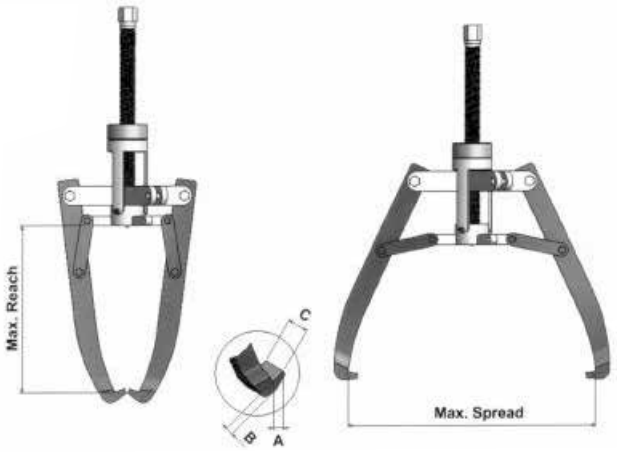
MECHANICAL PULLERS

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

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

Ergonomic design, easily operated by one person!

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



Advantages of self centering puliers:

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

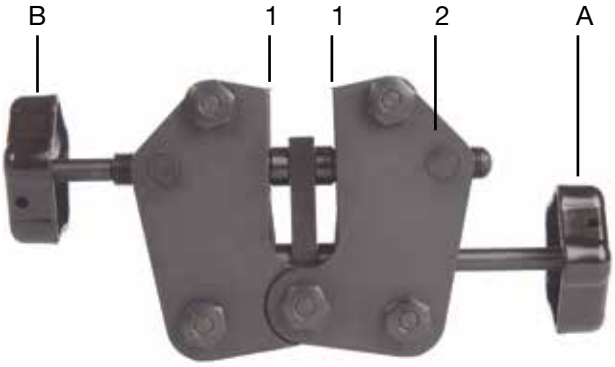
2, 3, 5, 8, 10 en 12 ton capacity!

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

Type	Art. no.	Cap. ton	Max. shaft length mm	Max. spread mm mm	A mm	B mm	C mm	Weight Kg
MSP 2/3-120	798250	2	80	120	8	6	15	1.6
MSP 2/3-180	798300	3	120	180	6	7	15	2.3
MSP 2/3-270	798350	5	160	270	11	10	25	4.3
MSP 2/3-300	798400	8	210	300	13	14	27	6.1
MSP 2/3-380	798450	10	250	380	14	10	29	9.6
MSP 2/3-440	798500	12	250	440	14	10	29	11.2

KEY-EXTRACTOR

BETEX KZZ



For professional removal of parallel keys.

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

Safe!
You no longer need a hammer and chisel.

Advantages
- Safe and fast removal.

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

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

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

MECHANICAL PULLERS

BETEX 46
Simple, handy 2-arm puller for parts gripped externally like pulleys, bearings, rings, etc. Suitable for removing fans from electric motors.
During operation the arms cannot slip because they are pressed against the cross bar. The higher the necessary pulling force, the stronger the arms are pressed against the cross bar.
One-hand operation. A spring inside the housing guarantees a continual clamping of the forged alloy steel arms.

BETEX 46 is available in 4 types

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

BETEX 47
Patented special 2-arm bearing pullers
This bearing puller is particularly suitable for extracting bearings, bearing rings etc. that **fit flushly with other parts.** This is due to the special jaws construction.
You prevent damage and save time. This system is generally applied when dismantling bearings from anchors, pump, shafts etc.

BETEX 47 is available in 3 types

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

BETEX 48/49
2/2 bearing splitters and pullers
Betex no. 48/49 is designed for dismantling flush-fitting bearings and other parts where an ordinary puller would be unable to get a proper grip.
Suitable for various applications.

BETEX 48 is available in 5 types
BETEX 49 is available in 4 types

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

MECHANICAL PULLERS

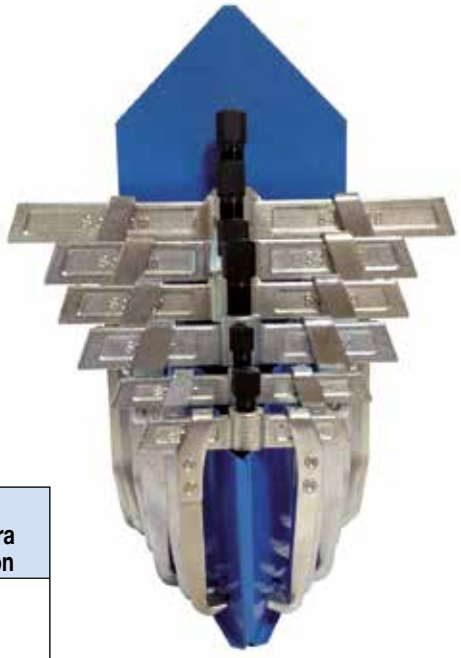
BETEX 52
Patented self-centering 3-arm pullers (mechanical and hydraulic) for diameters Ø40 mm to Ø640 mm

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

BETEX 52 with mechanical screw is available in 6 types

Type	Art. no.	Max. diam. mm	Max. shaft length: mm
52 -085	052085	85	65
52 -130	052130	130	105
52 -230	052230	230	150
52 -295	052295	295	235
52-390/394*	052390/394	390	270
52-640/644*	052640/644	640	300

* These types may be converted into hydraulic tools simply by replacing the mechanical screw and the screw-bush with a 20 ton mechanical hydraulic screw.



