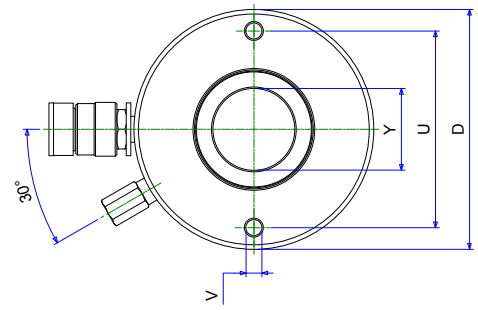
BETEX NDAH series, hollow cylinder, double acting



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



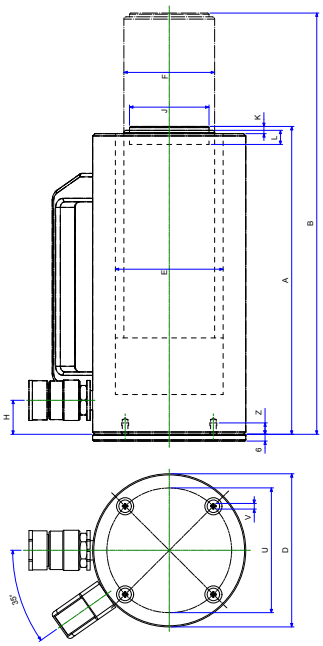
NDAH series

TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

Type	Cap. ton Push	Cap. ton Pull	Stroke mm	Oil cap cm³ Push	Oil cap cm³ Pull	A Height mm Min.	B Height mm Max.	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	Centre Hole	Weight Kg
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	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	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	3/4" -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	3/4" -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	3/4" -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	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	3/8" -12	60	79		88

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.

TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

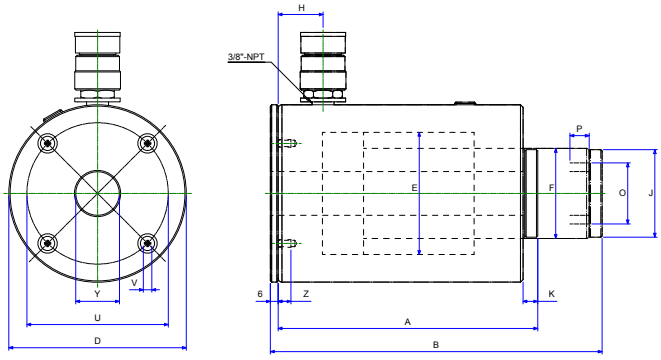
SSA series

Type	Cap. ton	Stroke mm	Oil cap cm^3	A Overall height Minimum	B Overall height Maximum	D ø mm	E ø mm	F ø mm	H mm ø mm	J ø mm	K mm	L mm	Weight Kg
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

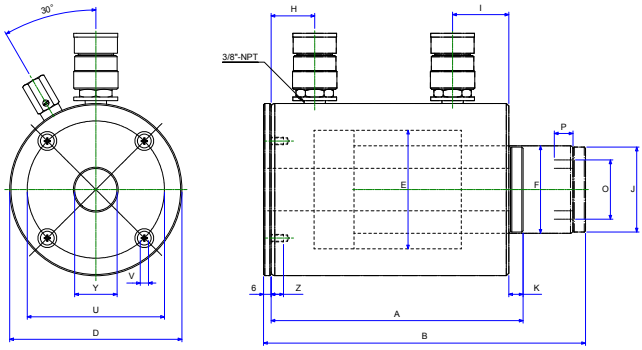
TIP! Use in combination with hand and foot pumps, pages 89-101. Accessories, pages 104-108

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 mm	J ø mm	K mm		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	-	-	14
ACHC 602	60	50	447.5	250	300	200	125	100	50	89	14	2 3/4"-16	-	19.5
ACHC 606	60	150	1342	350	500	200	125	100	50	89	14	-	-	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 89-101. Accessories, pages 104-108

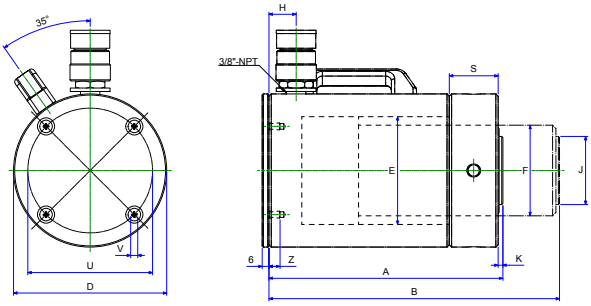
Centre hole

Type	Cap. ton	Stroke mm	Cap. ton Push	Cap. ton Pull	Oil cap cm^3 Push	Oil cap cm^3 Pull	A Overall height mm Min.	B Max.	D ø mm	E ø mm	F ø mm	H mm mm	I mm	J ø mm	K mm	P mm	O ø un	Y ø mm	Weight Kg
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 89-101. Accessories, pages 104-108

ALNC series

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 ø mm	J ø mm	K mm	L mm	Weight Kg
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

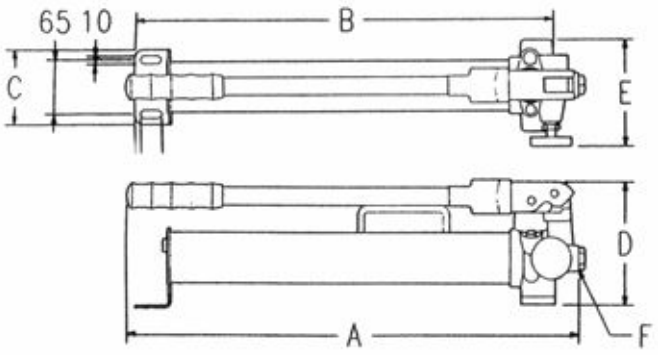
HAND PUMPS

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

Combi-set PB 700

- 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



PB/HC series

TIP! Use in combination with accessories page 104 -108

Type	Pressure rating (bar) 1st stage	2nd stage	Usable oil capacity cm^3	Oil volume per stroke cm^3 1st stage	2nd stage	A mm	B mm	C mm	D mm	E mm	Oil port thread F	Weight Kg
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

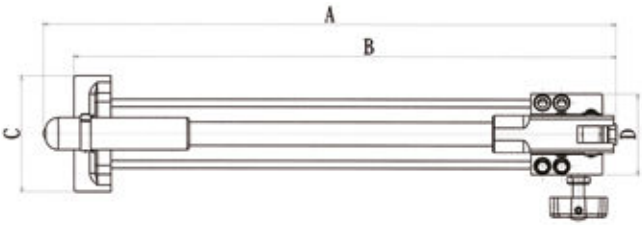
HAND PUMPS

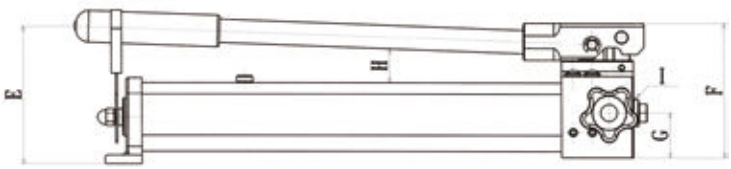
BETEX AHP SERIES, LIGHTWEIGHT ALUMINIUM HAND PUMPS, 700 BAR

- 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

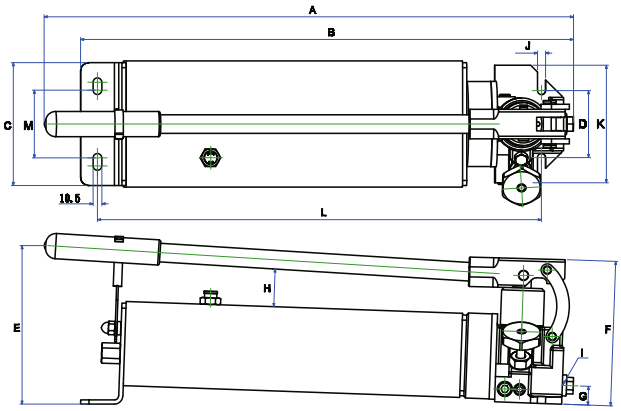
TIP! Use in combination with accessories page 104 -108

Type	Pressure rating (bar) 1st stage	2nd stage	Usable oil cap. cm^3	Oil volume per stroke cm^3 1st stage	2nd stage	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm mm	I	Weight Kg
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

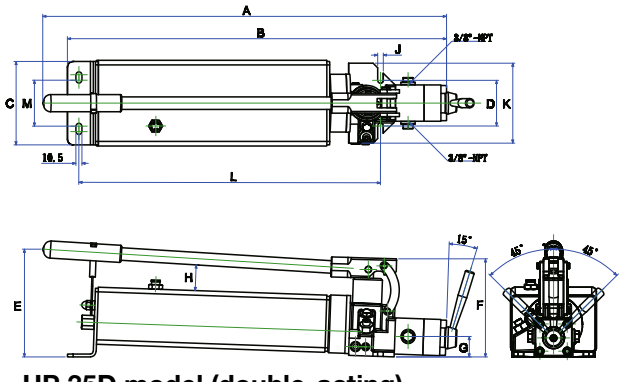
HAND PUMPS

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

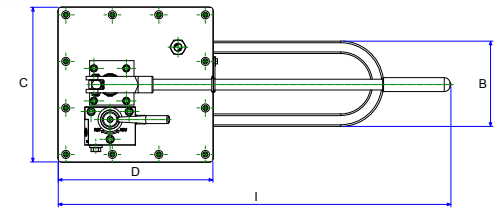
TIP! Use in combination with accessories page 104 -108

