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04

Condition Monitoring

Condition monitoring instruments



08

Dismounting

Mechanical and hydraulic pullers up to 150t



42

Hydraulic equipment

Cylinders, pumps, jacks



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Mounting and alignment

Induction heaters, fitting tool sets,
Shims, alignment computers



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CHECKING (MONITORING)

BETEX BEARING CHECKER



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

Bearing Checker is unique, being the first portable, pocket-size instrument (weight 185 g, size 158 x 62 x 30 mm) for evaluated shock pulse measurement. 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

Machine breakdowns are frequently caused by bearing damage. Unplanned downtime, as well as unnecessary repair work, can be significantly reduced by periodically checking bearing condition.

The Bearing Checker is inclusive:

- Infra-red thermometer
- Electronic Stethoscope
- Manual, quick-start instruction
- DVD with technical documentations
- Batteries



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.



CHECKING (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 frequency range. 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 is a cost-effective predictive maintenance tool.

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

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.



CHECKING (MONITORING)

LASER THERMOMETER

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 TEMPERATURE TO 300°C

- Measurement range: -50°C - 300°C
- Fast response time (within 0.9 sec.)
- Dimensions: 155x50x72 mm
- Incl. batteries
- Weight: 68 gr



BETEX 1230 - LASER TEMPERATURE TO 380°C

- Measurement range: -50°C - 380°C
- Max. height: 1500mm
- Fast response time (within 0.5 sec.)
- Dimensions: 185x135x38 mm
- Incl. batteries
- Weight: 150 gr



BETEX 1250 - LASER TEMPERATURE TO 1000°C

- Measurement range: -50°C - 1000°C
- Max. height: 1500mm
- Fast response time (within 0.5 sec.)
- Dimensions: 170x50x90 mm
- Power supply: one 9V battery (included) and carrying case with strap
- Weight: 178 gr



BETEX 1300 - TEMPERATURE TO 1370°C

- Measuring range: -100°C - 1370°C
- Also suitable for surface measurement
- Dimensions: 120x68x31 mm
- Incl. batteries
- Weight: 112 gr



CHECKING (MONITORING)

DECIBEL METER / TACHOMETER / STETHOSCOPE

DECIBEL METERS - 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: 260x69x32mm
- Weight: 270 gr

Includes:

- Windcap 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: 260x69x32mm
- Weight: 350 gr

Includes:

- Windcap 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 10mm 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.
- Accuracy + / - 0.5%
- Measuring distance 50 to 300 mm.
- Memory: last, maximum and minimum measured value.
- Dimensions: 72x190x37 mm.
- Weight: 250 grams.

Includes:

- 3 Reflective tape strips.
- Carrying case and instruction manual
- Battery



BETEX ELS12 ELECTRONIC STETHOSCOPE

For preventive maintenance on installations and rotating equipment. A simple method to detect machine failure in a noisy environment. The need to eavesdrop on mechanical sounds within machinery is essential in any maintenance department. Mechanical faults can often be heard. The problem is to locate the sound source quickly and accurately in a generally noisy environment.

The electronic stethoscope is a sensitive listening stick, for location of all kinds of machinery noise. Valve chatter, tappet noise, piston slap, gear and pump noise and the operation of relays and solenoids are just a few of the many noises that may be traced, amplified and assessed with this device. ELS-12 can also be connected to a tape recorder.

- 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: headphones and bag
- Measuring rod: 60 mm and 290 mm
- Dimensions: 205x50x40 mm



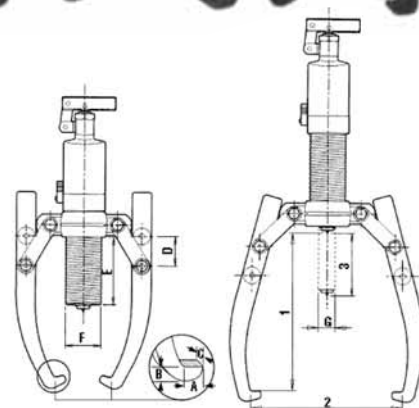
HYDRAULIC PULLERS

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



Compact, ergonomic design, easily operated by one person!

- **Multifunctional:**
These HP-pullers are ideal for pulling a wide variety of parts, including bearings, bushings, wheels, gears and pulleys. Applications for HP-pullers will be found in motor repair shops, service companies, maintenance shops, industry, mining, paper mills, chemical plants, shipping, offshore, etc.
- **Compact:**
The self contained hydraulic pump 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, 2 pullers for the price of one, including integrated pump and cylinder!



- **Safe:**
The improved integral safety release valve prevents overloading and ensures that you will never exceed the maximum power capacity.
- **Versatile:**
Various accessories are available. Sets are supplied in 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 Hydraulic pullers

TIP! For accessory sets see page 14,15

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	275	60	11	6	22	32	84	42	22	4.5
HP 63 *	792000	6	215	300	85	11	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	68	50	32.0

* Incl. safety net ** incl. safety blanket



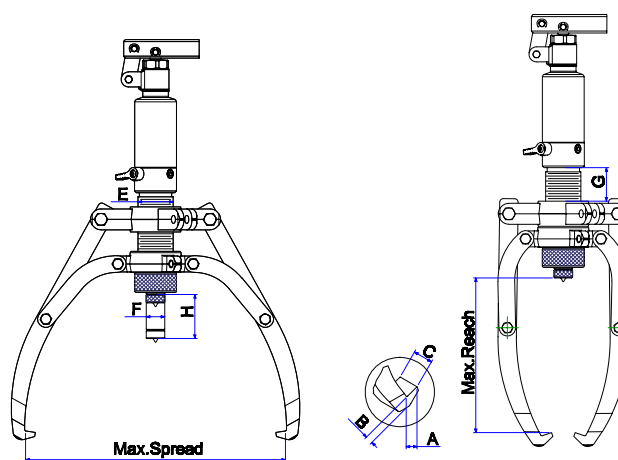
HYDRAULIC PULLERS

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, 2 pullers for the price of one, including integrated pump and cylinder!
- **Safe!**
The integral safety release valve prevents overloading and ensures that you will never exceed the maximum power capacity.
- **Versatile!**
Various accessories are available. Sets are supplied in practical PE case and consist of a puller block, connecting rods and a set of bearing splitters.



Advantages of self-centering pullers:

- Prevents 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 Hydraulic self-centering pullers

TIP! For accessory sets see page 14,15

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	325	60	13	10	22	-	40	42	22	8.0
HSP 63*	792500	6	230	380	70	13	10	22	-	50	45	23	10.0
HSP 83*	793500	8	280	450	85	13	13	27,5	-	70	50	25	12.0
HSP 123*	794500	12	305	485	85	15	16,5	29	-	70	60	28	15.0
HSP 203**	796500	20	365	570	111	20	27	33	-	62	80	40	25.0
HSP 303**	797500	30	465	680	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 easy dismounting of bearings, couplings, rings etc.

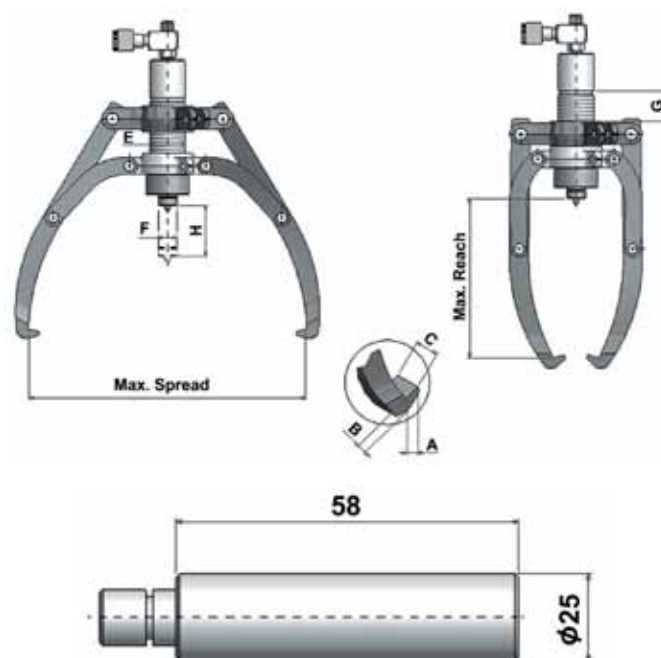
Separate 2-stage handpump available

- **Practical!**
Self-centering, easy to convert, 2-arm or 3-arm puller.
The arms slide inwards or outwards simultaneously.
- **Safe!**
Arms can never deflect!
- **Economical!**
2/3-arm combination puller, 2 pullers for the price of one.
- **Strong!**
The greater the pulling force, the tighter the jaws grip!
The arms cannot bend or deflect.

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.
- HXP503 also available with mobile crane (see page 18-19).

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



BETEX HXP 2/3 Hydraulic self-centering pullers

TIP! Use in combination with accessories, pag 14,15, hand- and foot pump sets, from pag 55

Type	Art. no.	Cap. ton	Max. shaft length mm	Max. spread mm	Stroke mm H	Pump tip mm			Jaw tip mm			Weight Kg
						E	F	G	A	B	C	
HXP 83*	793600	8	280	450	85	42	22	40	13	10	22	9.0
HXP 123*	794600	12	305	485	85	50	25	70	13	13	27.5	11.7
HXP 203**	796600	20	365	570	111	60	28	70	15	16.5	29	24.0
HXP 303**	797600	30	465	680	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



Tri-section pullers

- The plates grip behind the inner and outer rings of the bearing, preventing the pulling force from being transmitted through the moving parts, **minimizing the risk of bearing damage**.
- The Tri-section Plate's unique design ensures the application of force at the most efficient point - the inner ring and outer ring together - and thereby requires less force for removal than required if only pulling on the outer ring.
- The firm grip behind a bearing's inner and outer rings ensures that the pulling forces are not transmitted through the moving parts, preventing damage to the bearing.
- Most parts are forged SCM440 alloy steel, creating a very safe and durable product.

The puller sets come complete with:

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

4, 6, 8 und 12 tons capacities

BETEX Tri-section hydraulic pullers

Type	Art. no.	Cap. Tonnen	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 remove bearings and sleeves using either their outer or inner edges.

The push puller is specially designed for combined pushing and pulling. This creates one tool that uses even force to enable very easy pushing and pulling.

The pushing jaw fits 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 pump body to provide pushing and pulling force.
- 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.
- Depends on user requirements - the extension bars can be used where necessary for extra reach.

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

Safe

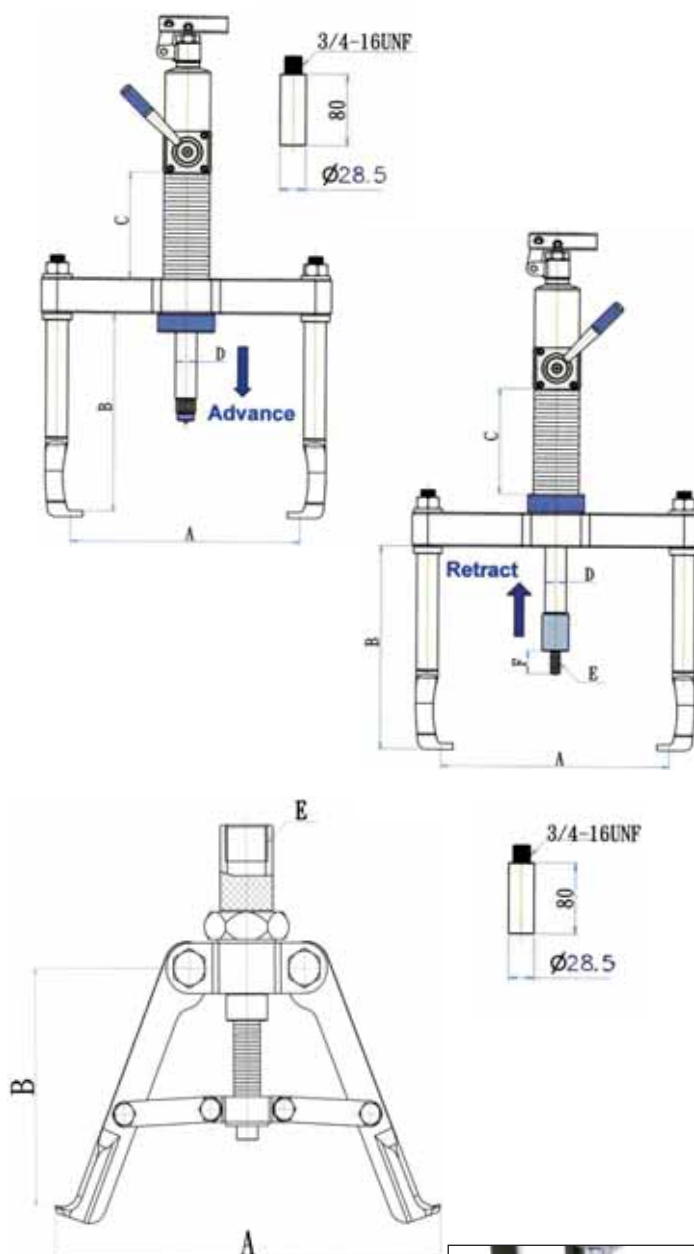
- The built-in safety valve ensures user safety and prevents damage to tool and job.
- The built-in safety valve prevents the user from being harmed and the job from being damaged as rated pressure cannot be reset or adjusted.
- Most parts are forged of SCM440 alloy steel, creating a very safe and durable product.

Cost-reducing

- Built-in safety valve ensures the tool is always operated as per the rated pressure, significantly extending tool life.
- 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 / three-in-one

TIP! For accessory sets see page 14, 15

Type	Art. no.	Operations	Output tons	A mm	B mm	C mm	D mm	E	F mm	Weight Kg
HPP123	794200	Pushing	8	44-280	270	140	28	M12-P1.75	30	19,5
		Outer pulling	12	85-300	260	140	28	-	-	
		Inner pulling	8	110-210	130-150	-	-	1"-12UNF	-	

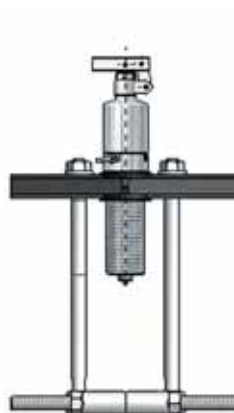
ACCESSORY SETS

BETEX BEARING SPLITTERS

This accessory set consists of:

- 1 puller block
- 2 connecting rods (legs)
- 1 set of bearing splitters for a min./max Ø 15-225 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	280	Ø 25-150	12.5
Acc. Set HP 83, HSP 83, HXP 83	793100	8	280	Ø 40-150	12.5
Acc. Set HP 123, HSP 123, HXP 123, HPP 123	794100	12	325	Ø 45-225	18.0

ACCESSORY-SETS

BETEX TRI-SECTION PLATES



Tri-section plate

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

User-friendly

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

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

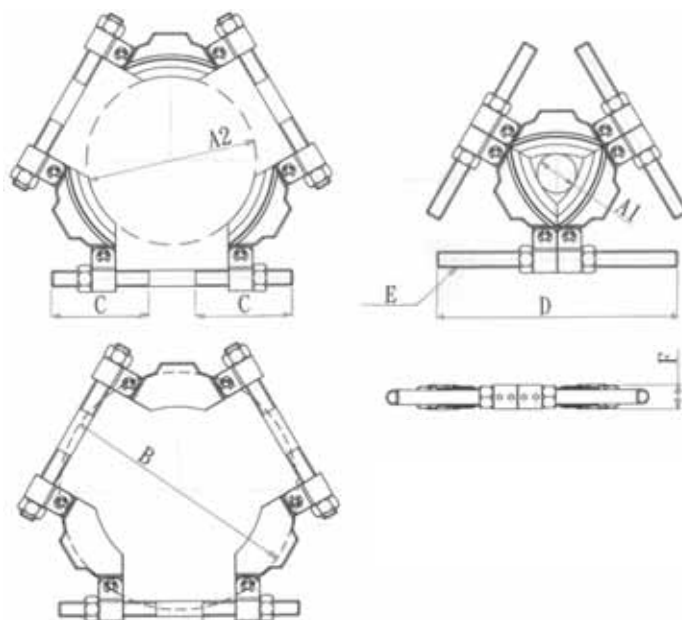
Use in combination with

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



Typ	Art. no.	Cap. ton	Available shaft diam		Spread	C	D	E	F	Weight
			A1 mm	A2 mm	B (mm max)	mm	mm		mm	kg
Tri-section 160	791160	6	26	160	216	105	240	5/8"-11UNC	8	3.5
Tri-section 210	791210	8	50	210	280	115	285	3/4"-16UNF	31	5.5
Tri-section 340	791340	20	90	340	460	170	430	7/8"-14UNF	45	16.5
Tri-section 495	791495	30	140	495	660	240	600	1"-14UNF	61	41

MOBILE HYDRAULIC PULLER

BETEX MOBIPULLER

25
OR
50
TONS



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.

A ¹ :	In standard position mm:	see table
A ² :	In extended position mm:	see table
B ¹ :	Frame length in standard pos. mm:	1560
B ² :	Frame length in extended pos. mm:	1940
	Position high / low mm:	1510/2040
	Dimensions L x W mm:	1570x990
C:	Diameter of jaws mm:	430
D:	Set-up height mm:	900/1430
	Adapters mm (155 mm):	2x Ø40, 2x Ø50

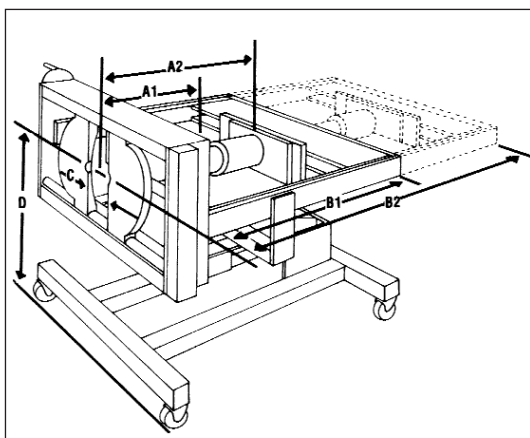
Remote control



All models are equipped with a safety cage for personal safety



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



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

Type	Art. no.	Cap. Ton	Stroke cylinder	Pump hydraulic manual/electric	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 electric	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 electric	740	1120	450
50 EVA 430 S 340	700005	50	340	single acting electric	660	1040	455
50 EVAD 430 S 340	700006	50	340	double acting electric	615	995	470
50 EVAD 430 S 460	700007	50	460	double acting electric	470	850	485

All models are standard equipped with

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

MOBILE HYDRAULIC PULLER

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



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

- **Practical**
The puller is self-centering, easy to maneuver and adjustable in height. Easy to convert to 2-arm or 3-arm puller. The arms slide inwards or outwards simultaneously.
- **Fast**
The complete stroke is 159 mm. Two adapters (extensions) are included for a total length of 310 mm.
- **Strong**
The harder the force, the tighter the jaws grip. The arms cannot bend or deflect.
- **Safe**
The integral safety release valve prevents overloading and ensures that you will never exceed the maximum power capacity.