BETEX 54
Patented 2-arm pullers for diameters Ø40 mm to Ø350 mm

This 2-arm puller is extremely well-suited for applications involving the extraction of bearing-rings, inner rings, gear wheels, couplings etc. Reversal of the arms makes internal dismantling also possible.
The **self-locking system** guarantees that the arms will not deflect.
Extended and extra-extended arms can be supplied for long shafts.

BETEX 54 with standard arm length is available in 6 types

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

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

MECHANICAL PULLERS

BETEX 56
Internal 4-arm bearing pullers with interchangeable claws (in case) for total 66 bearings up to Ø105 mm
This 4-arm bearing puller has been specially developed to extract ball-bearings from casings and shafts using a single action. The 6000, 6200, 6300 and 6400 series are used most commonly. These three sets of pullers will remove 66 different ball-bearings from Ø10 up to Ø105 mm shafts.

BETEX 56 is available in 3 sets

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

BETEX 44
Hydraulic 8/15 tons mini-press
When using mechanical screws, much of the force is lost as a result of the friction caused by the thread. This minipress administers a 'shock' to the part which is to be extracted. This enables optimal use to be made of BETEX pullers 52 and 54, without loss of force or wear and tear to screws. Note: may be used from 49-200, 52-230 and 54-300 and upwards.

BETEX 44 is available in 2 types

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

BETEX 625/630
Shaft protector sets for shaft centers and hollow shafts
These shaft protectors are indispensable between shaft and bearing puller while dismantling bearings, couplings etc.
There are two types: 625 for protecting shaft centers and 630 for hollow shafts.
Use of shaft protectors prevents:
- distortion to the shaft centers and the screw
- puller overload due to tilting (e.g. the 3-arm puller 52)

BETEX 625 consists of a 6-piece set

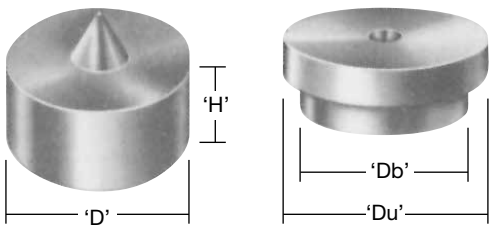
'D' min.	=	Ø 19 mm	'H' min.	=	Ø 16 mm
'D' max.	=	Ø 38 mm	'H' max.	=	Ø 19 mm

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

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

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

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



MECHANICAL PULLERS

BETEX 62
Internal expander-puller up to a bore of Ø150 mm
This special expander system has been developed to facilitate rapid and effective dismantling under difficult conditions, e.g. in 'blind holes'. The multiple adjustable jaws (up to 6) ensure the correct grip from behind the bearing, bush etc. Deflection is impossible.
The counter supports are universal, which means that the arms can be twisted in any direction to find the best point of pressure.
The marger type are equipped with a conical puller adapter in the expander, which prevents friction when tightening the screw.
Bearings, bushings, sealing rings etc. are extracted effortlessly.

Larger and longer sizes on request.

BETEX 62 is available in 3 sets
Set 62/105 comes in a free carrying case

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

* = set 1 62-101
** = set 2 62-201
*** = set 3 62-301
**** = combination set 62-105, including free carrying case

BETEX 62-9
Slide hammer puller, used in combination with internal expander puller.
Weight: 0.9 kg
2 sizes with strokes of 90 mm and 300 mm
2 connecting threads (M10 and M14x1.5)
The advantage of the slide hammer puller is that it can be used independently from any supporting face.
After positioning the internal puller the slide hammer is connected through the hexagon adaptor.
We recommend:
up to bore diameter 39.5 mm no. 62-9092
up to bore diameter 79.5 mm no. 62-9392

MECHANICAL PULLERS

BETEX 63, 64 / TRACTA
These systems are unique and suitable for difficult dismounting jobs of roller bearings.

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

BETEX 63, 64 / TRACTA

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

Larger models on request

BETEX 63 BETEX 64

MECHANICAL PULLERS

Collets for BETEX 63, 64 / TRACTA

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

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

Principle 1: grip on inner bearing ring. Bearing is dismantled in one act, from shaft and bearing house.

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

Principle 1

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

Example: wheel bearings, tapered bearings.

Principle 2

Principle 3: grip on inner bearing ring.

Example: tapered roller bearings.

Principle 3

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

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

Principle 4