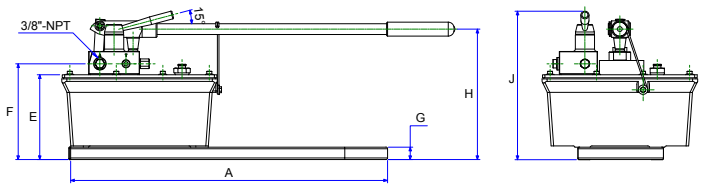
Type	Pressure rating (bar) 1st stage	2nd stage	Usable oil cap. cm^3	Oil volume per stroke cm^3 1st stage	2nd stage	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm mm	I	Weight Kg
HP 35	28	700	3500	40	3	629	586	146	79.7	79.7	79.7	22.35	45	3/8” -NPT	16.5
HP 35D	28	700	3500	40	3	706	663	146	79.7	79.7	79.7	36	45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

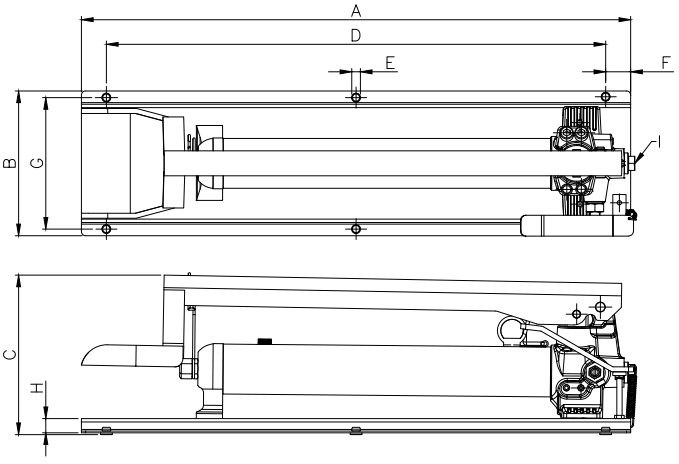
TIP! Use in combination with accessories page 104 -108

Type	Pressure rating (bar) 1st stage	2nd stage	Usable oil cap. cm^3	Oil volume per stroke cm^3 1st stage	2nd stage	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm mm	I mm	J mm	Weight Kg
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

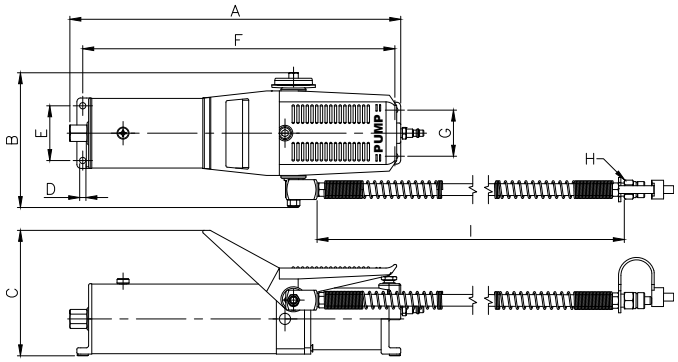
TIP! Use in combination with accessories page 104 -108

Type	Pressure rating (bar) 1st stage	2nd stage	Usable oil cap. cm^3	Oil volume per stroke cm^3 1st stage	2nd stage	A mm	B mm	C mm	D mm	E ø mm	F mm	G mm	H mm mm	I	Weight Kg
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 cyinders 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 921

AP series

TIP! Use in combination with accessories page 104 -108

Type	Pressure rating max. (bar)	Usable oil cap. cm^3	Oil volume per cm^3/min 1st stage	2nd stage	Air pressure bar	A mm	B mm	C mm	D ø mm	E mm	F mm	G mm	H mm	I m	Weight Kg
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

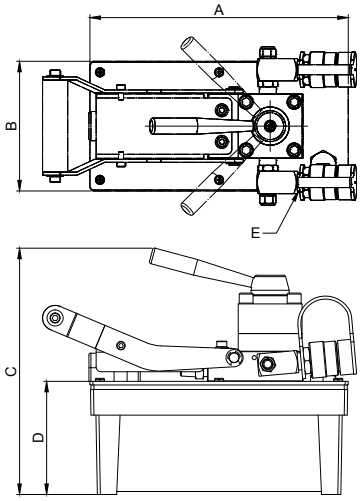
AP 1600S

AP 3000S

AP 1600D

AP 3000D

- The air-driven hydraulic pump is designed for use with single-acting cyinders 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

TIP! Use in combination with accessories page 104 -108

Type	Function	Pressure rating max. (bar)	Usable oil cap. cm^3	Oil volume per cm^3/min 1st stage	Oil volume per cm^3/min 2nd stage	Air supply (bar)	A mm	B mm	C mm	D mm	E	Weight Kg
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

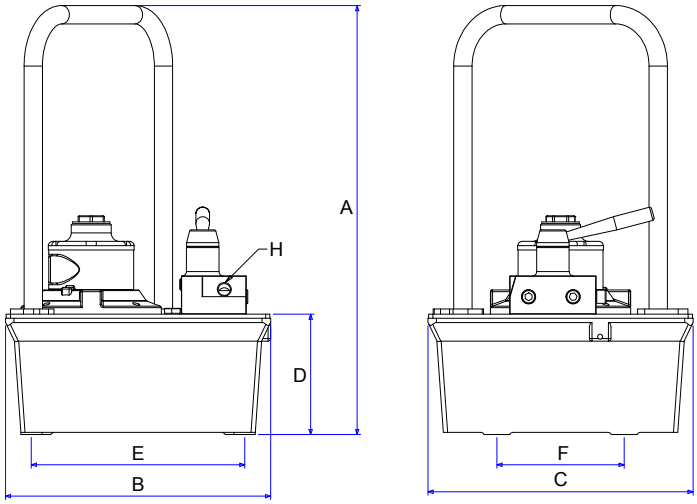
AIR PUMPS

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



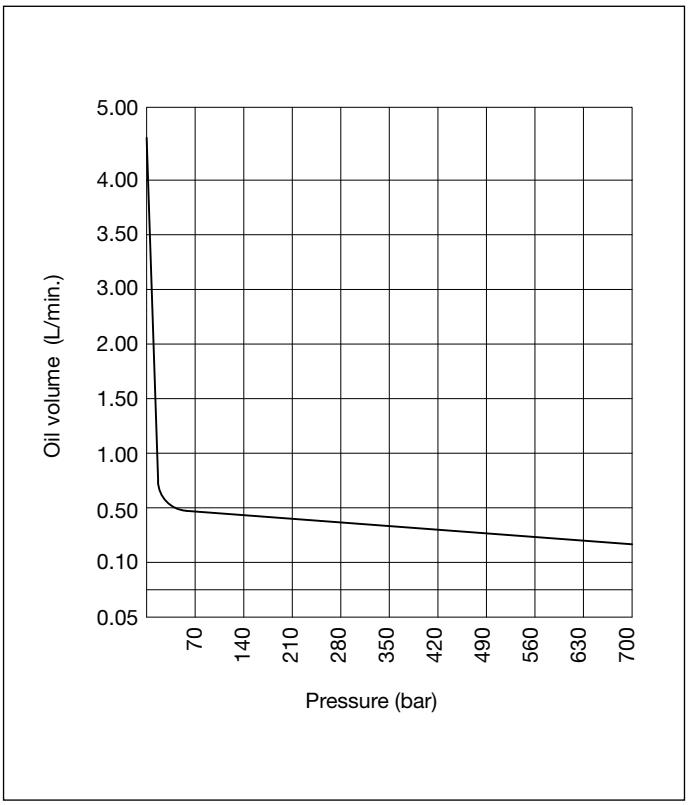
AP series

TIP! Use in combination with accessories page 104 -108

Type	Function	Pressure rating max. (bar)	Usable oil cap. cm^3	Oil volume per cm^3/min 1st stage	2nd stage	A mm	B mm	C mm	D mm	E mm	F mm	H mm	Weight Kg
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