Advantages

- Prevents damage to shaft and object being pulled
- One person can do the job
- Efficient and saves time
- Including 2 adapters
- Including remote control
- Including safety blanket

MOBILE HYDRAULIC PULLER

BETEX HXPC 50 - 2/3 arm puller, **self-centering**, 50 ton capacity **WITH CRANE**

- 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
- Crane has two swivel castors (self-locking) and has two rigid castors
- The hydraulic cylinder is spring-return type with a max. working pressure of 700 bar (50 ton)
- 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 mm	159
Max. spread mm	830
Min. spread mm	140
Max. shaft length mm	450
Operating main cylinder	electro-hydraulic pump EP18S, 230V, 5A, 50 Hz,
Operating height adjustment	with remote control
Operating self-centering jaws	manual
Adapters 2 items in mm. 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 pag 10

MOBILE HYDRAULIC PULLER

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



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

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

Advantages

- Prevents damage to shaft and object being pulled
- One person can do the job
- Efficient and saves time
- Including 4 adapters
- Including remote control
- Including safety blanket

MOBILE HYDRAULIC PULLER

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

- Double-acting cylinder for holding, opening and closing the 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 cart has two swivel castors (self-locking) and has two rigid castors
- The hydraulic cylinder is spring-return type with a max. working pressure of 700 bar (50 ton)
- 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 mm	330
Max. spread mm	1250
Min. spread mm	200
Max. shaft length mm	780
Operating: - 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 in mm. 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	385

MOBILE HYDRAULIC PULLER

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



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

- **Practical**

The puller is self-centering, easy to maneuver and adjustable in height. Easy to convert to 2-arm or 3-arm puller. The arms slide inwards or outwards simultaneously.

- **Fast**

The complete stroke is 330 mm. Four adapters (extensions) are included with a maximum length of 620 mm.

- **Strong**

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

- **Safe**

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

Advantages

- Prevents damage to shaft and object being pulled
- One person can do the job
- Efficient and saves time
- Including 4 adapters
- Including remote control
- Including safety blanket

MOBILE HYDRAULIC PULLER

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

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



Valve block



Adapters

Type	HXPM 50 - 2/3 arm SHORT	HXPM 50 - 2/3 arm LONG
Art. no	700017	700014
Capacity ton	50	50
Max. stroke mm	330	330
Max. spread mm	950	1250
Min. spread mm	200	200
Max. shaft length	500	780
Operating: - main cylinder - height adjustment	electro-hydraulic pump EP18S, 230V - 5A, 50 Hz, with remote control	
Operating self-centering jaws	hand pump, double acting	
4 adapters mm. 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 maneuver 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 harder the force, the tighter the jaws grip. The arms cannot bend or deflect.
- **Safe**
The integral safety release valve prevents overloading and ensures that you will never exceed the maximum power capacity.

Advantages

- Prevents damage to shaft and object being pulled
- One person can do the job
- 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 has two rigid castors
- The hydraulic cylinder is a spring-return type with a max. working pressure of 700 bar (100 ton)
- Seven adapters (extensions) with a total length of 1125 mm are included
- Adjustable jaw tips for optimal/adjustable 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 mm	270
Max. spread mm	1500
Min. spread mm	200
Max. shaft length mm	1215
Operating: - main cylinder - height adjustment - self-centering jaws	electro-hydraulic pump EP420D, 400V - 6A, 50 Hz, with remote control
Seven adapters mm	2x Ø70 L=300 mm, 2x Ø70 L=150 mm
Total length: 1125 mm	1x Ø70 L=100 mm, 1x Ø70 L=75 mm, 1x Ø70 L=50 mm
Min. height from centre mm	320
Max. height from centre mm	790
Gauge bar	700
Dimensions LxWxH	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 maneuver and adjustable in height. Easy to convert to 2-arm or 3-arm puller. 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 harder the force, the tighter the jaws grip. The arms cannot bend or deflect.
- **Safe**
The integral safety release valve prevents overloading and ensures that you will never exceed the maximum power capacity.

Advantages

- Prevents damage to shaft and object being pulled
- One person can do the job
- 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
- The design prevents the puller jaws from slipping or deflecting
- Easy to convert to 2-arm or 3-arm puller
- The puller is adjustable 5° vertically
- The cart has two swivel castors (self-locking) and has two rigid castors
- The hydraulic cylinder is a spring-return type with a max. working pressure of 700 bar (100 ton)
- Seven adapters (extensions) with a total length of 1125 mm are included
- Adjustable jaw tips for optimal/adjustable grip

TIP: use in combination with UHAP2800 high pressure pump.

Valve block



Pump block



Adjustable jaw tips for extra 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
Operating: - main cylinder - height adjustment - self-centering jaws	electro-hydraulic pump EP420D, 400V, 6A, 50 Hz, with remote control
Seven adapters mm	2x Ø70 L=300 mm, 2x Ø70 L=150 mm
Total length: 1125 mm	1x Ø70 L=100 mm, 1x Ø70 L=75 mm, 1x Ø70 L=50 mm
Min. height from centre mm	820
Max. height from centre mm	1320
Gauge bar	700
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 maneuver 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 harder the force, the tighter the jaws grip. The arms cannot bend or deflect.
- **Safe**
The integral safety release valve prevents overloading and ensures that you will never exceed the maximum power capacity.

Advantages

- Prevents damage to shaft and object being pulled
- One person can do the job
- 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 has two rigid castors
- The hydraulic cylinder is a spring-return type with a max. working pressure of 700 bar (150 ton)
- Seven adapters (extensions) with a total length of 1125 mm are included
- Adjustable jaw tips for optimal/adjustable 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 mm	325
Max. spread mm	1600
Min. spread mm	250
Max. shaft length mm	1150
Operating: - main cylinder / - height adjustment / - self-centering jaws	electro-hydraulic pump EP420D, 400V, 6A, 50 Hz, with remote control
Seven adapters mm	2x Ø70 L=300 mm, 2x Ø70 L=150 mm
Total length: 1125 mm	1x Ø70 L=100 mm, 1x Ø70 L=75 mm, 1x Ø70 L=50 mm
Min. height from centre mm	830
Max. height from centre mm	1330
Gauge bar	700
Dimensions LxWxH mm	2990 x 1030 x 1390
Weight kg	1200



Adapters

MOBILE HYDRAULIC PULLER-INSTALLER

BETEX BPP BEARING PULLER PUSHER, MAX 100 T CAP.



INSTALLATION AND REMOVAL OF RAILWAY 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 work safe & efficient. Easy to use roll-around model for both **mounting** and **dismounting**.

Type	BPP 100
Article 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	electric-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 cators and 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 68t max.
- Suitable for locomotives, passenger and freight cars
- For safe, simple and fast mounting and dismantling of tapered roller bearings
- For assembly of 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 between 2 models which are equipped with a **manual valve** or with 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 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 work safe & efficient. Easy to use, compact, roll-around model for both **mounting** and **dismounting**.

BPPS Side-Shift model, compact and easy to maneuver because of 4 swivelling castors.

Type	BPPS SIDE-SHIFT
Article 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	electric-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 swivelling 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 68t max.
- Suitable for locomotives, passenger and freight cars
- For safe, simple and fast mounting and dismantling of tapered roller bearings
- For assembly of 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.

VALVES

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



Manual valve

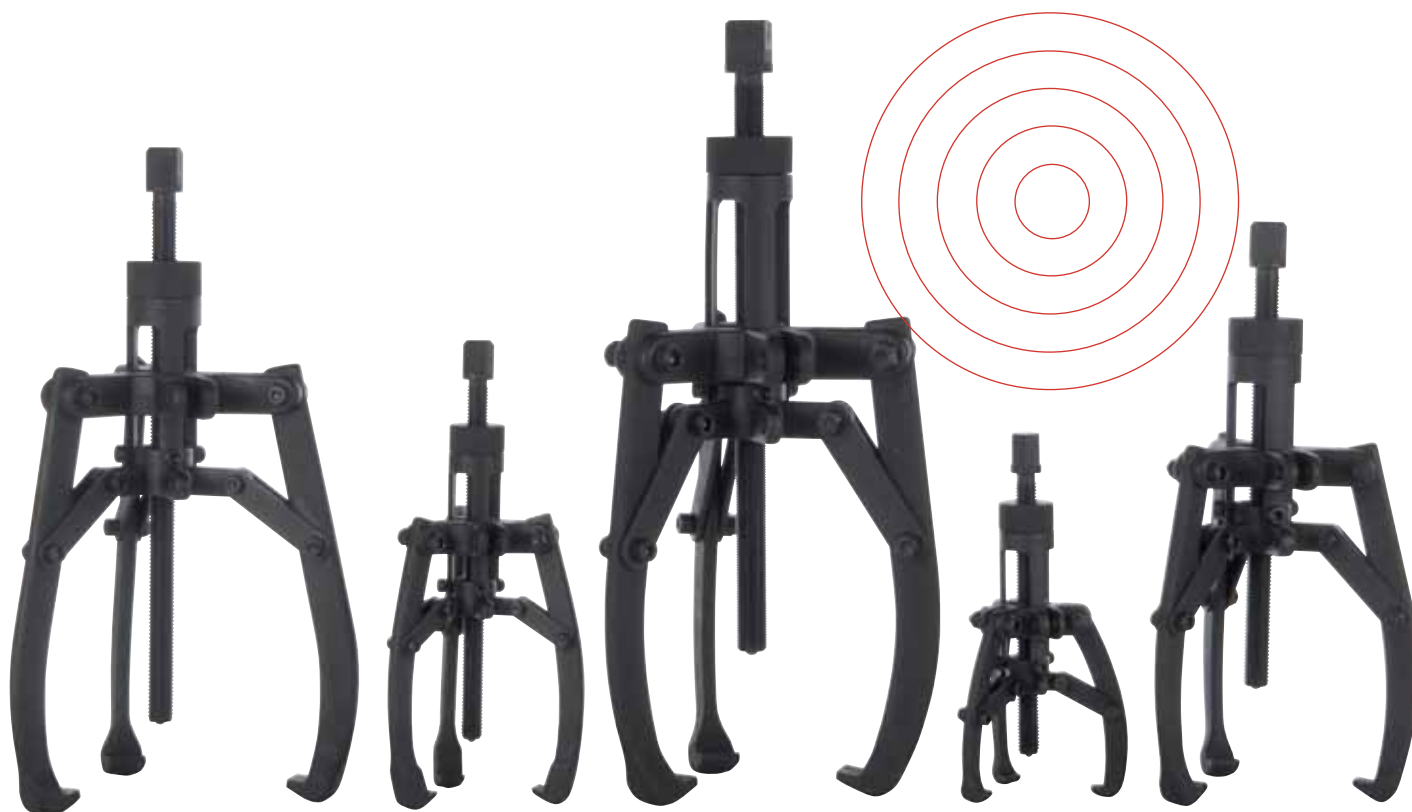


Solenoid valve

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

MECHANICAL PULLERS

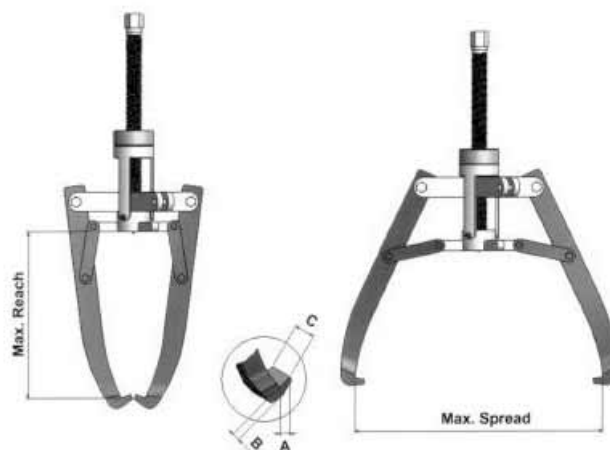
BETEX MSP 2/3-arm pullers, **self-centering**



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. The arms cannot bend or deflect.



Advantages of self-centering pullers:

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

2, 3, 5, 8 and 10 ton capacity!

BETEX MSP 2/3 Mechanical self-centering pullers

Type	Art. no.	Cap. ton	Max. shaft length mm	Max. spread mm	A mm	B mm	C mm	Weight Kg
MSP 2/3-120	798250	2	80	120	8	6	15	1.6
MSP 2/3-180	798300	3	120	180	6	7	15	2.3
MSP 2/3-270	798350	5	160	270	11	10	25	4.3
MSP 2/3-300	798400	8	210	300	13	14	27	6.1
MSP 2/3-380	798450	10	250	380	14	10	29	9.6

KEY-PULLER

BETEX KZZ



For professional removal of keys.

The Betex KZZ Key-drawer (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.

Typ	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 can not 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. The one-hand operation of the puller permits easy use even under unfavourable conditions. 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, bearingrings etc. that fit flushly with other parts. 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 diameter Ø40 mm till Ø640 mm

The 3 arms of these pullers adjust themselves simultaneously and symmetrically, inwards or outwards. There is no possibility of the arms bending or deflecting. Hydraulic screws with a 20 ton capacity are available for use in combination with the two largest pullers. 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 diameter Ø40 mm till Ø350 mm

This 2-arm puller is extremely well-suited to applications involving the extraction of bearing-rings, innerrings (NU-NJ). 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	Maximum 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 standard: art. no.: 054009



MECHANICAL PULLERS

BETEX 56

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

This 4-arm bearing puller has been specially developed to extract ball-bearings from casings and shafts using a single action.

This concerns the 6000, 6200, 6300 and 6400 series. 66 different ball-bearings can be removed with these three sets of pullers.

BETEX 56 is available in 3 sets

Set	Art. no.	Max. shaft length mm	Claws (4 per set)	No of bearings
56-020	056020	65	3 sets	12
56-120	056120	90	5 sets	30
56-220	056220	150	5 sets	24
Set	Ball-bearing 6000	Ball-bearing 6200	Ball-bearing 6300	Ball-bearing 6400
56-020	6004 t/m 6006	6200 6205	6300 6302	-
56-120	6007 t/m 6020	6206 6212	6303 6308	6403 6405
56-220	6021	6213 6219	6309 6319	6406 6412



BETEX 44

Hydraulic 8/15 tons mini-press

When using mechanical screws, much of the force is lost as a result of the friction caused by the thread. This minipress administers a shock to the part which is to be extracted. This enables optimal use to be made of BETEX pullers 52 and 54, without loss of force or wear and tear to screws. Note*: may be used from 49-200, 52-230 and 54-300 and upwards.

* application: heavy duty pullers, BETEX 49-200, 52-230 en 54-300 upwards * height: 35 mm

Betex 44 is available in 2 types

Type	Art. no.	Capacity 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.



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

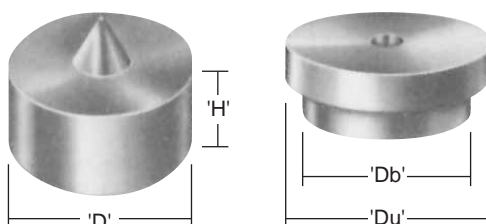
'Db' min. = Ø 19 mm 'Du' min. = Ø 25 mm

'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 Ø 150 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. Bearings, bushes, sealings etc. are extracted effortlessly.

Smaller, larger and longer sizes are available on request.



BETEX 62 is available in 3 sets

The two sets together come in a free carrying case

Counter support type	Suitable for expanders	Expander	For diameter mm	For max. depth mm		
62-100	62-005→ 62-030	62-005	5-7	35	*	****
		62-007	7-10	35	*	****
		62-010	10-14	35	*	****
		62-014	14-20	45	*	****
		62-020	20-30	50	*	****
		62-030	30-40	90	*	****
62-200	62-040→ 62-070	62-040	40-50	95	**	****
		62-050	50-60	95	**	****
		62-060	60-70	95	**	****
		62-070	70-80	95	**	****
62-200/62-300	62-070 → 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 the internal puller. Slide hammer 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 is that it can be used independent of 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 Nr. 62-9092

Up to bore-diameter 79,5 mm Nr. 62-9302

MECHANICAL PULLERS

BETEX 63, 64 / TRACTA

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

Advantages:

- For all kinds of roller bearings
- Shaft Ø 10,5 mm up to Ø 100 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 dismantling
- Prevents damage to bearing, bearing house and shaft!

BETEX 63, 64 / TRACTA

Type	Shaft diam. mm	Outside diam. mm	Max stroke mm	Max shaft length mm	Max shaft length mm 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 and 64

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

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 innering.



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 bearing inner ring.

Example: tapered roller bearings.



Principle 3

Principle 4: grip inside or behind bearing inner ring, or behind bearing outside ring.

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



Principle 4

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 to your Betex® cylinder.
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. 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	5-100	25.4-362	43
NSLS	Low profile, spring return	Single Acting	5-150	6-17	44
NSCS	Compact, spring return	Single Acting	10-100	38-57	45
NSHS	Hollow, spring return	Single Acting	13-100	8-158	46
JLLC	Lock nut, load return	Single Acting	50-1000	50-300	47
JLPC	Pan lock nut, load return	Single Acting	60-520	45-50	48
NDAC	General purpose	Double Acting	10-100	255-330	49
NDAH	Hollow	Double Acting	50-100	51-254	50
SSA	Aluminium, spring return	Single Acting	50-100	51-254	51
ACHC	Aluminium, hollow, spring return	Single Acting	30-60	76-153	52
ADHC	Aluminium, hollow	Double Acting	30-60	51-254	53
ALNC	Aluminium, lock nut, load return	Single Acting	30-60	51-254	54

CYLINDERS

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



Model: NSSS Series

Capacity : 5-100 ton
Stroke : 25,4-362 mm
Max. working pressure : 700 Bar

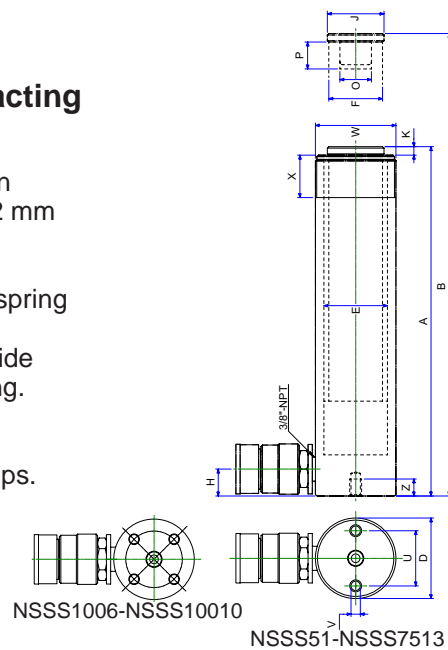
- All rams are single acting with spring return. Pistons hard chromed.
- Rams inside roll-polished, outside blasted with black nitride coating.

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.



