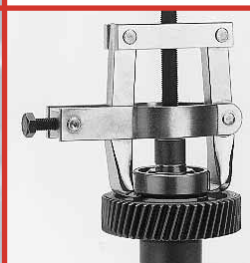


BEGA
SPECIAL TOOLS

ANNO 1978



TOP
QUALITY
SINCE
1978

BETEX®
MAINTENANCE PRODUCTS

WWW.BEGA.NL



Professional Solutions With Proven Quality & Performance!

Dear reader,

We are proud to present our catalogue of BETEX Maintenance Products.

Here you will find our BETEX® Special Tools programme for maintenance (MRO) and production (OEM):

- Condition Monitoring: measuring equipment for bearings, temperatures, noise and vibrations etc
- Dismounting: mechanical and hydraulic pullers, self-centering pullers up to 100 t capacity, work shop equipment, auxiliary tools
- Hydraulic equipment: BETEX Hydraulic Power
- Mounting & Alignment: induction heaters, fitting tool sets, shims, alignment computers

About Bega Special Tools

We have been developing and manufacturing 'Special Tools' since 1978 and we provide solutions for damage-free mounting and dismounting of bearings and drive components. Our expertise and experience ensure quality, reliability, professional advice and outstanding service.

BETEX® is a registered trademark of Bega Special Tools and stands for quality and reliability.

Please also order our catalog for:

- BETEX® Induction heaters for maintenance (MRO) and production (OEM).
For mounting and dismounting.

Please do not hesitate to contact our Sales department or one of our dealers.
We will be pleased to help you.

Your Bega Team.



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Condition Monitoring

Condition monitoring instruments



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Dismounting

Mechanical and hydraulic pullers up to 100t



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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.



BEWAKING

BETEX 1220 DIGITAL LASER THERMOMETER UP TO 290°C

Monitor temperatures remotely! A pocket-sized unit!

Super light and easily fits in your jacket pocket.

The laser beam allows you to measure remotely the temperature of any required object.

Digital laser temperature meter for accurately measuring fluids, gasses and all sorts of other substances, till 290 degrees Celsius!

- Temperature range from -50°C to + 290°C.
- Readable temperature from -50°C till 290°C
- Readings possible in Celsius or Fahrenheit.
- Display illumination on/off
- Incl. 2 x 1.5V AAA batteries
- Weight 125 grams



BETEX 1230 DIGITAL LASER THERMOMETER DIGITAL LASER THERMOMETER UP TO 380°C

Digital laser thermometer with a range of -50°C to 380°C and for accurately measuring fluids, gasses and all sorts of other substances.

The laser beam allows you to measure remotely the temperature of any required object.

- Measure distance: -50°C to 380°C
- Reading / resolution: 0,1°C
- Automatic "hold" function
- Display illumination
- Very fast reaction time (within 0.5 sec.)
- Incl. 1 battery, 9V
- Incl. carry case
- Measurements: 185 x 135 x 38 mm
- Weight: 178 grams
- Measurement distance: 1500 mm

BETEX 1250 DIGITAL LASER THERMOMETER UP TO 1000°C

High quality digital laser thermometer with an extreme range of -50°C up to 1000°C.

For accurately measuring fluids, gasses and all sorts of other substances. The laser beam allows you to measure remotely the temperature of any required object.

Digital laser temperature meter for accurately measuring fluids, gasses and all sorts of other substances.

- Measure distance: -50°C up to 1000°C
- Reading / resolution: 0,1 °C
- Automatic "hold" function
- Display illumination
- Very fast reaction time (within 0.5 sec.)
- Incl. 1 battery, 9V
- Incl. carry case
- Measurements: 122 x 53 x 240 mm
- Weight: 320 grams
- Measurement distance: 1500 mm



BETEX 1300 - DIGITAL THERMOMETER UP TO 1370°C

Digital temperature meter for accurately measuring fluids, gasses and all sorts of other substances, till 1370°C

- 13 mm LCD display
- Data memory
- Also suitable for surface measurements.
- Readable temperature from -50°C to + 1370°C
- Reading 1 degree Celsius
- Readings possible in Celsius or Fahrenheit.
- Reading 1 degree Celsius/Fahrenheit
- Works on 9V battery
- Incl. battery, linen bag and instructions



BETEX 1510 - PROFESSIONAL DIGITAL SOUND LEVEL METER

With this professional microprocessor operated dB meter you can measure sound level precisely.

The instrument has an extra large display with digit height of 20 mm.

- Measurement range: 40 - 130 dB (A)
- Hold-function and interval measurements
- Frequency range: 31.5 Hz - 8500 Hz
- Resolution: 0.1 dB
- 1x 9V batterij. (incl.) or connection for netadaptor
- Size: 260 x 69 x 32 mm
- Weight: 350 gr

Including:

- Microprocessor operated dB meter
- Windcap for microphone
- Battery 9V.
- Instruction guide.

BETEX 1620 - DIGITAL LASER TACHOMETER

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

- Display: 5-digit 10 mm LCD display
- Contact range of measurement: 5 - 99.999 rpm
- Display: 0,1 rpm at 0,5 - 999.99 rpm
- Display: 1,0 rpm above 1000 rpm
- Measurement results: 1x per second
- Precision: +/- 0,5 %
- Contact range: 50 - 300 mm
- Automatic contact range selection
- Memory key for last recorded value, maximum recorded value
- Power supply: 3x 1,5 V AAA batteries
- Incl. manual.
- Dimensions: 72 x 190 x 37 mm
- Weight: 250 grams



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.

The ELS12 is inclusive:

- Sound amplification with volume control
- Headset combined with ear defenders to cut out background noise
- Two probe tips, lengths 60 and 290 mm
- Strong probe body, black ABS moulding.
- Weight with 290 mm probe tip only 300 grams
- 9 V alkaline battery for about 30 hours of continuous operation.
- Temp. range: 0° to +55° C (32° to 131° F)
- Dimensions: 205 x 50 x 40 mm (8" x 2" x 1.6")

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:**

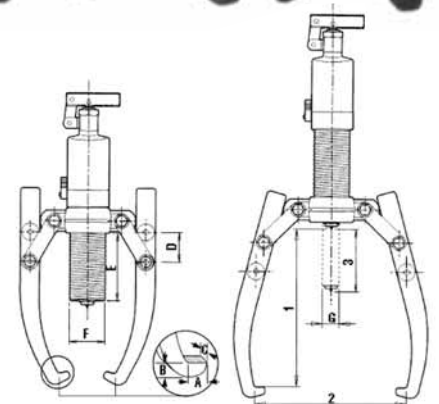
The self contained hydraulic pump and cylinder save space, as you don't need a separate pump, hose or puller.

- **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

For accessory sets see page 16, 17.

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

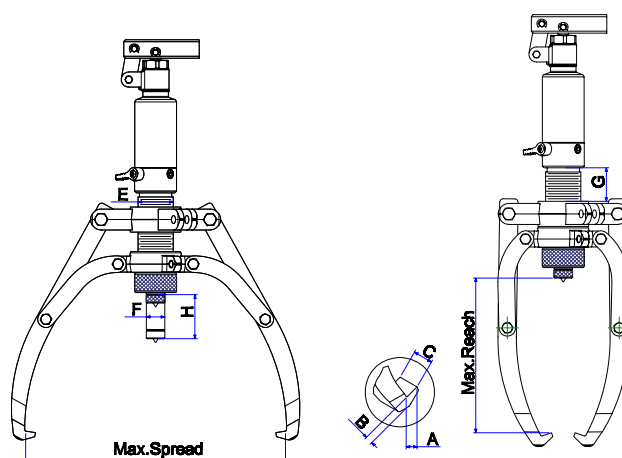
HYDRAULIC PULLERS

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

For accessory sets see page 16, 17.

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 dismantling of bearings, couplings, rings etc.

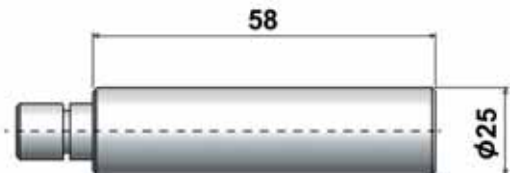
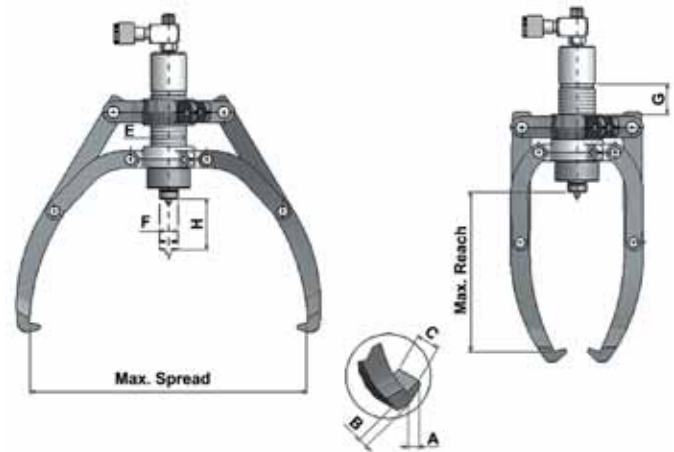
Separate 2-stage handpump available

- **Practical!**
Self-centering, easy to convert, 2-arm or 3-arm puller. The arms slide inwards or outwards simultaneously.
- **Save!**
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.

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



BETEX HXP 2/3 Hydraulic self-centering pullers

Use in combination with our hand- and footpump sets, page 42-47

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

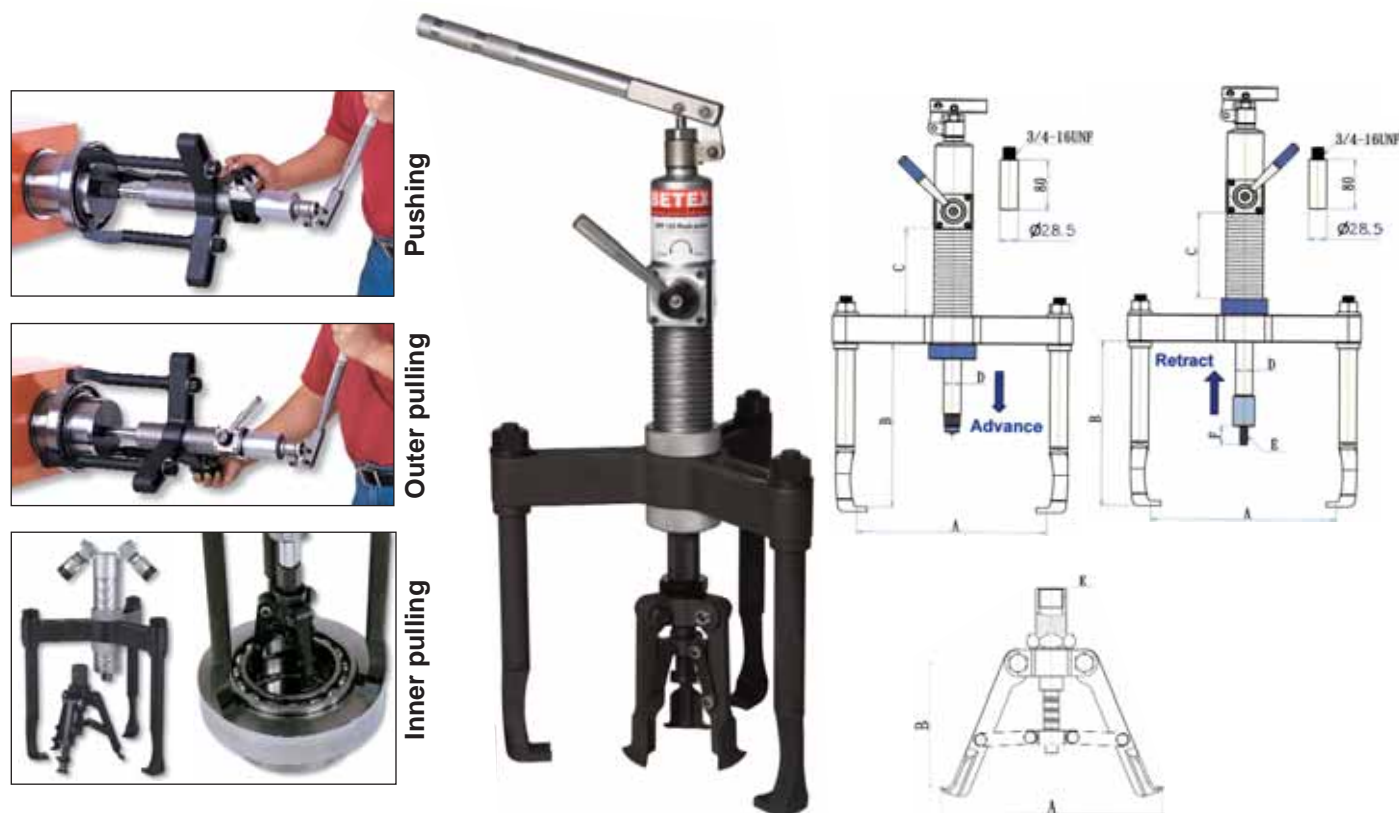
BETEX Tri-section hydraulic pullers

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, selfcentering 3-in-1 PUSH PULLER



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.

BETEX Push Puller / three-in-one

For accessory sets see page 16, 17.