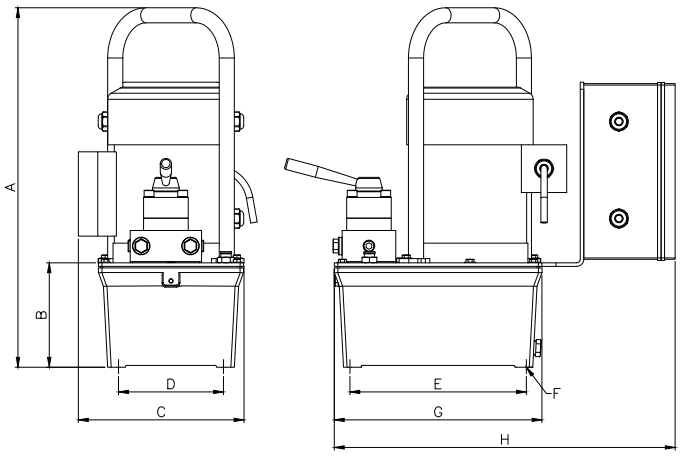
ELECTRIC PUMPS

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

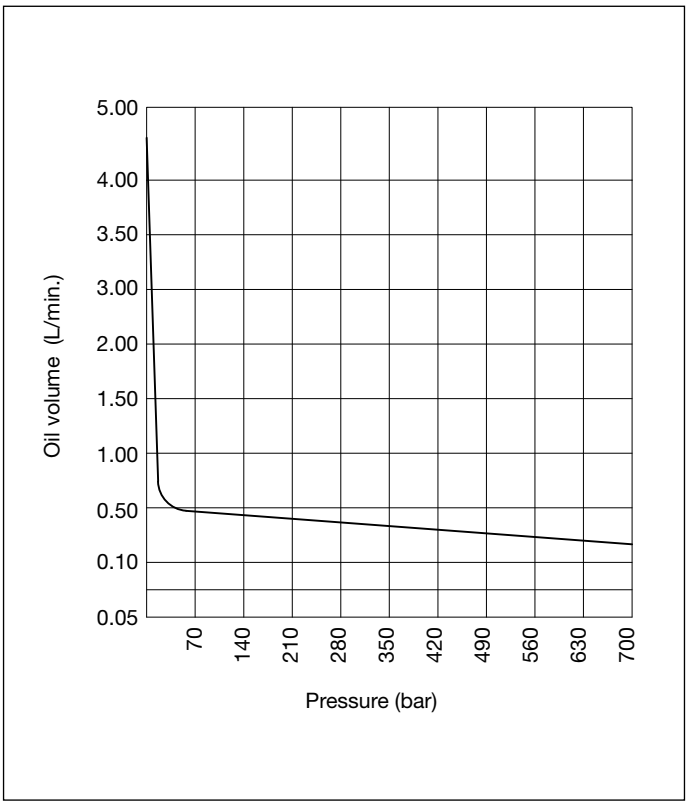
Type	Valve	Valve function	Motor
EP 13S	2 pos./ 2-way	Hold / return	0.37kW, 120V/10A-230V/5A 50/60Hz, single phase
EP 13D	3 pos./ 4-way	Advance / hold return	

TIP! Use in combination with accessories page 104 -108

Type	Function	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	Oil volume (cm^3/min.@60Hz) 0 bar	7 bar	350 bar	700 bar	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
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

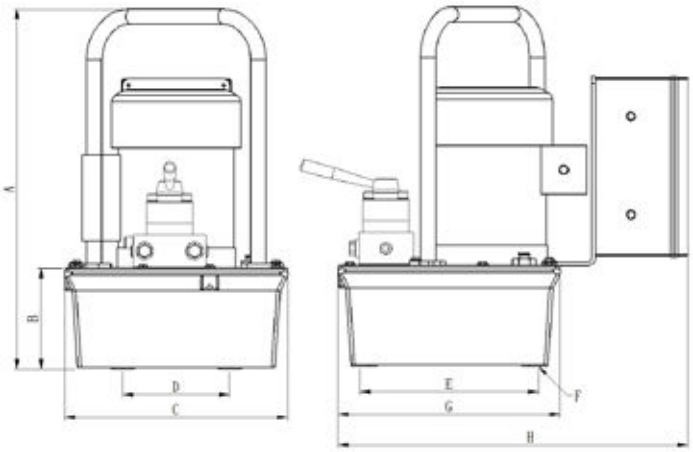
ELECTRIC PUMPS

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 50/60Hz, single phase
EP 18S(S*)	3 pos./ 4-way	Advance / hold return	

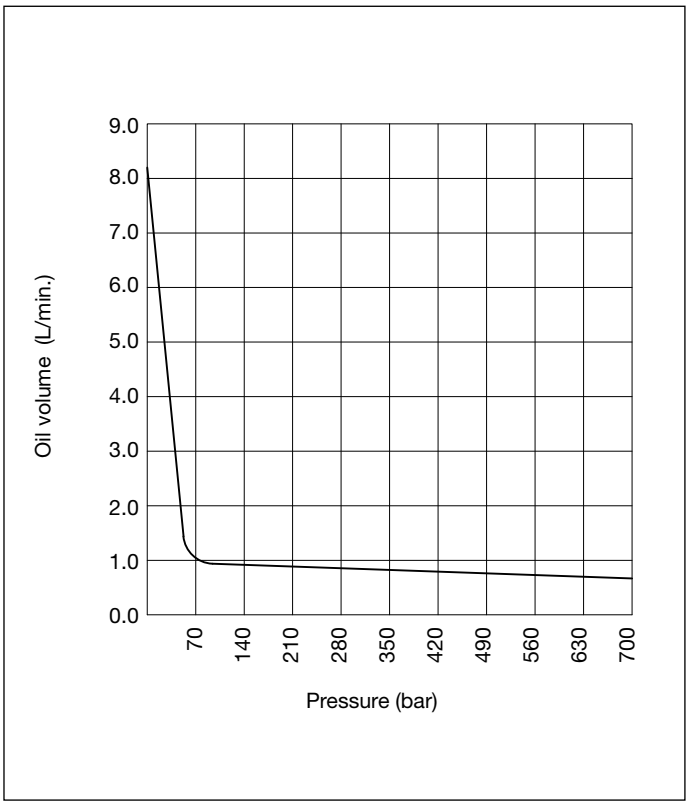
TIP! Use in combination with accessories page 104 -108

Type	Function	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	Oil volume (cm^3/min.@60Hz) 0 bar	7 bar	350 bar	700 bar	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
EP 18S(S*)	single	8	6	700	4200	2800	330	300	505	142	312	149.5	251	1/4"- 20UNF 10 deep	312	492	31
EP 18S(S*)	double	8	6	700	4200	2800	330	300	505	142	312	149.5	251	1/4"- 20UNF 10 deep	312	492	31

The models marked * are fitted with a solenoid valve.

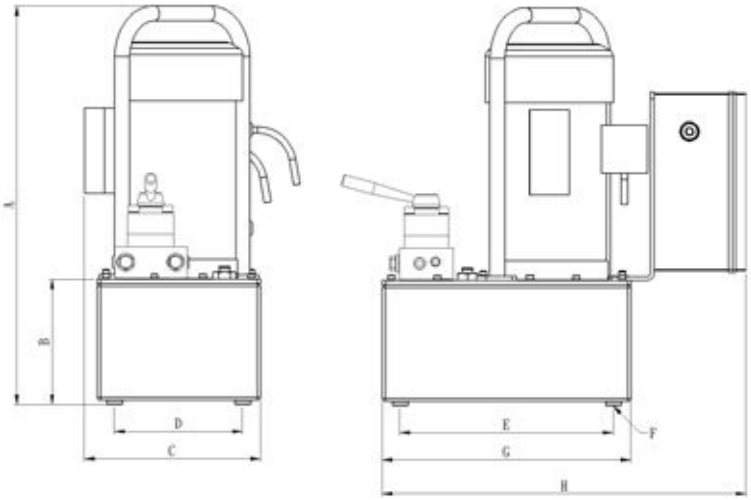
ELECTRIC PUMPS

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 50/60Hz, single phase
EP 211D(S*)	3 pos./ 4-way	Advance / hold return	

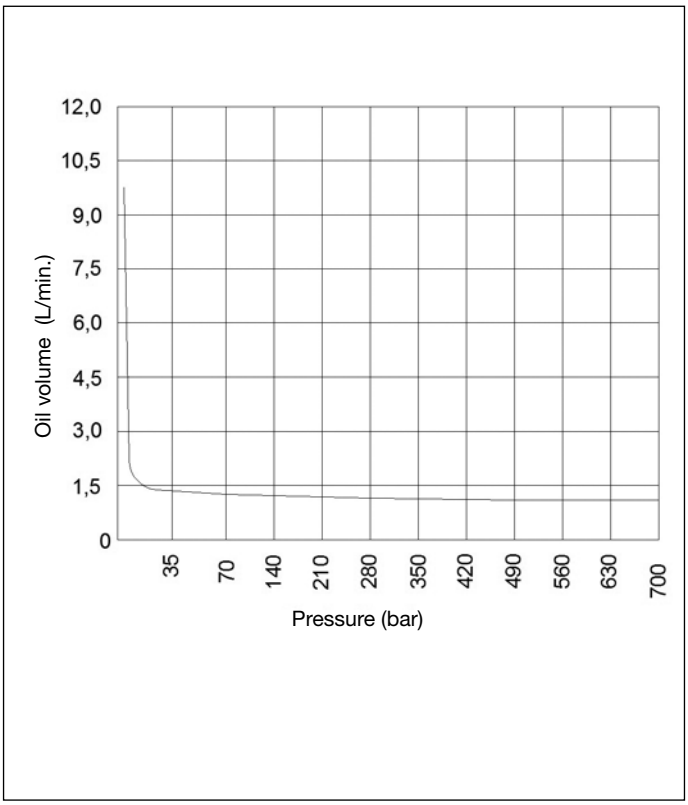
TIP! Use in combination with accessories page 104 -108

Type	Function	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	Oil volume (cm^3/min.@60Hz) 0 bar	7 bar	350 bar	700 bar	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
EP 211S(S*)	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(S*)	double	11	8.5	700	8200	7400	840	750	560	176	247	180	300	1/2"- 20UNF 15 deep	350	512.5	37

The models marked * are fitted with a solenoid valve.