NSSS1006-NSSS10010

NSSS51-NSSS7513

NSSS series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Type	Cap. ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	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
NSSS51	4.5	26	17	110	136		28.6						14						1
NSSS53	5	76	54	165	241		30						14						1.5
NSSS55	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
NSSS57	5	183	129	273	456		30						16						2.4
NSSS59	5	232	164	324	556		30						16						2.8
NSSS101		25.4	36.5	90	115.4		42.8			-	-	#10-24un	6.5						1.8
NSSS102		51	73	121	172		42.8			40	6	1"-8	19						2.3
NSSS104		101	145	171	272		42.8			40	6	1"-8	19						3.3
NSSS106	10	152.5	242	247	399.5	57	45	38	19	40	6	1"-8	19	39	5/16"-18un	2 1/4"-14	30	13	4.4
NSSS108		203.5	323	298	501.5		45			40	6	1"-8	19						5.4
NSSS1010		255.5	406	350	605.5		45			40	6	1"-8	19						6.4
NSSS1012		305.5	486	400	705.5		45			40	6	1"-8	19						6.8
NSSS1014		356.5	567	451	807.5		45			40	6	1"-8	19						8.2
NSSS151		26.5	63	124	150.5				19										3.3
NSSS152		52.5	125	149.6	202.1				19										4.1
NSSS154		102.5	243	200	302.5				19										5.0
NSSS156	15	153	363	271.6	424.6	73	55	40	25	38	9.6	1"-8	25.4	47.7	3/8"-16un	2 3/4"-16	30	13	6.8
NSSS158		203.5	483	322	525.5				25										8.2
NSSS1510		254.5	604	373	627.5				25										9.5
NSSS1512		305	724	424	729				25										10.9
NSSS1514		355.7	845	474.6	830.3				25										11.8
NSSS1516		406	824	523	829				25										12.8
NSSS251		25.5	98	139.5	165														5.9
NSSS252		51	196	165	216														6.4
NSSS254		102	392	216	318														8.2
NSSS256	25	158.5	610	273	431.5	88	70	55	25	50	10.5	1 1/2"-16	25.4	58	1/2"-13un	3 5/16"-12	50	19	10
NSSS258		209.5	806	324	533.5														12.2
NSSS2510		260.5	1002	375	636.5														14.1
NSSS2512		311	1196	425.5	736.5														16.3
NSSS2514		361.5	1390.5	476	837.5														17.7
NSSS308	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
NSSS502		51	361	177	228														15
NSSS504		101.5	719	229	330.5														19.1
NSSS506	50	157.5	1116	283	440.5	127	95	80	33	70	3	-	-	95	1/2"-13un	5"-12	55	19	23.1
NSSS508		203	1446	349	552														27.1
NSSS5010		260	1853	385	645														30.4
NSSS5013		335.5	2377	461	796.5														37.6
NSSS756	75	155	1752	285	440	152	120	95	30	70	3	-	-	-	-	5 3/4"-12	45	-	29.5
NSSS7513		333.5	3770	491	824.5														59
NSSS1006	100	170	2432	358	528	177	135	105	40	70	3	-	-	139	3/4"-10un	6 7/8"-12	45	25	59
NSSS10010		260	3720	448	708														72.6

CYLINDERS

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



Model: NSLS Series

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

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

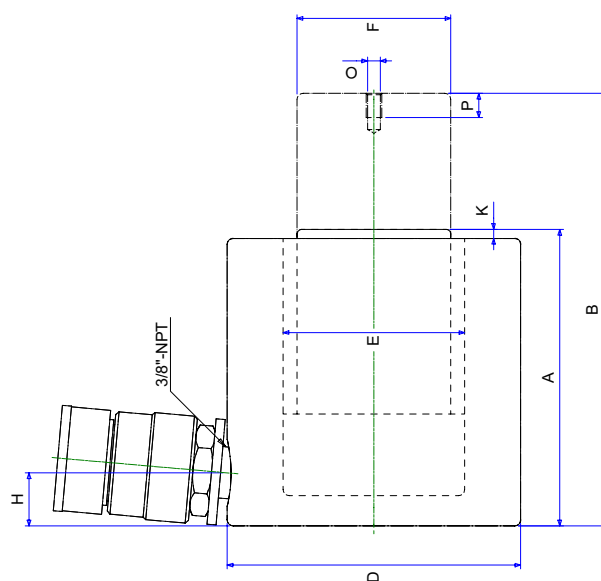
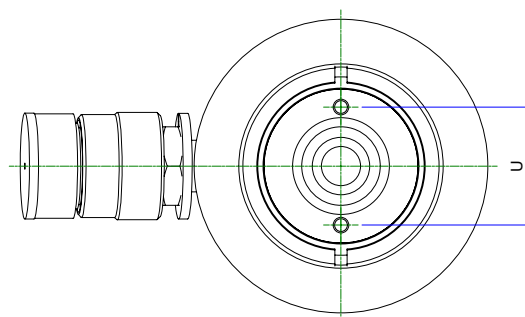
NSLS series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Type	Cap. ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	C mm	D mm	E Ø mm	F Ø mm	G Ø mm	H mm	K mm	L mm	M mm	O Ø mm	P Ø mm	U mm	V Ø mm	Weight Kg
NSLS50	5	6	4.5	33	39	28.5	58.5x44	31	25.4	9.5	16	1	22	22	-	-	-	5.3	1.0
NSLS100	10	12	18.0	42	54	36.5	82.5x60	44	38	11	19	1	30	34	-	-	-	7.5	1.4
NSLS200	20	12	34.0	51	63	49.3	100x78	60	50.8	15	19	1	39	39	-	-	-	10	3.1
NSLS300	30	13	54.0	58	71	52.3	117.5x95	73	63.5	16	19	2	47.5	47.5	-	-	-	10	4.5
NSLS500	50	16	113.0	66	82	66.5	145x115	95	70	19	19	2	57.5	58	-	-	-	11	6.8
NSLS750	75	16	180.0	79	95	76.2	170x145	120	82.5	20.5	19	2	72.5	70	-	-	-	13.5	11.3
NSLS1000	100	16	229.0	85	101	76.2	185x160	135	92	20.5	19	2	80	78	-	-	-	13.5	14.5
NSLS1500	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. working pressure : 700 bar

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

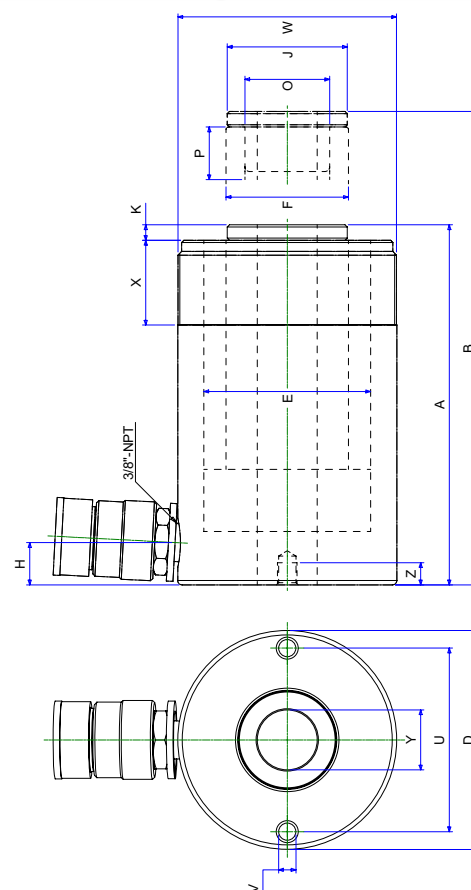
NSCS series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Type	Cap. ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	C mm	D mm	E ø mm	F ø mm	G ø mm	H mm	K mm	L mm	M mm	O ø mm	P ø mm	U mm	V ø mm	Weight Kg
NSCS101	10	38	55.0	88	126	-	78	42.8	38	-	17.5	5	-	-	M4	8	26	-	4.1
NSCS201	20	45	127.0	98	143	-	97	60	50.8	-	17.5	3	-	-	M5	9	39	-	5.0
NSCS302	30	62	274.0	117	179	-	107	75	63.5	-	19	3	-	-	M5	8	39	-	6.8
NSCS502	50	60.5	429.0	122	182	-	127	95	70	-	19	2	-	-	M5	8	39	-	10.9
NSCS1002	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. working 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

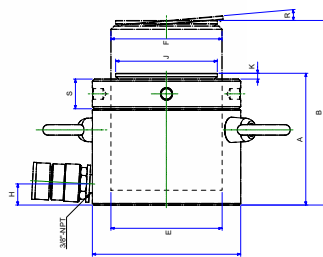
TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Centre Hole

Type	Cap. ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	D Ø mm	E Ø mm	F Ø mm	H mm	J mm	K mm	O Ø un	P mm	U mm	V Ø unc	W Ø un	X mm	Y Ø mm	Z mm	Weight Kg
NSHS120	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
NSHS121	12	42	76	120	162	73	55	35	19	-	-	-	-	50.8	5/16"-18	2 3/4"-16	33	19.5	12.7	3
NSHS123	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
NSHS202	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
NSHS206	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
NSHS302	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
NSHS306	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
NSHS603	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
NSHS606	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
NSHS1003	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

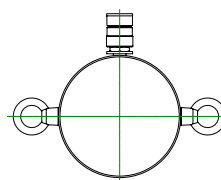
BETEX JLLC series, high tonnage cylinder, load return, single acting



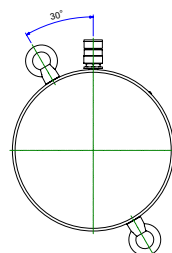
TSA-Optional Tilt Saddle

Model: JLLC series

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



Model JLLC50-200T



Model JLLC300-1000T

- Single-acting, load return
- Safety locknut for mechanical load holding
- 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, page 55-67. Accessories, page 70-73

Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height Retr. mm	B Ext. mm	D Ø mm	E Ø mm	F mm	H mm	J mm	K mm	L mm	S mm	Weight Kg	Optional Tilt Saddle		
															J1 mm	K1 mm	Type
JLLC502	50	50	354.5	164	214	125	95	Tr95x4	20	70	4	13	35	15	70	24	TSA-100
JLLC506	50	150	1063.5	264	414	125	95	Tr95x4	20	70	4	13	35	25	70	24	TSA-100
JLLC5010	50	250	1772.5	364	614	125	95	Tr95x4	20	70	4	13	35	35	70	24	TSA-100
JLLC1002	100	50	665	187	237	165	130	Tr130x4	32	70	4	13	45	30	70	24	TSA-100
JLLC1006	100	150	1995	287	437	165	130	Tr130x4	32	70	4	13	45	48	70	24	TSA-100
JLLC10010	100	250	3325	387	637	165	130	Tr130x4	32	70	4	13	45	64	70	24	TSA-100
JLLC1502	150	50	1005	209	259	205	160	Tr160x6	49	125	4	25	45	53	125	20	TSA-200
JLLC1506	150	150	3015	309	459	205	160	Tr160x6	49	125	4	25	45	78	125	20	TSA-200
JLLC15012	150	300	6030	459	759	205	160	Tr160x6	49	125	4	25	45	117	125	20	TSA-200
JLLC2002	200	50	1345	243	293	235	185	Tr185x6	52	125	4	25	50	83	125	20	TSA-200
JLLC2006	200	150	4035	343	493	235	185	Tr185x6	52	125	4	25	50	117	125	20	TSA-200
JLLC20012	200	300	8070	493	793	235	185	Tr185x6	52	125	4	25	50	170	125	20	TSA-200
JLLC3002	300	50	2167.5	295	345	305	235	Tr235x6	62	160	5	25	60	173	195	75	TSA-300
JLLC3006	300	150	6502.5	395	545	305	235	Tr235x6	62	160	5	25	60	233	195	75	TSA-300
JLLC30012	300	300	13005	545	845	305	235	Tr235x6	62	160	5	25	60	323	195	75	TSA-300
JLLC4002	400	50	2755	335	385	355	265	Tr265x6	76	160	5	25	70	250	225	85	TSA-400
JLLC4006	400	150	8265	435	585	355	265	Tr265x6	76	160	5	25	70	327	225	85	TSA-400
JLLC400112	400	300	16530	585	885	355	265	Tr265x6	76	160	5	25	70	441	225	85	TSA-400
JLLC5002	500	50	3532.5	375	425	395	300	Tr300x6	81	180	5	25	80	367	250	90	TSA-500
JLLC5006	500	150	10597.5	475	625	395	300	Tr300x6	81	180	5	25	80	466	250	90	TSA-500
JLLC50012	500	300	21195	625	925	395	300	Tr300x6	81	180	5	25	80	617	250	90	TSA-500
JLLC6002	600	50	4274	395	445	425	330	Tr330x6	89	195	5	25	85	446	275	95	TSA-600
JLLC6006	600	150	12823	495	645	425	330	Tr330x6	89	195	5	25	85	562	275	95	TSA-600
JLLC60012	600	300	25646	645	945	425	330	Tr330x6	89	195	5	25	85	737	275	95	TSA-600
JLLC8002	800	50	5970	455	505	505	390	Tr390x6	105	225	5	25	100	709	320	120	TSA-800
JLLC8006	800	150	17910	555	705	505	390	Tr390x6	105	225	5	25	100	870	320	120	TSA-800
JLLC80012	800	300	35820	705	1005	505	390	Tr390x6	105	225	5	25	100	1110	320	120	TSA-800
JLLC10002	1000	50	7257	495	545	555	430	Tr430x6	108	250	5	25	110	949	360	135	TSA-1000
JLLC10006	1000	150	21772	595	745	555	430	Tr430x6	108	250	5	25	110	1141	360	135	TSA-1000
JLLC100012	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



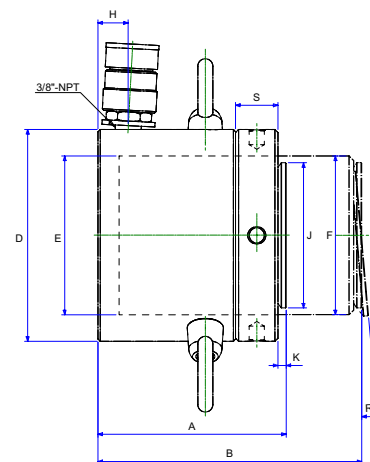
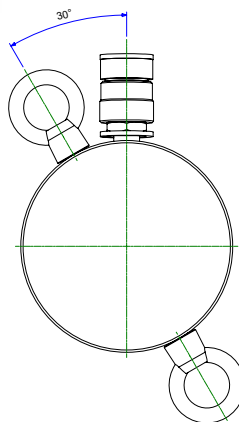
Model: JLPC series

Capacity : 60 - 500 ton

Stroke : 45 - 50 mm

Max. working 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.



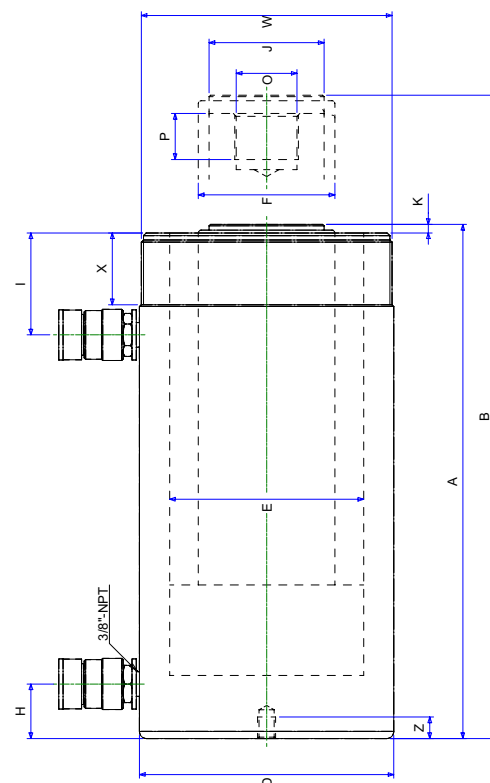
JLPC series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height mm Retr.	B Height mm Ext.	D mm	E Ø mm	F Ø mm	H mm	J Ø mm	K mm	R mm	S mm	Weight Kg
JLPC602	60	50	433	124	174	140	105	Tr105x4	20	96	5	5°	28	15
JLPC1002	100	50	715	137	187	175	135	Tr135x6	21	126	8	5°	31	26
JLPC1502	150	45	963	148	193	220	165	Tr165x6	27	150	9	5°	40	44
JLPC2002	200	45	1273.5	155	200	245	190	Tr190x6	30	180	10	5°	43	57
JLPC2502	250	45	1633	159	204	275	215	Tr215x6	32	200	11	5°	44	74
JLPC4002	400	45	2574	178	223	350	270	Tr270x6	39	250	11	5°	55	134
JLPC5002	520	45	3179	192	237	400	300	Tr300x6	48	285	10	5°	62	189

CYLINDERS

BETEX NDAC series, double acting



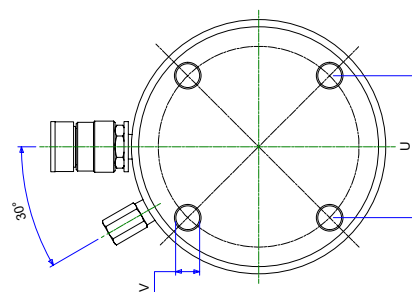
Model: NDAC series

Capacity : 10 - 100 ton
Stroke : 150 - 460 mm
Max. working pressure : 700 bar

- Perfect for construction, shipyards, utilities, mining and maintenance workshop.
- Hard chromed piston.
- Cylinders inside roll-polished, outside blasted with black nitride coating.



Overload valve



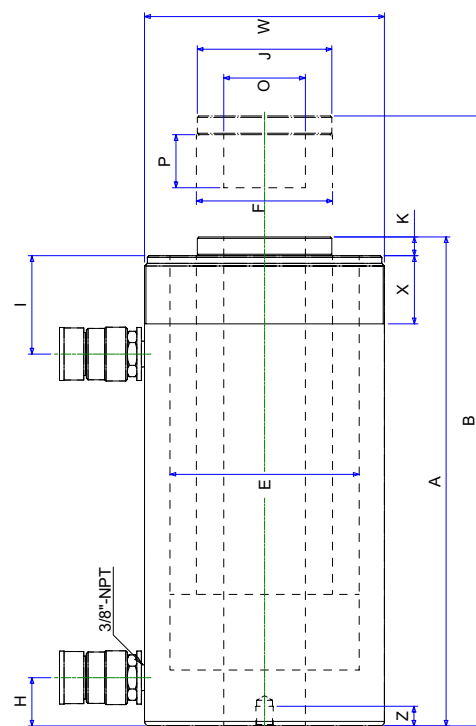
NDAC series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Type	Capacity ton		Stroke mm	Oil cap cm³		A	B	D	E	F	H	I	J	K	O	P	U	V	Z	W	X	Weight Kg
	Push	Pull		Push	Retracted	Height mm Extended	Ø mm	Ø mm	Ø mm	mm	mm	mm	Ø mm	mm	Ø un	mm	mm	mm	mm	Ø un	mm	
NDAC1010	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
NDAC1012	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
NDAC2512	25	13	305	1500	720	470	775	101	56	50	36	26	50	10	1 1/2"-16	25.4	-	-	-	4"-12	40	29
NDAC308	30	14	209	923	426	387	596	103	75	55	25	75	50	12	1 1/2"-16	25.4	-	-	-	4"-12	50	20
NDAC3014	30	14	368	1625	751	547	915	103	75	55	25	75	50	12	1 1/2"-16	25.4	-	-	-	4"-12	50	29
NDAC506	50	14	150	1062	309	331	481	127	95	80	30	70	70	5	1"-12	25.4	-	-	-	5"-12	50	29
NDAC5013	50	14	330	2338	680	511	841	127	95	80	30	70	70	5	1"-12	25.4	-	-	-	5"-12	50	43
NDAC5018	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
NDAC756	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
NDAC7513	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
NDAC1006	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
NDAC10013	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

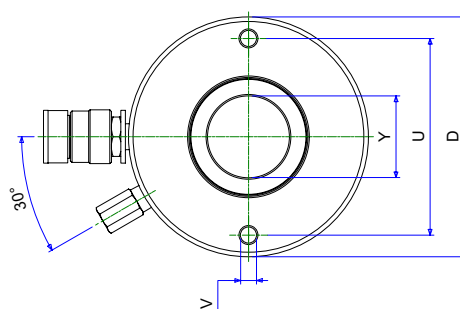
BETEX NDAH series, hollow cylinder, double acting



Model: NDAH series

Capacity : 30 - 100 ton
Stroke : 76 - 257 mm
Max. working 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, shipyards, utilities, mining and equipment maintenance



NDAH series

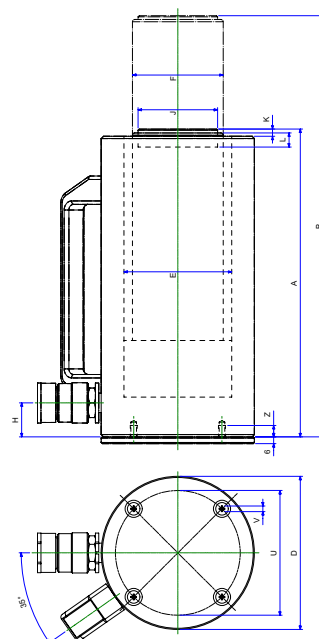
TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Centre Hole

Type	Capacity ton Push Pull		Stroke mm	Oil cap cm³ Push Pull		A		D Ø mm	E Ø mm	F Ø mm	H mm	I mm	J Ø mm	K mm	O Ø un	P mm	U mm	V mm	Z mm	W Ø un	X mm	Y Ø mm	Weight Kg
						Height mm Retracted	Height mm Extended																
NDAH307	30	21	178	849	541	330	508	117	90	65	21.5	60.5	59.5	0.5	1 7/8"-16	25	92	3/8"-16	14	4 1/2"-12	42	34	22
NDAH3010	30	21	257	1226	782	431	688	117	90	65	21.5	60.5	59.5	10	1 7/8"-16	25	92	3/8"-16	14	4 1/2"-12	42	34	27
NDAH603	60	41	89	797	526	247.5	336.5	158.6	125	90	32	65	89	12.5	2 3/4"-16	25	130	1/2"-13	14	6 1/4"-12	50	54	28
NDAH606	60	41	165	1477	975	323.5	488.5	158.6	125	90	32	65	89	12.5	2 3/4"-16	25	130	1/2"-13	14	6 1/4"-12	50	54	35
NDAH6010	60	41	257	2300	1518	437.5	694.5	158.6	125	90	32	65	89	12.5	2 3/4"-16	25	130	1/2"-13	14	6 1/4"-12	50	54	45
NDAH1003	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
NDAH1006	100	64	152	2172	1384	325	477	213	165	125	38	82	125	12	4"-16	30	178	5/8"-11	19	8 3/8"-12	60	79	65
NDAH10010	100	64	256	3656	2331	462	718	213	165	125	38	82	125	12	4"-16	30	178	5/8"-11	19	8 3/8"-12	60	79	88

ALUMINIUM CYLINDERS

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



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.
- All models are provided with carrying handles.
- Rod wiper protects inner rod from dirt.
- Black hard-anodized housing and piston reduce wear and corrosion.