Type	Operations	Output tons	A mm	B mm	C mm	D mm	E	F mm	Weight Kg
HPP123	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	-	

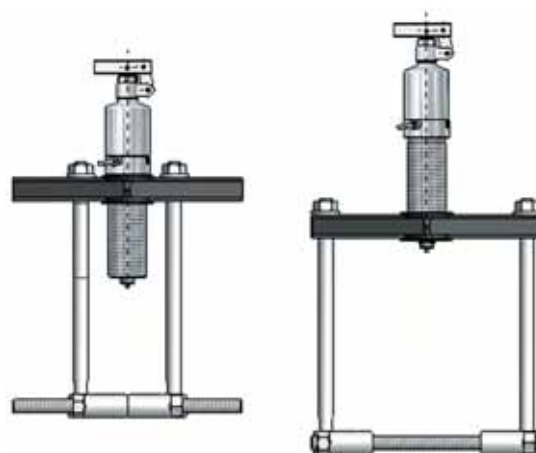
ACCESSORY SETS

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 25-225 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



Easy to use

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.

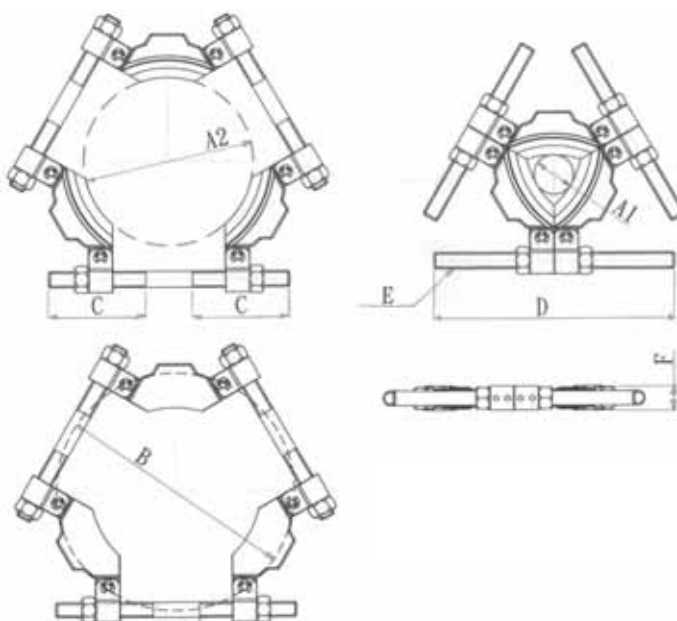
User-friendly

- 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 plates series consist of 4 different sizes of tri-section plates that are suitable for shafts of max. Ø ranging from 50 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



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.

A1: In standard position mm:	750
A2: In extended position mm:	1130
B1: Frame length in standard pos. mm:	1210
B2: Frame length in extended pos. mm:	1590
Position high / low mm:	1100/1650
Dimensions L x W mm:	1470x1040
C: Diameter of jaws mm:	430
D: Set-up height mm:	900/1430
Adapters mm (155 mm):	Ø 40,50
Weight kg:	460

Remote control

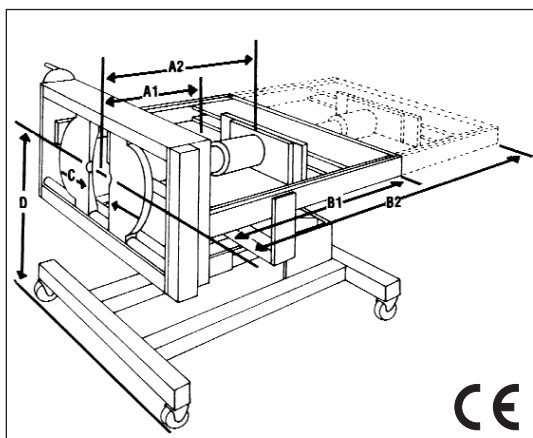


All models are equipped with a safety cage for personal safety



Auxiliary tools for dismantling of inner rings and delicate components.

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



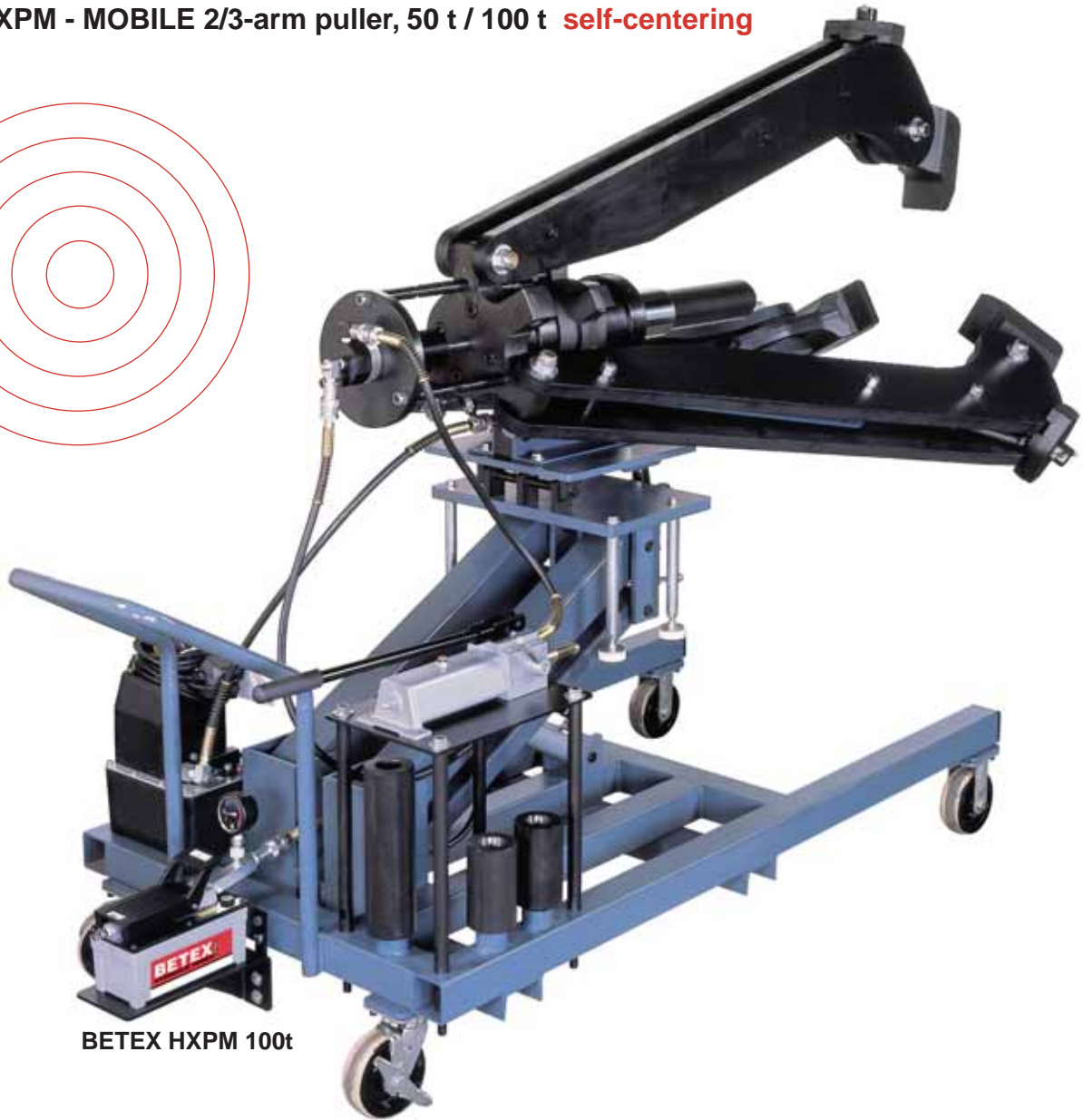
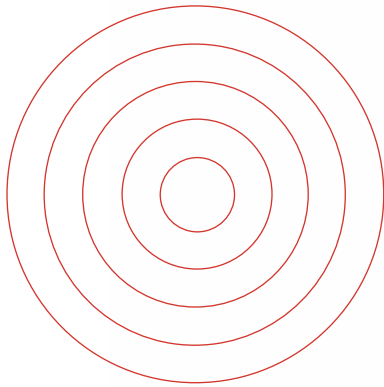
Type	Art.no.	Cap. Ton	Stroke cylinder	Pump hydraulic manual/electric	In standard position mm	In extended position mm
25 HV 430 S 260	700001	25	260	manual	750	1130
25 EVA 430 S 260	700002	25	260	single acting electric	750	1130
50 HV 430 S 260	700003	50	260	manual	770	1150
50 EVA 430 S 260	700004	50	260	single acting electric	770	1150
50 EVA 430 S 340	700005	50	340	single acting electric	690	1070
50 EVAD 430 S 340	700006	50	340	double acting electric	640	1020
50 EVAD 430 S 460	700007	50	460	double acting electric	490	870

All models are standard equipped with

- a with oil filled pressure gauge against overload
- 4 shaft protectors with an ID of 40 and 50 mm
- 4 stable wheels with polyurethane equipped tires, 2 swiveling wheels with double functioning brake
- Safety cage
- CE-Mark

HYDRAULIC PULLERS

BETEX HXPM - MOBILE 2/3-arm puller, 50 t / 100 t **self-centering**



BETEX HXPM 100t

For dismantling of transmission parts, such as bearings, couplings, bushes, gear wheels, etc.

- **Practical!**
The puller is easy to manoeuvre, adjustable in height and 5° vertically adjustable.
- **Fast!**
The complete stroke is 330 mm. Three adapters (extensions) are included for a max stroke of 620 mm.
- **Safe!**
The arms move inwards and outwards simultaneously and cannot deflect. A safety release valve prevents overload and ensures that you never exceed the maximum power capacity.

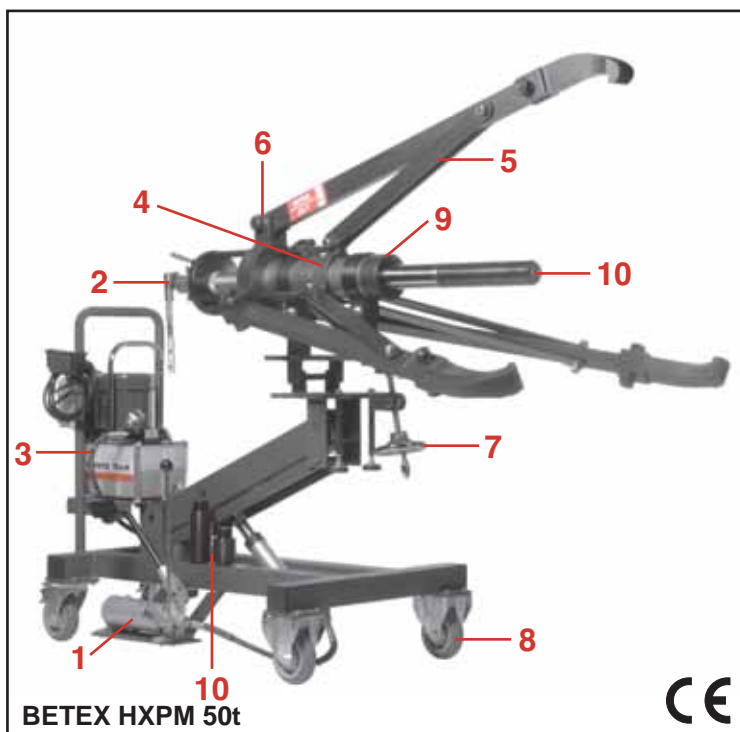
50 / 100 ton capacity!



HYDRAULIC PULLERS

BETEX HXPM - MOBILE 2/3-arm puller, 50 t / 100 t **self-centering**

Type / Art. no.	50-HXPM-1250-S330 / 700014	100-HXPM-500-S260 / 700015
Capacity in tons	50	100
Max. stroke in mm	330	270
Max. spread in mm	1250	1500
Min. spread in mm	75	200
Max. shaft length in mm	720	1215
Operating main cylinder	electric-hydraulic pump, 230V-16A, with remote control	electric-hydraulic pump, 400V-3 fase - 2,24 kW
Operating height adjustment	with footpump	with air hydraulic foot pump
Operating self-centering jaws	with handpump, double-acting	with handpump, double-acting
Four adapters (in mm)	2 x Ø 40, 2 x Ø 50, length: 155	4 x Ø 105, length: 2 x 150, 2 x 300
Min. height (from the centre) in mm	820	820
Max. height (from the centre) in mm	1.370	1.370
Manometer	700 bar	700 bar
Weight in kg	370 kg	1000 kg



- 1 Foot pump for height adjustment.
- 2 Double-acting handpump for holding, opening and closing the jaws for safe, secure grip on job.
- 3 An electric-hydraulic pump, 230V-700 bar operates the cylinder. This is a 4-stage pump. For the 50 ton puller the oil delivery is 3.9 liters per minute at 0 bar pressure, for the 100 ton puller the oil delivery is 6,7 liters per minute at 0 bar pressure.
- 4 Self-centering; the jaws are evenly advanced or retracted.
- 5 The design prevents the puller jaws from slipping or deflecting.
- 6 Puller can easily be converted from 3- to 2-arm configuration.
- 7 The puller is adjustable 5° vertically.
- 8 The cart has two swivel casters (self-locking) and has two rigid casters.
- 9 The hydraulic cylinder is a 2-stage spring-return type with a max. working pressure of 700 bar (50 ton).
- 10 Four adapters (cylinder extensions) with a total length of 620 mm are included.