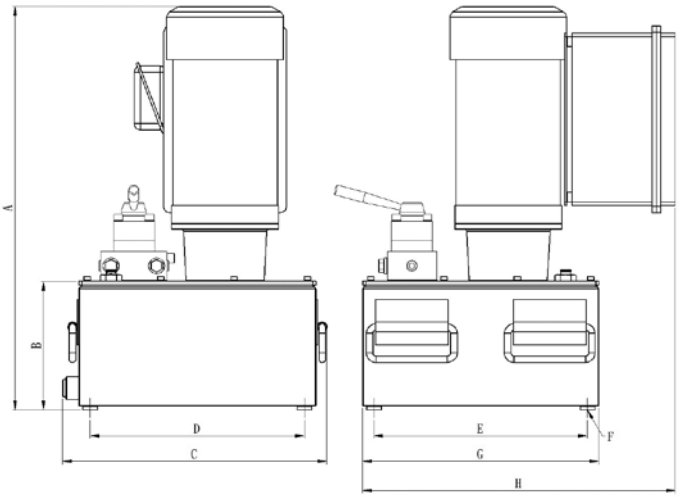
ELECTRIC PUMPS

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

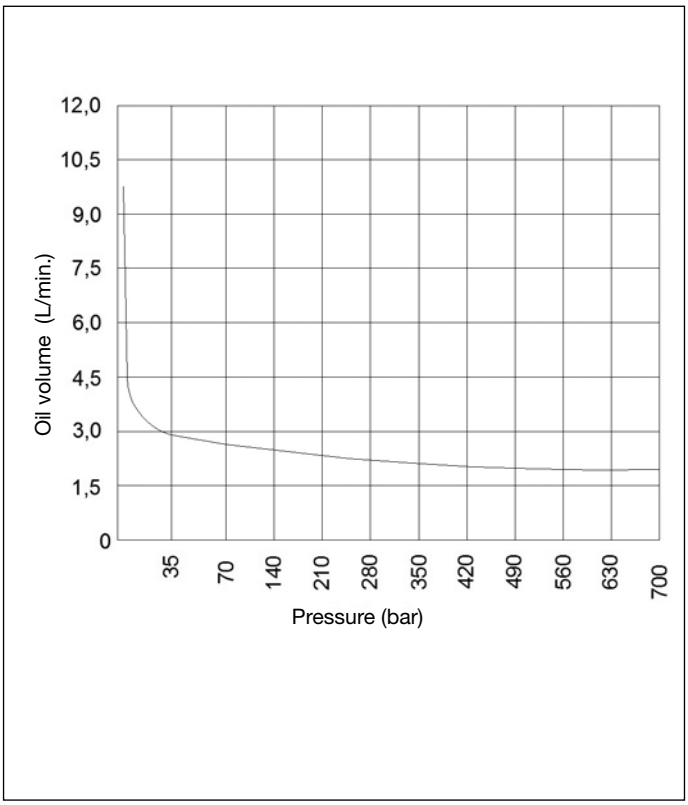
Type	Valve	Valve function	Motor
EP 320S	2 pos./ 2-way	Hold / return	1.49kW 230V/7.5A-400V/5A 50/60Hz 3 phase
EP 320D	3 pos./ 4-way	Advance / hold return	

TIP! Use in combination with accessories page 104 -108

Type	Function	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	Oil volume (cm^3/min.@60Hz) 7 bar	70 bar	350 bar	700 bar	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
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

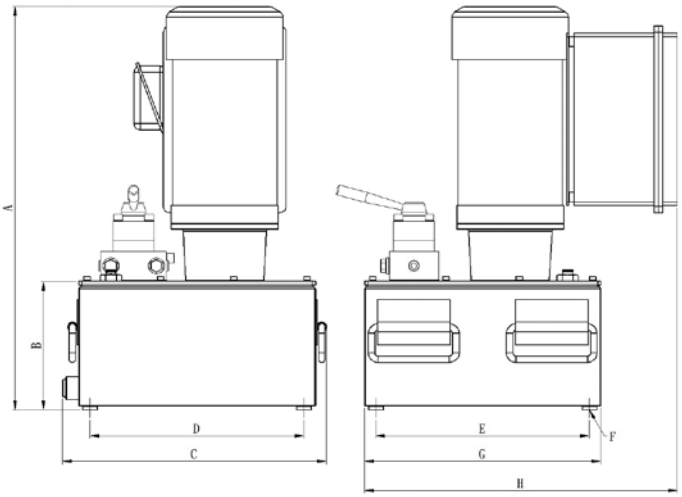
ELECTRIC PUMPS

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	Valve	Valve function	Motor
EP 420S	2 pos./ 2-way	Hold / return	2.24kW 230V/10A-400V/6A 50/60Hz 3 phase
EP 420D	3 pos./ 4-way	Advance / hold return	

TIP! Use in combination with accessories page 104 -108

Type	Function	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	Oil volume (cm^3/min.@60Hz) 7 bar	70 bar	350 bar	700 bar	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
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

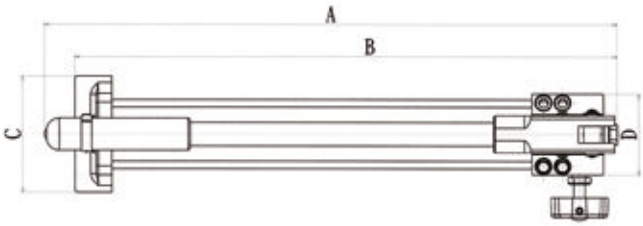
AHP 705

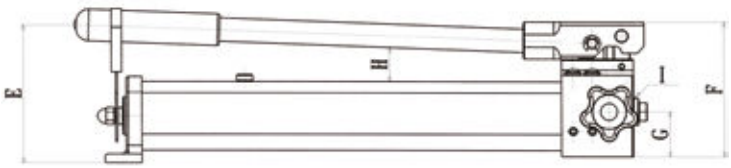
UHP 2800

- 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	Pressure rating (bar) 1st stage	2nd stage	Usable oil cap. cm^3	Oil volume per stroke cm^3 1st stage	2nd stage	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm mm	I	Weight Kg
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
AIR PUMP UHAP 2800	7292803	2800 bar	5 liter	0.43 Liter p/min, at 7 bar air pressure	29
AIR PUMP 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.

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.

CP 330B

CP 331B

CP 332B

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

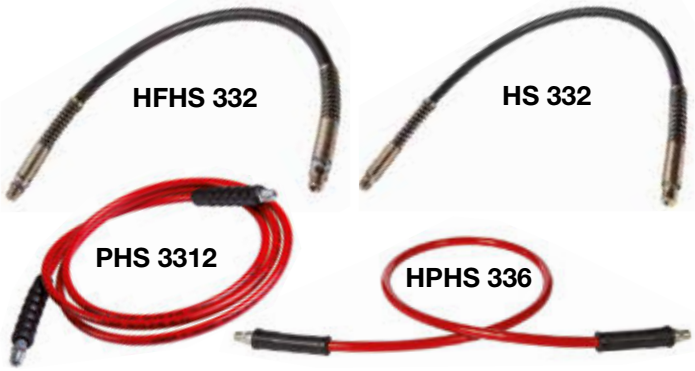
CP 431

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/ 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.

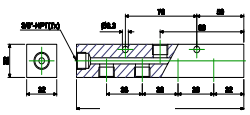
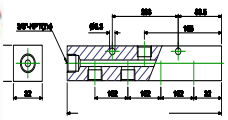
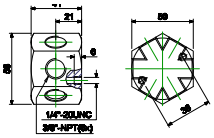
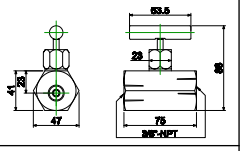
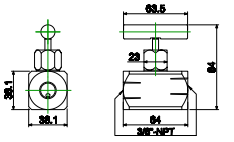
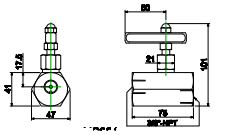
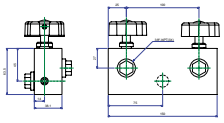
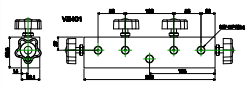
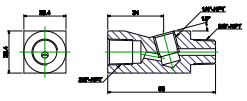
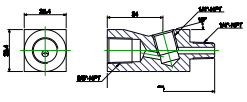
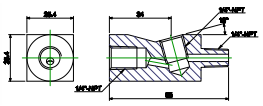
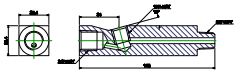


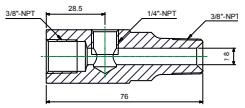
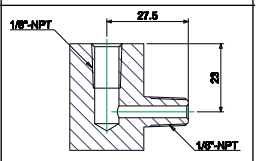
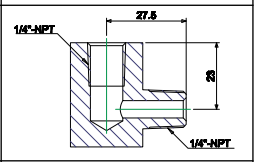
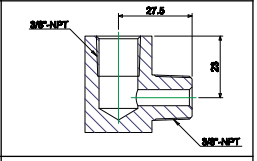
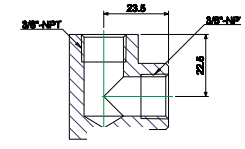
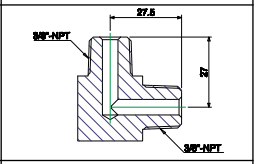
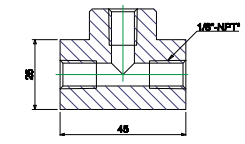
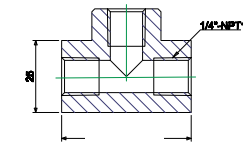
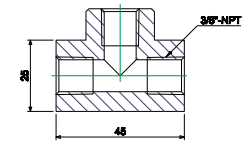
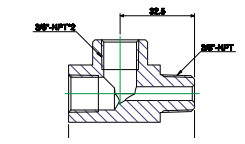
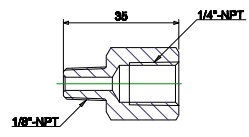
MANOMETER