Custom stroke lengths and capacities are available.

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

Base Plate Mounting holes dimensions (mm)

Cylinder model/ capacity ton	Bolt circle U mm	Thread V mm	Thread Dept Z 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

SSA series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

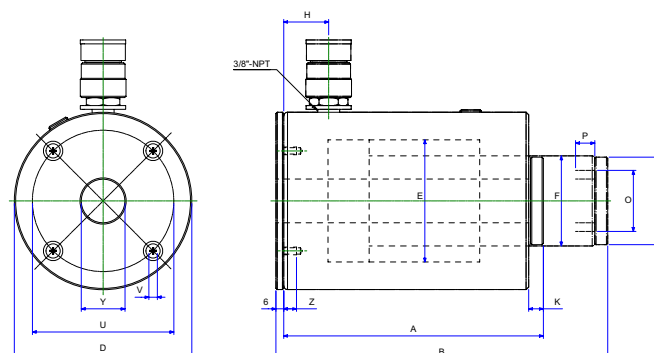
Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	D Ø mm	E Ø mm	F Ø mm	H Ø mm	J Ø mm	K mm	L mm	Weight Kg
SSA202	20	50	166	168	218	92	65	55	25	40	3	9	4,3
SSA204		100	332	218	318	92	65	55	25	40	3	9	5
SSA206		150	498	268	418	92	65	55	25	40	3	9	5,7
SSA208		200	664	318	518	92	65	55	25	40	3	9	6,5
SSA302	30	50	221	175	225	110	75	60	25	40	3	9	6
SSA304		100	442	225	325	110	75	60	25	40	3	9	6,9
SSA306		150	663	275	425	110	75	60	25	40	3	9	7,9
SSA308		200	884	325	525	110	75	60	25	40	3	9	8,8
SSA502	50	50	354,5	171	221	135	95	80	30	70	6	12	7,7
SSA504		100	709	221	321	135	95	80	30	70	6	12	9,1
SSA506		150	1063,5	271	421	135	95	80	30	70	6	12	11,7
SSA508		200	1418	321	521	135	95	80	30	70	6	12	13,5
SSA5010		250	1772,5	371	621	135	95	80	30	70	6	12	16,4
SSA1002	100	50	715	185	235	200	135	105	45	70	6	12	17,2
SSA1004		100	1430	235	335	200	135	105	45	70	6	12	21
SSA1006		150	2145	285	435	200	135	105	45	70	6	12	25,1
SSA1008		200	2860	335	535	200	135	105	45	70	6	12	28,5
SSA10010		250	3575	388	638	200	135	105	45	70	6	12	30,7

ALUMINIUM CYLINDERS

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



Model ACHC 30-60T



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

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 all models
- Black hard-anodized coating reduces wear & corrosion
- Stop rings for piston blow-out protection
- Rod wiper protects inner cylinder from dirt

Base Plate Mounting holes dimensions (mm)

Cylinder model/ capacity ton	Bolt circle U mm	Thread V mm	Thread Dept Z mm	Y Ø mm
ACHC-30	110	M6 x 1.0	10	34
ACHC-60	160	M6 x 1.0	10	34

ACHC series

Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height Retracted	B Height Extended	D Ø mm	E Ø mm	F Ø mm	H mm	J Ø mm	K mm	O mm	P mm	Weight Kg
ACHC302	30	50	275	202	252	138	95	70	35	68	11.5	1 ⁷ / ₈ -16	25	10
ACHC306	30	150	825	327	477	138	95	70	35	68	11.5	-	-	14
ACHC602	60	50	447.5	250	300	200	125	100	50	89	14	2 ³ / ₄ -16	-	19.5
ACHC606	60	150	1342	350	500	200	125	100	50	89	14	-	-	25

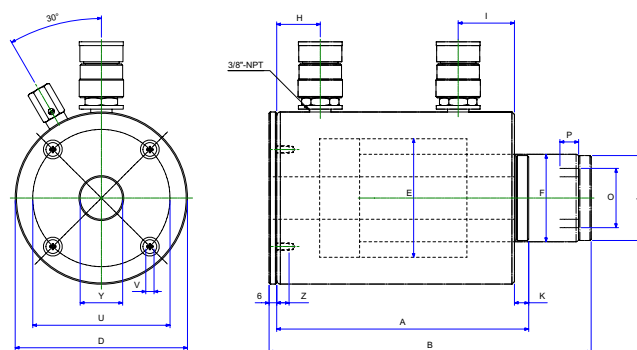
TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

ALUMINIUM CYLINDERS

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



Model ADHC cylinders 30-60T



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

Model: ADHC series

- Half the weight of steel cylinders
- Steel piston for protection against load damage
- Chrome plated centre hole for extra protection
- Carrying handles standard on all models
- Black hard-anodized coating reduces wear & corrosion
- Stop rings for piston blow-out protection
- Rod wiper protects inner cylinder from dirt

Base Plate Mounting holes dimensions (mm)

Cylinder model/ capacity 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

Type	Cap ton	Stroke mm	Cap ton Push	Cap ton Pull	Oil cap cm ³ Push	Oil cap cm ³ Pull	A Height Retr. mm	B Ext. mm	D Ø mm	E Ø mm	F Ø mm	H mm	I mm	J Ø mm	K mm	P mm	O Ø un	Y Ø mm	Weight Kg
ADHC302	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
ADHC306	30	150	38.5	22.7	825	486	327	477	138	95	70	35	45	68	11.5	25	-	34	13
ADHC3010	30	250	38.5	22.7	1374	810	430	680	138	95	70	35	45	68	11.5	25	-	34	16
ADHC602	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
ADHC606	60	150	62.6	31	1342	662	350	500	200	125	100	50	50	89	14	25	-	54	23
ADHC6010	60	250	62.6	31	2237	1104	433	683	200	125	100	50	50	89	14	25	-	54	30.5

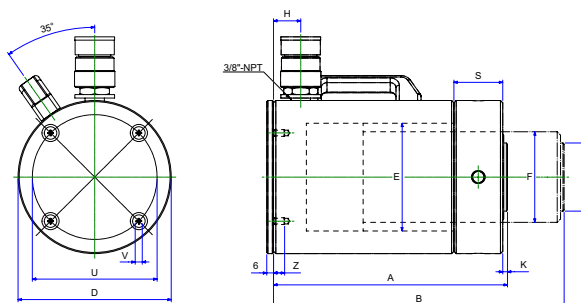
TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

ALUMINIUM CYLINDERS WITH LOCK NUT

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



Model ALNC cylinders 50 -100T



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

Model: ALNC series

- Half the weight of steel cylinders
- Locknuts offer extended load holding
- Large bearing surfaces for side load protection
- Carrying handles standard on all models
- Black hard-anodized coating reduces wear & corrosion
- Stop rings for piston blow-out protection
- Heavy duty spring for fast & full return

Base Plate Mounting holes dimensions (mm)

Cylinder model/ capacity ton	Bolt circle U mm	Thread V mm	Thread Dept Z 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

ALNC series

TIP! Use in combination with: hand- and foot pumps, page 55-67. Accessories, page 70-73

Type	Cap. ton	Stroke mm	Oil cap cm ³	A Height mm Retr.	B Height mm Ext.	D Ø mm	E Ø mm	F Ø mm	H Ø mm	J Ø mm	K mm	L mm	Weight Kg
ALNC202	20	50	166	212	262	92	65	Tr55x3	25	40	3	25	4,8
ALNC204		100	332	262	362	92	65	Tr55x3	25	40	3	25	5,5
ALNC206		150	498	312	462	92	65	Tr55x3	25	40	3	25	6,3
ALNC208		200	664	412	612	92	65	Tr55x3	25	40	3	25	6,9
ALNC302	30	50	221	205	255	110	75	Tr60x3	25	40	3	30	6,9
ALNC304		100	442	255	355	110	75	Tr60x3	25	40	3	30	7,7
ALNC306		150	663	305	455	110	75	Tr60x3	25	40	3	30	7,6
ALNC308		200	884	355	555	110	75	Tr60x3	25	40	3	30	9,6
ALNC502	50	50	354,5	212	262	135	95	Tr80x4	30	60	3	43	9,3
ALNC504		100	709	262	362	135	95	Tr80x4	30	60	3	43	10,7
ALNC506		150	1063,5	312	462	135	95	Tr80x4	30	60	3	43	13,7
ALNC508		200	1418	362	562	135	95	Tr80x4	30	60	3	43	14,5
ALNC5010		250	1772,5	412	662	135	95	Tr80x4	30	60	3	43	16,5
ALNC1002	100	50	715	235	285	200	135	Tr105x6	45	70	3	51	21,7
ALNC1004		100	1430	285	385	200	135	Tr105x6	45	70	3	51	25,2
ALNC1006		150	2145	335	485	200	135	Tr105x6	45	70	3	51	29,2
ALNC1008		200	2860	385	585	200	135	Tr105x6	45	70	3	51	33
ALNC10010		250	3575	438	688	200	135	Tr105x6	45	70	3	51	35,4

HAND PUMPS

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



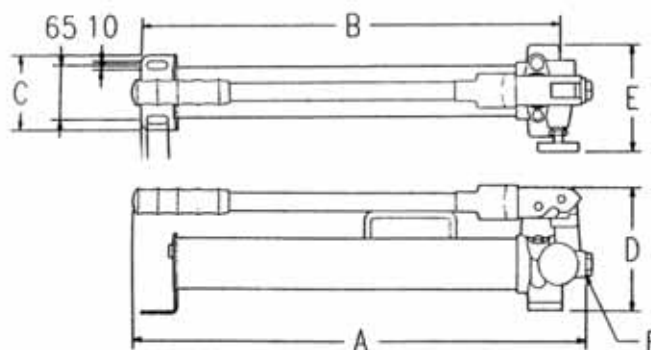
- The drop-forged base and rugged welded construction effectively prevents collision damage and deformation
- The professional choice for a wide range of industrial applications
- Two-speed pumps provide rapid pumping to load the cylinder quickly
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation
- External adjustable relief valve with locking mechanism
- Carrying handles for easy portability

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

- T-adaptor
- gauge
- hose 1,8 mtr.
- couplings
- steel storage case



Handpumpset PB 700



PH/HC series

TIP! Use in combination with accessories, page 70-74

Type	Pressure rating (bar)		Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	Oil port thread F	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage							
PB350	13,8	700	350	13,0	2,8	335	303	90	146	128	3/8"-NPT	5,5
PB600	13,8	700	600	13,0	2,8	543	480	90	146	142	3/8"-NPT	7,3
PB700	13,8	700	700	13,0	2,8	632	541	90	146	128	3/8"-NPT	7,6
HC1500	13,8	700	1500	13,0	2,8	633	551	106	200	142	3/8"-NPT	11,2
HC2000	13,8	700	2000	13,0	2,8	580	523	140	189	148	3/8"-NPT	11,5

HAND PUMPS

BETEX AHP SERIES, ALUMINIUM LIGHTWEIGHT HAND PUMPS, 700 BAR



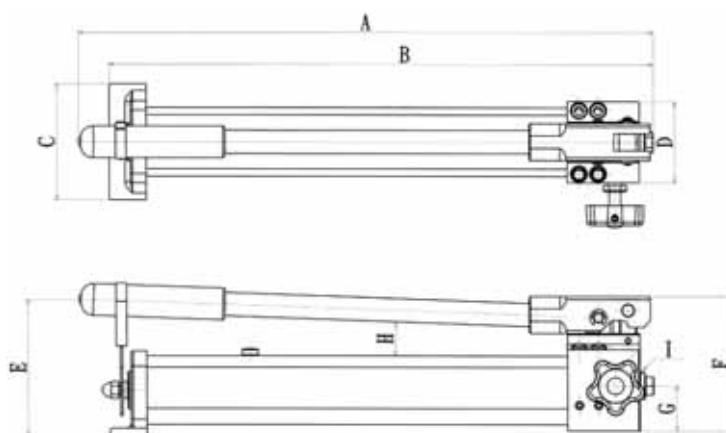
- Our 2-speed hand pumps are always characterized by their rugged construction and easy-operation handles.
- Aluminium alloy construction and handy release knobs with locking mechanism are perfect for industrial applications and daily operations.
- Special lightweight design with aluminium alloy construction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

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

- T-adaptor
- gauge
- hose 1,8 mtr.
- couplings
- steel storage case



Handpumpset AHP 702



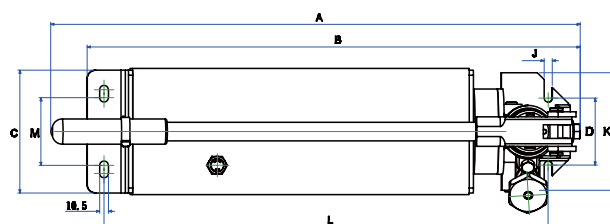
AHP series

TIP! Use in combination with accessories, page 70-74

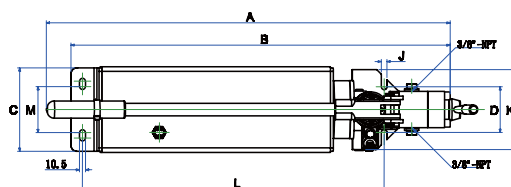
Type	Pressure rating (bar)		Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage										
AHP701	13.8	700	350	12.9	1.0	391	361	110	77	140	127	42.5	37	3/8" -NPT	2.3
AHP702	13.8	700	1000	12.9	2.3	542	513	110	77	130	127	42.5	-	3/8" -NPT	3.5
AHP703	13.8	700	2000	12.9	2.3	623	556	150	102	135	135	50	-	3/8" -NPT	6.0
AHP703D	13.8	700	2000	12.9	2.3	623	556	150	102	135	135	24/37	-	3/8" -NPT	7.0

HAND PUMPS

BETEX HP35 SERIES, STEEL HAND PUMPS, HEAVY-DUTY, 3,5 LITER, 700 BAR



Model HP35



Model HP35D (double-acting)

- Max. working pressure: 700 bar.
- Large 3/8" pressure port for maximum flow.
- Low Handle effort for easy operation.
- Two speed models.
- Our handpumps are always 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.
- Special lightweight design, easy to handle.
- Specially designed HP35D is for double-acting cylinders without the need for extra controlling valve and adapters
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation

HP series

TIP! Use in combination with accessories, page 70-74

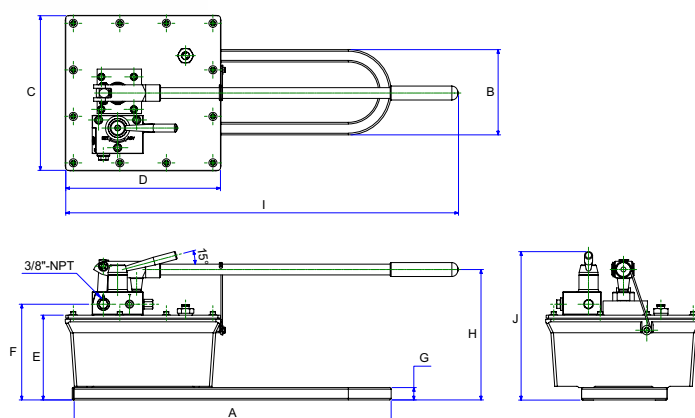
Type	Pressure rating (bar)		Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage										
HP35	28	700	3500	40	3	629	586	146	79.7	79.7	79.7	22.35	45	3/8" -NPT	16.5
HP35D	28	700	3500	40	3	706	663	146	79.7	79.7	79.7	36	45	3/8" -NPT	16.8

HAND PUMPS

BETEX HP80 SERIES, STEEL HAND PUMPS, HEAVY-DUTY, 8 LITER, 700 BAR



- Rugged construction made of steel
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation
- New inlet/outlet design features slow deflation function reducing noise, and allows multidirectional operation
- Two-speed pumps provide rapid pumping to load the cylinder quickly
- Specially designed HP80D is for double-acting cylinders without the need for extra controlling valve and adapters



HP series

TIP! Use in combination with accessories, page 70-74

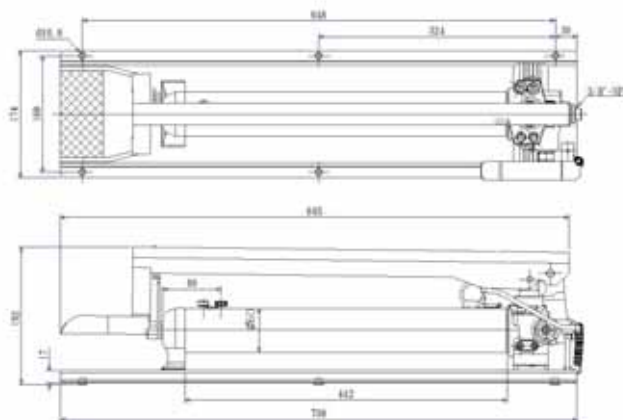
Type	Pressure rating (bar)		Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage											
HP80	27.5	700	8000	113	4	700	300	312	420	275	208.5	315.5	9	3/8"-NPT	14	24
HP80D	27.5	700	8000	113	4	700	300	312	420	275	216.5	338.5	9	3/8"-NPT	14	24