Including safty blanket



MECHANICAL PULLERS

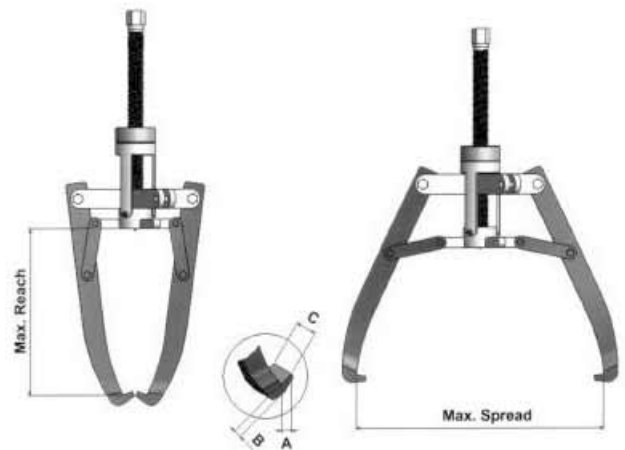
BETEX MSP 2/3-arm pullers, **self-centering**



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-DRAWER

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	Max. diam. mm	Max. shaft length mm
46-200	60	40
46-000	75	60
46-010	110	100
46-020	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	Max. diam. mm	Max. shaft length mm
47-100	45	65
47-200	90	100
47-300	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	Max. diam. mm	Counter support	Max. shaft length mm	
			standard	with extension
48-060	60	49-100	150	250
48-075	75	49-100	150	250
48-115	115	49-200	200	300
48-150	150	49-300	300	400
48-210	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	Max. diam. mm	Max. shaft length mm
52-085	85	65
52-130	130	105
52-230	230	150
52-295	295	235
52-390/394*	390	270
52-640/644*	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	Max. diam. mm	Maximum shaft length mm		
		standard	with extension	with extra extension
54-100	80	100	200	250
54-200	120	125	200	250
54-300	160	150	250	300
54-400	200	175	250	300
54-500	250	200	300	400
54-600	350	250	300	400



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	Max. shaft length mm	Claws (4 per set)	No of bearings	
56-020	65	3 sets	12	
56-120	90	5 sets	30	
56-220	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	Capacity ton	Stroke mm
44-080	8	7
44-150	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

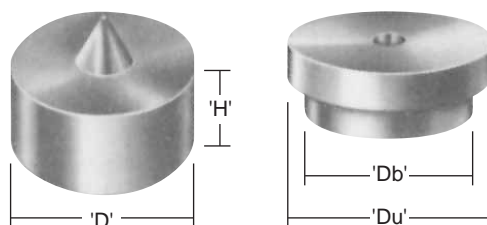
'Db' min. = Ø 19 mm 'Du' min. = Ø 25 mm

'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	62-004→ 62-030	62-004	4-7	35	*	****
		62-007	7-10	35	*	****
		62-010	10-14	35	*	****
		62-014	14-20	45	*	****
		62-020	20-30	50	*	****
		62-030	30-40	90	*	****
62-200	62-040→ 62-070	62-040	40-50	95	**	****
		62-050	50-60	95	**	****
		62-060	60-70	95	**	****
62-200/62-300	62-070 → 62-0125	62-070	70-80	95	**	****
		62-080	80-100	140	***	
		62-0100	100-125	140	***	
		62-0125	125-150	140	***	

* = set 1 62-101

** = set 2 62-201

*** = set 3 62-301

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

BETEX 62-9

Slide hammer puller

Used in combination with 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 chrome-plated finish to protect the cylinder from dirt, moisture and other contaminants for long life.

Cylinders overview

Series	Description	Type	Capacity ton	Stroke mm	Page
SSS	General purpose, spring return	Single Acting	5-100	25.4-362	31
SLS	Low profile, spring return	Single Acting	5-150	6-17	32
SCS	Compact, spring return	Single Acting	10-100	38-57	33
SHS	Hollow, spring return	Single Acting	13-100	8-158	34
JLLC	Lock nut, load return	Single Acting	50-1000	50-300	35
JLPC	Pan lock nut, load return	Single Acting	60-520	45-50	36
SSA	Aluminium, spring return	Single Acting	50-100	51-254	37
ALNC	Aluminium, lock nut, load return	Single Acting	50-100	51-254	38
ACHC	Aluminium, hollow, spring return	Single Acting	30-60	76-153	39
DAC	General purpose	Double Acting	10-100	255-330	40
ADAC	Aluminium, hollow	Double Acting	30-60	51-254	41

CYLINDERS

BETEX SSS series, single acting, spring return



Model: SSS Series

Capacity : 5-100 ton
Stroke : 25,4-362 mm
Max. working pressure : 10,000 psi / 700 Bar

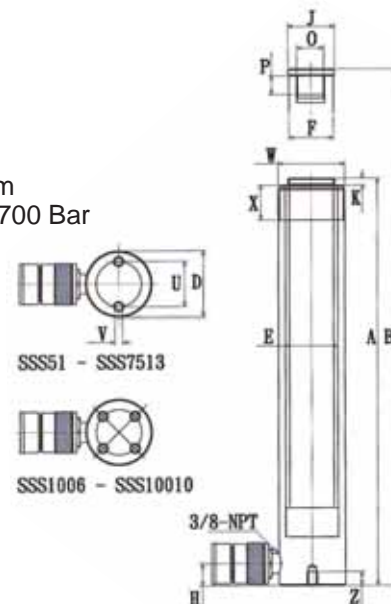
All rams are single acting with spring return. Pistons hard chromed. Rams inside roll-polished, outside blasted and chromed.

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.



SSS series

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

Type	Capacity 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	W un	X mm	Z mm	Weight Kg
SSS51	5	27	19	110	137								14						1
SSS53		76	54	165	241								14						1.5
SSS55		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
SSS57		181	128	273	454								16						2.4
SSS59		232	164	324	556								16						2.8
SSS101	10	25.4	40	89	114.4					-	-	#10-24un	6						1.8
SSS102		55	87	121	176					40	6	1"-8	16						2.3
SSS104		105	167	171	276					40	6	1"-8	16						3.3
SSS106		155	246	247	402	57	45	38	19	40	6	1"-8	16	39	5/16"-18un	2 1/4"-14	30	12	4.4
SSS108		206	327	298	504					40	6	1"-8	16						5.4
SSS1010		257	408	350	607					40	6	1"-8	16						6.4
SSS1012		305	484	400	705					40	6	1"-8	16						6.8
SSS1014		356	566	451	807					40	6	1"-8	16						8.2
SSS151	15	25.4	50	124	149				19										3.3
SSS152		51	100	149.5	200.5				19										4.1
SSS154		101.6	199	200	301.6				19										5.0
SSS156		152.4	299	271.5	423.9	70	50	40	25.4	38	9.6	1"-8	25	47	3/8"-16un	2 3/4"-16	30	12	6.8
SSS158		203	398	322	525				25.4										8.2
SSS1510		254	498	373	627				25.4										9.5
SSS1512		305	598	424	729				25.4										10.9
SSS1514		356	698	475	831				25.4										11.8
SSS1516		406	824	523	829														12.8
SSS251	25	25.5	84	139.5	165														5.9
SSS252		50.8	168	165	215.8														6.4
SSS254		102	338	215.5	317.5														8.2
SSS256		152.4	505	273	425.4	85	65	55	25	50	10.5	1 1/2"-16	25	58	1/2"-12un	3 5/16"-12	50	19	10
SSS258		210	696	324	534														12.2
SSS2510		261	865	375	636														14.1
SSS2512		311	1031	425	736														16.3
SSS2514		362	1200	476	838														17.7
SSS308	30	209	923	388.5	597.5	103	75	65	57	50	10.5	1 1/2"-16	25	-	-	4"-12	50	-	18.1
SSS502	50	51	361	176	227				33										15
SSS504		102	723	227	328				33										19.1
SSS506		159	1126	288	447	127	95	80	33	70	2	-	-	95	1/2"-12un	5"-12	55	19	23.1
SSS508		203	1446	349	552														27.1
SSS5010		260	1853	385	645														30.4
SSS5013		337	2387	463	800				35							5 3/4"-12	45	-	37.6
SSS756	75	156	1619	288	444	146	115	95	30	70	5	-	-	-					29.5
SSS7513		333	3457	492	825												45	25	59
SSS1006	100	168	2228	357	525	177	130	105	41	70	2	-	-	139	3/4"-10un	6 7/8"-12			59
SSS10010		260	3449	449	709														72.6

CYLINDERS

BETEX SLS series: shorty, flat, compact, spring return



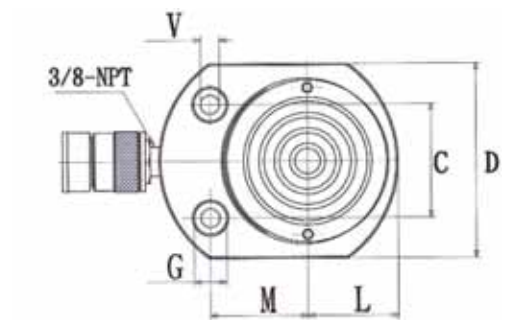
Model: SLS Series

Capacity : 5-150 ton
Stroke : 6-17 mm
Max. working pressure : 10,000 psi / 700 Bar

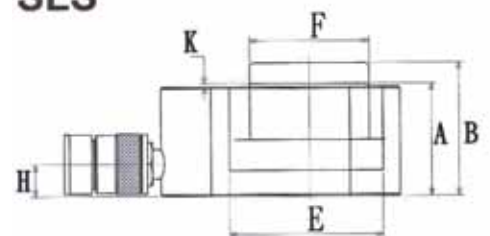
All rams are single acting with spring return.
Pistons hard chromed.
Rams inside roll-polished.
Rams outside blasted and chromed.

SLS series

Type	Capacity 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
SLS50	5	6	4.5	33	39	28.5	58x41	31	25.4	9.5	16	1	20	22	-	-	-	5.5	1.0
SLS100	10	12	18.0	42	54	36	82x55	44	38	11	19	1	28.5	34	-	-	-	7.5	1.4
SLS200	20	12	34.0	51	63	49.3	101x76	60	50.8	15	19	1	39	39	-	-	-	10	3.1
SLS300	30	13	54.0	58	71	52.3	117x95	73	63.5	16	19	2	47	44	-	-	-	10	4.5
SLS500	50	16	102.0	66	82	66.5	140x114	90	70	19	19	2	55	55	-	-	-	11	6.8
SLS750	75	16	166.0	79	95	76.2	165x140	115	82.5	20.5	19	2	69	66	-	-	-	13.5	11.3
SLS1000	100	16	212.0	85	101	76.2	178x152.5	130	92	20.5	19	2	76	74	-	-	-	13.5	14.5
SLS1500	150	17	342.0	100	117	117	216x190	160	115	20.5	23	2	95	82	-	-	-	13.5	26.3



SLS



TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

CYLINDERS

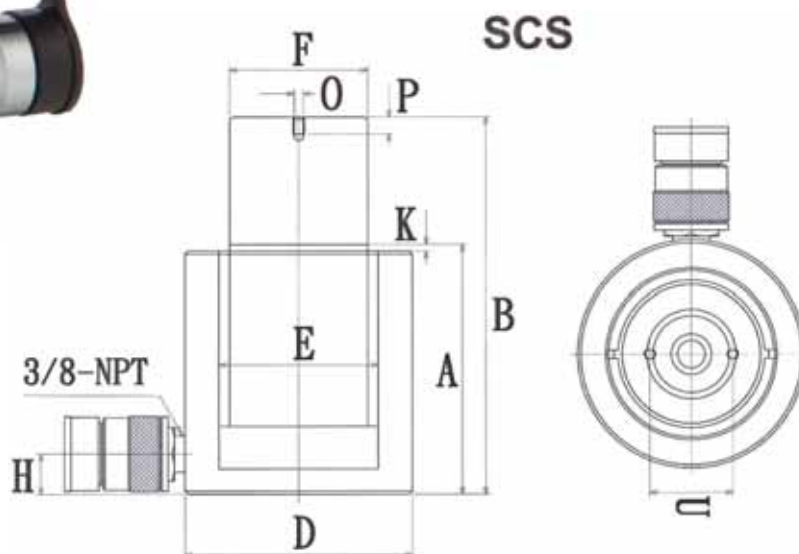
BETEX SCS series, shorty, flat, compact, spring return



Model: SCS Series

Capacity : 10-100 ton
Stroke : 38-62 mm
Max. working pressure : 10,000 psi / 700 Bar

All rams are single acting with spring return.
Pistons hard chromed.
Rams inside roll-polished.
Rams outside blasted and chromed.



SCS series

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	C mm	D mm	E mm	F mm	G mm	H mm	K mm	L mm	M mm	O mm	P mm	U mm	V mm	Weight Kg
SCS101	10	38	53.0	88	126	-	70	42	38	-	17	5	-	-	M4	8	26	-	4.1
SCS201	20	45	127.0	98	143	-	93	60	50	-	17	3	-	-	M5	8	39	-	5.0
SCS302	30	62	274.0	117	179	-	107	75	65	-	19	3	-	-	M5	8	39	-	6.8
SCS502	50	60	381.0	122	182	-	125	90	70	-	23	2	-	-	M5	8	39	-	10.9
SCS1002	100	57	756.0	141	198	-	165	130	95	-	31	1	-	-	M8	10	55	-	22.7

CYLINDERS

BETEX SHS series, center hole cylinders, spring return



Model: SHS Series

Capacity : 12-100 ton
Stroke : 8-158 mm
Max. working pressure : 10,000 psi / 700 Bar

All rams are single acting with spring return.
Pistons hard chromed.
Rams inside roll-polished.
Rams outside blasted and chromed.