Type	Description	Dimensions mm
M0031B		Liquid-filled, dampens needle vibration. Calibrated to read in bar, psi. External diameter gauge – 2½"; 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

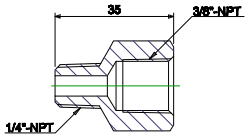
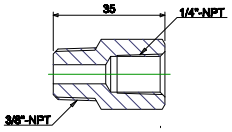
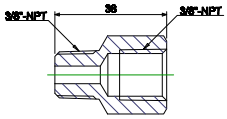
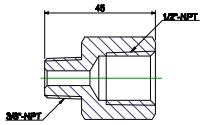
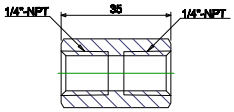
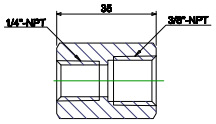
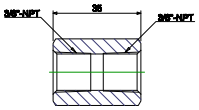
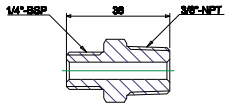
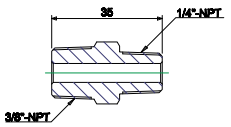
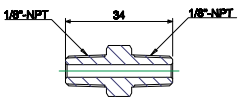
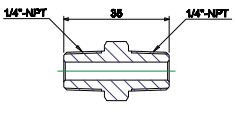
Accessories

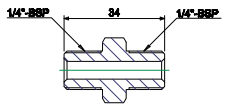
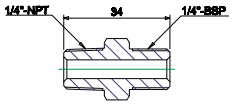
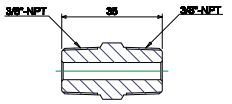
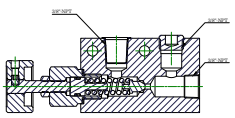
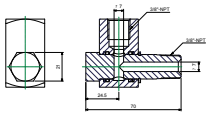
Type	Description		Dimensions mm
JP64	Manifold valve		
JP65	Manifold valve		
JP65	Manifold valve		
VB66	Control valve		
VB101	Control valve		
VC331	Control valve		
VB201	Manifold valve		
VB401	Manifold valve		
E0567	T-adapter for gauge		
E1336	T-adapter for gauge		
E1343	T-adapter for gauge		
E1745	T-adapter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

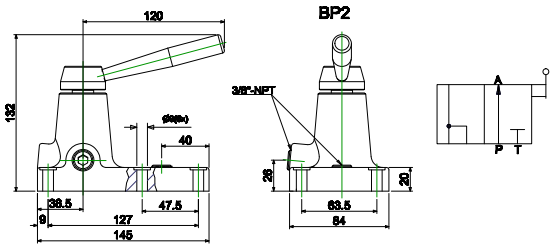
Accessories

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		

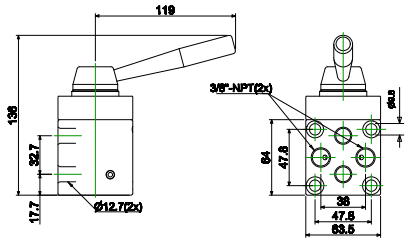
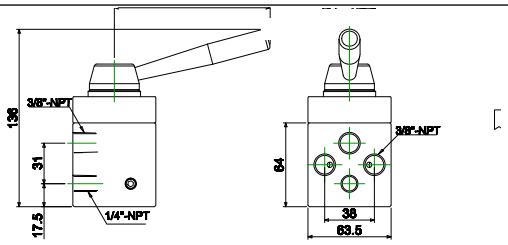
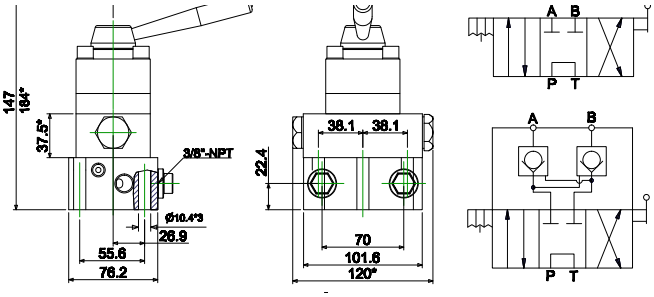
Type	Description		Dimensions mm
ADO204	Hexagon nipple		
ADO205	Hexagon nipple		
ADO303	Hexagon nipple		
BG9623	Pressure regulator		
BG9705	High-flow swivel connector		

ACCESSORIES Max. working pressure, 700 bar

3-way directional control valve

Type	Description		Dimensions mm
BP2	700 bar; 17 l/min manual, 2-position, advance/retract for single-acting cylinders		

4-way directional control valve

Type	Description		Dimensions mm
BP421	For use with double-acting cylinder or two single-acting cylinders 700 bar; 17 l/min manual, advance/hold/ retract		
BP422			
BP423 *BP425	manual, advance/hold/ retract; Lock for load holding		

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

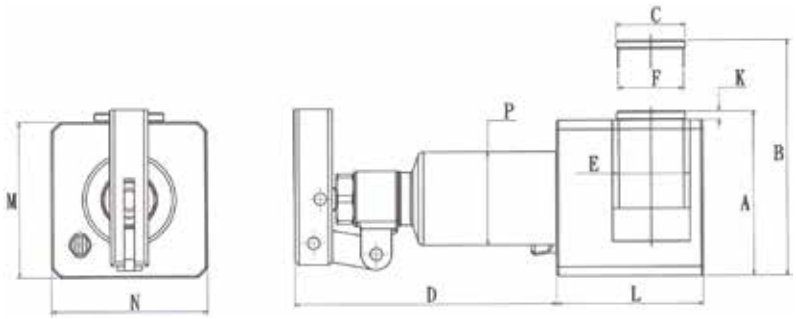
Grade no.	LPS 78
Gravity, API, 15.6°C	29.5
Viscosity, Kin, cSt @ 40°C	70.0
@ 100°C	11.30
Viscosity Index	155
Pour Point, °C	-39
Flash Point, COC, °C	244
Color, D1500	L2.0
TAN, mgKOH/g	0.60
Carbon Residue, Rams.,%	0.17
Emulsion, 54°C, 40-37-3, min	15
	LA68068

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.



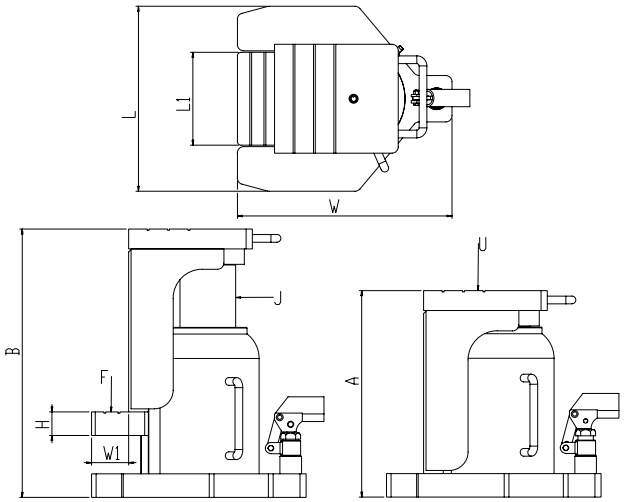
CJ series

Type	Art. no.	Cap. ton	Stroke mm	Oil cap cm^3	A Height Min.	B Height Max.	C ø mm	D mm	E ø mm	F ø mm	H mm mm	K mm	L mm	M mm	N mm	P ø mm		Weight Kg
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, page126-128

- '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

Safety block

15 TL Set

15 TLS Duo-set

Sets

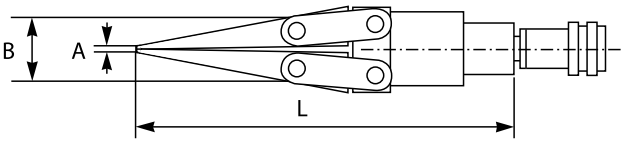
Various combination sets are available in a carrying case. All sets are pre-mounted, you can get started right away!

- 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 126 -128

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

HLW 18T

HLW 18TI with integrated pump

HLW 18T Set

HLW 18T Duo-set

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 1.5 mtr
- Stepped safety block
- Manometer, T-adapter
- 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 safety blocks)
39.5 – 67.5 mm (using multi-stage safety 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

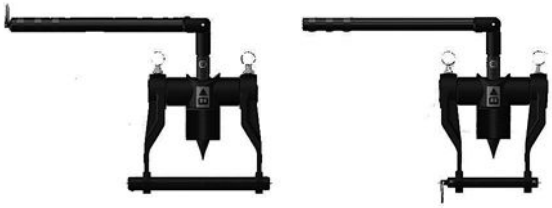
* using stepped block

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:
MSF 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

PFS 10T Duo-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-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 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.