FOOT PUMPS

BETEX FHB SERIES, STEEL FOOT PUMPS, 700 BAR



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



FHB series

TIP! Use in combination with accessories, page 70-74

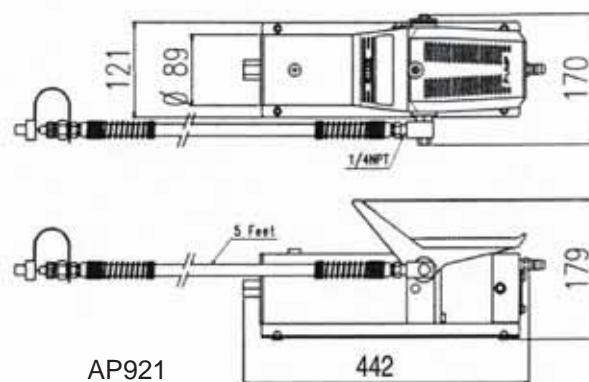
Type	Pressure rating (bar)		Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	Output flow rate (cc)		Air cons.	F	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage						Unload	Load			
FHB350	13.8	700	350	13.0	2.8	474	174	192	17	461	-	-	-	$\frac{3}{8}$ "-NPT	8.5
FHB600	13.8	600	600	13.0	2.8	660	174	192	17	647	-	-	-	$\frac{3}{8}$ "-NPT	10.8
FHB700	13.8	700	700	13.0	2.8	708	174	192	17	695	-	-	-	$\frac{3}{8}$ "-NPT	11.1

AIR PUMPS

BETEX AP921 SERIES, AIR-HYDRAULIC FOOT PUMP, 700 BAR



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



AP series

TIP! Use in combination with accessories, page 70-74

Type	max. Pressure (bar)	Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F	G mm	Weight Kg
			1st stage	2nd stage								
AP921	700	750	530	130	442	170	89	-	-	3-8 bar	179	5.4

AIR PUMPS

BETEX AP1600/3000 SERIES, AIR-HYDRAULIC FOOT PUMPS, 700 BAR



AP1600S



AP3000S

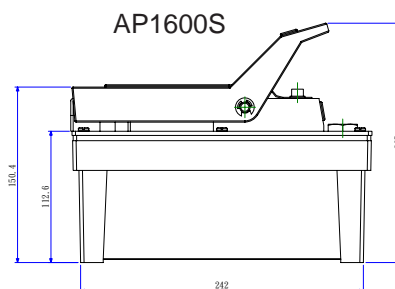
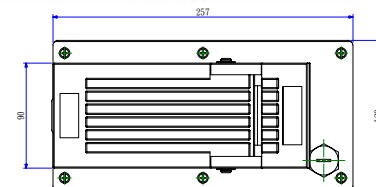
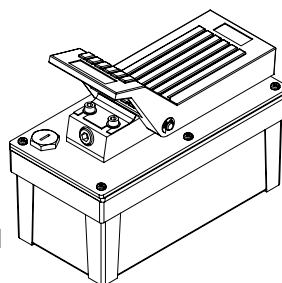


AP1600D



AP3000D

- The air-driven hydraulic pump is designed for use with single-acting cylinders and tools like the Betex cylinder serie
- Rugged construction: most components are made of aluminium alloy and are built for long service life, easy operation and portability
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation
- New inlet/outlet design features slow deflation function reducing noise, and allows multidirectional operation
- The AP1600D + AP3000D-models are specially designed for double-acting cylinders without the need of an additional control valve and connecting pieces



AP series

TIP! Use in combination with accessories, page 70-74

Type	max. Pressure (bar)	Usable oil capacity cm ³	Oil volume per stroke cm ³	A mm	B mm	C mm	D mm	E mm	F	G mm	Weight Kg
AP1600S	700	1600	1250 193	242	128	90	258	154	3-8 bar	205	7.5
AP1600D	700	1600	1250 193	242	128	90	258	154	3-8 bar	205	8.3
AP3000S	700	3000	1250 193	305	160	90	325	152	3-8 bar	205	10.0
AP3000D	700	3000	1250 193	305	160	90	325	152	3-8 bar	205	10.3

AIR PUMPS

BETEX AP8000 SERIES, AIR-HYDRAULIC PUMPS, 700 BAR

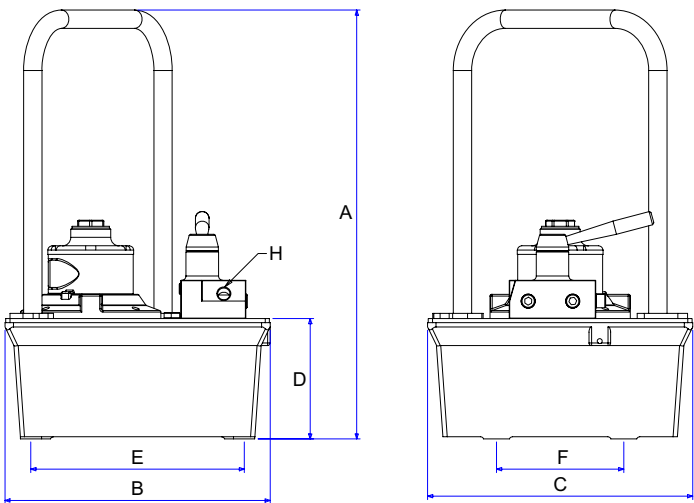


AP8000D



AP8000S

- Two speed operation for fast speed cylinder advance
- 8 Liter durable aluminium reservoir
- Air motor capable of starting under full load
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation
- Specially designed AP8000D is for double-acting cylinders without the need for extra controlling valve and adapters



AP series

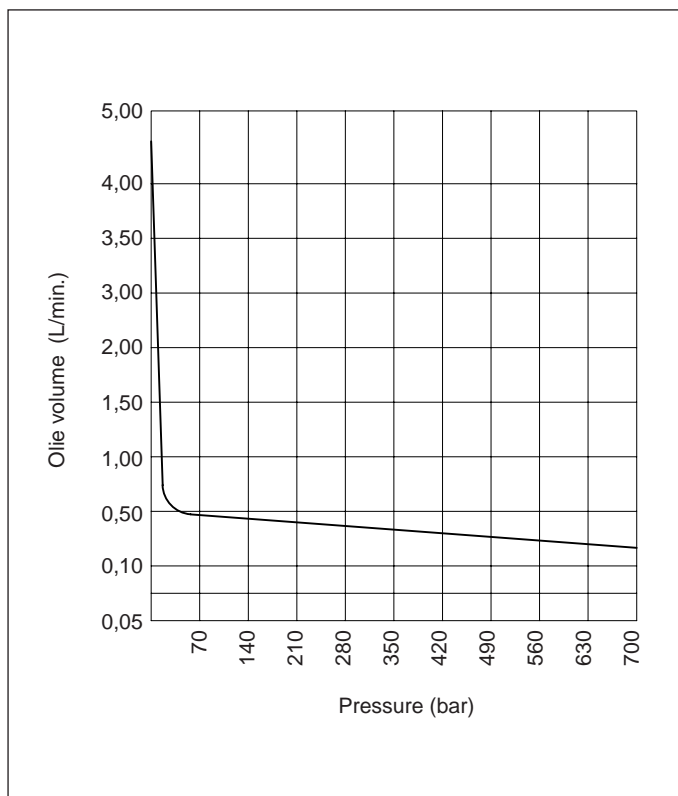
TIP! Use in combination with accessories, page 70-74

Type	max. Pressure (bar)	Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F mm	H	Weight Kg
			1st stage	2nd stage								
AP8000S	700	8000	4700	280	505	312	312	142	251	149	3/8"-NPT	20
AP8000D	700	8000	4700	280	505	312	312	142	251	149	3/8"-NPT	20



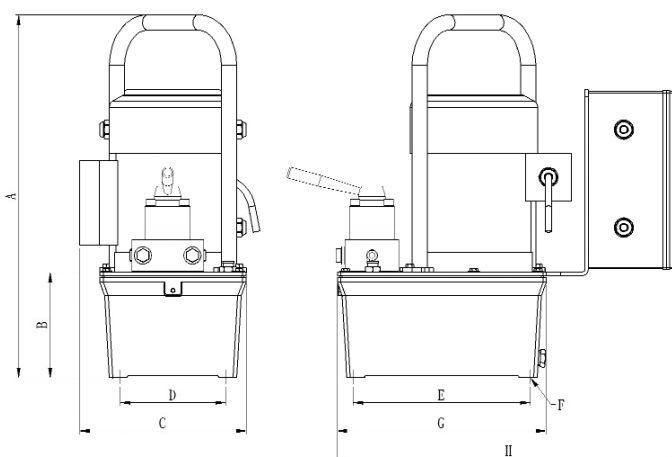
ELECTRIC PUMPS

BETEX EP13 SERIES, ELECTRIC HYDRAULIC PUMPS, 3 LITER, 700 BAR



EP13S

- Electric pump 230V, 5A, 50/60 Hz universal induction motor, thermal protected
- Very quiet (about 80dBA at 700 Bar)
- Remote control incl cord (3m)
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation
- Specially designed EP13D is for double-acting cylinders without the need for extra controlling valve and adapters



EP13 series

Type	Valve	Valve function	Motor
EP13S	2 pos./ 2-way	Hold / return	0.37kW, 230V/5A 50/60Hz, Single phase
EP13D	3 pos./ 4-way	Advance / hold return	

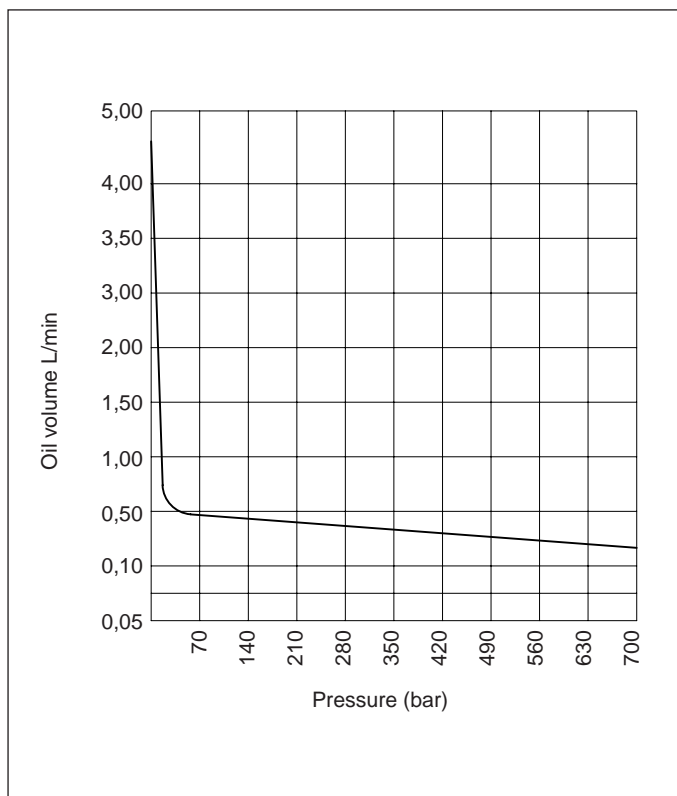
TIP! Use in combination with accessories, page 70-74

Type	Acting	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	0 bar	Oil volume (l/min. @60Hz)			A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
EP13S	single	3	2,8	700	4.2	2.8	0.33	0.3	512	149	236	149,5	251	1/4"- 20UNC 10 deep	296	485	26,5
EP13D	double	3	2,8	700	4.2	2.8	0.33	0.3	512	149	236	149,5	251	1/4"- 20UNC 10 deep	296	485	26,5



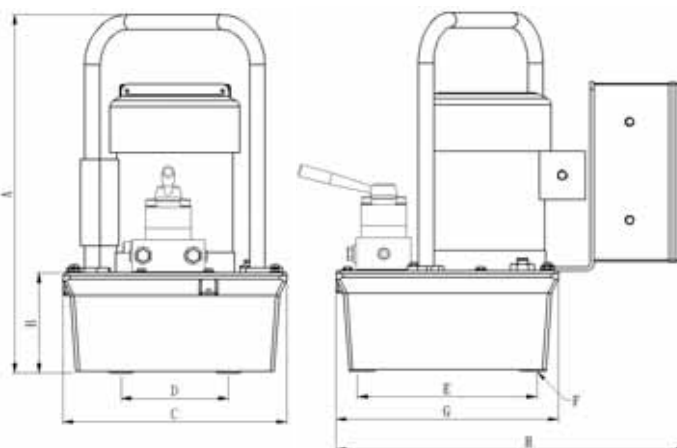
ELECTRIC PUMPS

BETEX EP18 SERIES, ELECTRIC-HYDRAULIC PUMPS, 8 LITER, 700 BAR



EP18D

- Electric pump 230V 50/60 Hz universal induction motor, thermal protected
- Very quiet (about 80dBA at 700 bar)
- Remote control incl cord (3m)
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation
- Specially designed EP18D is for double-acting cylinders without the need for extra controlling valve and adapters
- Type EP18SS and EP18DS are fitted with a solenoid valve



EP18 series

Type	Valve	Valve function	Motor
EP18S(S*)	2 pos./ 2-way	Hold / return	0.37kW, 230V/10A 50/60Hz, Single phase
EP18D(S*)	3 pos./ 4-way	Advance / hold return	

TIP! Use in combination with accessories, page 70-74

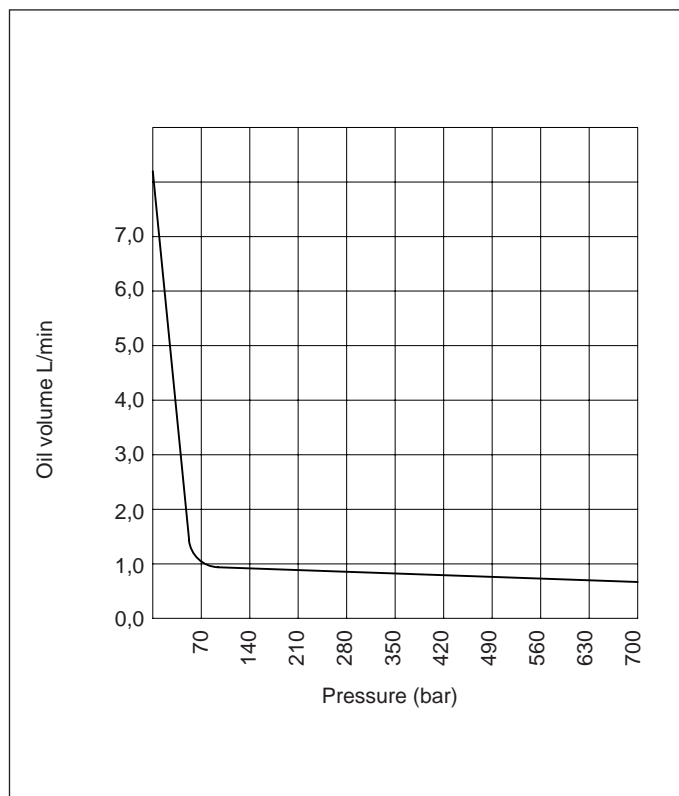
Type	Acting	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	0 bar	Oil volume (l/min. @60Hz)			A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
EP18S(S*)	single	8	6	700	4.2	2.8	0.33	0.3	505	142	312	149,5	251	1/4"- 20UNC 10 deep	312	492	31
EP18D(S*)	double	8	6	700	4.2	2.8	0.33	0.3	505	142	312	149,5	251	1/4"- 20UNC 10 deep	312	492	31

The models with a * are fitted with a solenoid valve.



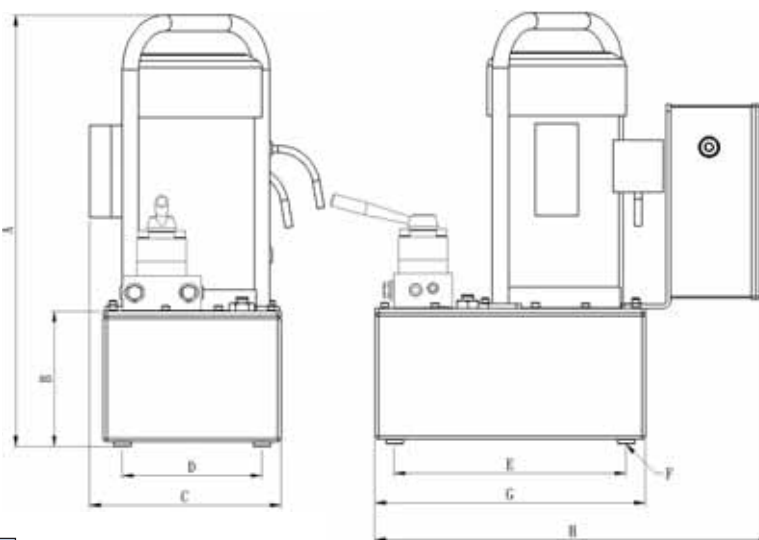
ELECTRIC PUMPS

BETEX EP211 SERIES, ELECTRIC HYDRAULIC PUMPS, 11 LITER, 700 BAR



EP211D

- Electric pump 230V 50/60 Hz universal induction motor, thermal protected
- Very quiet (about 80dBA at 700 bar)
- Remote control incl cord (3m)
- Automatic 700 bar overload-relief valve protects components in hydraulic systems and ensures safe operation
- Specially designed EP211D is for double-acting cylinders without the need for extra controlling valve and adapters
- Type EP211SS and EP211DS are fitted with a solenoid valve



EP211 series

Type	Valve	Valve function	Motor
EP211S(S*)	2 pos./ 2-way	Hold / return	1.12kW, 230V/12A 50/60Hz, Single phase
EP211D(S*)	3 pos./ 4-way	Advance / hold return	

TIP! Use in combination with accessories, page 70-74

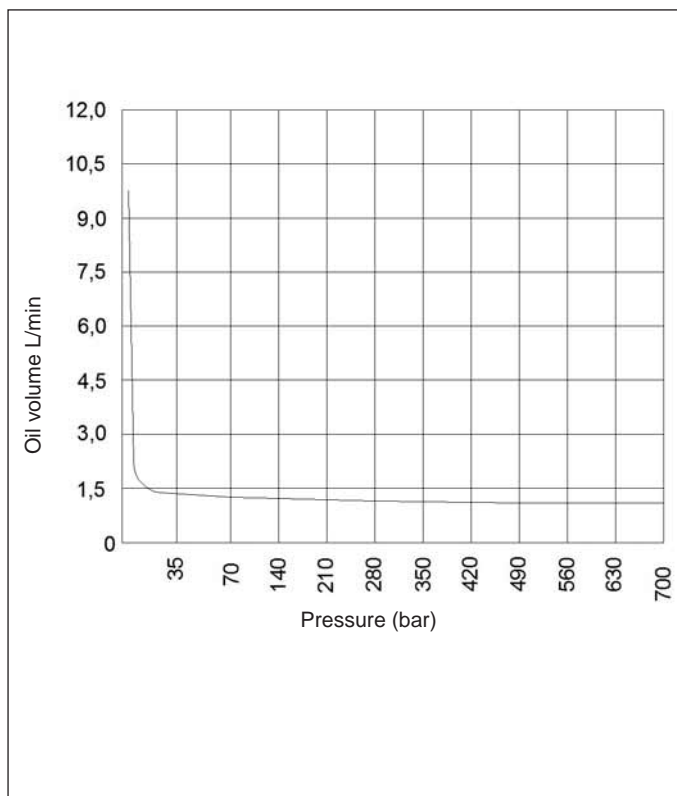
Type	Acting	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	0 bar	Oil volume (l/min. @60Hz)				A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
EP211S(S*)	single	11	8,5	700	8.2	7.4	0.84	0.75		560	176	247	180	300	1/2" - 20UNF 15 deep	350	512,5	37
EP211D(S*)	double	11	8,5	700	8.2	7.4	0.84	0.75		560	176	247	180	300	1/2" - 20UNF 15 deep	350	512,5	37

The models with a * are fitted with a solenoid valve.