SHS series

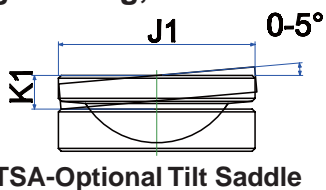
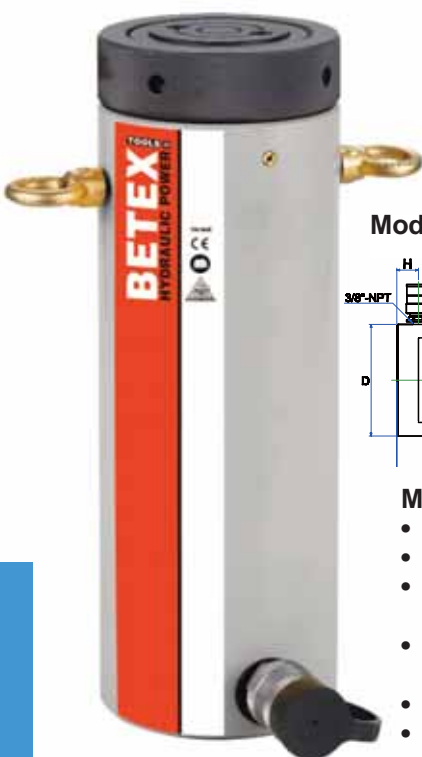
TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

Centre Hole ø

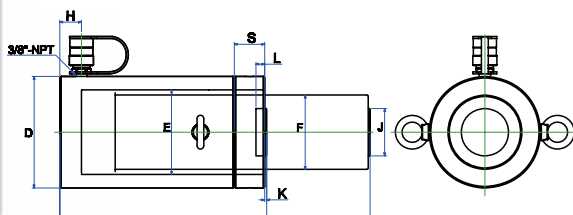
Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	D ø mm	E ø mm	F ø mm	H mm	J mm	K mm	O ø un	P mm	U mm	V ø unc	W ø un	X mm	Y ø mm	Z mm	Weight Kg
SHS120	12	8	18	60	68	73	54.1	35	11.5	-	-	3/4"-16	16	50.8	5/16"-18	2 3/4"-16	30	19.5	9	1.5
SHS121	12	42	96	121	163	73	54.1	35	19	-	-	-	16	-	-	2 3/4"-16	30	19.5	-	3
SHS123	12	76	175	180	256	73	54.1	35	19	-	-	-	16	50.8	5/16"-18	2 3/4"-16	30	19.5	12.7	4.2
SHS202	20	52	230	162	214	100	75	54.9	19	54	9	1 9/16"-16	19	82.6	3/8"-16	3 7/8"-12	38	27	9.4	7.5
SHS206	20	152	671	310	462	100	75	54.9	19	54	9	1 9/16"-16	19	82.6	3/8"-16	3 7/8"-12	38	27	9.4	13.5
SHS302	30	68.5	435	182	250.5	114	90	65	23	63	10	1 7/8"-16	22	92	3/8"-16	4 1/2"-12	42	36	14	11
SHS306	30	158	1005	332	490	114	90	65	25	63	10	1 7/8"-16	22	92	3/8"-16	4 1/2"-12	42	36	14	20.4
SHS603	60	76	932	247.5	323.5	158.6	125	90	32	89	12.5	2 3/4"-16	22	130	1/2"-12	6 1/4"-12	50	54	14	26.4
SHS606	60	153	1876	326.5	479.5	158.6	125	90	32	89	12.5	2 3/4"-16	22	130	1/2"-12	6 1/4"-12	50	54	14	34
SHS1003	100	83	1774	254	337	213	165	125	38	125	12	4"-12	28	178	5/8"-11	8 3/8"-12	60	79	19	50.1

LOCK NUT CYLINDERS

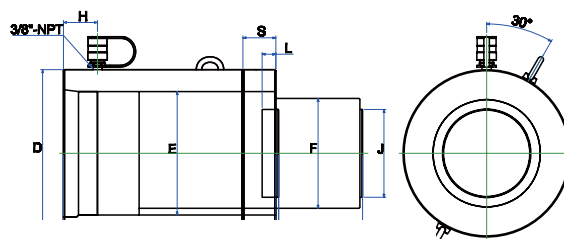
BETEX JLLC series, single acting, loadreturn



Model JLLC50-200T



Model JLLC300-1000T



Lock Nut
Capacity : 50-1000 ton
Stroke : 50-300 mm
Max. working pressure : 10,000 psi / 700 bar

Model: JLLC series

- 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

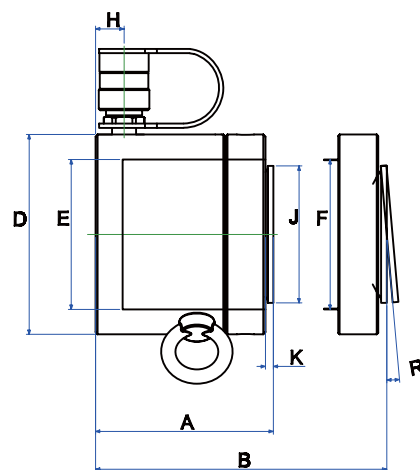
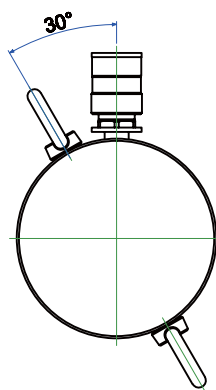
TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

JLLC series

Type	Capacity ton	Stroke mm	Oil cap cm³	A Height mm Retr.	B Ext. mm	D Ø mm	E Ø mm	F mm	H mm	J mm	S mm	Weight Kg	Optional Tilt Saddle		
													J1 mm	K1 mm	Type
JLLC502	50	50	354.5	164	214	125	95	Tr80x4	20	70	35	15	70	24	TSA-100
JLLC506	50	150	1063.5	264	414	125	95	Tr80x4	20	70	35	25	70	24	TSA-100
JLLC5010	50	250	1772.5	364	614	125	95	Tr80x4	20	70	35	35	70	24	TSA-100
JLLC1002	100	50	665	187	237	165	130	Tr110x6	32	70	45	30	70	24	TSA-100
JLLC1006	100	150	1995	287	437	165	130	Tr110x6	32	70	45	48	70	24	TSA-100
JLLC10010	100	250	3325	387	637	165	130	Tr110x6	32	70	45	64	70	24	TSA-100
JLLC1502	150	50	1005	209	259	205	160	Tr140x6	49	125	45	53	125	20	TSA-200
JLLC1506	150	150	3015	309	459	205	160	Tr140x6	49	125	45	78	125	20	TSA-200
JLLC15012	150	300	6030	459	759	205	160	Tr140x6	49	125	45	117	125	20	TSA-200
JLLC2002	200	50	1345	243	293	235	185	Tr170x6	52	125	50	83	125	20	TSA-200
JLLC2006	200	150	4035	343	493	235	185	Tr170x6	52	125	50	117	125	20	TSA-200
JLLC20012	200	300	8070	493	793	235	185	Tr170x6	52	125	50	170	125	20	TSA-200
JLLC3002	300	50	2167.5	295	345	305	235	Tr210x6	62	155	60	173	195	75	TSA-300
JLLC3006	300	150	6502.5	395	545	305	235	Tr210x6	62	155	60	233	195	75	TSA-300
JLLC30012	300	300	13005	545	845	305	235	Tr210x6	62	155	60	323	195	75	TSA-300
JLLC4002	400	50	2755	335	385	355	265	Tr250x6	76	155	70	250	225	85	TSA-400
JLLC4006	400	150	8265	435	585	355	265	Tr250x6	76	155	70	327	225	85	TSA-400
JLLC400112	400	300	16530	585	885	355	265	Tr250x6	76	155	70	441	225	85	TSA-400
JLLC5002	500	50	3532.5	375	425	395	300	Tr280x6	81	175	80	367	240	90	TSA-500
JLLC5006	500	150	10597.5	475	625	395	300	Tr280x6	81	175	80	466	240	90	TSA-500
JLLC50012	500	300	21195	625	925	395	300	Tr280x6	81	175	80	617	240	90	TSA-500
JLLC6002	600	50	4274	395	445	425	330	Tr300x6	89	195	85	446	275	95	ATS-600
JLLC6006	600	150	12823	495	645	425	330	Tr300x6	89	195	85	562	275	95	ATS-600
JLLC60012	600	300	25646	645	945	425	330	Tr300x6	89	195	85	737	275	95	ATS-600
JLLC8002	800	50	5970	455	505	505	390	Tr360x6	105	225	100	709	315	120	ATS-800
JLLC8006	800	150	17910	555	705	505	390	Tr360x6	105	225	100	870	315	120	ATS-800
JLLC80012	800	300	35820	705	1005	505	390	Tr360x6	105	225	100	1110	315	120	ATS-800
JLLC10002	1000	50	7257	495	545	555	430	Tr400x6	108	245	110	949	355	135	ATS-1000
JLLC10006	1000	150	21772	595	745	555	430	Tr400x6	108	245	110	1141	355	135	ATS-1000
JLLC100012	1000	300	43544	745	1045	555	430	Tr400x6	108	245	110	1430	355	135	ATS-1000

LOCK NUT CYLINDERS

BETEX JLPC series, single acting, load return



Model: JLPC series

- 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

Capacity : 60-500 ton
Stroke : 45-50 mm
Max. working pressure : 10,000 psi / 700 bar

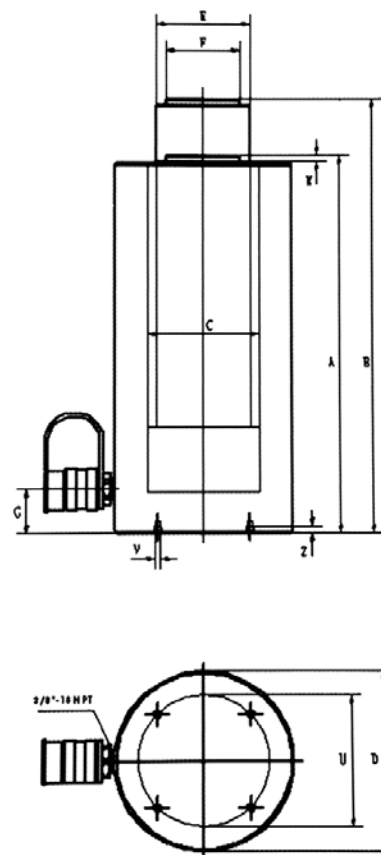
JLPC series

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

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	125	175	140	105	Tr105x4	20	96	6	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	1710	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	500	45	3179	192	237	400	300	Tr300x6	48	285	10	5°	62	189

ALUMINIUM CYLINDERS

BETEX SSA series, aluminium cylinders, spring return



Model: SSA series

- 8 standard models available for 50 to 150 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.
- Hard-anodized housing and piston reduce wear and corrosion.

Capacity : 50-150 ton
Stroke : 45-50 mm
Max. working pressure : 10,000 psi / 700 bar

Custom stroke lengths and capacities are available.

SSA series

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

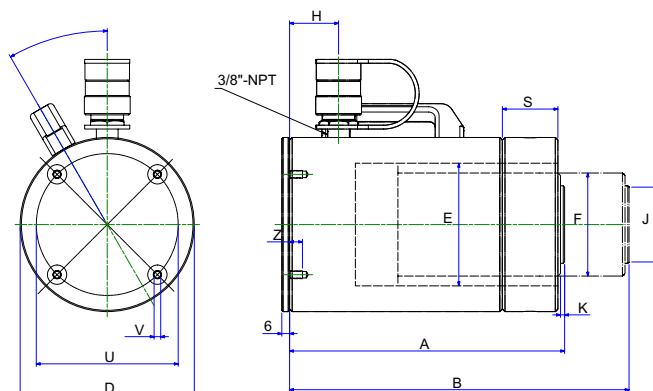
Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm Extended	C Ø mm	D Ø mm	E Ø mm	F Ø mm	G Ø mm	K mm	U mm	V mm	Z mm	Weight Kg
SSA502	50	50	354	165	215	95	140	80	60	38.1	3	110	M6x1.0	6	6
SSA504	50	100	708	215	315	95	140	80	60	38.1	3	110	M6x1.0	6	7.7
SSA506	50	150	1062	265	415	95	140	80	60	38.1	3	110	M6x1.0	6	8.2
SSA5010	50	250	1770	365	615	95	140	80	60	38.1	3	110	M6x1.0	6	16.4
SSA1002	100	50	663	165	215	130	203	110	90	38.1	3	160	M6x1.0	6	18.2
SSA1004	100	100	1326	215	315	130	203	110	90	38.1	3	160	M6x1.0	6	20.5
SSA1006	100	150	1989	265	415	130	203	110	90	38.1	3	160	M6x1.0	6	22.7
SSA10010	100	250	3315	365	615	130	203	110	90	38.1	3	160	M6x1.0	6	30.9

ALUMINIUM CYLINDERS

BETEX ALNC series, load return, lock nut type



Model ALNC cylinders 50-100T



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
- Hard-anodized coating reduces wear & corrosion
- Stop rings for piston blow-out protection
- Heavy duty spring for fast & full return

Load Return, Lock nut type

Capacity : 50-100 ton
Stroke : 50-250 mm
Max. working pressure : 10,000 psi / 700 bar

Base Plate Mounting holes dimensions (mm)