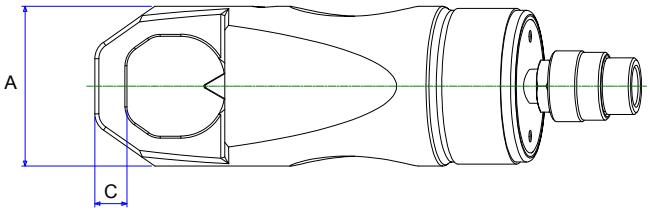
BETEX PFS 10T

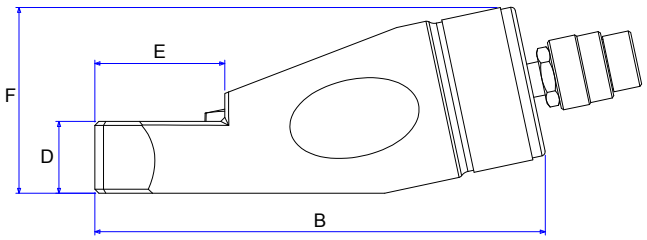
Type	Art. no.	Spreading force ton	Bolt size	Standard wedge	Claw width mm	Pump type	Weight Kg
PFS 10T	789410	10	M33	3.3 - 28.7	104 - 216	single-acting	15
PFS 10T Set (case included)	789411	10	M33	3.3 - 28.7	104 - 216	single-acting	25.2
PFS 10T Duo-set (case included)	789412	2 x 10	M33	3.3 - 28.7	104 - 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.





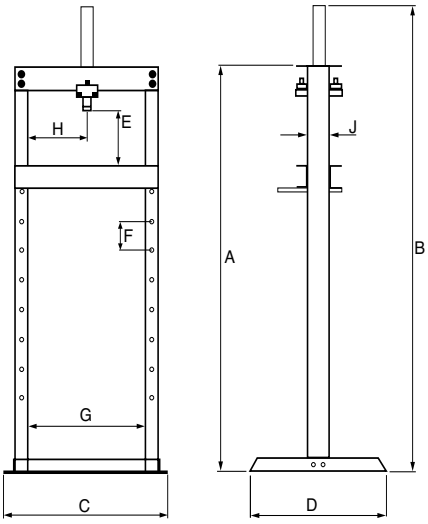
TIP! Use in combination with hand pumps, page 89 -91

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, hearings 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

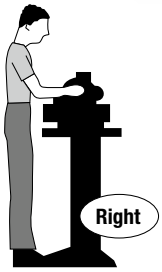
*capacity up to and including 200 ton available.

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

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

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 length	630 1080	630 1080
Tool drawers (lxwxh) (2 pcs with padlock)	500x300x100	500x300x100
(dimensions in mm)		

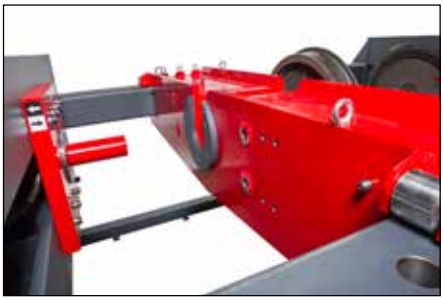
Specials - Rail workshop tools

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.)

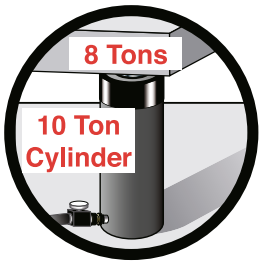
- Pressing force of 150 tons
- Stroke : 460 mm
- With press cylinders on opposite sides
- With 2 adapter jaws for dismounting when little space is available
- Positioning of the wheelset by means of overhead crane
- Manual centering of the wheelset
- Flexible supports for the positioning the wheel set
- 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



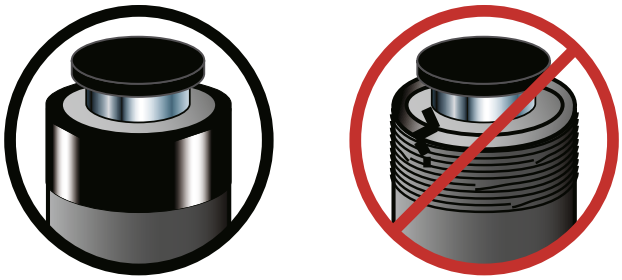
SAFETY TIPS

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.

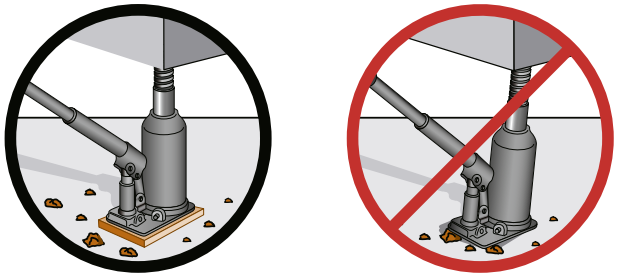


Check each component before you set up your hydraulic system. Do not use damaged or worn components. Turn them in for repair or replacement.

3. Safety instructions

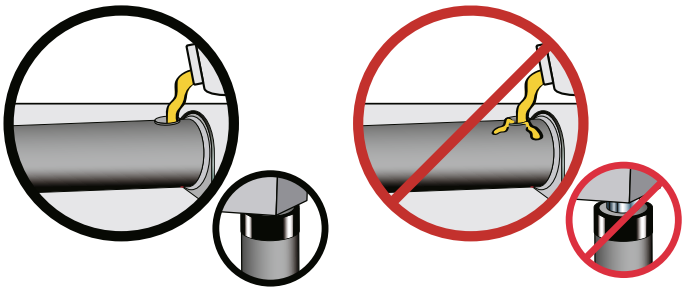
Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.

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



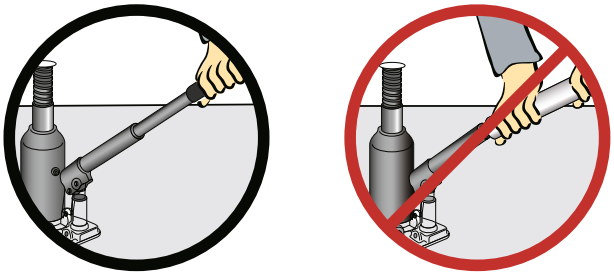
Every jack or ram, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.

5. Fill oil reservoirs with cylinder retracted.



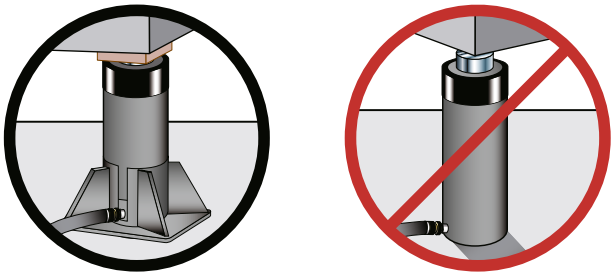
Fill pump to recommended level. Only fill when connected cylinder is fully retracted.

6. Know how your hydraulics work.



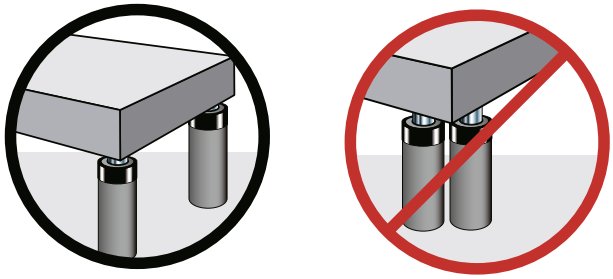
Do not use extensions or cheater bars
on hydraulic jacks or hand pumps to raise a load.

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.

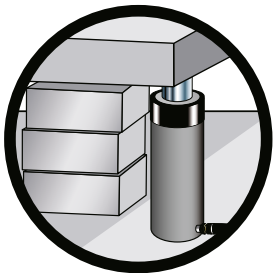
8. Distribute load evenly when using multiple rams.



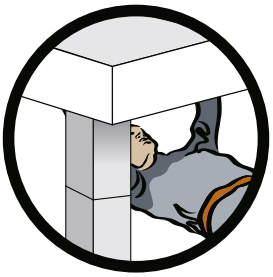
For multiple ram lifts, you must be able to determine the location and number of lifting points that will allow the load to be evenly distributed to all the rams. This is called load balance. Size, centre of gravity and load geometry must be considered in order to correctly determine load balance.

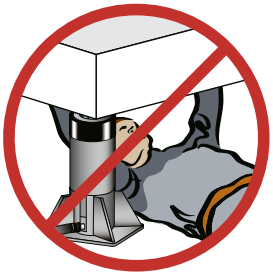
SAFETY TIPS

9. Support load.

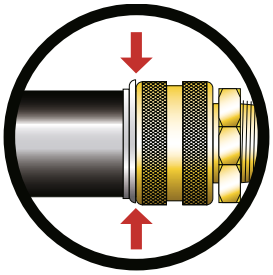


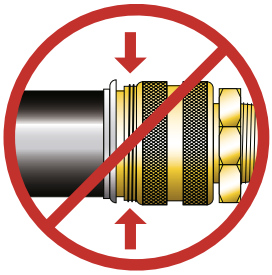
Place blocking or cribbing under the load as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body parts between the load and the cribbing.





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.

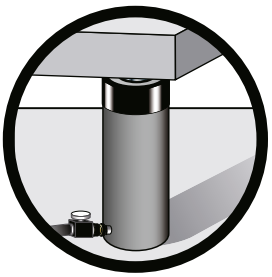




11. Connecting the hydraulics.
When making connections with quick couplers, make sure the couplings are fully engaged. Threaded connections, such as fittings, gauges, etc., must be securely tightened and leak free. Never use excessive tightening force that may distort the fittings or strip the thread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

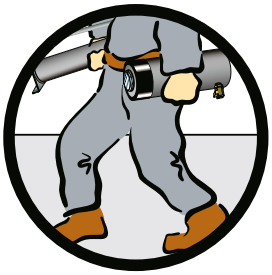
12. Avoid extreme heat or weld splatter.
Weld splatter will damage plunger rods and hoses.
Hydraulic fluid can ignite if vaporized or exposed to high temperatures.

13. Disconnecting the hydraulics.



Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the 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

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.

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.

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.

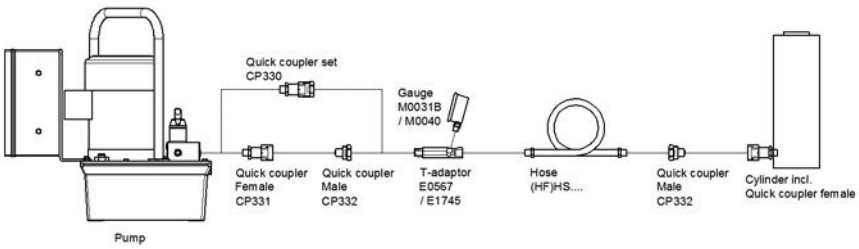
STEP 2: Choose a hydraulic pump, that matches the selected cylinder, consider:

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?

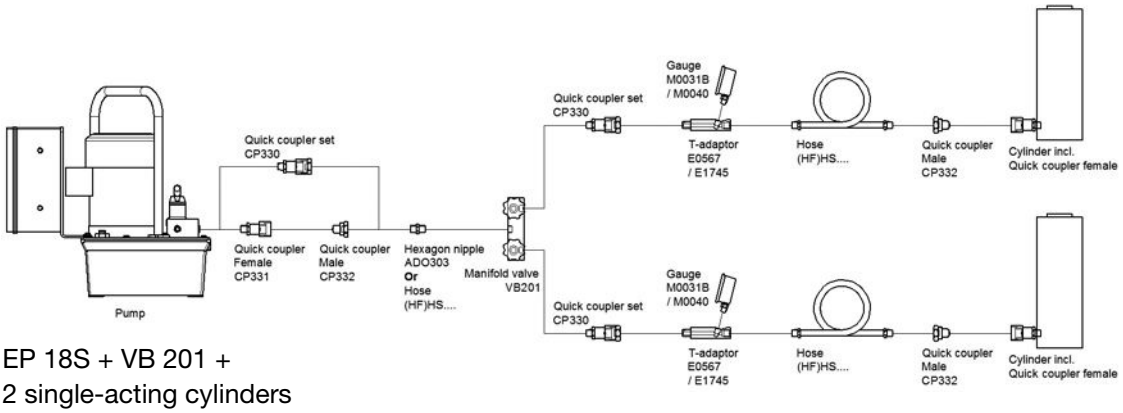
STEP 3: Choose necessary hydraulic accessories, consider:

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

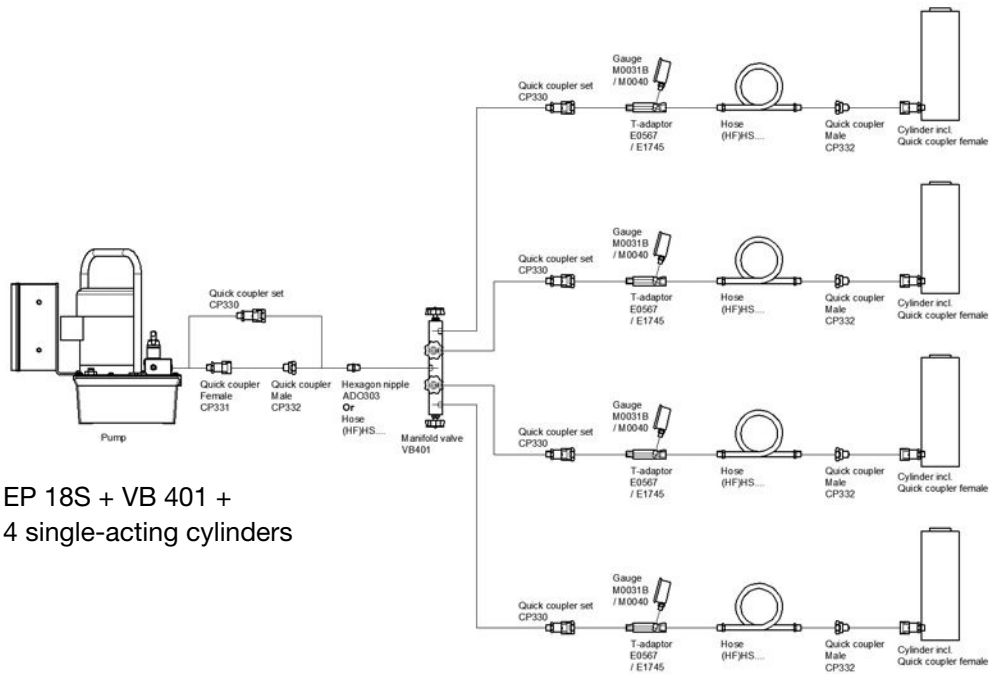
SELECTING THE RIGHT SETUP



EP 18S + single-acting cylinder

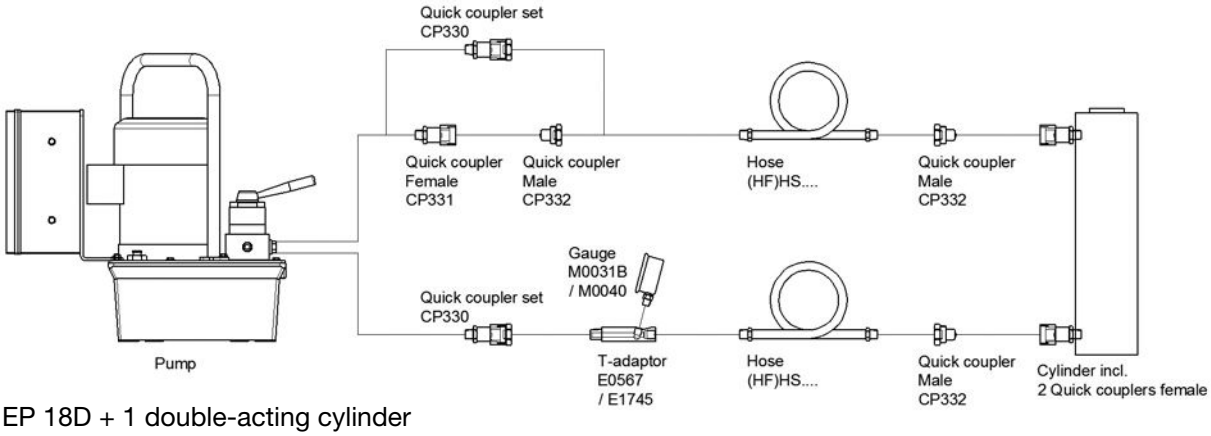


EP 18S + VB 201 +
2 single-acting cylinders

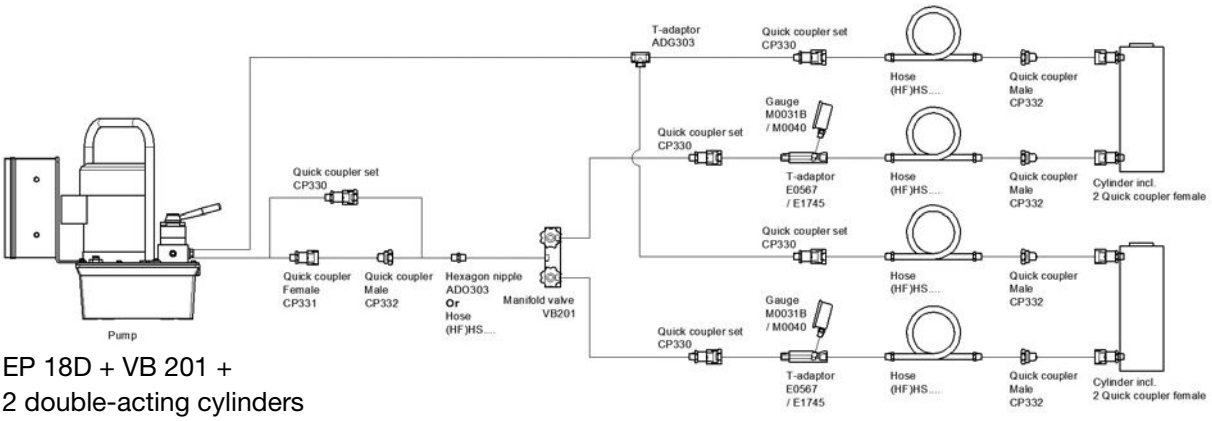


EP 18S + VB 401 +
4 single-acting cylinders

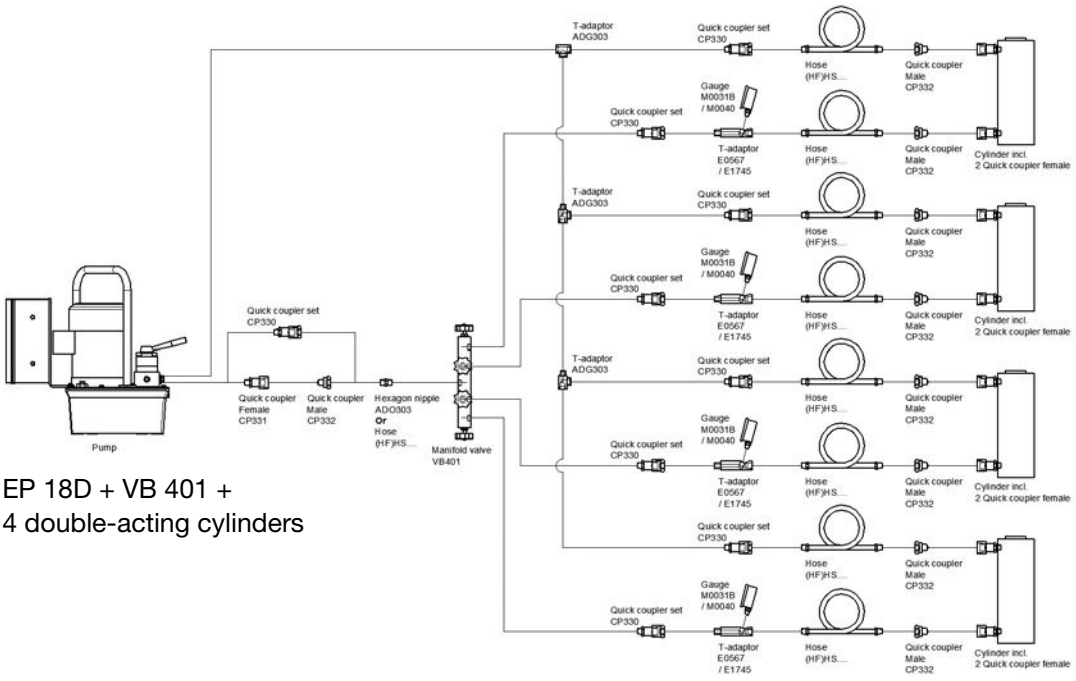
SELECTING THE RIGHT SETUP



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																				
PB 600	600	two stage																				
PB 700	700	two stage																				
HC 1500	1500	two stage																				
HC 2000	2000	two stage																				
HC 2500	2500	two stage																				
AHP 701	350	two stage																				
AHP 702	1000	two stage																				
AHP 703	2000	two stage																				
AHP 703D	2000	two stage																				
HP 35	3500	two stage																				
HP 35D	3500	two stage																				
HP 80	8000	two stage																				
HP 80D	8000	two stage																				
FHB 350	350	two stage																				
FHB 600	700	two stage																				
FHB 700	700	two stage																				
AP 921	750	two stage																				
AP 1600S	1600	two stage																				
AP 1600D	1600	two stage																				
AP 3000S	3000	two stage																				
AP 3000D	3000	two stage																				
AP 8000S	8000	two stage																				
AP 8000D	8000	two stage																				
EP 13S	3000	two stage																				
EP 13D	3000	two stage																				
EP 18S	8000	two stage																				
EP 18D	8000	two stage																				
EP 18SS	8000	two stage																				
EP 18DS	8000	two stage																				
EP 211S	11000	two stage																				
EP 211D	11000	two stage																				
EP 211SS	11000	two stage																				
EP 211DS	11000	two stage																				
EP 320S	15000	two stage																				
EP 320D	15000	two stage																				
EP 420S	15000	two stage																				
EP 420D	15000	two stage																				

Generally recommended Marginal, check requirements Not recommended for most applications

SHIMS

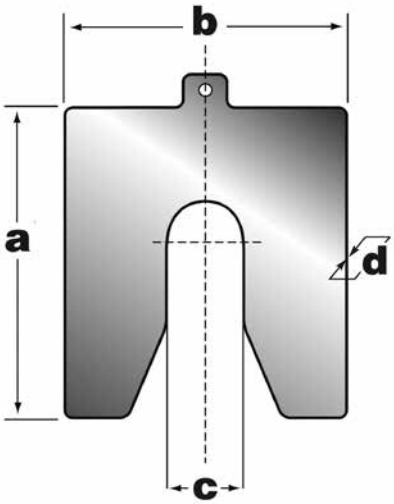
BETEX SOLID STAINLESS STEEL SHIMS
Precut stainless steel shims for fast, simple and precise machine alignment.

- 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

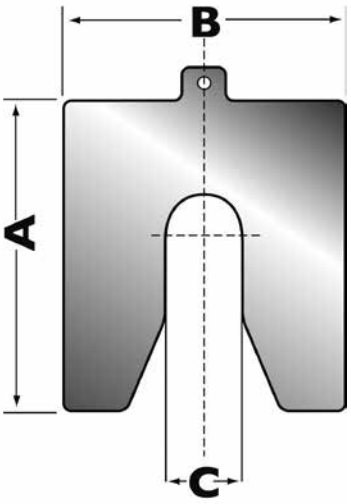
BETEX PEEL-OFF HARD BRASS OR STAINLESS STEEL SHIMS

- 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 109-110
Spreaders, page 112
Alignment computers: 129 -132

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

Case:

Weight incl. all parts case	: 2.75 kg
Dimensions mm (lxwxh)	: 357x305x96 mm
Displayed resolution	: 0.01 mm

Sensor units:

Weight	: 156 g
Dimensions mm (lxwxh)	: 139x79x40 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 tranceiver 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 109 -110
Betex spreaders, page 112
Betex shims, page 126 -128

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.

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.

BELT ALIGNMENT COMPUTERS

BTA EASY-LASER D90 PULLEY ALIGNMENT SYSTEM

Easy-Laser® D90 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 (see below).

Applications: Suitable for most types of belts/chain drives
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 EASY-LASER D130 ATEX/EX

- Intrinsically safe and approved for use in potentially explosive environments.
- Shows both angular and parallel misalignment between sheaves, V-belts, flat belts, toothed belts and chain drives.
- Faster and more accurate than conventional alignment methods.
- For both both horizontal and vertical mounted machines.
- Alignment can be made by one operator
- Also suitable for non-magnetic sheaves

Fits almost any kind of sheaves:
- V-belts
- Flat belts
- Toothed belts
- Chain drives

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.
- The E180 BTA is the perfect complement to the E540 axis alignment.

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

TIP!
Use in combination with
Betex toe jacks, page 109 -110
Betex spreaders, page 112
Betex shims, page 126 -128

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:

Material	: anodised aluminium
Dimensions	: 61 x 76 x 60 mm (lxhxw)
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 109 -110
Betex spreaders, page 112
Betex shims, page 126 -128

Monitoring

BETEX BEARING CHECKER

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

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

Bearing Checker is unique, being the first portable, pocketsize 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.

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 predicative 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.

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

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

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

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

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

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

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.

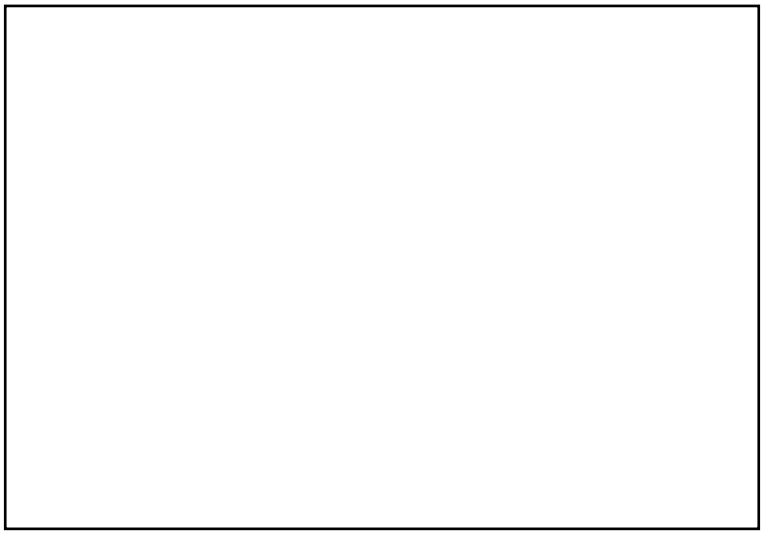
- 5-digit 10 mm LCD display.
- Test range of measurement: 5 to 99,999 rpm.
- Display: 0.1 r.p.m. at 0.5 to 999,99 r.p.m.
- Display:1.0 r.p.m. above 1000 r.p.m.
- Reading: 1 x second.
- Accuracy: +/- 0.5 %
- Measuring distance 50 to 300 mm.
- Memory: last, maximum and minimum measured value.
- Dimensions: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

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 meausuring 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
- Meausuring rod: 60 mm and 290 mm
- Dimensions: 205 x 50 x 40 mm

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