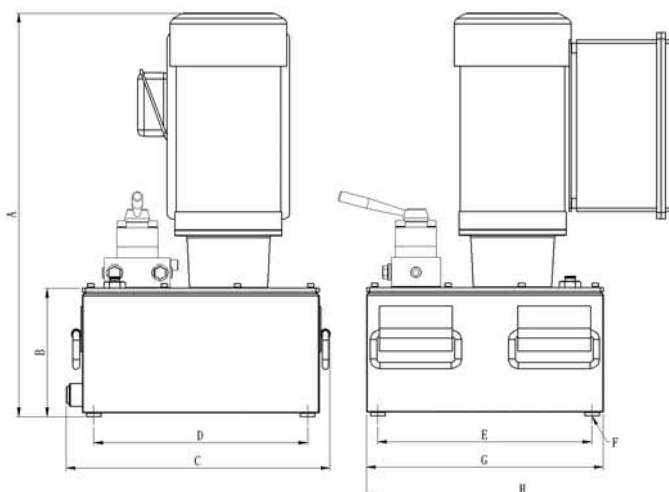
ELEKTRISCHE POMPEN

BETEX EP320 SERIES, ELECTRIC HYDRAULIC PUMPS, 20 LITER, 700 BAR



EP320S

- Electric pump 400V, 5A, 50/60 Hz universal induction motor, thermal protected
- Very quiet (about 80dBA at 700 Bar)
- Remote control incl cord (3m)
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation
- Specially designed EP320D is for double-acting cylinders without the need for extra controlling valve and adapters



EP320 series

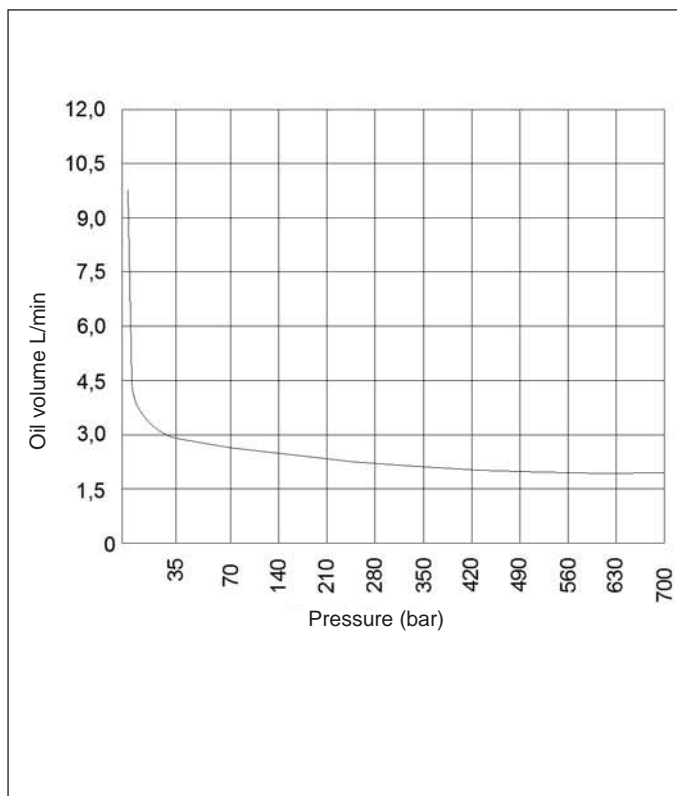
Type	Valve	Valve function	Motor
EP320S	2 pos./ 2-way	Hold / return	1.49kW 400V 5A
EP320D	3 pos./ 4-way	Advance / hold return	50/60Hz 3 phase

TIP! Use in combination with accessories, page 70-74

Type	Acting	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	7 bar	Oil volume (l/min. @60Hz)			A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
						70 bar	350 bar	700 bar									
EP320S	single	20	15	700	9.5	1.1	1.06	0.98	630	199	407	330	330	1/2" - 20UNF 19 deep	365	483	54
EP320D	double	20	15	700	9.5	1.1	1.06	0.98	630	199	407	330	330	1/2" - 20UNF 19 deep	365	483	54

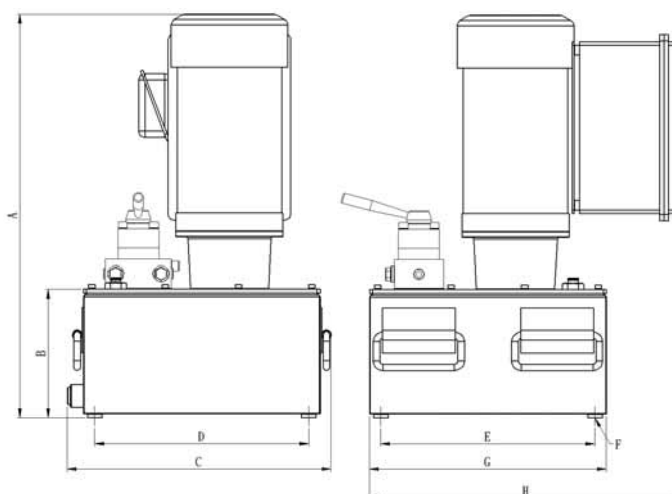
ELECTRIC PUMPS

BETEX EP420 SERIES, ELECTRIC HYDRAULIC PUMPS, 20 LITER, 700 BAR



EP420D

- Electric pump 400V, 6A, 50/60 Hz universal induction motor, thermal protected
- Very quiet (about 80dBA at 700 Bar)
- Remote control incl cord (3m)
- Automatic overload-relief valve (700 bar) protects components in hydraulic systems and ensures safe operation
- Specially designed EP420D is for double-acting cylinders without the need for extra controlling valve and adapters



EP420 series

Type	Valve	Valve function	Motor
EP420S	2 pos./ 2-way	Hold / return	2.24kW 400V 6A
EP420D	3 pos./ 4-way	Advance / hold return	50/60Hz 3 phase

TIP! Use in combination with accessories, page 70-74

Type	Acting	Content reservoir (liter)	Usable oil (liter)	Max. pressure (bar)	7 bar	Oil volume (l/min. @60Hz)			A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	Weight Kg
						70 bar	350 bar	700 bar									
EP420S	single	20	15	700	9.5	2.6	2.1	1.95	630	199	407	330	330	1/2" - 20UNF 19 deep	365	483	59
EP420D	double	20	15	700	9.5	2.6	2.1	1.95	630	199	407	330	330	1/2" - 20UNF 19 deep	365	483	59

ULTRA HIGH PRESSURE AIR PUMPS

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



AHP704



Handpumpset UHP 2800



AHP705

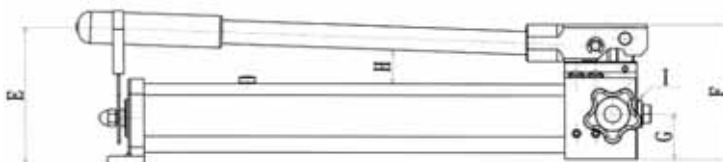
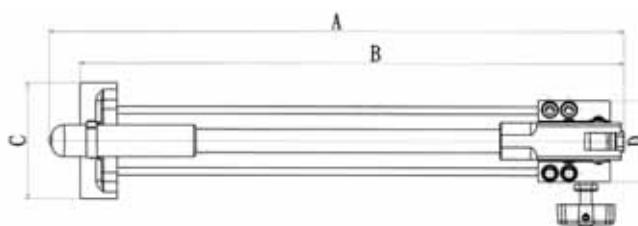


UHP2800

- AHP704: high working pressure up to 1000 / 1500 bar
- UHP2800 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, including:

- T-adaptor
- gauge
- hose 1,8 mtr.
- couplers
- steel storage case



AHP/UHP series

Type	Pressure rating (bar)		Usable oil cap. cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage										
AHP704	13.8	1000	1000	12.9	1.65	539	501	110	77	145	127	42.5	37	3/8" - NPT	3.5
AHP705	13.8	1500	2700	6.5	1.00	699	629	150	102	152	157	50	37	3/4" - 16UNF	6.7
UHP2800	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. driving 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: UHAP2800
 Capaciteit: 2800 bar
 Olie capaciteit: 5 liter
 max. cap.: **0,43** liter p/min,
 by 7 bar air pressure

Model: UHAP2800 ULTRA
 Capaciteit: 2800 bar
 Olie capaciteit: 5 liter
 max. cap.: **0,75** liter p/min,
 by 7 bar air pressure

Both pumps are inclusive:

- Gauge (0-3000 bar scale)
- Flexible HD Hose (3 Mtr incl. extra couplingset)
- Coupling 1/4"
- Air filter"

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 air pressure	29
AIR PUMP UHAP 2800 ULTRA	7292802	2800 Bar	5 Liter	0,75 Liter p/Min, at 7 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.



CP330B



CP331B



CP332B


Type	End one	End two	Length (mm)	ID (mm)
Rubber				
HS332	3/8" NPT	3/8" NPT	600	6,4
HS333	3/8" NPT	3/8" NPT	900	6,4
HS335	3/8" NPT	3/8" NPT	1500	6,4
HS336	3/8" NPT	3/8" NPT	1800	6,4
HS338	3/8" NPT	3/8" NPT	2400	6,4
HS3310	3/8" NPT	3/8" NPT	3000	6,4
HS3312	3/8" NPT	3/8" NPT	3600	6,4
HS3315	3/8" NPT	3/8" NPT	4500	6,4
HS3320	3/8" NPT	3/8" NPT	6000	6,4
HFHS332-BG	3/8" NPT	3/8" NPT	600	9,4 high flow
HFHS333-BG	3/8" NPT	3/8" NPT	900	9,4 high flow
HFHS335-BG	3/8" NPT	3/8" NPT	1500	9,4 high flow
HFHS336-BG	3/8" NPT	3/8" NPT	1800	9,4 high flow
HFHS338-BG	3/8" NPT	3/8" NPT	2400	9,4 high flow
HFHS3310-BG	3/8" NPT	3/8" NPT	3000	9,4 high flow
HFHS3312-BG	3/8" NPT	3/8" NPT	3600	9,4 high flow
HFHS3315-BG	3/8" NPT	3/8" NPT	4500	9,4 high flow
HFHS3320-BG	3/8" NPT	3/8" NPT	6000	9,4 high flow
Polyurethane				
PHS332	3/8" NPT	3/8" NPT	600	6,4
PHS333	3/8" NPT	3/8" NPT	1000	6,4
PHS336	3/8" NPT	3/8" NPT	1800	6,4
PHS3310	3/8" NPT	3/8" NPT	3000	6,4
PHS3315	3/8" NPT	3/8" NPT	4500	6,4
PHS3320	3/8" NPT	3/8" NPT	6000	6,4
HPS332	3/8" NPT	3/8" NPT	600	9,7 high flow
HPS333	3/8" NPT	3/8" NPT	1000	9,7 high flow
HPS336	3/8" NPT	3/8" NPT	1800	9,7 high flow
HPS3310	3/8" NPT	3/8" NPT	3000	9,7 high flow
HPS3315	3/8" NPT	3/8" NPT	4500	9,7 high flow
HPS3320	3/8" NPT	3/8" NPT	6000	9,7 high flow
Couplers				
CP330B	3/8" NPT	3/8" NPT	Standard coupler set	
CP331B	3/8" NPT	3/8" NPT	Standard coupler female	
CP332B	3/8" NPT	3/8" NPT	Standard coupler male	
CP430	3/8" NPT	3/8" NPT	No-spill coupler set	
CP431	3/8" NPT	3/8" NPT	No-spill coupler female	
CP432	3/8" NPT	3/8" NPT	No-spill coupler male	

HOSES

- Heavy-duty hoses rated at 700 bar, meet IJ-100 specifications
- Hoses are black rubber coated with two layers of steel braided reinforcement, I/D of 1/4".
- Flexible hoses with spring guards at both ends to protect the adapters. Available to special lengths upon request.



MANOMETER

Type	Description	Dimensions mm
M0031B		Liquid-filled, dampens needle vibration. Calibrated to read in bar, psi. Dial – 2 1/2"; Accuracy, meets DIN Standard ±1.6% of full scale Thread: 1/4" NPT
M0040		All functions similar to M0031B except the dial 100 mm

ACCESSORIES Max. Working Pressure, 700 bar

FITTINGS

Type	Description	Dimensions mm
JP64	Manifold valve	
JP65	Manifold valve	
JP66	Manifold valve	
VB66	Flow control valve	
VB101	Flow control valve	
VC331	Flow control valve	
VB201	Manifold valve	
VB401	Manifold valve	
E0567	T-adaptor for gauge	
E1336	T-adaptor for gauge	
E1343	T-adaptor for gauge	
E1745	T-adaptor for gauge	

Typ	Description		Dimensions mm
ADG323	T-adaptor for gauge high flow		
ADL101	Elbow		
ADL202	Elbow		
ADL303	Elbow		
ADC303	Elbow		
ADE303	Elbow		
ADT101	T-adaptor		
ADT202	T-adaptor		
ADT303	T-adaptor		
ADG303	T-adaptor		
ADF102	Adaptor		

ACCESSORIES Max. Working Pressure, 700 bar


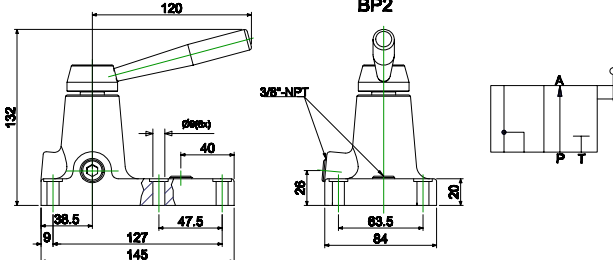
FITTINGS

Type	Description		Dimensions mm
ADF203	Adaptor		
ADF302	Adaptor		
ADF303	Adaptor		
ADF304	Adaptor		
ADI202	Connector		
ADI203	Connector		
ADI303	Connector		
ADO2031	Reducing Connector		
ADO203	Reducing Connector		
ADO101	Hexagon Nipple		
ADO202	Hexagon Nipple		


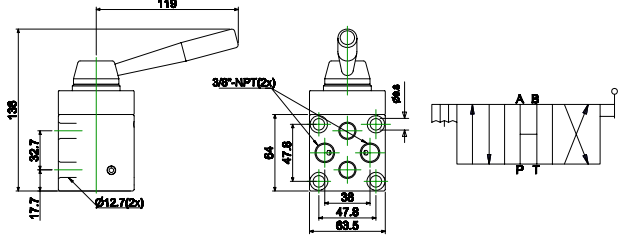

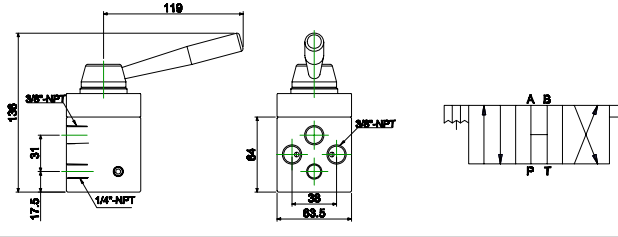


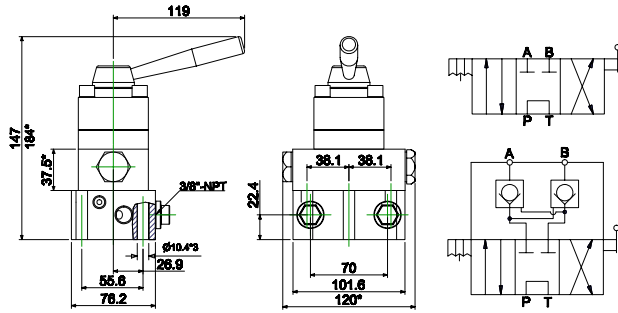
Type	Description		Dimensions mm
ADO204	Hexagon Nipple		
ADO205	Hexagon Nipple		
ADO303	Hexagon Nipple		
BG9623	Pressure regulator		
BG9705	High flow swivel connector		

ACCESSORIES Max. Working Pressure, 700 bar

3-WAY Directional Control Valve

Type	Description		Dimensions mm
BP2	700 bar; 17l/min Manual, 2-position, Advance/Retract for single-acting cylinders		 <p>BP2</p> <p>120</p> <p>132</p> <p>38.5</p> <p>127</p> <p>145</p> <p>40</p> <p>47.5</p> <p>3/8" NPT</p> <p>28</p> <p>63.5</p> <p>84</p> <p>8</p> <p>Symbol: A, P, T</p>

4-WAY Directional Control Valve

Type	Description		Dimensions mm
BP421	for use with double-acting cylinder or two single-acting cylinders 700 bar; 17l/min Manual, Advance/Hold/Retract		 <p>119</p> <p>138</p> <p>32.7</p> <p>17.7</p> <p>3/8" NPT (2x)</p> <p>64</p> <p>47.8</p> <p>38</p> <p>47.8</p> <p>63.5</p> <p>Symbol: A, B, P, T</p>
BP422			 <p>119</p> <p>138</p> <p>31</p> <p>17.5</p> <p>3/8" NPT</p> <p>1/4" NPT</p> <p>64</p> <p>38</p> <p>63.5</p> <p>3/8" NPT</p> <p>Symbol: A, B, P, T</p>
BP423 *BP425	Manual, Advance/Hold/Retract; Lock for Load Holding	 	 <p>119</p> <p>147</p> <p>184</p> <p>37.5</p> <p>55.6</p> <p>78.2</p> <p>3/8" NPT</p> <p>26.9</p> <p>38.1</p> <p>38.1</p> <p>70</p> <p>101.6</p> <p>120</p> <p>22.4</p> <p>Symbol: A, B, P, T</p>

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 and cylinder, low height jacks

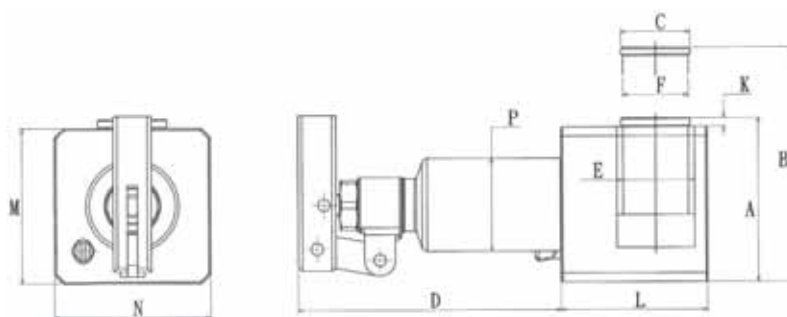


Spring-loaded

Available in : 10 or 20 ton.
Stroke : 41 mm.
Max. working 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 Retracted	B Height Extended	C Ø mm	D mm	E Ø mm	F Ø mm	H mm	K mm	L mm	M mm	N mm	P Ø mm	Weight Kg
CJ100	7270100	10	41	155	95	136	40	152.5	45	37.95	407.5	4.9	85	90	90	53.8	5.5
CJ200	7270200	20	41	250	95	136	40	152.5	65	50.8	407.5	4.9	110	90	110	69.5	8

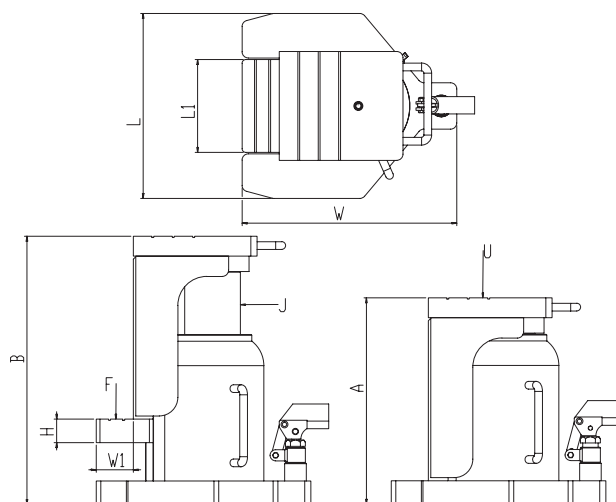
TOE JACKS

BETEX TOE JACKS 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.
- Strong toe lift for long service life.
- Low toe heights for tight spaces.
- Swivel sockets for easy operation.
- Toe jacks can be operated quickly by hand without a load.
- Removable handle makes unit easier to operate.