Cylinder model/ capacity ton	Bolt circle U mm	Thread V mm	Thread Dept X mm
ALNC-50	110	M6 x 1.0	10
ALNC-100	170	M6 x 1.0	10

ALNC series

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	S mm	Weight Kg
ALNC502	50	50	354.5	206	257	135	95	Tr80x4	38	60	3	36	10
ALNC504	50	100	709	257	359	135	95	Tr80x4	38	60	3	36	12.7
ALNC506	50	150	1063.5	308	461	135	95	Tr80x4	38	60	3	36	14.5
ALNC5010	50	250	1772.5	409	663	135	95	Tr80x4	38	60	3	36	18.2
ALNC1002	100	50	663.5	213	264	198	130	Tr105x6	38	90	3	43	20.5
ALNC1004	100	100	1327	264	366	198	130	Tr105x6	38	90	3	43	25
ALNC1006	100	150	1990.5	315	468	198	130	Tr105x6	38	90	3	43	29.1
ALNC10010	100	250	3317.5	416	670	198	130	Tr105x6	38	90	3	43	37.3

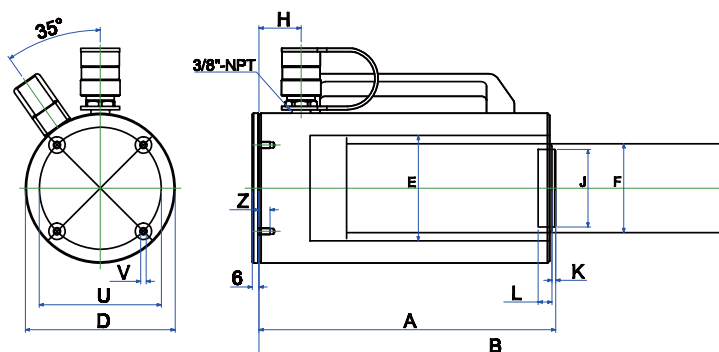
TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

ALUMINIUM CYLINDERS

BETEX ACHC series, spring return, hollow



Model ACHC 30-60T



Spring Return, Hollow type

Capacity : 30 & 60 ton
Stroke : 50-150 mm
Max. working pressure : 10,000 psi / 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
- 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
ACHC-30	110	M6 x 1.0	10
ACHC-60	160	M6 x 1.0	10

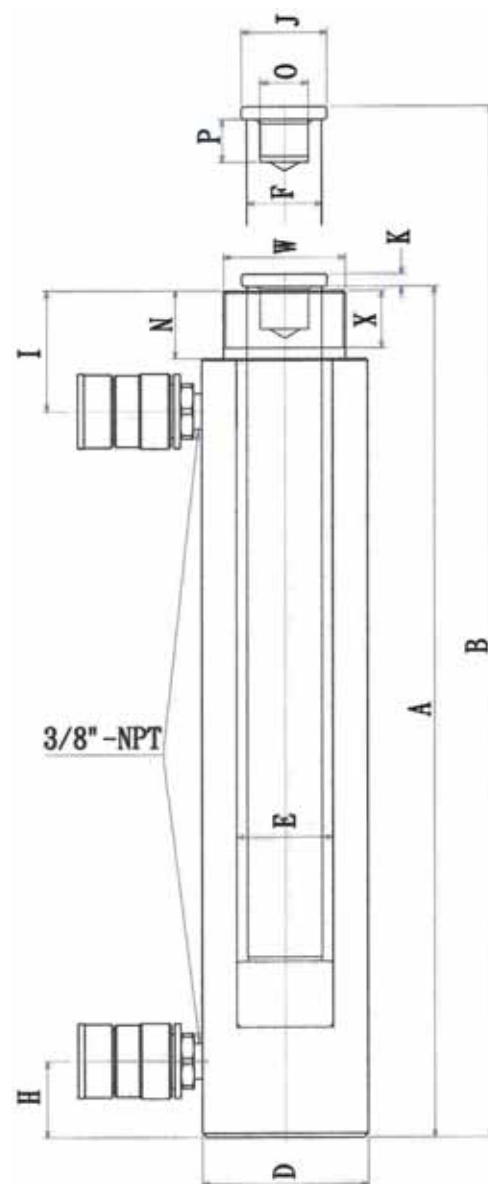
ACHC series

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 mm	J Ø mm	K mm	L mm	Weight Kg
ACHC302	30	50	362	177	227	135	90	65	35	63	11.5	36	10
ACHC306	30	150	728	305	455	135	90	65	35	63	11.5	36	14
ACHC602	60	50	684	177	227	198	125	90	35	89	14	54	19.5
ACHC606	60	150	1377	305	455	198	125	90	35	89	14	54	25

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

CYLINDERS

BETEX DAC series, double acting



Model: DAC series, double acting

Capacity : 10-100 ton
Stroke : 153 - 356 mm
Max. working pressure : 10,000 psi / 700 bar

- Perfect for construction, shipyards, utilities, mining and equipment maintenance.
- Hard chromed piston.
- Ram inside roll-polished.
- Ram outside blasted and chromed.

DAC series

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

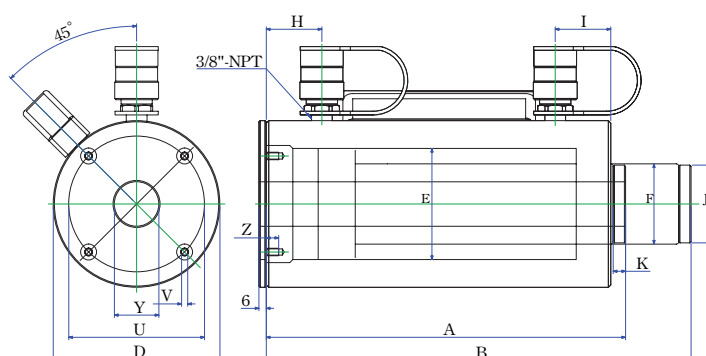
Type	Capacity ton Push Pull		Stroke mm	Oil cap cm³ Push Pull		A Height mm Retracted	B Height mm Extended	D Ø mm	E Ø mm	F Ø mm	H mm	I mm	J Ø mm	K mm	O Ø un	P mm	U mm	V mm	Z mm	W Ø un	X mm	Weight Kg
DAC1010	10	4.5	255	405	160	408	663	78	45	35	36	57	50	6	1"-8	20	-	-	-	2 1/4"-14	27	13
DAC1012	10	4.5	305	485	190	458	763	78	45	35	36	57	50	6	1"-8	20	-	-	-	2 1/4"-14	27	15
DAC2512	25	13	305	1500	720	470	775	101	56	50	36	26	50	10	1 1/2"-16	25	-	-	-	4"-12	40	29
DAC308	30	15	204	901	440	386.5	590.5	103	75	55	36	80	50	10	1 1/2"-16	30	-	-	-	4"-12	50	20
DAC3014	30	15	356	1572	760	551.5	907.5	103	75	55	36	80	50	10	1 1/2"-16	30	-	-	-	4"-12	50	29
DAC506	50	28	153	1084	320	336	489	127	95	80	30	76	70	3	1"-12	25.4	-	-	-	5"-12	50	29
DAC5013	50	28	356	2339	680	511	841	127	95	80	30	76	70	3	1"-12	25.4	-	-	-	5"-12	50	43
DAC 5018	50	28	460	3280	1673	658	1118	127	95	80	30	76	70	3	1"-12	25.4	-	-	-	5"-12	50	65
DAC756	75	35	153	1589	505	353	506	146	115	95	30	75	70	3	1"-12	38	-	-	-	5 3/4"-12	50	40
DAC7513	75	35	356	3427	1090	524	854	146	115	95	30	75	70	3	1"-12	38	-	-	-	5 3/4"-12	50	58
DAC1006	100	45	153	2030	945	359	512	177	130	95	38	71	70	10	1 3/4"-12	35	139	3/4"-10	25.4	6 7/8"-12	50	59
DAC10013	100	45	356	4380	2040	526	856	177	130	95	38	71	70	10	1 3/4"-12	35	139	3/4"-10	25.4	6 7/8"-12	50	83

ALUMINIUM CYLINDERS

BETEX ADAC series, double acting, hollow



Model ADAC cylinders 30-60T



Double acting, hollow

Capacity : 30-60 ton
Stroke : 50-250 mm
Max. working pressure : 10,000 psi / 700 bar

Model: ADAC 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
- 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
ADAC-30	110	M6 x 1.0	10
ADAC-60	160	M6 x 1.0	10

ADAC series

Type	Capacity ton	Stroke mm	Capacity ton Push	Capacity ton Pull	Oil cap cm ³ Push	Oil cap cm ³ Pull	A Height mm Retr.	B mm Ext.	D mm	E mm	F mm	H mm	I mm	J mm	K mm	Y mm	Weight Kg
ADAC302	30	50	33	21	238	152	177	227	135	90	65	35	45	63	11.5	36	9.3
ADAC306	30	150	33	21	715	456	305	455	135	90	65	35	45	63	11.5	36	13
ADAC3010	30	250	33	21	1192	760.5	430	680	135	90	65	35	45	63	11.5	36	16
ADAC602	60	50	62	41	447.5	295	177	227	198	125	90	35	45	89	14	54	15.5
ADAC606	60	150	62	41	1342	886	305	455	198	125	90	35	45	89	14	54	23
ADAC6010	60	250	62	41	2237	1477	430	680	198	125	90	35	45	89	14	54	30.5

TIP! Use in combination with: hand- and foot pumps, page 42-47. Accessories, page 51-53

HEAVY-DUTY HAND PUMPS

BETEX PB/HC series, heavy-duty hand pumps



Model: PB series

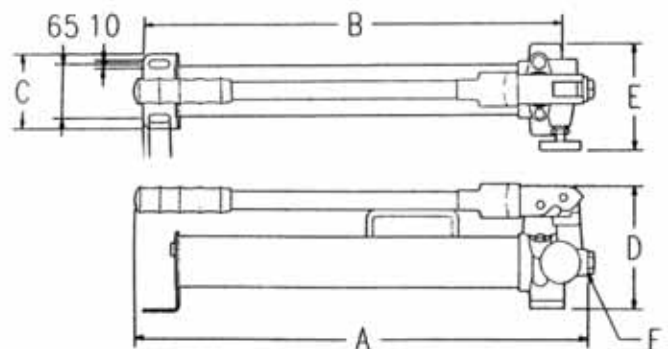
- Betex heavy duty hand pumps feature a forged construction.
- The drop-forged base and rugged welded construction effectively prevents collision damage and deformation.
- The professional choice for a wide range of industrial applications.
- Internal overload valve prevents pump from being used beyond its rated capacity.
- Two-speed pumps provide rapid pumping to load the cylinder quickly.
- External adjustable relief valve with locking mechanism.
- Carrying handles for easy portability.

Also available as a HANDPUMPSET, this includes:

- T-adaptor
- gauge
- hose
- couplers
- steel storage case



Handpumpset PB 700



PH/HC series

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	7,6
PB700	13,8	700	700	13,0	2,8	632	541	90	146	128	3/8"-NPT	7,3
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

TIP! Use in combination accessories, page 51-53

HEAVY-DUTY ALUMINIUM HAND PUMPS

BETEX AHP series, aluminium hand pumps



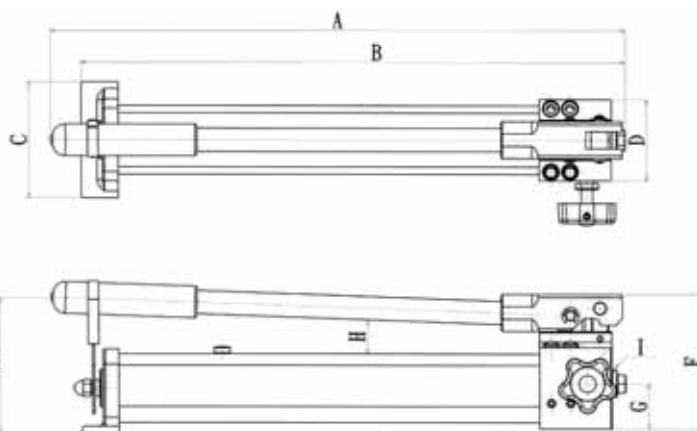
Handpumpset AHP 702

Model: AHP series

- Our 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.
- Specially designed AHP703D is for double-acting cylinders without the need for extra controlling valve and adapters.

Also available as a HANDPUMPSET, this includes:

- T-adaptor
- gauge
- hose
- couplers
- steel storage case



AHP series

TIP! Use in combination accessories, page 51-53

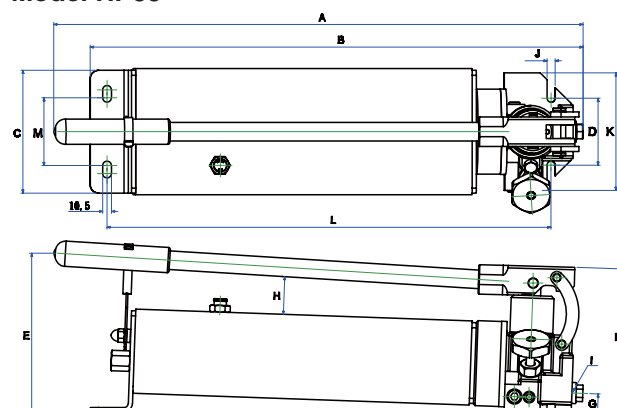
Type	Pressure rating (bar)		Usable oil capacity cm ³	Oil volume per stroke cm ³		A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage										
AHP701	13.8	700	350	12.9	1	391	361	110	77	140	127	42.5	37	3/8" -NPT	2.3
AHP702	13.8	700	1000	12.9	2.3	542	513	110	77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

HEAVY-DUTY ALUMINIUM HAND PUMPS

BETEX HP series, aluminium hand pumps



Model HP35



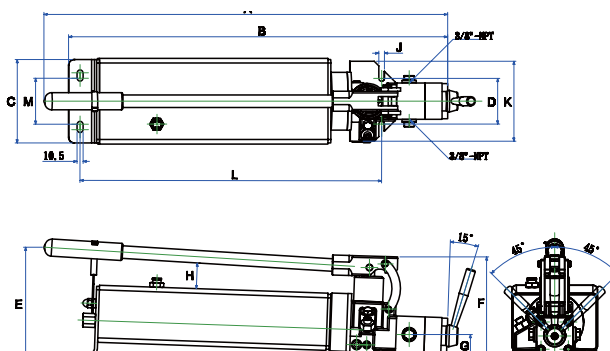
Model: HP series

Max. working pressure : 10,000 psi / 700 bar.
Large 3/8" pressure port for maximum flow.
Low Handle effort for easy operation.
Two speed models.

Model: HP series

- Our handpumps 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.
- Specially designed HP35D is for double-acting cylinders without the need for extra controlling valve and adapters.

Model HP35D (double acting)



HP series

TIP! Use in combination accessories, page 51-53

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

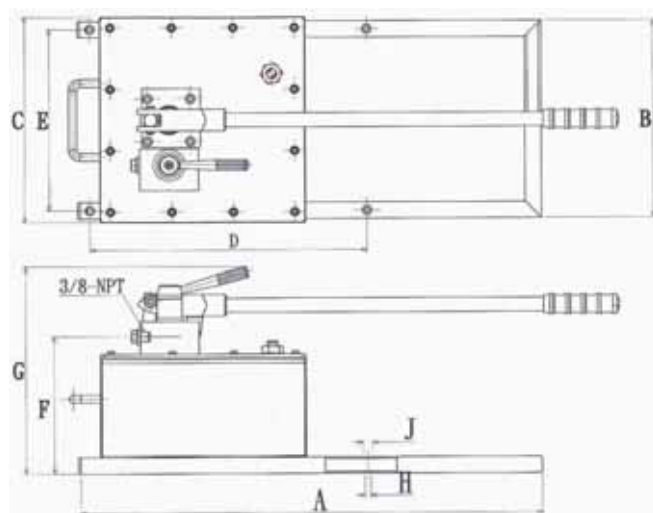
HEAVY-DUTY HAND PUMPS

BETEX HP series, 8L reservoir hand pumps



Model: HP hand pumps series

- Rugged construction: most components are made of aluminium alloy and are built for long service life, easy operation and portability
- Automatic 10,000 psi 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
- Oil capacity can be modified according to your specific application



HP series

TIP! Use in combination accessories, page 51-53

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	6400	113	4	700	300	312	420	275	208.5	315.5	9	3/8"-NPT	14	24
HP80D	27.5	700	6400	113	4	700	300	312	420	275	216.5	338.5	9	3/8"-NPT	14	24

HEAVY-DUTY FOOT PUMPS

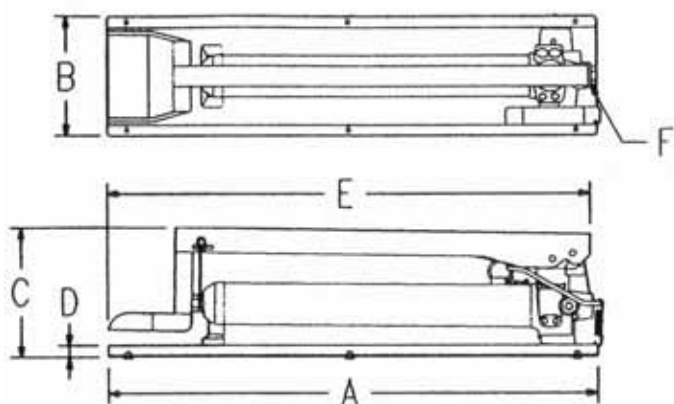
BETEX FHB series, foot pumps

Max. working pressure: 10,000 psi / 700 bar.
Large $\frac{3}{8}$ " pressure port for maximum flow.
Low pedal effort for easy operation.
Single & twin speed models.
Metal pump.



Model: FHB series

- Betex® innovative foot pumps are not only attractively designed, but are also durable and stable
- Foot-operated pump and release pedal, providing accurate control for operating in different conditions
- Single-speed, two-speed and forged metal versions available
- Spring-loaded foot pedal is convenient and easy to operate
- Internal overload valve prevents pump from being used beyond its rated capacity



FHB series

TIP! Use in combination accessories, page 51-53

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	700	700	13.0	2.8	660	174	192	17	647	-	-	-	$\frac{3}{8}$ "-NPT	10.8
FHB700	13.8	700	700	13	2.8	708	174	192	17	695	-	-	-	$\frac{3}{8}$ "-NPT	11.1

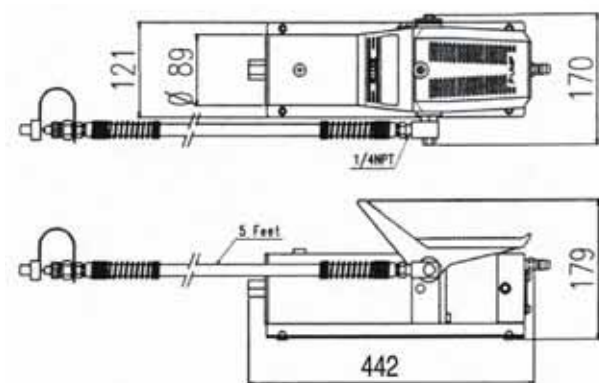
HEAVY-DUTY FOOT PUMPS

BETEX AP series, air/hydraulic foot pumps



AP921

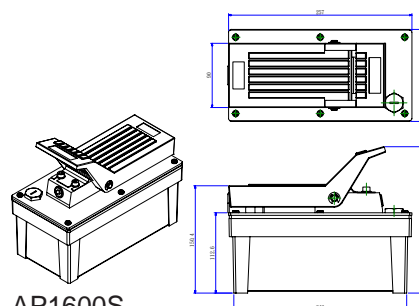
AP921



AP1600

Model: AP series

- 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 10,000 psi 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
- Oil capacity can be modified according to your specific application
- The AP is specially designed for double-acting cylinders without the need of an additional control valve and connecting pieces



AP1600S

AP series

TIP! Use in combination accessories, page 51-53

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	G mm	Weight Kg
	1st stage	2nd stage		1st stage	2nd stage								
AP921	13.8	700	750	530	130	442	170	89	-	-	3-8 bar	179	5.4
AP1600S	13.8	700	1600	1230	193	242	128	90	258	154	3-8 bar	205	7.5
AP1600D	13.8	700	1600	1230	193	242	128	90	258	154	3-8 bar	205	8.3
AP3000S	13.8	700	3000	1230	193	305	160	90	325	152	3-8 bar	205	10
AP3000D	13.8	700	3000	1230	193	305	160	90	325	152	3-8 bar	205	10.3

HEAVY-DUTY ALUMINIUM HIGH PRESSURE HAND PUMPS

BETEX AHP/UHP series, aluminium high pressure hand pumps: 1000 / 1500 / 2800 bar



AHP704



Handpumpset UHP 2800



UHP2800



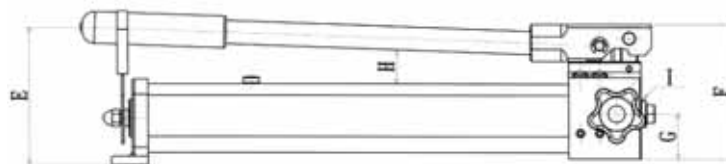
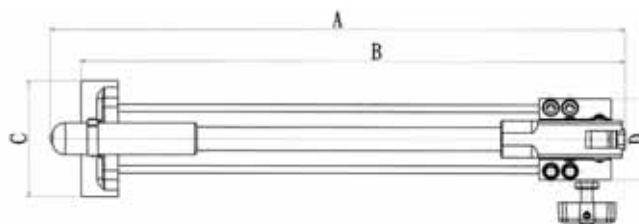
AHP705

Model: AHP/UHP serie

- AHP704: high working pressure up to 1000 / 1500 bar
- UHP2800: light weight model for ultra high working pressure of 2800 bar for special applications.

Also available as HANDPUMPSETS, which are supplied complete with:

- T-adaptor
- gauge
- hose
- couplers
- 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	3/4"-16UNF	3.5
AHP705	13.8	1500	2700	6.5	1	699	629	150	102	152	157	50	37	3/8" - NPT	6.7
UHP2800	14	2800	1000	12.9	0.65	620	488	80	140	108	157	26	37	3/4"-16UNF	5.3

HIGH PRESSURE AIR PUMPS

BETEX UHAP series, high pressure air pumps, 2800 Bar



Both pumps are inclusive:

- Gauge (0-3000 Bar scale)
- HD Hose (3 Mtr incl. extra coupler set)
- Couplers 1/4"

UHAP series

Type	Art.no.	Capacity	Oil capacity	Max. capacity	Weight Kg
AIR PUMP UHAP 2800	7292803	2800 Bar	3 Liter	0,43 Liter p/Min, at 7 air pressure	29
AIR PUMP UHAP 2800 ULTRA	7292802	2800 Bar	3 Liter	0,75 Liter p/Min, at 7 air pressure	32

HYDRAULIC DISPLAY A



ACCESSORIES

Hoses, regulators, valves, gauge adapters



HS



BP422



M0031B



E0567



VB201



VB401



VC331

- 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.
- 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.

MODEL: M0031B

Hydraulic gauge

Liquid-filled, dampens needle vibration.

Indicated range: 1000 Bar (14,000 psi); Safety Range: 700 Bar(10,000psi).

Diameter of Gauge surface: 63 mm; Thread size: 3/8 NPT.

MODEL: E0567

T-adaptor

Allows you to fit gauge between hydraulic pump and hose coupling.

MODEL: VB201/VB401

Manifold valve

Allows distribution of hydraulic fluid from one source to two or four cylinders.

MODEL: VC331

One-way relief valve

Allows metered lowering of cylinder and locks when prolonged load lifting is required. Also protects rams and hoses which need to be separated.

MODEL: BP422

Manifold valve

Allows distribution of hydraulic fluid for double-acting cylinder.

Aluminium alloy construction for long service life, easy operation and portability

MODEL: CP330

Quick couplerset.

This set includes CP331 female coupler and CP332 male coupler

HOSES

Type	End one	End two	Lenght (mm)	ID (mm)
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	4100	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	4100	9,4 high flow
HFHS3320-BG	3/8" NPT	3/8" NPT	6000	9,4 high flow
CP330B	3/8" NPT	3/8" NPT	-	-
CP331B	3/8" NPT	3/8" NPT	-	-
CP332B	3/8" NPT	3/8" NPT	-	-

COUPLER SETS



CP330B



CP331B



CP332B

ACCESSORIES Max. Working Pressure -700 bar/10,000 psi

FITTINGS

Type	Description	Dimensions mm
ADL101	Elbow	
ADL202	Elbow	
ADL303	Elbow	
ADC303	Elbow	
ADE303	Elbow	
ADT101	T-adaptor	
ADT202	T-adaptor	
ADT303	T-adaptor	
ADG303	T-adaptor	
ADF102	Adaptor	
ADF203	Adaptor	

Type	Description	Dimensions mm
ADF302	Adaptor	
ADF303	Adaptor	
ADF304	Adaptor	
ADI202	Connector	
ADI203	Connector	
ADI303	Connector	
ADO2031	Reducing Connector	
ADO203	Reducing Connector	
ADO101	Hexagon Nipple	
ADO202	Hexagon Nipple	
ADO204	Hexagon Nipple	

ACCESSORIES Max. Working Pressure -700 bar/10,000 psi

ACCESSORIES

Type	Description	Dimensions mm
ADO205	Hexagon Nipple	
ADO303	Hexagon Nipple	

GAUGE

Type	Description	Dimensions mm
M0031B		Liquid-filled, dampens needle vibration. Calibrated to read in bar, psi. Dial – 2½"; Accuracy, meets DIN Standard ±1.6% of full scale Thread: ¼" NPT

3-WAY Directional Control Valve

Type	Description	Dimensions mm
BP2	700 bar; 17l/min Manual, 2-position, Advance/Retract for single-acting cylinders	

4-WAY Directional Control Valve

Type	Description	Dimensions mm
BP421	for use with double-acting cylinder or two single-acting cylinders 700 bar; 17l/min Manual, Advance/Hold/Retract	
BP422		
BP423 *BP425	Manual, Advance/Hold/Retract; Lock for Load Holding	

JACKS

BETEX CJ series, with integrated pump and cylinder, low height jacks



Model: CJ series

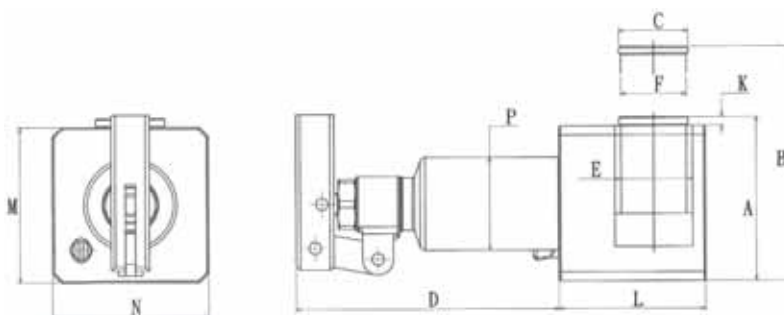
Spring-loaded

Available in : 10 or 20 ton.

Stroke : 41 mm.

Max. working pressure : 10,000 psi / 700 bar.

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



CJ series

TIP! Use in combination with: Betex shims, page 66, 67

Type	Capacity ton	Stroke mm	Oil cap cm ³	A Height mm Retracted	B Height mm 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	10	41	155	95	136	40	152.5	45	37.95	407.5	4.9	85	90	90	53.8	5.5
CJ200	20	41	250	95	136	40	152.5	65	50.8	407.5	4.9	110	90	110	69.5	8

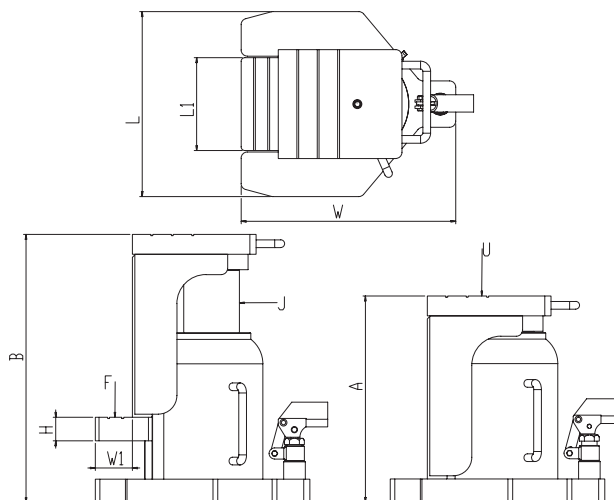
TOE JACKS

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

TIP! Use in combination with: Betex shims, page 66, 67

Type	Top cap. U (tons)	Top-lift cap. F (tons)	Stroke mm	Min. height A mm	Max. height B mm	Piston rod diam. J mm	Base dimensions LxW mm	Height H mm	Top-lift L1xW1 mm	Weight kg
TOE-025	2.5	1.2	100	194	294	19	140x190	19	65x50	6.5
TOE-040	4	2	110	204	314	25	150x200	19	65x50	8
TOE-060	6	3	110	212	322	36	160x217	19	65x50	10
TOE-100	10	5	130	258	388	40	189x242	22	75x55	11.9
TOE-160	16	8	131	275	406	52	211x256	25	90x55	23
TOE-200	20	10	140	303	443	56	228x274	25	100x60	31
TOE-300	30	15	147	322	469	70	259x305	32	110x60	47.3
TOE-500	50	25	148	333	481	90	299x347	38	150x60	77.5

PORTABLE MAINTENANCE SET

BETEX PPK, Portable Power Kits



Set PPK 4 (art.nr. 7560804)
incl. 4 t cylinder, 100 mm stroke, in portable transport case

Set PPK 10 (art.nr. 7560810)
incl. 10 t cylinder, 150 mm stroke, in portable transport 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 66, 67

Type PPK 4	Description 4 t	Type PPK 10	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.

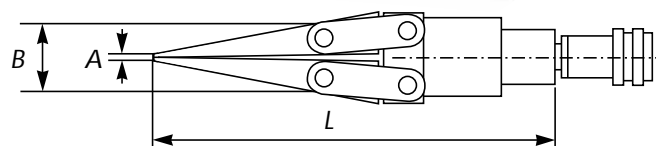
Various combination sets* available in carrying case, including:

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

TIP! Use in combination with: Betex shims, page 66, 67



15 TLS SET



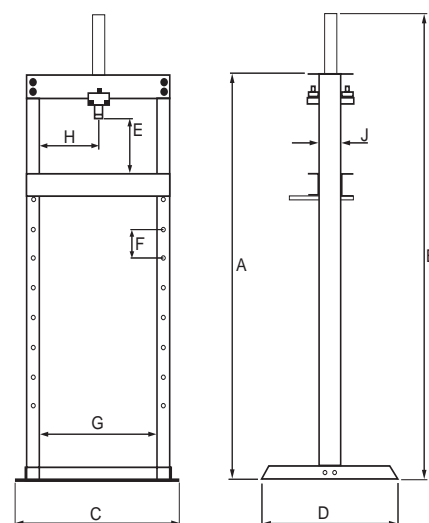
Type	Art. no.	Capacity ton	Max. spread mm	Max. pressure bar	Combined pump	A mm	B mm	L mm	Weight Kg
15TL	789170	15	10	700	single-acting	5	40	235	4
15 TLS	789150	15	10	700	single-acting	5	40	235	4
25 TLS	789250	25	16	700	single-acting	8	43	342	8

* see price list

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 en 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	Cap. * ton	Stroke mm	Type pump	Work force bar	Type cilinder	Weight kg
WSP10	10	250	hand	700	single acting	87
WSPA10	10	250	air	700	single acting	88
WSPE10	10	250	electric	700	single acting	90
WSP10HD	10	250	hand	700	single acting	87
WSPA10HD	10	250	air	700	single acting	88
WSPE10HD	10	250	electric	700	single acting	90
WSP25	25	250	hand	700	single acting	145
WSPA25	25	250	air	700	single acting	146
WSPE25	25	250	electric	700	single acting	148

*cap. up to and including 200 ton available.

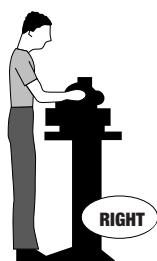


WSP shop presses are including adaptors and accessories to support work: V adaptor, V block and 2 pushing adaptors.

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.

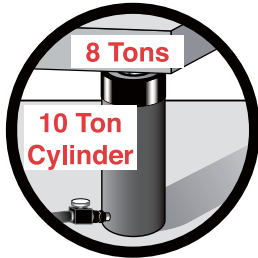
Advantages:

- 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. nr.	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

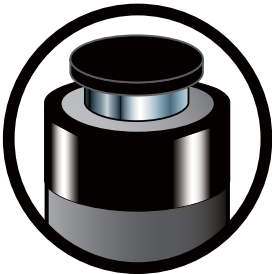
SAFETY TIPS

1. Choose the right ram.



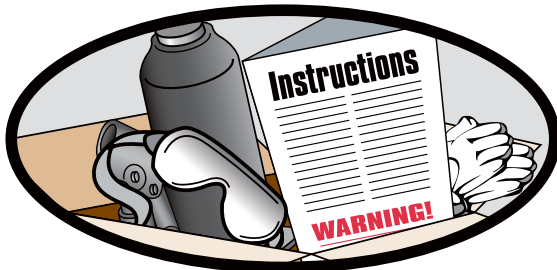
You must know the weight of what you intend to lift and choose a ram with at least 20% more capacity. Be aware of possible load shift requiring more capacity at any particular lifting point.

2. Check each component.



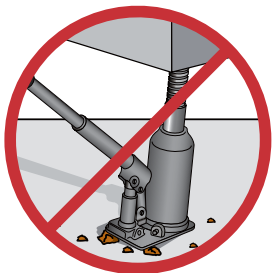
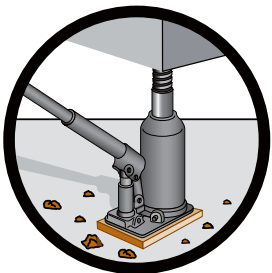
Check each component before you set up your hydraulic system. Do not use damaged or worn components. Turn them in for repair or replacement.

3. Safety instructions.



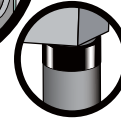
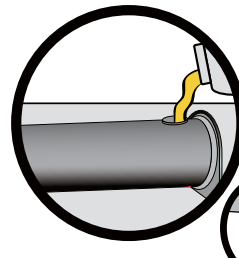
Read all warning labels and instructions. Operating instructions must be understood before using equipment. Never remove labels from equipment. Replace missing, worn or damaged labels. Always wear safety goggles and protective clothing when using hydraulic equipment.

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



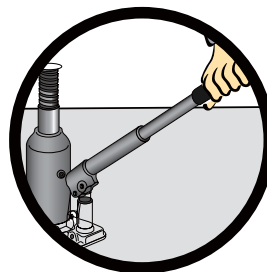
Every jack or ram, whether used individually or in a system, should be completely supported on a solid, firm, non-sliding foundation capable of supporting the load.

5. Fill oil reservoirs with cylinder retracted.



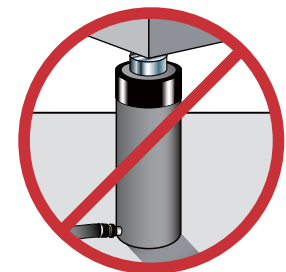
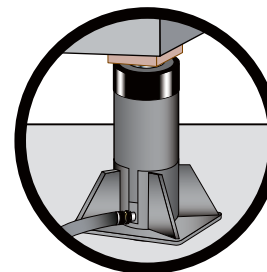
Only fill pump to recommended level; only fill when connected cylinder is fully retracted.

6. Know how your hydraulics work.



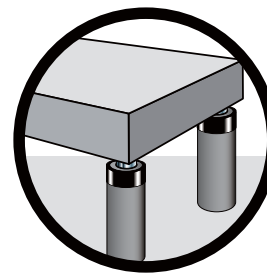
Do not use extensions or cheater bars on hydraulic jacks or hand pumps to raise a load.

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.

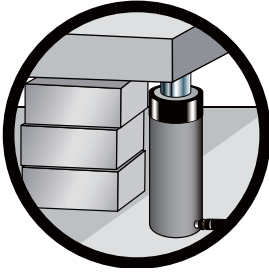
8. Distribute load evenly when using multiple rams.



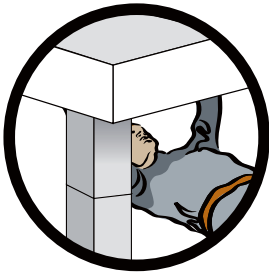
For multiple ram lifts, you must be able to determine the location and number of lifting points that will allow the load to be evenly distributed to all the rams. This is called load balance. Size, centre of gravity and load geometry must be considered in order to correctly determine load balance.

SAFETY TIPS

9. Block or crib load as it rises.

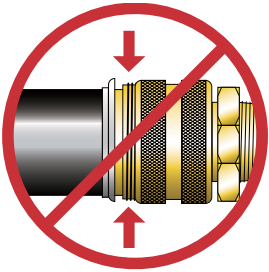
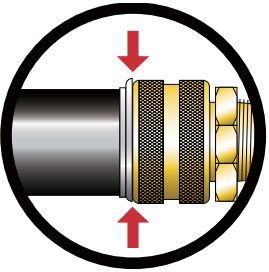


Place blocking or cribbing under the load as you raise it. Each time you raise it higher, insert more blocking. Position yourself in a manner that will keep you clear of the load, and will not allow your hands or other body parts between the load and the cribbing.



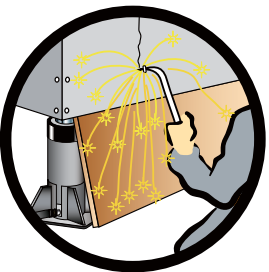
10. Do not use rams as permanent supports.

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.

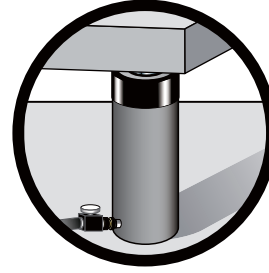
When making connections with quick couplers, make sure the couplings are fully engaged. Threaded connections, such as fittings, gauges, etc., must be securely tightened and leak free. Never use excessive tightening force that may distort the fittings or strip the thread profile.



12. Avoid extreme heat or weld splatter.

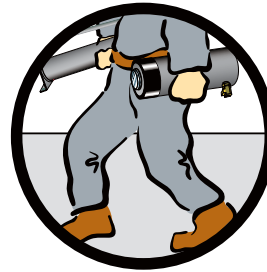
Weld splatter will damage plunger rods and hoses. Hydraulic fluid can ignite if vaporized or exposed to high temperatures.

13. Disconnecting the hydraulics.



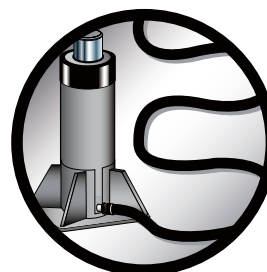
Never attempt to disconnect hydraulic hoses, fittings or couplers under pressure. Unload the ram, open the release screw on the hand pump and shift or open all hydraulic controls several times. If system includes a gauge, double check the gauge to ensure pressure has been completely released.

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.

FITTING TOOL SET

BETEX IMPACT 33

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.

IMPACT 33

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

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 coloured, to avoid mistakes.



TIP! Use in combination with: Betex induction heaters, page 64, 65

FITTING TOOL SET

BETEX IMPACT 39

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 39

- with 39 rings, suitable for ± 600 bearings.

Impact	33	39
Collet bore mm	10-50	10-60
Collet OD mm	26-110	26-130
Sleeve bore mm	32, 52	18, 32, 52, 62
Hammer	0.7 kg, absorbs shocks and vibrations	
Weigh kg	4,8	6,5



Collets are marked clearly in order to avoid mistakes.

TIP! Use in combination with: Betex induction heaters, page 64, 65

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.
- ✓ UL and CSA certification approved by TÜV.
- ✓ 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 for mounting & dismounting

BETEX MF Quick-heater



	Standard serie		TURBO serie	
3,6 kVA	Betex 22 ELD portable Min. Ø 10 mm Max. OD: 240 mm For bearings up to ±15 kg			Betex 24 RLD TURBO portable Min. Ø 10 mm Max. OD: 350 mm For bearings up to ±40 kg
3,6 kVA	Betex 22 ESD Min. Ø 15 mm Max. OD: 340 mm For bearings up to ±40 kg			Betex 24 RSD TURBO Min. Ø 15 mm Max. OD: 520 mm For bearings up to ±95 kg
8 kVA	Betex 38 ESD Min. Ø 30 mm Max. OD: 480 mm For bearings up to ±125 kg			Betex 40 RSD TURBO Min. Ø 30 mm Max. OD: 790 mm For bearings up to ±350 kg
12 kVA	Betex 38 ZFD Min. Ø 30 mm Max. OD: 720 mm For bearings up to ±280 kg			Betex 40 RMD TURBO Min. Ø 60 mm Max. OD: 920 mm For bearings up to ±600 kg
24 kVA	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
40-48- 100 kVA	Betex GIANT Min. Ø 85 mm Max. OD: 1400-2500 mm For bearings from ±1500 up to ±3500 kg			Betex GIANT TURBO Min. Ø 115 mm Max. OD: 1400-2500 mm For bearings from ± 500 up to ±12000 kg

SHIMS



Case ABCD

BETEX SOLID STAINLESS STEEL SHIMS

Pre-cut shims for fast, simple and precise machine alignment.

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



Case ABC



Case E

Your advantages:

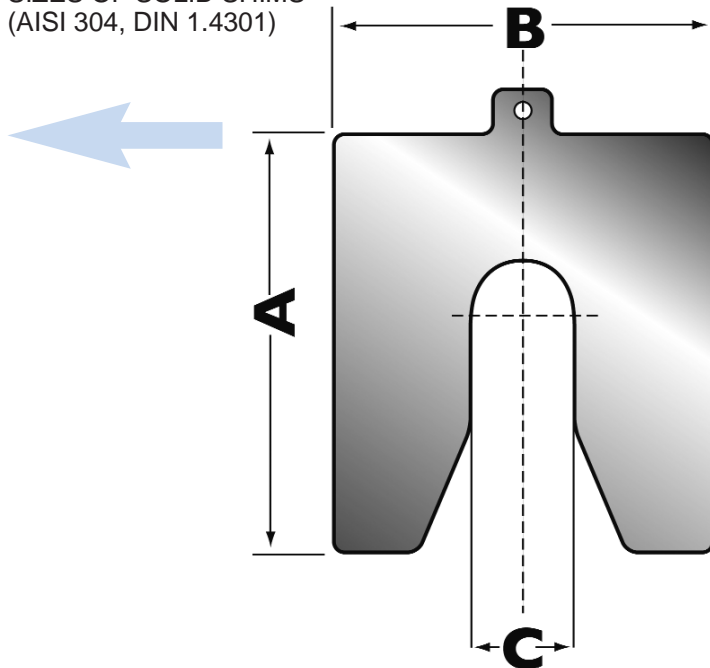
- You have the right size available for immediate use
- The shims have been smoothed and have no burrs
- Precise machine alignment helps you get the best machine performance
- Stock control is now simpler and easier to verify
- **Now also available in 2 and 3 mm thickness!**

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

Art. No.	Thickness: Case type:	Number of Shims per series / case in various sizes											Total per case
		0.025	0.05	0.10	0.20	0.25	0.40	0.50	0.70	1.00	2.00	3.00	
B020210	AB 10/9		10	10	10	10	10	10	10	10	10		180
B020230	AB 10/10		10	10	10	10	10	10	10	10	5	5	180
B020240	AB 10/11	10	10	10	10	10	10	10	10	10	5	5	200
B020220	AB 20/9		20	20	20	20	20	20	20	20	10		340
B020250	AB 20/10		20	20	20	20	20	20	20	10	5	5	320
B020260	AB 20/11	20	20	20	20	20	20	20	20	10	5	5	360
B020310	BC 10/9		10	10	10	10	10	10	10	10	10		180
B020330	BC 10/10		10	10	10	10	10	10	10	10	5	5	180
B020340	BC 10/11	10	10	10	10	10	10	10	10	10	5	5	200
B020320	BC 20/9		20	20	20	20	20	20	20	20	10		340
B020350	BC 20/10		20	20	20	20	20	20	20	10	5	5	320
B020360	BC 20/11	20	20	20	20	20	20	20	20	10	5	5	360
B020410	CD 10/9		10	10	10	10	10	10	10	10	10		180
B020430	CD 10/10		10	10	10	10	10	10	10	10	5	5	180
B020440	CD 10/11	10	10	10	10	10	10	10	10	10	5	5	200
B020420	CD 20/9		20	20	20	20	20	20	20	20	10		340
B020450	CD 20/10		20	20	20	20	20	20	20	10	5	5	320
B020460	CD 20/11	20	20	20	20	20	20	20	20	10	5	5	360
B020110	ABC 10/9		10	10	10	10	10	10	10	10	10		270
B020100	ABC 10/10		10	10	10	10	10	10	10	10	5	5	270
B020140	ABC 10/11	10	10	10	10	10	10	10	10	10	5	5	300
B020120	ABC 20/9		20	20	20	20	20	20	20	20	10		510
B020130	ABC 20/10		20	20	20	20	20	20	20	10	5	5	480
B020150	ABC 20/11	20	20	20	20	20	20	20	20	10	5	5	540
B020019	ABCD 10/9		10	10	10	10	10	10	10	10	10		360
B020030	ABCD 10/10		10	10	10	10	10	10	10	10	5	5	360
B020040	ABCD 10/11	10	10	10	10	10	10	10	10	10	5	5	400
B020029	ABCD 20/9		20	20	20	20	20	20	20	20	10		680
B020031	ABCD 20/10		20	20	20	20	20	20	20	10	5	5	640
B020032	ABCD 20/11	20	20	20	20	20	20	20	20	10	5	5	720
B020600	E 10/10		10	10	10	10	10	10	10	10	5	5	90

	Art.no.	package	A	B	C	size	bolt size
MINI	B-035-005Mn	10	35mm	30mm	9mm	0,05mm	M8
	B-035-010Mp	10	35mm	30mm	9mm	0,10mm	M8
	B-035-020Mr	10	35mm	30mm	9mm	0,20mm	M8
	B-035-025Ms	10	35mm	30mm	9mm	0,25mm	M8
	B-035-040Mt	10	35mm	30mm	9mm	0,40mm	M8
	B-035-050Mu	10	35mm	30mm	9mm	0,50mm	M8
	B-035-070Mv	10	35mm	30mm	9mm	0,70mm	M8
	B-035-100Mw	10	35mm	30mm	9mm	1,00mm	M8
A	B-050-0025Ak	10	50mm	50mm	13mm	0,025mm	M12
	B-050-005An	10	50mm	50mm	13mm	0,05mm	M12
	B-050-010Ap	10	50mm	50mm	13mm	0,10mm	M12
	B-050-020Ar	10	50mm	50mm	13mm	0,20mm	M12
	B-050-025As	10	50mm	50mm	13mm	0,25mm	M12
	B-050-040At	10	50mm	50mm	13mm	0,40mm	M12
	B-050-050Au	10	50mm	50mm	13mm	0,50mm	M12
	B-050-070Av	10	50mm	50mm	13mm	0,70mm	M12
	B-050-100Aw	10	50mm	50mm	13mm	1,00mm	M12
	B-050-200Ax	10	50mm	50mm	13mm	2,00mm	M12
	B-050-300Ay	10	50mm	50mm	13mm	3,00mm	M12
B	B-075-0025Bk	10	75mm	75mm	21mm	0,025mm	M20
	B-075-005Bn	10	75mm	75mm	21mm	0,05mm	M20
	B-075-010Bp	10	75mm	75mm	21mm	0,10mm	M20
	B-075-020Br	10	75mm	75mm	21mm	0,20mm	M20
	B-075-025Bs	10	75mm	75mm	21mm	0,25mm	M20
	B-075-040Bt	10	75mm	75mm	21mm	0,40mm	M20
	B-075-050Bu	10	75mm	75mm	21mm	0,50mm	M20
	B-075-070Bv	10	75mm	75mm	21mm	0,70mm	M20
	B-075-100Bw	10	75mm	75mm	21mm	1,00mm	M20
	B-075-200Bx	10	75mm	75mm	21mm	2,00mm	M20
	B-075-300By	10	75mm	75mm	21mm	3,00mm	M20
C	B-100-0025Ck	10	100mm	100mm	32mm	0,025mm	M30
	B-100-005Cn	10	100mm	100mm	32mm	0,05mm	M30
	B-100-010Cp	10	100mm	100mm	32mm	0,10mm	M30
	B-100-020Cr	10	100mm	100mm	32mm	0,20mm	M30
	B-100-025Cs	10	100mm	100mm	32mm	0,25mm	M30
	B-100-040Ct	10	100mm	100mm	32mm	0,40mm	M30
	B-100-050Cu	10	100mm	100mm	32mm	0,50mm	M30
	B-100-070Cv	10	100mm	100mm	32mm	0,70mm	M30
	B-100-100Cw	10	100mm	100mm	32mm	1,00mm	M30
	B-100-200Cx	10	100mm	100mm	32mm	2,00mm	M30
	B-100-300Cy	10	100mm	100mm	32mm	3,00mm	M30
D	B-125-0025Dk	10	125mm	125mm	45mm	0,025mm	M42
	B-125-005Dn	10	125mm	125mm	45mm	0,05mm	M42
	B-125-010Dp	10	125mm	125mm	45mm	0,10mm	M42
	B-125-020Dr	10	125mm	125mm	45mm	0,20mm	M42
	B-125-025Ds	10	125mm	125mm	45mm	0,25mm	M42
	B-125-040Dt	10	125mm	125mm	45mm	0,40mm	M42
	B-125-050Du	10	125mm	125mm	45mm	0,50mm	M42
	B-125-070Dv	10	125mm	125mm	45mm	0,70mm	M42
	B-125-100Dw	10	125mm	125mm	45mm	1,00mm	M42
	B-125-200Dx	10	125mm	125mm	45mm	2,00mm	M42
	B-125-300Dy	10	125mm	125mm	45mm	3,00mm	M42
E	B-200-005En	10	200mm	200mm	55mm	0,05mm	M52
	B-200-010Ep	10	200mm	200mm	55mm	0,10mm	M52
	B-200-020Er	10	200mm	200mm	55mm	0,20mm	M52
	B-200-025Es	10	200mm	200mm	55mm	0,25mm	M52
	B-200-040Et	10	200mm	200mm	55mm	0,40mm	M52
	B-200-050Eu	10	200mm	200mm	55mm	0,50mm	M52
	B-200-070Ev	10	200mm	200mm	55mm	0,70mm	M52
	B-200-100Ew	10	200mm	200mm	55mm	1,00mm	M52
	B-200-200Ex	10	200mm	200mm	55mm	2,00mm	M52
	B-200-300Ey	10	200mm	200mm	55mm	3,00mm	M52

SIZES OF SOLID SHIMS (AISI 304, DIN 1.4301)

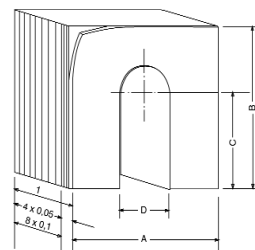


PEEL-OFF (HARD BRASS SHIMS) MS-63

- The peel-off shims are 1 mm thick and are available in 5 sizes. They consist of 12 peel-off layers (8x0.1 mm and 4x0.05 mm).
- They always fit! Simply peel off until the right thickness is obtained.

Sizes of peel-off shims

Art.no.	package	size	bolt size
8125005	10	35x35mm	M8
812502	10	50x50mm	M12
8125035	10	75x75mm	M20
812504	10	100x100mm	M30
8125045	10	125x125mm	M42



TIP!

Use in combination with:
Betex jacks pag. 54, 55
Betex Spreaders, pag. 57
Alignment computer, pag. 68-71

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. 54, 55
Betex spreaders, pag. 57
Betex shims pag. 66, 67

EASY-LASER E420 AND E530 SHAFT ALIGNMENT SYSTEM

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 E530:

- 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 E530:

- 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® E530

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® E530 is a precise and competent alignment system for your rotating machinery. Easy-Laser® E530 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
- Now also available in Atex/EX version (D130)



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 D160 DIGITAL

BTA Digital Easy-Laser D160 pulley alignment laser

Transmitter dimensions (wxdxh)	: 145 x 86 x 30 mm - 270 grams
Receiver dimensions (wxdxh)	: 95 x 95 x 35 mm - 170 grams
Display dimensions (wxdxh)	: 78 x 120 x 23 mm - 170 grams
Material	: ABS plastic / anodised aluminium
Sheave diameters	: 60 mm diameter and larger
Operating range	: maximum 3 metres digital (10 metres with targets)

Parallel and angular errors between the sheaves are given with digital precision on the receiver.

The laser is supplied complete with:

- Separate backlit display
- 1 measuring cable, length 2 metres, with push/pull connectors
- 2 magnetic targets, adjustable from -4 to +4 mm
- 2 AA 1.5V Penlight and 9V Block batteries (1 reserve set)
- Plastic case with foam insert and manual



TIP!

Use in combination with:
Betex jacks pag. 54, 55
Betex spreaders, pag. 57
Betex shims pag. 66, 67

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. 54, 55
Betex spreaders, pag. 57
Betex shims pag. 66, 67