Toe jacks series

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	Hoogte 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 MAINTENANCE SET

BETEX PPK PORTABLE POWER KITS



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

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

- '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.
- Versatile through many different accessories!
- All parts are made of forged steel.

TIP! Use in combination with Betex shims, page 92-94

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 hose 1,8 meter	HS236	HD hose 1,8 meter
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



15 TL SPREADER



15 TLS SPREADER/LIFTER



25 TLS SPREADER/LIFTER

Loads are lifted perpendicularly!

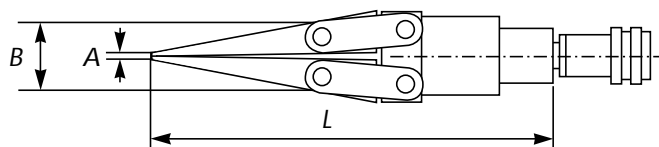
- Ideal for numerous industrial maintenance repair jobs.
- Accurate height adjustments (for instance shaft alignment) can easily be executed by one person.
- Easy, light and very practical to use. Particularly suitable when available space is very limited.
- Suitable for spaces of 5 to 43 mm.
- Due to the reduced thickness of the jaws, made of high quality hardened steel, these multi-functional wedges can be used for jobs where working space is extremely limited.

Sets* available in carrying case, including:

- hydraulic spreader/lifter
- 2-stage handpump
- hose, 1.8 mtr
- pressure gauge
- T-adapter
- male (hose) half coupler
- complete quick coupler



15 TLS SET



TIP! Use in combination with Betex shims, page 75-78

Type	Art. no.	Cap. ton	Max. spread mm	Max. pressure bar	Combined pump	A mm	B mm	L mm	Weight Kg
15TL	789170	15	10	700	single-acting	5	40	235	4
15 TLS	789150	15	10	700	single-acting	5	40	235	4
25 TLS	789250	25	16	700	single-acting	8	43	342	8

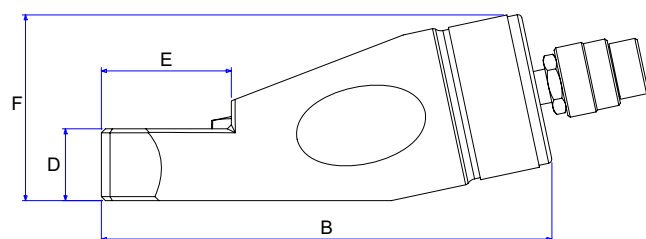
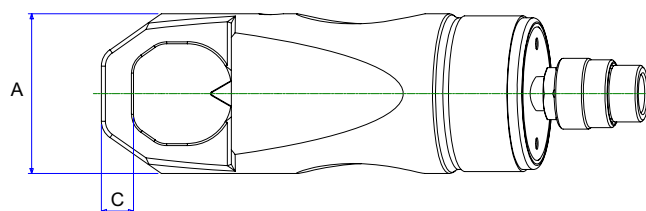
* see price list

NUTSPLITTER

BETEX HNS NUT SPLITTERS



- 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



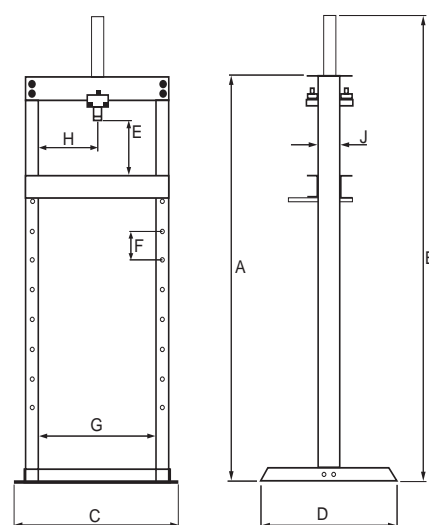
TIP! Use in combination with electric pumps page 63-67

Type	Art. no.	Hexagon nut range mm	Bolt range	Cap. ton	Oil cap cm ³	A mm	B mm	C mm	D mm	E mm	F mm	Weight Kg
HNS1924	781924	19-24	M12-M16	10	20	60	167.2	10	25	40	68	2.1
HNS2432	782432	24-32	M16-M22	15	60	70	178	13	30	52	76	3.1
HNS3241	783241	32-41	M22-M27	20	80	80	226	15	36	65	93	4.2
HNS4150	784150	41-50	M27-M33	35	155	95	244	21	45	76	106	8.0
HNS5060	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.
- Includes gauge for precise control of the press force.
- Available in 2 models: 10 and 25 ton.
- Single-acting and spring-return ram with 10" stroke is horizontally moveable on head channel.
- Also available with electric- or air-hydraulic pump.



BETEX WSP 10 ton

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

BETEX WSP 25 ton

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

Type	Art. no.	Cap.* ton	Stroke mm	Type pump	Work force bar	Type cylinder	Weight kg
WSP10	7511301	10	250	hand	700	single acting	87
WSPA10	7511302	10	250	air	700	single acting	88
WSPE10	7511303	10	250	electric	700	single acting	90
WSP10HD	7511401	10	250	hand	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	hand	700	single acting	145
WSPA25	7512202	25	250	air	700	single acting	146
WSPE25	7512203	25	250	electric	700	single acting	148

*cap. up to and including 200 ton available.

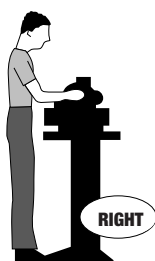


WSP shop presses are including adaptors and accessories to support work: V adaptor, V block and 2 pushing adaptors.

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

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.

IDEAL IN ANY WORKSHOP

The Betex Mobilift

is a modern designed adjustable bench with a unique **one-arm lifting principle**.

The bench is mobile and 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 workbenches are available in 2 types: capacity 400 or 1000 kg.

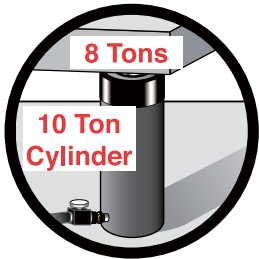
Advantages:

- 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.
- Simple controls.
- **Promotes a good working posture!**

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 footpump	Hydraulic footpump
Security devices	check valve	check valve
Base/frame	2 casters with brake, 2 rigid casters, Ø 160, wheel width 50	2 casters 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) (dimensions in mm)	500x300x100	500x300x100

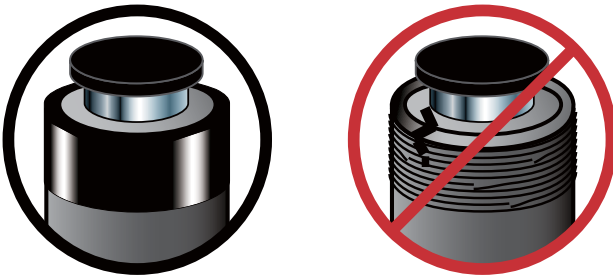
SAFETY TIPS

1. Choose the right ram.



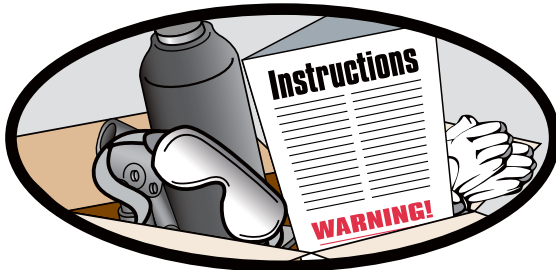
You must know the weight of what you intend to lift and choose a ram with at least 20% more capacity. Be aware of possible load shift requiring more capacity at any particular lifting point.

2. Check each component.



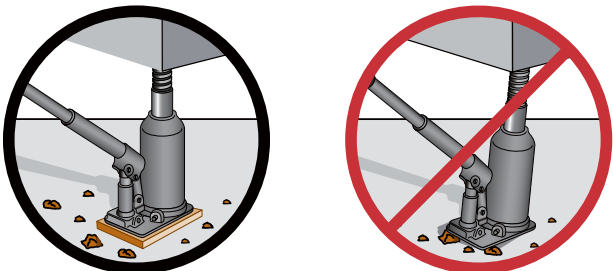
Check each component before you set up your hydraulic system. Do not use damaged or worn components. Turn them in for repair or replacement.

3. Safety instructions.



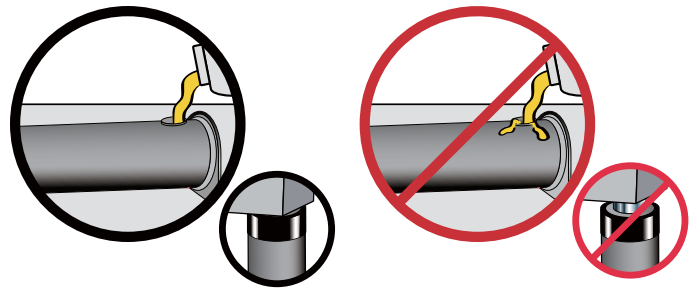
Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.

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



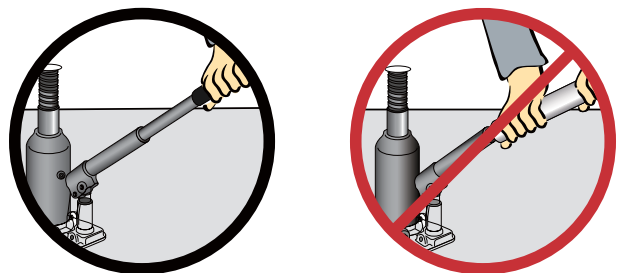
Every jack or ram, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.

5. Fill oil reservoirs with cylinder retracted.



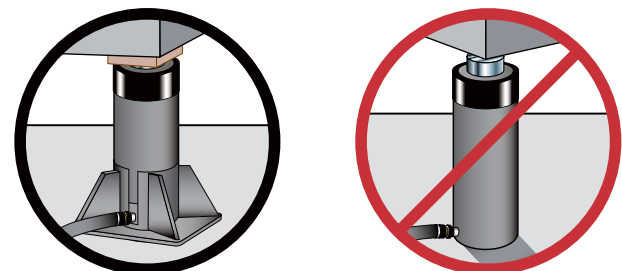
Only fill pump to recommended level; only fill when connected cylinder is fully retracted.

6. Know how your hydraulics work.



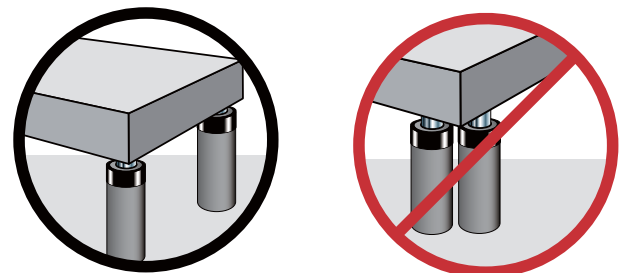
Do not use extensions or cheater bars on hydraulic jacks or hand pumps to raise a load.

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.

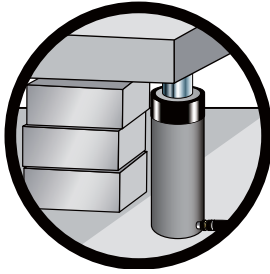
8. Distribute load evenly when using multiple rams.



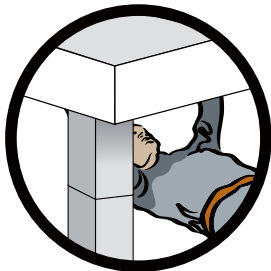
For multiple ram lifts, you must be able to determine the location and number of lifting points that will allow the load to be evenly distributed to all the rams. This is called load balance. Size, centre of gravity and load geometry must be considered in order to correctly determine load balance.

SAFETY TIPS

9. Block or crib load as it rises.

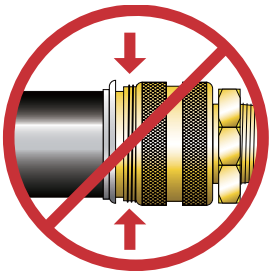
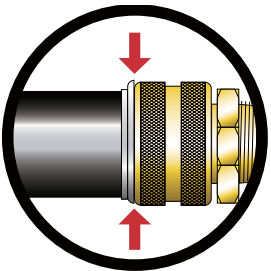


Place blocking or cribbing under the load as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body parts between the load and the cribbing.



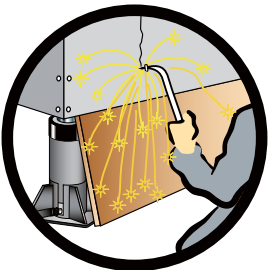
10. Do not use rams as permanent supports.

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.

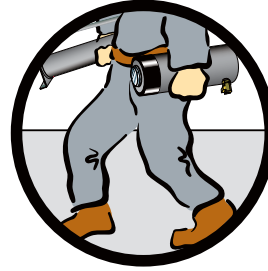
Weld splatter will damage plunger rods and hoses. Hydraulic fluid can ignite if vaporized or exposed to high temperatures.

13. Disconnecting the hydraulics.



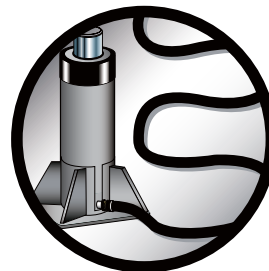
Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the ram, open the release screw on the hand pump and shift or open all hydraulic controls several times. If system includes a gauge, double check the gauge to ensure pressure has been completely released.

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 installation space?
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 aluminum?
 - 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.

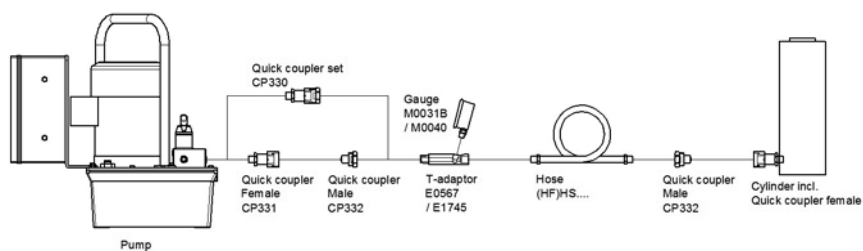
Step 2: Choose a hydraulic pump, that matches the selected cylinder, consider:

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?

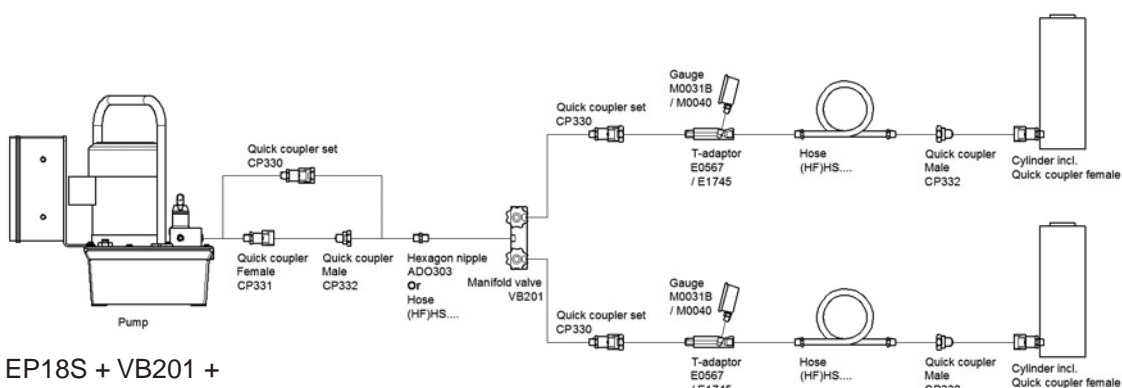
Step 3: Choose necessary hydraulic accessories, consider:

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

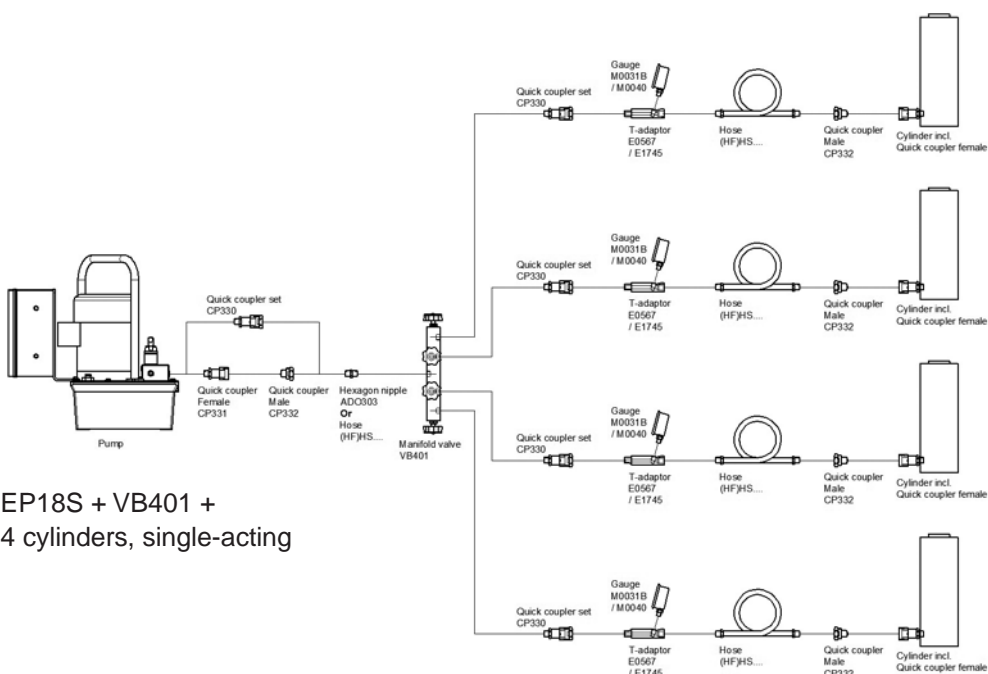
SELECTING THE RIGHT SETUP



EP18S + 1 cylinder single-acting

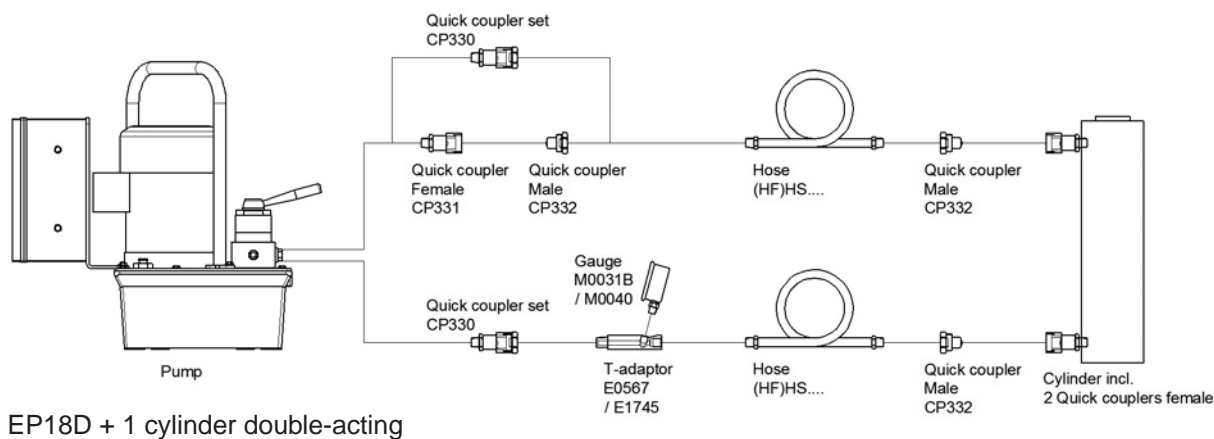


EP18S + VB201 +
2 cylinders, single-acting

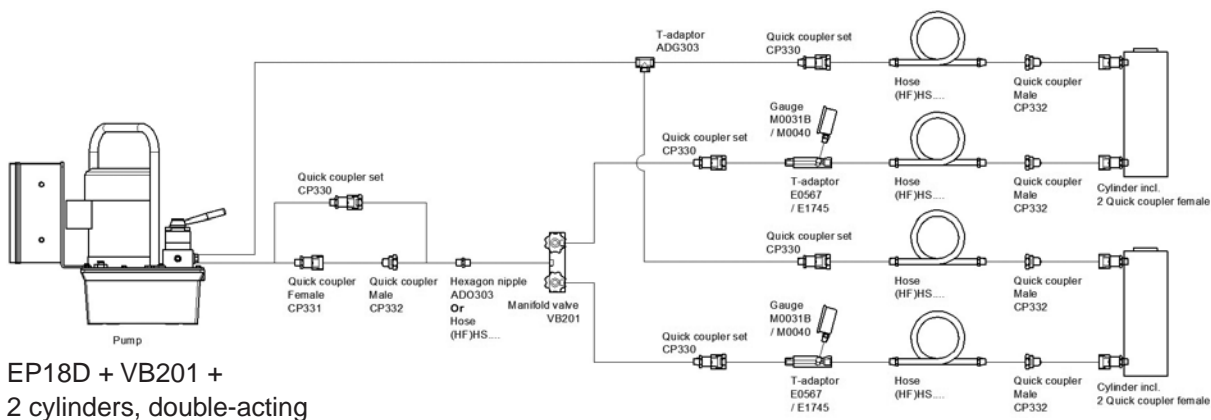


EP18S + VB401 +
4 cylinders, single-acting

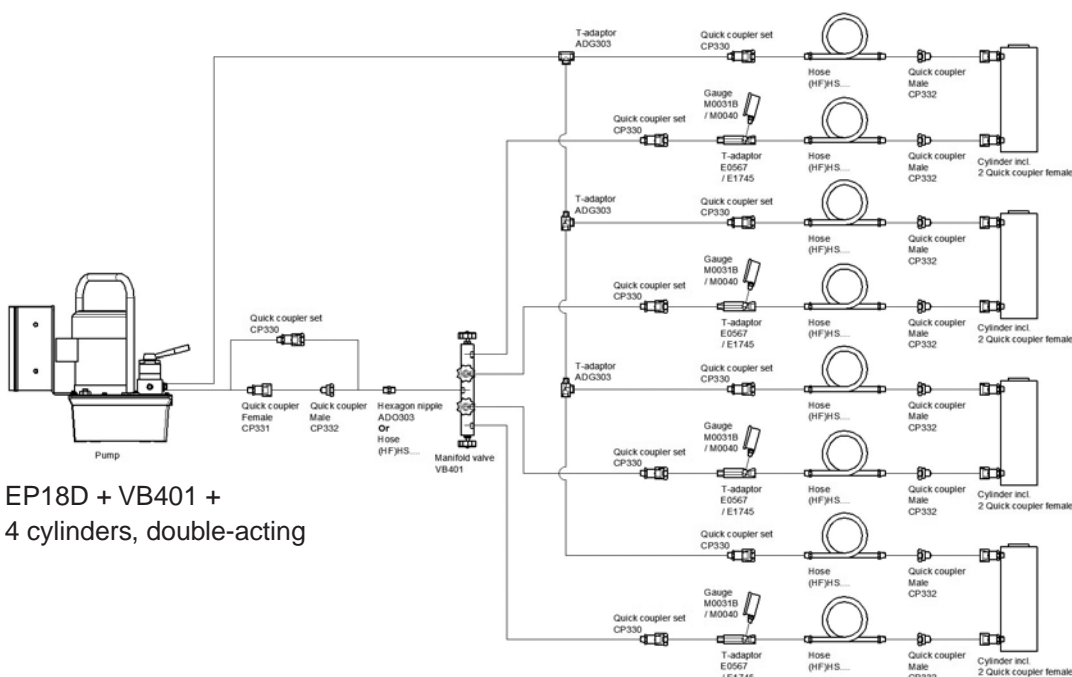
SELECTING THE RIGHT SETUP



EP18D + 1 cylinder double-acting



EP18D + VB201 +
2 cylinders, double-acting



EP18D + VB401 +
4 cylinders, double-acting

SELECTING THE RIGHT SETUP

Type	Oil cap cm ³	Cylinder capacity (tons)																			
		5	10	12	15	20	25	30	50	60	75	100	150	200	250	300	400	500	600	800	1000
PB350	350	Green	Yellow	Green	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
PB600	600	Green	Green	Green	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
PB700	700	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
HC1500	1500	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
HC2000	2000	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red
AHP 701	350	Green	Yellow	Green	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AHP 702	1000	Green	Green	Green	Green	Green	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AHP 703	2000	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red
AHP 703D	2000	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red
HP 35	3500	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Green	Green	Red	Red	Red	Red	Red
HP 35D	3500	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Green	Green	Red	Red	Red	Red	Red
HP 80	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Red	Red	Red	Red	Red
HP 80D	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Red	Red	Red	Red	Red
FHB 350	350	Green	Yellow	Green	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
FHB 600	700	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
FHB 700	700	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AP 921	750	Green	Green	Green	Green	Green	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AP 1600S	1600	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AP 1600D	1600	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
AP 3000S	3000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red
AP 3000D	3000	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red
AP 8000S	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Red	Red	Red	Red	Red
AP 8000D	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Green	Red	Red	Red	Red	Red
EP 13S	3000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red
EP 13D	3000	Green	Green	Green	Green	Green	Green	Green	Yellow	Green	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red
EP 18S	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red
EP 18D	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red
EP18SS	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red
EP 18DS	8000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red
EP 211S	11000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
EP 211D	11000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
EP 211SS	11000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
EP 211DS	11000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
EP 320S	15000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow
EP 320D	15000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow
EP 420S	15000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow
EP 420D	15000	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow

Generally recommended
 Marginal, check requirements
 Not recommended for most applications

FITTING TOOL SET

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, page 90-91

FITTING TOOL SET

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, contrary to easily breaking injection moulded collets.
- The collet numbers are clearly engraved and marked, to avoid mistakes.

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 marked clearly in order to avoid mistakes.



TIP! Use in combination with Betex induction heaters, page 90-91

INDUCTION HEATERS

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

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 medium 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.

WHY USE INDUCTION HEATING?

Induction heating is a superior, fast and controlled heating method.

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

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.

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. Induction heaters are ideal for sealed (2RS-ZZ) and pre-lubricated bearings.

SAFE AND CONTROLLED HEATING

Digital electronics ensure optimum control during the heating process. These automatically regulate the most efficient use of power and ensure even and rapid heating. No extra steps are necessary. This prevents explosive heating (no discolouration 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.

ADVANTAGES OF BETEX® INDUCTION HEATERS

- ✓ Robust design for working in industrial environments.
- ✓ Evenly distributed heating: the microprocessor controlled electronics prevent overheating and explosive heating.
- ✓ The energy saving alternative to traditional methods.
- ✓ For sealed (2RS-ZZ) and pre-lubricated bearings.
- ✓ Automatic power reduction.
- ✓ Automatic demagnetisation to <2A/cm.
- ✓ Unique, user-friendly swivel-arm construction.
- ✓ Suitable for continuous use (24/7).
- ✓ Large selection from STANDARD and TURBO series, from 3.6 to 100 kVA.
- ✓ TURBO models are energy efficient.
- ✓ Portable models for on-site works.
- ✓ 3 year warranty.
- ✓ Meets CE and IEC requirements.
- ✓ Certified by TUV to CSA (Canada) and UL (USA) standard.
- ✓ Practical solutions based on more than 30 years of experience.

OUR RANGE INCLUDES

- Standard series - up to 100 kVA
- **TURBO** series - up to 100 kVA
- Custom-made to client's requirements.
- Medium frequency series for mounting & dismounting

BETEX MF Quick-heater



Standard serie		TURBO serie	
Betex 22 ELDi portable Min. Ø 10 mm Max. OD: 240 mm For bearings up to 20 kg			Betex 24 RLDi TURBO portable Min. Ø 10 mm Max. OD: 350 mm For bearings up to 50 kg
Betex 22 ESDi Min. Ø 15 mm Max. OD: 340 mm For bearings up to 65 kg			Betex 24 RSDi TURBO Min. Ø 15 mm Max. OD: 520 mm For bearings up to 150 kg
Betex 38 ESD Min. Ø 30 mm Max. OD: 480 mm For bearings up to 150 kg			Betex 40 RSD TURBO Min. Ø 30 mm Max. OD: 790 mm For bearings up to 350 kg
Betex 38 ZFD Min. Ø 30 mm Max. OD: 720 mm For bearings up to 300 kg			Betex 40 RMD TURBO Min. Ø 60 mm Max. OD: 920 mm For bearings up to 600 kg
Betex SUPER Min. Ø 60 mm Max. OD: 1300 mm For bearings up to 600 kg			Betex SUPER TURBO Min. Ø 175 mm Max. OD: 1700 mm For bearings up to 1200 kg
Betex GIANT Min. Ø 85 mm Max. OD: 1400-2500 mm For bearings up to 3500 kg			Betex GIANT TURBO Min. Ø 115 mm Max. OD: 1400-2500 mm For bearings up to 12000 kg

SHIMS

BETEX SOLID STAINLESS STEEL SHIMS

Precut shims for fast, simple and precise machine alignment.

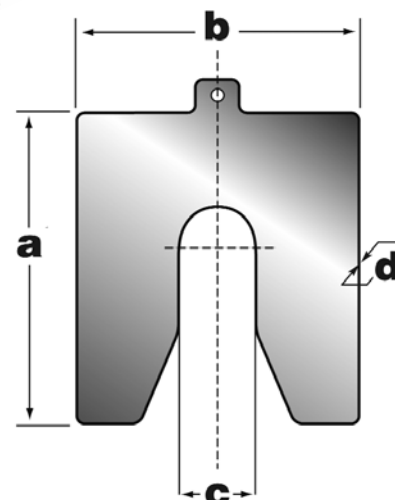
- Available in 6 difference sizes and 11 thicknesses!
- Packed in sets of 10 shims
- Highquality, noncorroding material
- The shim's thickness is etched on each shim.
- Suitable for reuse
- 31 standard combinations in handy carrying cases

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
M	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 E

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: Case type:	0.025	0.05	0.10	0.20	0.25	0.40	0.50	0.70	1.00	2.00	3.00	
B020210	AB 10/9		10	10	10	10	10	10	10	10	10		180
B020230	AB 10/10		10	10	10	10	10	10	10	10	5	5	180
B020240	AB 10/11	10	10	10	10	10	10	10	10	10	5	5	200
B020220	AB 20/9		20	20	20	20	20	20	20	20	10		340
B020250	AB 20/10		20	20	20	20	20	20	20	10	5	5	320
B020260	AB 20/11	20	20	20	20	20	20	20	20	10	5	5	360
B020310	BC 10/9		10	10	10	10	10	10	10	10	10		180
B020330	BC 10/10		10	10	10	10	10	10	10	10	5	5	180
B020340	BC 10/11	10	10	10	10	10	10	10	10	10	5	5	200
B020320	BC 20/9		20	20	20	20	20	20	20	20	10		340
B020350	BC 20/10		20	20	20	20	20	20	20	10	5	5	320
B020360	BC 20/11	20	20	20	20	20	20	20	20	10	5	5	360
B020410	CD 10/9		10	10	10	10	10	10	10	10	10		180
B020430	CD 10/10		10	10	10	10	10	10	10	10	5	5	180
B020440	CD 10/11	10	10	10	10	10	10	10	10	10	5	5	200
B020420	CD 20/9		20	20	20	20	20	20	20	20	10		340
B020450	CD 20/10		20	20	20	20	20	20	20	10	5	5	320
B020460	CD 20/11	20	20	20	20	20	20	20	20	10	5	5	360
B020110	ABC 10/9		10	10	10	10	10	10	10	10	10		270
B020100	ABC 10/10		10	10	10	10	10	10	10	10	5	5	270
B020140	ABC 10/11	10	10	10	10	10	10	10	10	10	5	5	300
B020120	ABC 20/9		20	20	20	20	20	20	20	20	10		510
B020130	ABC 20/10		20	20	20	20	20	20	20	10	5	5	480
B020150	ABC 20/11	20	20	20	20	20	20	20	20	10	5	5	540
B020019	ABCD 10/9		10	10	10	10	10	10	10	10	10		360
B020030	ABCD 10/10		10	10	10	10	10	10	10	10	5	5	360
B020040	ABCD 10/11	10	10	10	10	10	10	10	10	10	5	5	400
B020029	ABCD 20/9		20	20	20	20	20	20	20	20	10		680
B020031	ABCD 20/10		20	20	20	20	20	20	20	10	5	5	640
B020032	ABCD 20/11	20	20	20	20	20	20	20	20	10	5	5	720
B020600	E 10/10		10	10	10	10	10	10	10	10	5	5	90

SHIMS

BETEX LAMINATED 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 0.1mm and 4 x 0.05 mm)
- Burr-free with specially rounded corners
- They always fit! Simply peel off until the right thickness is obtained

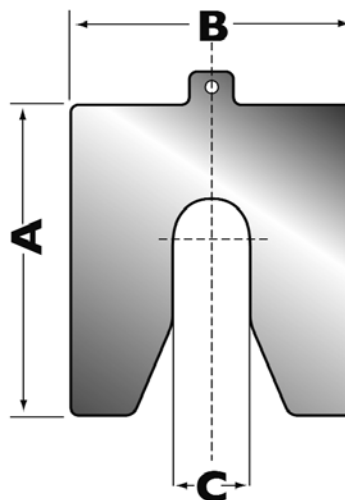
Sizes of peel off shims in mm

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

Art.no.	Material	Quantity	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

Sizes of peel off shims in mm

Art.no.	Material	Dimensions mm
812508	Brass	610 x 1220 x 1.00
812558	Stainless Steel	610 x 1220 x 1.00



TIP!

Use in combination with:
 Betex jacks pag. 75-76
 Betex Spreaders, pag. 78
 Alignment computer, pag. 95-96

SHAFT ALIGNMENT COMPUTERS

FIXTURELASER DIRIGO

The Fixturelaser Dirigo puts laser alignment accuracy within reach of everyone! The ergonomically designed control unit fits comfortably in one hand. The live display means that you will get instant feedback when shimming or moving the machines. This eliminates the guesswork and back and forth you're suffering through now. All this at an affordable price that means a really quick payback.

Fast, Easy, Precise

The Fixturelaser Dirigo features an unique "laser line" instead of the traditional laser dot. This makes setup and alignment much easier, as the line is wide and is easily projected to the laser detector.

An easy to use and payable laser align system with push-buttons for the alignment of horizontal mounted machines.

- Horizontal shaft alignment
- Easy to use
- Wide laserbeams
- Packaged brackets
- Measuring distance: max. 1 meter

The Fixturelaser is inclusive:

- Display unit
- 2 measuring units with spirit levels
- 2 mechanical shaft fixtures
- 2 locking chains
- 2 extension chains
- Measuring tape
- Instruction for use
- Certificate of calibration
- Set of alignment reports
- Carrying case



TIP!

Use in combination with:
Betex jacks pag. 75-76
Betex spreaders, pag. 78
Betex shims pag. 92-94

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!

Easy-Laser® is also used to align generators and gearboxes in wind turbines of a number of sizes and makes. Special brackets are available for alignment with locked rotors to increase the safety of the operator.



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. Regardless of the machine type, it is easy to measure and align with Easy-Laser® E420.

Vertical/flange-mounted machines: this program is used for alignment of vertical and flange-mounted machines, e.g. pumps, motors, gear boxes. Shows centre offset, angular error and shim value at each bolt.



Advantages E420 and E540:

- Easy to learn and to use.
- Compact measuring units for use on most machine designs.
- All wireless units (Built-in Bluetooth® technology and integrated rechargeable battery).
- Large, easy to read 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!

Optimize operating conditions

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 as well vertical/flange mounted machines (pumps, motors, gear boxes compressors, etc)
- 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.



PULLEY ALIGNMENT COMPUTERS

BTA EX EASY-LASER D90 PULLEY ALIGNMENT LASER

Why the Easy-Laser BTA models?

- The BTA fits all types of chain and belt drives
- Not only V-belts, but also flat and toothed belts
- Shows both angular and parallel errors together
- Can be used on both horizontally and vertically mounted machines
- Pulley alignment can now be done by one person
- The simplicity of the design makes training unnecessary
- Laser-technology is faster and more precise than conventional alignment methods

Specifications:

Measurements (bxdxh) : 145 x 86 x 30 mm

Material : ABS plastic

Weight : 270 gram

Schijfdiameters : from diameter 60 mm and bigger

Measuremetn distance : max. 10 meter



BTA EASY LASER D130 ATEX/EX

Bega has been supplying laser-optic aligning equipment for shaft alignment and geometric measurement since the early nineties. Recently, Bega has added the BTA Easy Laser Compact to its range.

- The BTA fits all types of chain and belt drives
- Not only V-belts, but also flat and toothed belts
- Intrinsically safe and approved for use in potentially explosive environments.
- Shows both angular and parallel misalignment between the sheaves
- Can be used on both horizontally and vertically mounted machines
- Pulley alignment can be made by one operator
- Laser-technology is faster and more precise than conventional alignment methods

Specifications:

Dimensions (wxdxh) : 145 x 86 x 30 mm

Material : ABS plastic

Weight : 270 grams

Sheave diameters : 60 mm diameter and larger

Operating range : maximum 10 metres

BTA EASY LASER E180 DIGITAL

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 a 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 at the same time takes place.
- Work can be carried out in a short period of time by one person.
- The units are placed using powerful super magnets, and can be installed on all types of drives / pulleys, such as V-belts, flat belts, timing belts and chain drives.
- When you use aluminum sheaves / pulleys, you can pass the low weight, the measuring units also place using double-sided tape.
- The E180 BTA is the perfect complement to the E710, E540 and E530-axis alignment.

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



TIP!

Use in combination with:
Betex jacks pag. 75-76
Betex spreaders, pag. 78
Betex shims pag. 92-94

PULLEY 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. Alignment is just as easy as mounting the laser units. Simply switch on the lasers and view the laser unit on the other pulley.

The laser projects a line on the upper surface of the opposing laser unit, mounted on the 'target' as shown to the left. If required, the machine can be aligned in such a way that the laser on both units hits the 'target'.



Specifications:

Material	: anodised aluminium
Dimensions	: 61 x 76 x 60 mm (l x h x w)
Weight	: 0,64 kg
Battery type	: (2) AAA batteries
Operating range	: from 15,2 mm till 609,6mm
Laser	: class 2
Pulley diameters	: 76 mm and bigger

TIP!

Use in combination with:
Betex jacks pag. 75-76
Betex spreaders, pag. 78
Betex shims pag. 92-94

OTHER BEGA SPECIAL TOOLS:

