



TOX®-FinePress

- Toggle Presses
- Rack and Pinion Presses
- Pneumatic Presses
- Pneumatic Presses
with manual approach



TOX®-FinePress

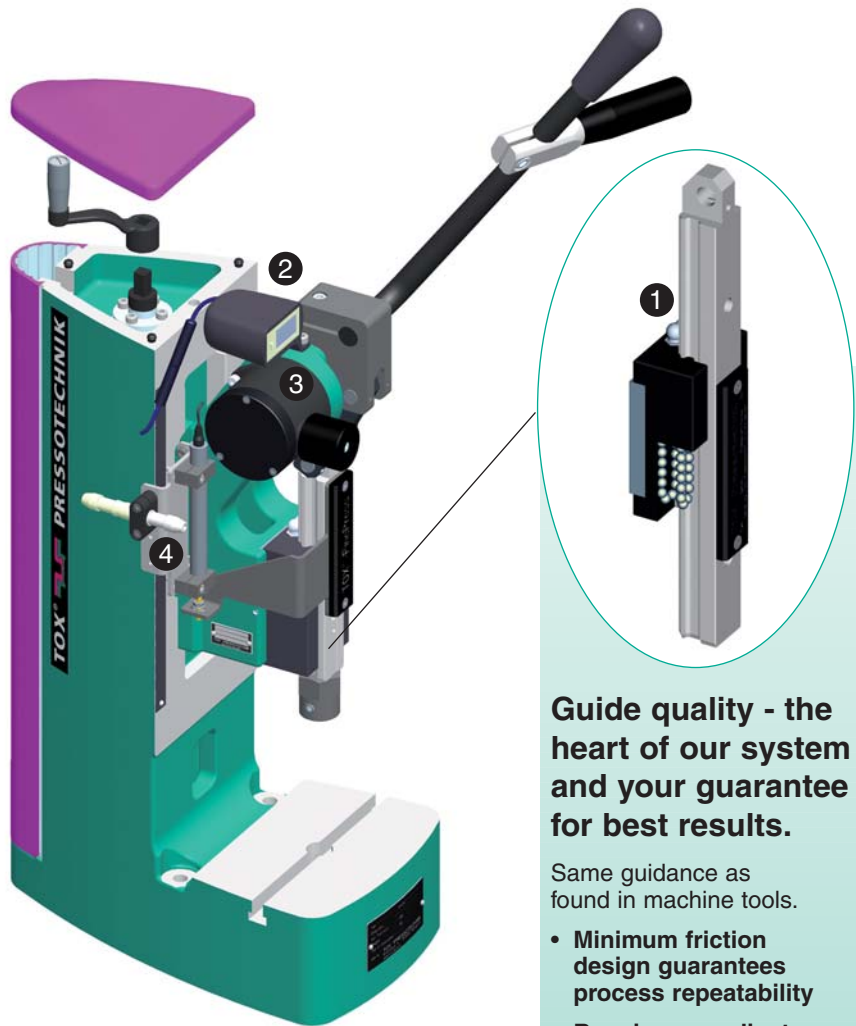
Functional design + noticeable quality = motivated workers = your success!

The Assignment:

- increase productivity
- assure quality
- save on investment

The Solution: TOX®-FinePress

- **Flexibility**
 - extensive program
 - ample accessories
 - quick tool change
 - 360° adjustable pull handle
- **Quality**
 - precise linear ram guide
 - smooth operation
 - robust design
 - rigid cast steel frames
 - Press Monitor available
- **Value**
 - best price / performance ratio
 - all accessories retrofittable
 - worldwide TOX® service
 - 12 months warranty
 - TOX®-Presses are safe: they meet all European standards and guidelines. Turnkey machines are CE conforming.



Picture shows optional accessories.

Guide quality - the heart of our system and your guarantee for best results.

Same guidance as found in machine tools.

- **Minimum friction design guarantees process repeatability**
- **Requires no adjustment of guide rail preload.**

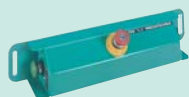
Small Presses 2 – 57.5 kN (450 – 12,900 lbf)

- ① Ball rail guide for ram
- ② Electric counter
- ③ Return stroke lock
- ④ Travel sensor

- Additional Accessories:**
- + Tool fixture
 - + Fine stroke adjustment
 - + Side grip
 - + Machine bases
 - + Slide tables
 - + Electric/pneumatic controls
 - + Press monitor with sensors

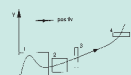
**TOX®-FinePress:
The expandable,
economical program**

TOX®-Pneumatic-Controls

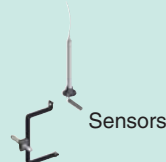


Pneumatic 2-hand safety controls for Pneumatic Presses

TOX®-Pressing-Monitoring with Sensors



TOX® Force-Travel Press Monitor



Sensors



Optional and retrofittable for all presses.

TOX®-FinePress

Small press program from 2 – 57.5 kN
(450 – 12,900 lbf).

The right size for every application

| Standard S | Larger open height L | Larger throat depth W |
|----------------------|--------------------------------|---------------------------------|
|----------------------|--------------------------------|---------------------------------|

Toggle Presses KF

- Minimum operator effort
- High press forces

See page 4/5.



Rack and Pinion Presses ZF

- Constant press force
- Minimum effort for hand lever
- High press forces

See page 6/7.



Pneumatic Presses PF

- Multi-stage-pneumatic
- Standard stroke adjustment
- Optional: position or travel sensor

See page 8/9.



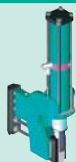
Pneumatic Presses with manual approach PFH

- with Hand-lever toggle mechanism for approach stroke
- Pneumatic power stroke
- in compliance with the EC type examination certificate

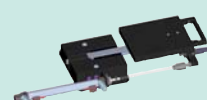
See page 10/11.



Our extensive accessories program provides many options.



All press heads are separately available.



Slide tables



Tool fixture



Return stroke lock

Constant press stroke: Return stroke is released only after the ram has reached the selected end position.

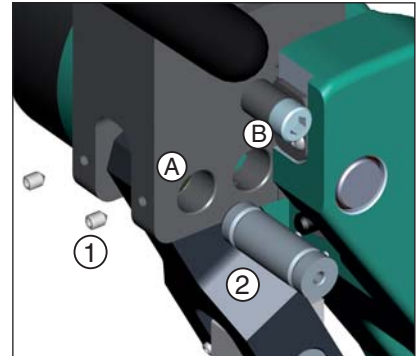
More accessories on page 11.

Optional Accessories

- 1 Ergonomic side grip.
- 2 Electric counter, long life battery operated.
- 3 Return stroke lock. Includes retract spring for toggle presses.
- 4 Travel sensor.
- 5 Tool fixture. Also available with 3-in-1 tool clamping concept, with or without force sensor, or with fine micrometer adjustment for precise setting of the bottom end position.
- 6 Standardized interface for all electrical sensors.

More accessories:
Press monitor

Mounting of slide tables according to frame type.

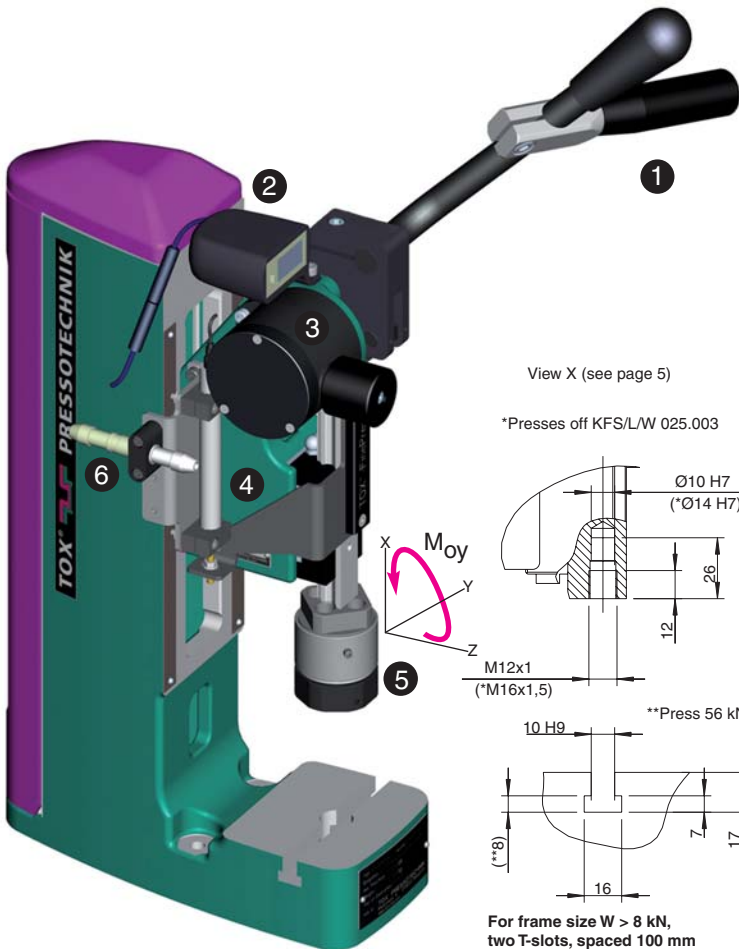


Changing the force-travel-characteristic

A change in the characteristic of force and travel is possible by simple repositioning of the toggle lever:

- Remove set screw ①
- Remove bolt ②. Bolt has tapped hole to facilitate removal
- Reposition bolt from A to B
- Install set screw ① in correct location to secure bolt

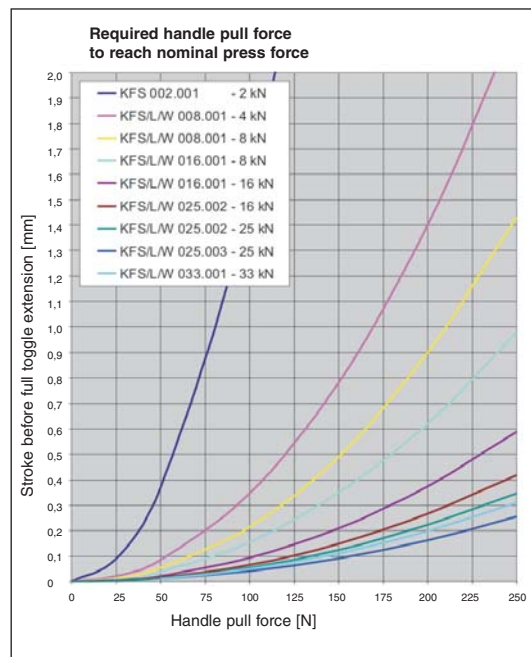
Caution: changing the press force also results in a change of the working stroke (see Tables for Force/Travel ranges).



View X (see page 5)

*Presses off KFS/L/W 025.003

Press force diagram



Picture shows optional accessories.

TOX®-FinePress

Custom made system

For additional dimensional information, please visit us at www.tox-en.com

Toggle Presses 2 – 33 kN (450 – 7,400 lbf), high precision, no guide adjustment required, non-rotating ram. Distinguishable TOX®-FinePress Quality!

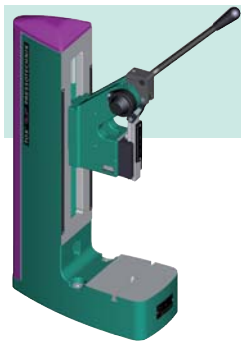
Toggle Presses with standard frame size Type S



| Order No. | max. press force | | max. allowable handle pull force [N] | max. stroke A | Return force [N] | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection * | Moy allow. moment [Nm] | E Ø | F | G | H |
|-------------|------------------|------------|--------------------------------------|----------------|------------------|-----|--------|-----|-----|---------|-----|-------------------|-------------|-------------------|------------------------|-----|----|-----|-----|
| | [kN] | [tons] | | | | | | | | | | | | | | | | | |
| KFS 002.001 | 2,5 | 0.3 | 50 | 42 | 30 | 90 | 70-200 | 55 | 465 | 110x90 | 260 | 20 | 22,5 | 0,05 | 25 | 9 | 72 | 203 | 76 |
| KFS 008.001 | (4) 8 | 0.5 0.9 | 220 | (55,7) 23,1 | (26) 60 | 95 | 70-220 | 80 | 535 | 130x110 | 285 | 20 | 32 | 0,10 | 25 | 9 | 78 | 214 | 94 |
| KFS 016.001 | (8) 16 | 0.9 1.8 | 220 | (45) 20,15 | (12) 45 | 95 | 65-200 | 90 | 555 | 185x120 | 319 | 20 | 45 | 0,25 | 25 | 11 | 79 | 236 | 130 |
| KFS 025.002 | (16) 25 | 1.8 2.8 | 220 | (60) 25,3 | (5) 35 | 95 | 65-200 | 90 | 555 | 185x120 | 319 | 20 | 45 | 0,25 | 25 | 11 | 79 | 236 | 130 |
| KFS 025.003 | 25 | 2.8 | 250 | 60 | 30 | 105 | 60-220 | 110 | 615 | 200x150 | 379 | 25 | 68,5 | 0,25 | 70 | 11 | 84 | 269 | 140 |
| KFS 033.001 | 33 | 3.7 | | 30 | 70 | 105 | 50-210 | 110 | 615 | 200x150 | 379 | 25 | 68,5 | 0,25 | 70 | 11 | 84 | 269 | 140 |

All dimensions in mm. *Press head in uppermost position () = for alternative toggle lever position

Toggle Presses with increased open height Type L



| Order No. | max. press force | | max. allowable handle pull force [N] | max. stroke A | Return force [N] | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection * | Moy allow. moment [Nm] | E Ø | F | G | H |
|-------------|------------------|------------|--------------------------------------|----------------|------------------|-----|--------|-----|-----|---------|-----|-------------------|-------------|-------------------|------------------------|------|-----|-----|-----|
| | [kN] | [tons] | | | | | | | | | | | | | | | | | |
| KFL 008.001 | (4) 8 | 0.5 0.9 | 220 | (55,7) 23,1 | (26) 60 | 120 | 70-340 | 95 | 674 | 150x125 | 339 | 20 | 45,5 | 0,10 | 25 | 9 | 94 | 263 | 110 |
| KFL 016.001 | (8) 16 | 0.9 1.8 | 220 | (45) 20,15 | (12) 45 | 165 | 65-415 | 115 | 800 | 200x180 | 439 | 20 | 83 | 0,40 | 25 | 11 | 120 | 330 | 144 |
| KFL 025.002 | (16) 25 | 1.8 2.8 | 220 | (60) 25,3 | (5) 35 | 165 | 70-415 | 115 | 800 | 200x180 | 439 | 20 | 83,5 | 0,45 | 25 | 11 | 120 | 330 | 144 |
| KFL 025.003 | 25 | 2.8 | 250 | 60 | 30 | 200 | 60-420 | 125 | 820 | 240x220 | 534 | 25 | 120 | 0,45 | 70 | 13,5 | 158 | 405 | 164 |
| KFL 033.001 | 33 | 3.7 | | 30 | 70 | 200 | 55-415 | 125 | 820 | 240x220 | 534 | 25 | 120 | 0,45 | 70 | 13,5 | 158 | 405 | 164 |

All dimensions in mm. *Press head in uppermost position () = for alternative toggle lever position

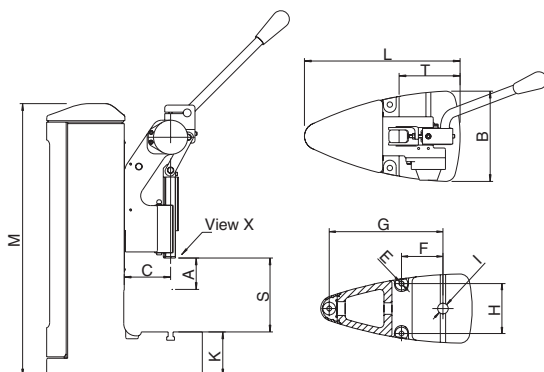
Toggle Presses with increased throat depth Type W



| Order No. | max. press force | | max. allowable handle pull force [N] | max. stroke A | Return force [N] | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection * | Moy allow. moment [Nm] | E Ø | F | G | H |
|-------------|------------------|------------|--------------------------------------|----------------|------------------|-----|---------|-----|-----|---------|-----|-------------------|-------------|-------------------|------------------------|------|-----|-----|-----|
| | [kN] | [tons] | | | | | | | | | | | | | | | | | |
| KFW 008.001 | (4) 8 | 0.5 0.9 | 220 | (55,7) 23,1 | (26) 60 | 300 | 210-360 | 150 | 745 | 200x200 | 624 | 20 | 103 | 0,20 | 25 | 13,5 | 145 | 500 | 100 |
| KFW 016.001 | (8) 16 | 0.9 1.8 | 220 | (45) 20,15 | (12) 45 | 300 | 195-325 | 180 | 775 | 240x230 | 654 | 20 | 165 | 0,30 | 25 | 13,5 | 145 | 520 | 100 |
| KFW 025.002 | (16) 25 | 1.8 2.8 | 220 | (60) 25,3 | (5) 35 | 300 | 205-325 | 180 | 775 | 240x230 | 654 | 20 | 165 | 0,35 | 25 | 13,5 | 145 | 520 | 100 |
| KFW 025.003 | 25 | 2.8 | 250 | 60 | 30 | 300 | 190-340 | 190 | 805 | 300x250 | 674 | 25 | 197 | 0,35 | 70 | 13,5 | 160 | 530 | 100 |
| KFW 033.001 | 33 | 3.7 | | 30 | 70 | 300 | 185-335 | 190 | 805 | 300x250 | 674 | 25 | 197 | 0,35 | 70 | 13,5 | 160 | 530 | 100 |

All dimensions in mm. *Press head in uppermost position () = for alternative toggle lever position

C = Throat depth
S = Open height, adjustable
E = Mounting bore



Ordering example:

KFS 008.001 + options e.g.
 Version
 Max. press force
 Toggle Press
 frame Type S
+ ZR-L2.001
 Return stroke lock
+ ZEZ 001
 Counter

Please order all other accessories and controls separately.

Note: The press heads of this series are separately available. Prices upon request.

Optional Accessories

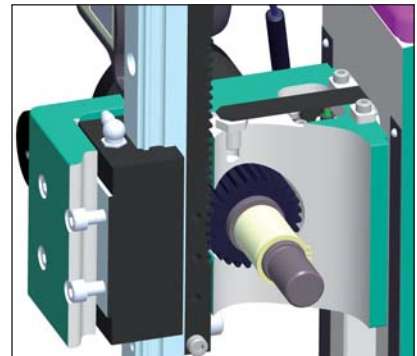
- 1 Ergonomic side grip.
- 2 Electric counter, long life battery operated.
- 3 Return stroke lock.
- 4 Travel sensor.
- 5 Tool fixture. Also available with 3-in-1 tool clamping concept, with or without force sensor.
- 6 Standardized interface for all electrical sensors.

More accessories:

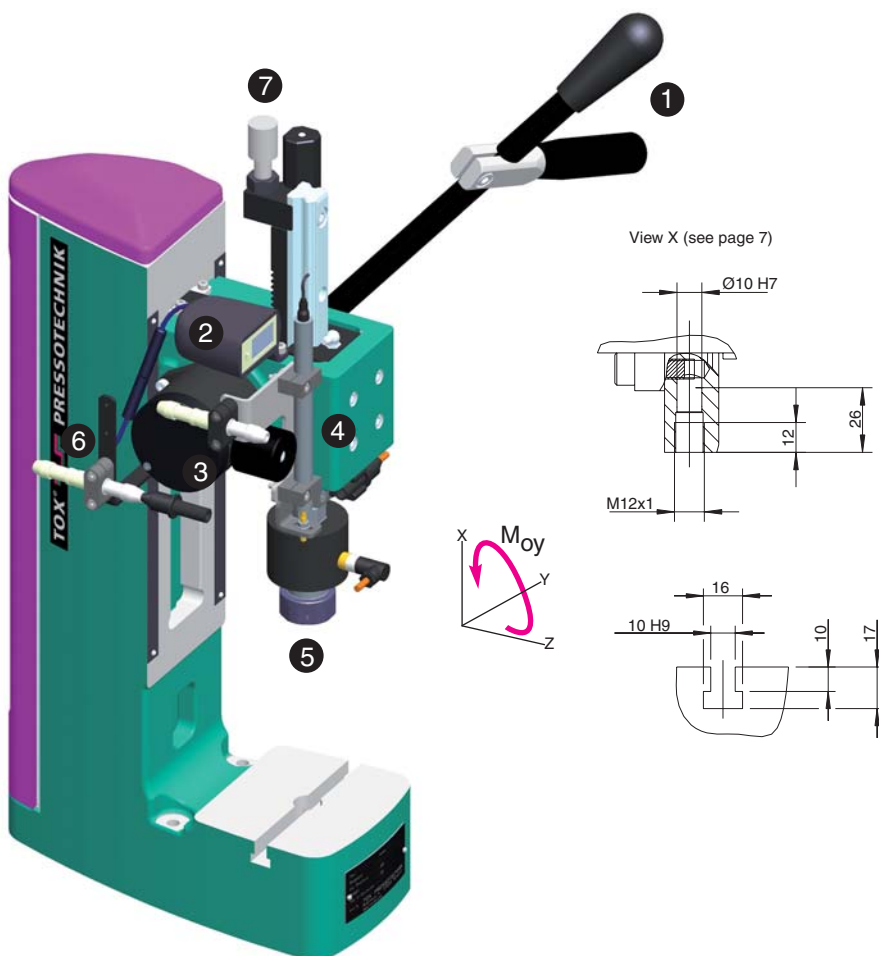
Press monitor
 Mounting of slide tables according to frame type.

Scope of delivery:

- 7 Stop screw for precise end of stroke adjustment.



The Rack and Pinion presses transmit the pull force on the lever into a high force at the ram.



Constant press force throughout the entire stroke.

Picture shows optional accessories.

TOX®-FinePress

For additional dimensional information, please visit us at www.tox-en.com

Custom made system

Rack and Pinion Presses from 2.5 – 4 kN (560 – 900 lbf), high precision, no guide adjustment required, non-rotating ram. Distinguishable TOX®-FinePress Quality!

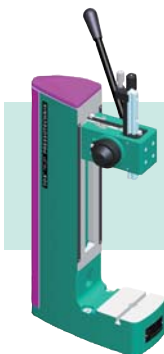
Rack and Pinion Presses with standard frame size Type S



| Order No. | max. press force | | Handle pull force [N] | max. stroke over lever rotation A | Return force [N] | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection * | Moy allow. moment [Nm] | E Ø | F | G | H |
|-----------|------------------|--------|-----------------------|-----------------------------------|------------------|----|--------|----|-----|---------|-----|-------------------|-------------|-------------------|------------------------|-----|----|-----|----|
| | [kN] | [tons] | | | | | | | | | | | | | | | | | |
| ZFS 002 | 2,5 | 0.3 | 200 | 60/228° | 60 | 90 | 55-190 | 55 | 465 | 110x90 | 260 | 20 | 22 | 0,05 | 25 | 9 | 72 | 203 | 76 |
| ZFS 004 | 4 | 0.5 | 300 | 80/218° | 60 | 95 | 80-230 | 80 | 535 | 130x110 | 285 | 20 | 33 | 0,05 | 25 | 9 | 78 | 214 | 94 |

All dimensions in mm. *Press head in uppermost position

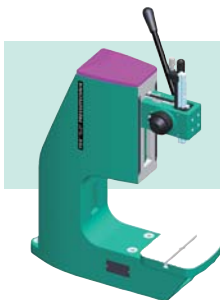
Rack and Pinion Presses with increased open height Type L



| Order No. | max. press force | | Handle pull force [N] | max. stroke over lever rotation A | Return force [N] | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection * | Moy allow. moment [Nm] | E Ø | F | G | H |
|-----------|------------------|--------|-----------------------|-----------------------------------|------------------|-----|--------|----|-----|---------|-----|-------------------|-------------|-------------------|------------------------|-----|----|-----|-----|
| | [kN] | [tons] | | | | | | | | | | | | | | | | | |
| ZFL 004 | 4 | 0.5 | 300 | 80/218° | 60 | 120 | 85-355 | 95 | 674 | 150x125 | 339 | 20 | 47 | 0,05 | 25 | 9 | 94 | 263 | 110 |

All dimensions in mm. *Press head in uppermost position

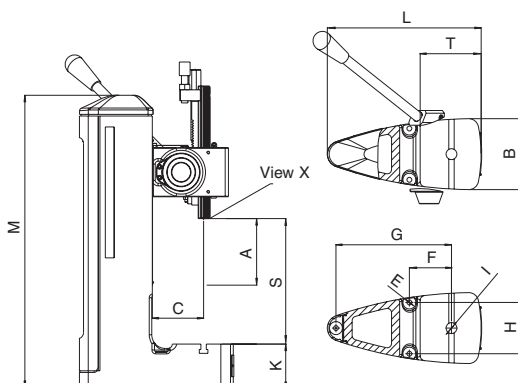
Rack and Pinion Presses with increased throat depth Type W



| Order No. | max. press force | | Handle pull force [N] | max. stroke over lever rotation A | Return force [N] | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection * | Moy allow. moment [Nm] | E Ø | F | G | H |
|-----------|------------------|--------|-----------------------|-----------------------------------|------------------|-----|---------|-----|-----|---------|-----|-------------------|-------------|-------------------|------------------------|------|-----|-----|-----|
| | [kN] | [tons] | | | | | | | | | | | | | | | | | |
| ZFW 004 | 4 | 0.5 | 300 | 80/218° | 60 | 300 | 225-370 | 150 | 745 | 200x200 | 624 | 20 | 104 | 0,05 | 25 | 13,5 | 145 | 500 | 100 |

All dimensions in mm. *Press head in uppermost position

C = Throat depth
S = Open height, adjustable
E = Mounting bore



Ordering example:

ZFS 004 + options e.g. + ZR-L2.001
 Max. press force Rack and Pinion Press frame Type S
 Return stroke lock
 + ZEZ 001
 Counter

Please order all other accessories and controls separately.

Note: The press heads of this series are separately available. Prices upon request.

Optional Accessories

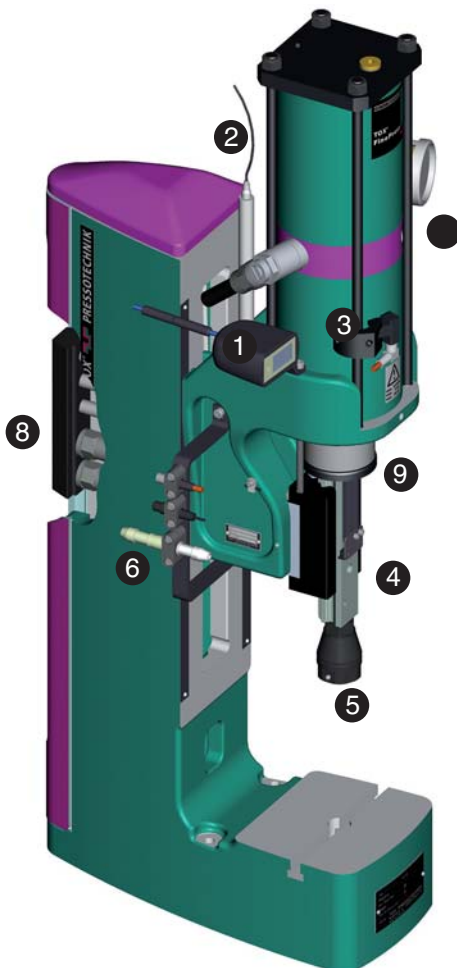
- 1 Electric counter, long life battery operated incl. pressure switch.
 - 2 Travel sensor.
 - 3 Home position sensor mounted on tie rods.
 - 4 End position sensor with stroke adjustment. No sensor adjustment required if stroke is adjusted.
 - 5 Tool fixture. Also available with 3-in-1 tool clamping concept, with or without force sensor.
 - 6 Standardized interface for all electrical sensors.
- More accessories:**
Press monitor
- Mounting of slide tables according to frame type.
- Scope of delivery:**
- 7 Adjustable end position damping.
 - 8 Clean plumbing. Air connections integrated on frame.
 - 9 Stroke adjustment over entire travel.

Integrated Accessories



Option: sensor for bottom end position.
Order No.: ZUT 000

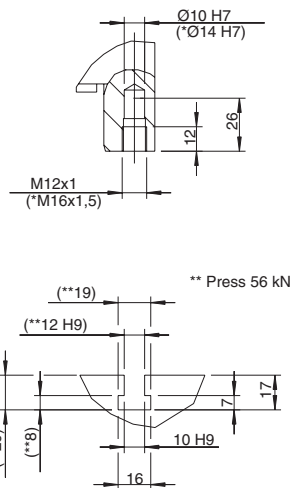
The TOX® Pneumatic Cylinder features the latest seal technology for smooth, trouble-free operation. These seals result in simpler service and more reliable operation than pneumatic cylinders with flat seals.



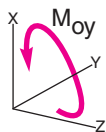
Picture shows optional accessories.

View X (see page 9)

*Presses > 13,5 kN



For frame size $W > 8\ kN$, two T-slots, spaced 100 mm



TOX®-FinePress

For additional dimensional information, please visit us at www.tox-en.com

Custom made system

Pneumatic Presses from 2 – 57.5 kN (450 – 12,900 lbf), high precision, no guide adjustment required, non-rotating ram. Distinguishable TOX®-FinePress Quality!



Pneumatic Presses with standard frame size Type S

| Order No. | max. press-force** [kN] [tons] | max. stroke A | max. return force [kN] at 6 bar | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection* [Nm] | Moy allow. moment [Nm] | E Ø | F | G | H | J |
|-----------|-----------------------------------|------------------|------------------------------------|----|--------|----|-----|--------|-----|-------------------------|----------------|--------------------------|---------------------------|--------|----|-----|----|-----|
| PFS 002 | 2 0.2 | 80 | 1 | 90 | 70-125 | 55 | 465 | 110x90 | 260 | 20 | 25 | 0,05 | 25 | 9 | 72 | 203 | 76 | 1/4 |

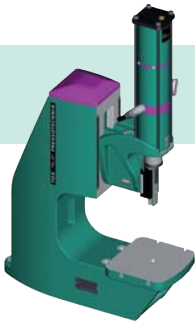
All dimensions in mm. *Press head in uppermost position
**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)



Pneumatic Presses with increased open height Type L

| Order No. | max. press-force** [kN] [tons] | max. stroke A | max. return force [kN] at 6 bar | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection* [Nm] | Moy allow. moment [Nm] | E Ø | F | G | H | J |
|-----------|-----------------------------------|------------------|------------------------------------|----|---------|-----|-----|---------|-----|-------------------------|----------------|--------------------------|---------------------------|--------|-----|-----|-----|-----|
| PFL 004 | 4,0 0.5 | 80 | 120 | 1 | 100-295 | 95 | 674 | 150x125 | 339 | 20 | 51 | 0,15 | 25 | 9 | 94 | 263 | 110 | 1/4 |
| PFL 008 | 8,5 1.0 | 80 | 120 | 4 | 70-270 | 95 | 674 | 150x125 | 339 | 20 | 57 | 0,20 | 25 | 9 | 94 | 263 | 110 | 1/2 |
| PFL 013 | 13,5 1.5 | 80 | 165 | 4 | 75-370 | 115 | 800 | 200x180 | 439 | 20 | 96 | 0,50 | 25 | 11 | 120 | 330 | 144 | 1/2 |
| PFL 022 | 22,5 2.5 | 80 | 165 | 11 | 90-370 | 115 | 800 | 200x180 | 439 | 20 | 116 | 0,45 | 70 | 11 | 120 | 330 | 144 | 1/2 |
| PFL 033 | 34,5 3.8 | 80 | 200 | 11 | 95-380 | 125 | 820 | 240x220 | 534 | 25 | 150 | 0,45 | 70 | 13,5 | 158 | 405 | 164 | 1/2 |
| PFL 056 | 57,5 6.4 | 80 | 240 | 11 | 95-385 | 160 | 860 | 260x220 | 614 | 30 | 227 | 0,85 | 70 | 13,5 | 178 | 487 | 190 | 1/2 |

All dimensions in mm. *Press head in uppermost position
**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)



Pneumatic Presses with increased throat depth Type W

| Order No. | max. press-force** [kN] [tons] | max. stroke A | max. return force [kN] at 6 bar | C | S | K | M | BxT | L | Table bore I Ø H7 | Weight [kg] | max. deflection* [Nm] | Moy allow. moment [Nm] | E Ø | F | G | H | J |
|-----------|-----------------------------------|------------------|------------------------------------|-----|---------|-----|-----|---------|-----|-------------------------|----------------|--------------------------|---------------------------|--------|-----|-----|-----|-----|
| PFW 004 | 4,0 0.5 | 80 | 1 | 300 | 240-310 | 150 | 745 | 200x200 | 624 | 20 | 107 | 0,20 | 25 | 13,5 | 145 | 500 | 100 | 1/4 |
| PFW 008 | 8,5 1.0 | 80 | 4 | 300 | 210-285 | 150 | 745 | 200x200 | 624 | 20 | 114 | 0,25 | 25 | 13,5 | 145 | 500 | 100 | 1/2 |
| PFW 013 | 13,5 1.5 | 80 | 4 | 300 | 210-280 | 180 | 775 | 240x230 | 654 | 20 | 177 | 0,45 | 25 | 13,5 | 145 | 520 | 100 | 1/2 |
| PFW 022 | 22,5 2.5 | 80 | 11 | 300 | 225-280 | 180 | 775 | 240x230 | 654 | 20 | 198 | 0,35 | 70 | 13,5 | 145 | 520 | 100 | 1/2 |
| PFW 033 | 34,5 3.8 | 80 | 11 | 300 | 225-300 | 190 | 805 | 300x250 | 674 | 25 | 226 | 0,35 | 70 | 13,5 | 160 | 530 | 100 | 1/2 |
| PFW 056 | 57,5 6.4 | 80 | 11 | 355 | 215-295 | 215 | 825 | 300x280 | 789 | 30 | 303 | 0,65 | 70 | 13,5 | 210 | 625 | 130 | 1/2 |

All dimensions in mm. *Press head in uppermost position
**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)

C = Throat depth
S = Open height, adjustable
J = Connection [inch]
E = Mounting bore

Ordering example:

PFL 004 + options e.g.

Max. press force
Pneumatic Press
frame type L

+ ZUT 000

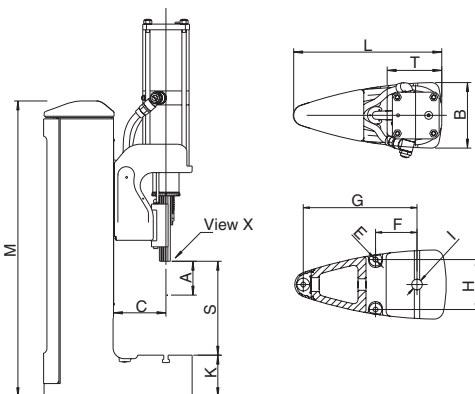
End position
sensor

+ ZPZ 001

Counter

+ STP 03-10

2-hand
safety
controls



Please order all other accessories and controls separately.

Note: The press heads of this series are separately available. Prices upon request.

Optional Accessories

- 1 Electric counter, long life battery operated incl. pressure switch.
- 2 Travel sensor.
- 3 Tool fixture. Also available with 3-in-1 tool clamping concept, with or without force sensor.

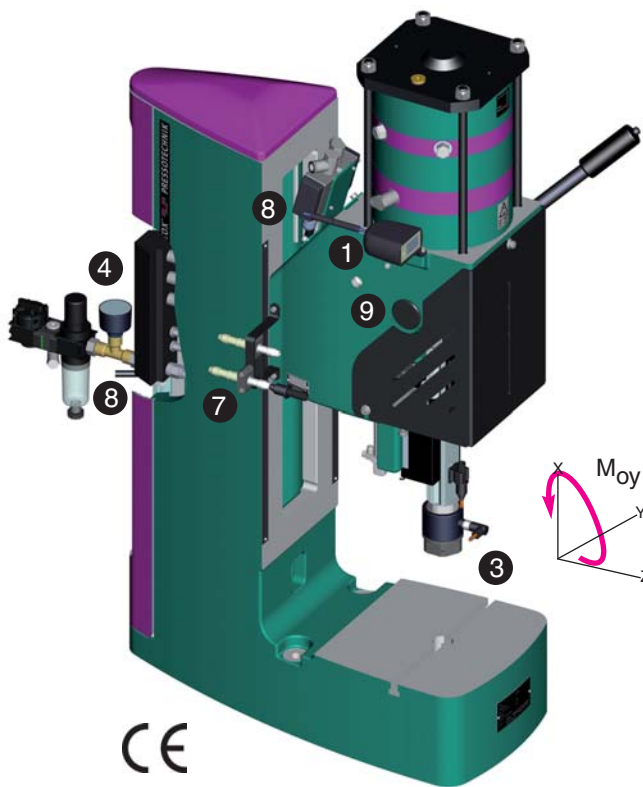
More accessories:
 Press monitor
 Mounting of slide tables according to frame type.

Scope of delivery:

- 4 Clean plumbing. Air connections integrated on frame.
- 5 Fine stroke adjustment during power stroke (6 mm).
- 6 Return force/tool weight is infinitely adjustable.
- 7 Standard interface for all electrical sensors.
- 8 Controls completely integrated on frame, including air servicing unit.
- 9 The hand lever can be mounted on left side too for all models.

Function:

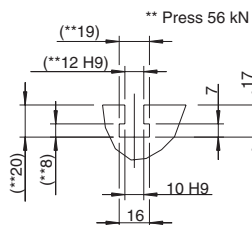
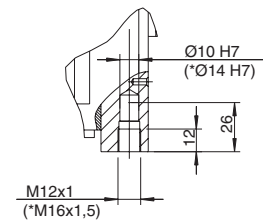
The press ram is moved forward over a toggle mechanism by pulling on the hand lever. Pressing the start button on the lever, after a limit switch is tripped, results in a 6 mm long pneumatic power stroke. Releasing the lever or the start button ends the power stroke.



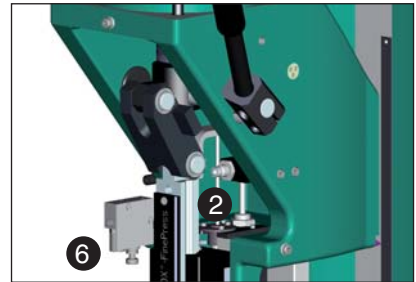
Picture shows optional accessories.

View X (see page 11)

* Presses > 13,5 kN



** Press 56 kN
 For frame size W > 8 kN, two T-slots, spaced 100 mm

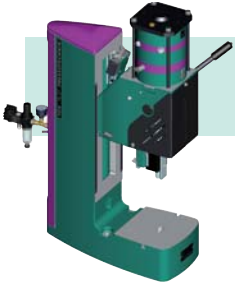


TOX®-FinePress

For additional dimensional information, please visit us at www.tox-en.com

Custom made system

Pneumatic Presses with hand lever toggle mechanism for 54 mm approach stroke and max. 6 mm power stroke. From 8.5 – 57.5 kN (1,900 – 12,900 lbf), high precision, no guide adjustment required, non-rotating ram. Distinguishable TOX®-FinePress Quality!



Pneumatic Presses with increased open height Type L

| Order No. | max. press-force** | | max. stroke | max. return force | C | S | K | M | BxT | L | Table bore I | Weight | max. deflection* | Moy allow. moment | E | F | G | H | J |
|-----------|--------------------|--------|-------------|-------------------|-----|--------|-----|-----|---------|-----|--------------|--------|------------------|-------------------|------|-----|-----|-----|-----|
| | [kN] | [tons] | A | [N]** | | | | | | | Ø H7 | [kg] | [mm] | [Nm] | Ø | | | | |
| PFHL 008 | 8,5 | 1.0 | 60 | 85 | 120 | 30-265 | 95 | 674 | 150x125 | 339 | 20 | 61 | 0,10 | 25 | 9 | 94 | 263 | 110 | 1/4 |
| PFHL 013 | 13,5 | 1.5 | 60 | 85 | 165 | 35-375 | 115 | 800 | 200x180 | 439 | 20 | 95 | 0,20 | 25 | 11 | 120 | 330 | 144 | 1/4 |
| PFHL 022 | 22,5 | 2.5 | 60 | 73 | 165 | 25-330 | 115 | 800 | 200x180 | 439 | 20 | 120 | 0,35 | 70 | 11 | 120 | 330 | 144 | 1/4 |
| PFHL 033 | 34,5 | 3.8 | 60 | 73 | 200 | 35-355 | 125 | 820 | 240x220 | 534 | 25 | 157 | 0,45 | 70 | 13,5 | 158 | 405 | 164 | 1/4 |
| PFHL 056 | 57,5 | 6.4 | 60 | 73 | 240 | 55-340 | 160 | 860 | 260x220 | 614 | 30 | 232 | 0,70 | 70 | 13,5 | 178 | 487 | 190 | 1/4 |

All dimensions in mm. *Press head in uppermost position
**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)

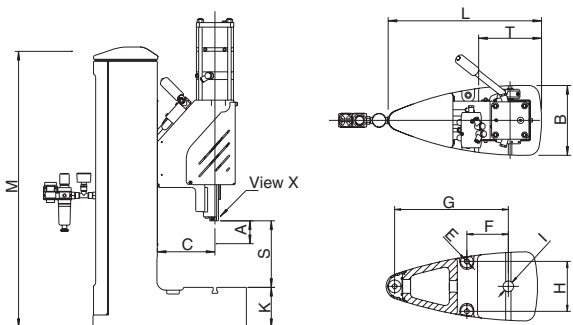


Pneumatic Presses with increased throat depth Type W

| Order No. | max. press-force** | | max. stroke | max. return force | C | S | K | M | BxT | L | Table bore I | Weight | max. deflection* | Moy allow. moment | E | F | G | H | J |
|-----------|--------------------|--------|-------------|-------------------|-----|---------|-----|-----|---------|-----|--------------|--------|------------------|-------------------|------|-----|-----|-----|-----|
| | [kN] | [tons] | A | [N]** | | | | | | | Ø H7 | [kg] | [mm] | [Nm] | Ø | | | | |
| PFHW 008 | 8,5 | 1.0 | 60 | 85 | 300 | 205-285 | 150 | 745 | 200x200 | 624 | 20 | 115 | 0,20 | 25 | 13,5 | 145 | 500 | 100 | 1/4 |
| PFHW 013 | 13,5 | 1.5 | 60 | 85 | 300 | 200-280 | 180 | 775 | 240x230 | 654 | 20 | 177 | 0,20 | 25 | 13,5 | 145 | 520 | 100 | 1/4 |
| PFHW 022 | 22,5 | 2.5 | 60 | 73 | 300 | 190-240 | 180 | 775 | 240x230 | 654 | 20 | 200 | 0,25 | 70 | 13,5 | 145 | 520 | 100 | 1/4 |
| PFHW 033 | 34,5 | 3.8 | 60 | 73 | 300 | 210-275 | 190 | 805 | 300x250 | 674 | 25 | 234 | 0,35 | 70 | 13,5 | 160 | 530 | 100 | 1/4 |
| PFHW 056 | 57,5 | 6.4 | 60 | 73 | 355 | 185-245 | 215 | 825 | 300x280 | 789 | 30 | 308 | 0,45 | 70 | 13,5 | 210 | 625 | 130 | 1/4 |

All dimensions in mm. *Press head in uppermost position
**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)

C = Throat depth
S = Open height, adjustable
J = Connection [inch]
E = Mounting bore



Ordering example:

PFHL 008 + options e.g.

Max. press force
Pneumatic Press
with manual approach
frame type L

+ ZAK-K08

Tool fixture
with force
sensor

+ ZPZ 001

Counter

Please order all other accessories and controls separately.

Note: The press heads of this series are separately available. Prices upon request.

TOX®-FinePress

Accessories

Operator friendly and retrofittable

Universal Base FinePress UUF 1-045.000



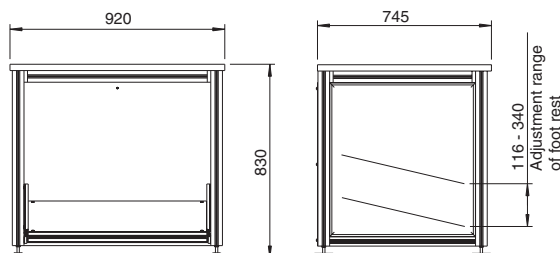
Meets latest ergonomic guidelines for maximum operator comfort.

Ordering Description for Options:

- UUF 1 – 45 Standard base with hardwood top and leveling feet
- ZUUF 1 – 45 R Swivel casters for standard base UUF 1 – 45
- ZUUF 1 – 45 A Foot rest, adjustable, for standard base UUF 1 – 45

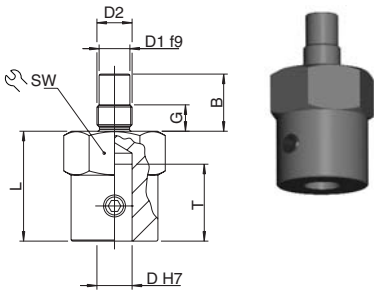
Option:

- Swivel casters



max. load 450 kg (990 lbs)

Tool fixture

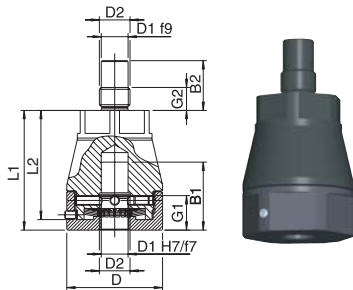


This simple tool fixture is being screwed into the ram thread, it centers the tool via the precision bore D and provides fixation of the tool using a set screw.

Other tool fixtures with different bore sizes D are available on request.

| Type | Order no. | D _{H7} | T | D1 | D2 | G | B | L | SW |
|--------------|-----------|-----------------|----|----|---------|----|----|----|----|
| ZA 10.10.000 | | 10 | 25 | 10 | M12x1 | 10 | 26 | 35 | 30 |
| ZA 10.12.000 | | 12 | 30 | 10 | M12x1 | 10 | 26 | 45 | 30 |
| ZA 14.10.000 | | 10 | 25 | 14 | M16x1,5 | 12 | 26 | 35 | 30 |
| ZA 14.20.000 | | 20 | 45 | 14 | M16x1,5 | 12 | 26 | 60 | 41 |

3 in 1 – the perfect tool fixture concept for long term investment



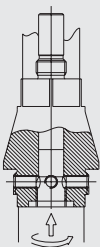
In most conventional small presses, the tool is mounted directly on the press ram and held in place with a set screw. If the threads in the set screw bore are damaged, then the ram has to be replaced, which is expensive. Therefore, **TOX® has developed the 3 in 1 solution for:**

- ① cylindrical threaded centering pilot
- ② cylindrical clamping shank without threads
- ③ clamping shank per DIN 9859, with set screw mount

Caution: press force must be carried over the entire surface ØD.

Choice ①

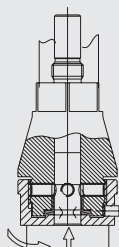
The tool can be inserted directly into the threaded pilot bore.



Choice ②

Clamping disc elements provide high radial clamping forces for a strong connection.

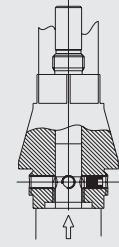
Advantage:
No damage to tool fixture. Zero clearance and detachable.
Tool weight max. 4 kg.



Choice ③

Conventional set screw clamping is also possible for existing tooling.

Advantage:
Prevents damage to ram.

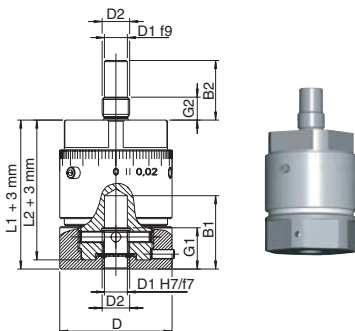


| Type | D | D1 | D2 | G1 | G2 | B1 | B2 | L1 | L2 | SW 1 | SW 2 |
|------------|----|----|---------|----|----|----|----|------|----|------|------|
| ZA 010.001 | 38 | 10 | M12x1 | 13 | 10 | 32 | 26 | 54 | 51 | 24 | 36 |
| ZA 014.001 | 50 | 14 | M16x1,5 | 17 | 12 | 33 | 26 | 62,5 | 57 | 32 | 46 |

The hex section with 46 mm across the flats is 11 mm high. See data sheet TOX® Joining Systems 80.100 for an 8 mm thick open end wrench CZG.

3 in 1 Tool fixture with Force Sensor ZAK See page 15.

3 in 1 Tool fixture with fine ram stroke adjustment ZF



Micrometer adjustment for end of stroke. Applicable to all toggle presses.

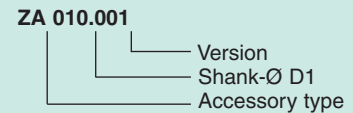
Toggle presses reach their maximum force at the end of stroke. The micrometer fine adjustment allows for precise stroke adjustment in a 1/100 mm

range. This tool fixture offers three tool mounting possibilities.

All three ①, ②, ③ tool locking possibilities are integrated in this tool fixture. See above.

| Type | Press-Force | D | D1 | D2 | G1 | G2 | B1 | B2 | L1 | L2 | SW1 | SW2 |
|--------|-------------|----|----|---------|----|----|----|----|------|----|-----|-----|
| ZF 001 | <=25 kN | 49 | 10 | M12x1 | 18 | 10 | 32 | 26 | 61 | 58 | 36 | 46 |
| ZF 002 | > 25 kN | 54 | 14 | M16x1,5 | 17 | 12 | 33 | 26 | 66,5 | 61 | 36 | 46 |

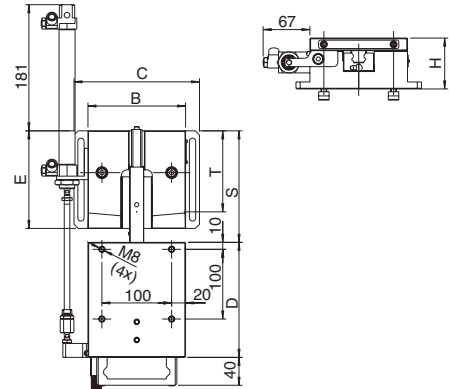
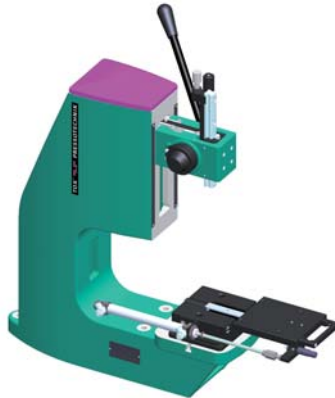
Ordering example:



Slide Table ZHST, simplify your press feeding requirements

Specially designed for our TOX®-FinePress program.

- Integrated end of stroke dampening for smooth operation
- Can be integrated into fully automated production lines
- Tool weight: max 40 kg
- Can be used with all presses up to 150 kN



Ordering example:

ZHST 080.160 P

Pneumatic drive
Slide table

+ ZHSTP 01.00

Position sensor

Technical Details

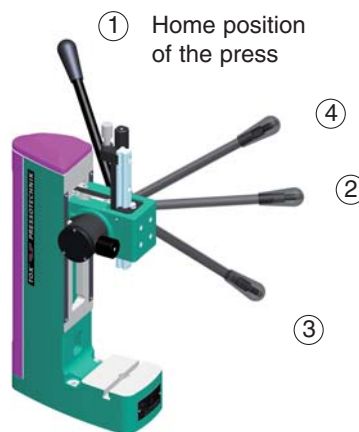
- Precision linear ball rail guide
- Self-locking in working position
- Pneumatic cylinder for automatic operation (optional)
- Adjustable positive stop

Special Accessories

To be ordered separately for ZHST 080.160P:
- End position sensors
Order number ZHSTP 01.00.

| Type Order no. | Max. Load | Travel S mm | Pressure area BxT mm | Table height H mm | Flange width C mm | Flange depth E mm | Slide length D mm | Pull/push force at 6 bar |
|----------------|-----------|-------------|----------------------|-------------------|-------------------|-------------------|-------------------|--------------------------|
| ZHST 080.160 | 150 kN | 160 | 140x115 | 73 | 180 | 140 | 165 | |
| ZHST 080.160P | 150 kN | 160 | 140x115 | 73 | 180 | 140 | 165 | 150 N |

Return Stroke Lock Toggle presses, Rack and pinion presses: ZR-L2.001



- ① Home position of the press.
- ② First ratchet position: loose workpieces can still be aligned.
- ③ Ratchet position in end position: the return stroke lock is released after the ram reaches the selected end position. This guarantees the process repeatability and a constant usage. The locking function can be set to any position within the stroke.
- ④ At this position of the return stroke, the lock is activated again.
- ⑤ The emergency knob releases the locking function in any position.

This option can be mounted on any toggle or rack and pinion press.

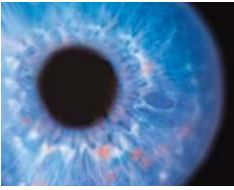
Ergonomic Side grip ZEH 018



Ergonomic grip can be mounted and rotated anywhere along the hand lever.

Hand lever extension 150 mm HH 018.150

Intended solely to reduce the manual force required. It should not be used to increase the press force.





TOX®-Controls and TOX®-Monitoring

Please see our catalog
"TOX®-Controls" for more
detailed information.

NETWORK

TOX^{soft}Ware
Ethernet
Interbus/ProfiNet/Profibus
RS 232/485
PLC

TOX®-Controls – A Modular System for TOX®-FinePress

| Ordering description | Size variants | Controls | Functionality | | Cycle initiation approach stroke | Signal for return stroke | Optional retract over position | Lockout for start of press cycle | Signal for slide table | Integration of CEP/EPW 400 |
|----------------------|---------------|--------------------|--|---|----------------------------------|--------------------------|--------------------------------|----------------------------------|------------------------|----------------------------|
| STP 03-11 | 1/4" | Straight pneumatic | 2-hand controls to drive main directional valves. |  | 2-hand control unit | 2-hand control unit | – | – | – | – |
| STP 03-10 | 1/2" | | 2-hand safety controls. Basic function, forward/retract strokes actuated by finger sensors. (Enclosure per EN 574). | | 2-hand control unit | 2-hand control unit | – | – | – | – |
| | 1/4" | | | | 2-hand control unit | 2-hand control unit | – | – | – | – |
| STE 325-500 | 1/2" | Electric | 2-hand safety controls series 500. Cycle initiation by finger sensors, from simple to complex program sequencing by PLC. |  | 2-hand control unit | Air pressure switch | yes | yes | – | – |
| STE 336-500 | | | | | | | yes | yes | yes | yes |

Jog mode not possible.

Technical data:

electric: all required electric components, emergency reset, in-feed, function keys, etc. are included.



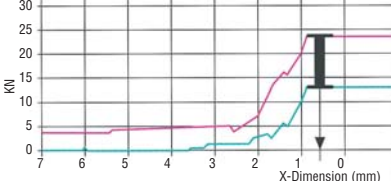
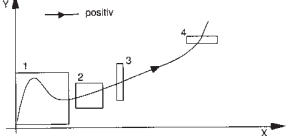
pneumatic: includes all required valves as well as an air servicing unit, as well as flow controls for approach and return speed.

Ordering example:

STE 325-500-1/4"

└─ Size variant for pneumatic supply
└─ Ordering description

TOX®-Monitoring at a glance

| CEP 400 | Force Monitor for TOX® Joining applications | EPW 400 | Force-Travel Measurement |
|---|---|--|---|
|  | - CEP 400 Process Monitor |  | - EPW Press Monitor |
| |  | |  |

The following items complete the TOX®-FinePress Program:

Matched sensors consisting of 3 elements: 1. Basic unit EPW, 2. Force sensor with tool fixture adapter, e.g. ZAK, 3. Potentiometer travel measurement e.g. ZWK. Your quality control process can be retrofitted anytime.

Potentiometer Travel Measurement ZW-K; ZW-Z; ZWP; ZW-PH

Easy mounting to return stroke lock and press head.

Scope of delivery: travel sensor, cable incl. plug M8x1, mounting bracket, cable guard and cable accessory.

| Toggle Presses | | Rack and Pinion Presses | | Pneumatic Presses | | Pneumatic Presses with manual approach | |
|----------------|---|-------------------------|-------------|-------------------|---|--|--|
| type | fits for | type | fits for | type | fits for | type | fits for |
| ZW-K 075.001 | KFS 002 KFS/L/W 004 KFS/L/W 008 | ZW-Z 075.000 | ZFS 002 | ZWP 080.000 | PFL/W 008 PFL/W 013 PFL/W 022 PFL/W 033 PFL/W 056 | ZW-PH 075.000 | PFHL/W 008 PFHL/W 013 PFHL/W 022 PFHL/W 033 PFHL/W 056 |
| ZW-K 075.002 | KFS/L/W 016 KFS/L/W 025.000 KFS/L/W 025.002 | ZW-Z 100.000 | ZFS/L/W 004 | ZW-P 100.000 | PFS 002 PFL/W 004 | | |
| ZW-K 075.003 | KFS/L/W 025.001 KFS/L/W 025.003 KFS/L/W 033 | | | | | | |

Ordering Example:

ZW-K 075.002

- Type 002
- 75 mm
- Potentiometer Travel Measurement for Toggle Presses

| Technical data: | ZWP / ZW-Z100 | ZW-PH / ZW-K075 / ZW-Z075 |
|----------------------|-----------------------|---------------------------|
| Type: | Travel sensor | Travel sensor |
| Electric path: | 100 mm + -1 mm | 75 mm + -1 mm |
| Output voltage: | 0 ... 10V, 10V ... 0V | 10 ... 0V, 0V ... 10V |
| Linearity tolerance: | + -0,1% | + -0,1% |
| Resolution: | < 0,01 mm | < 0,01 mm |
| Mechanical travel: | 105 mm | 80 mm |

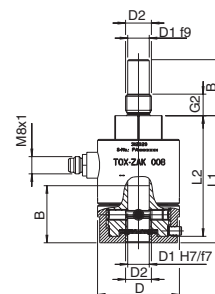
3 in 1 Tool fixture with force sensor type ZAK

Scope of delivery: force sensor, cable incl. plug M8x1 and mounting bracket, cable guard and cable accessory. The sensor offers three tool fixing possibilities, see page 12.

Ordering Example:

ZAK - K08

- Nominal Force 8 kN for Toggle Presses
- Tool Force Sensor with fixture



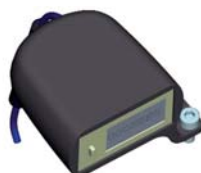
| Type | Nominal force of sensor [kN] tons] | | Fits Press type | Nominal force of press | Measuring accuracy (depending on press) | D | D1 | D2 | G1 | G2 | B | L1 | L2 |
|--------------|------------------------------------|-----|--|---|---|----|----|---------|------|----|----|------|----|
| ZAK-K04.000* | 4,0 | 0,5 | KFS 002 | 2,5 kN | 0,8% | 55 | 10 | M12x1 | 13 | 12 | 26 | 86 | 83 |
| ZAK-Z04.000* | 4,0 | 0,5 | ZFS 002 ZFS/L/W 004 | 2,5 kN 4,0 kN | 0,8% 0,5% | 55 | 10 | M12x1 | 13 | 12 | 26 | 86 | 83 |
| ZAK-P04.000* | 4,0 | 0,5 | PFS 002 PFL/W 004 | 2,0 kN 4,0 kN | 1,0% 0,5% | 55 | 10 | M12x1 | 13 | 12 | 26 | 86 | 83 |
| ZAK-K08.000 | 8,0 | 0,9 | KFS/L/W 008 PFHL/W 008 | 8,0 kN 8,5 kN | 0,5% 0,5% | 38 | 10 | M12x1 | 13 | 10 | 26 | 59 | 56 |
| ZAK-K16.000 | 16,0 | 1,8 | KFS/L/W 016 PFHL/W 013 | 16,0 kN 13,5 kN | 0,5% 0,6% | 38 | 10 | M12x1 | 13 | 10 | 26 | 59 | 56 |
| ZAK-P16.000 | 16,0 | 1,8 | PFL/W 008 PFL/W 013 | 8,5 kN 13,5 kN | 0,94% 0,6% | 38 | 10 | M12x1 | 13 | 10 | 26 | 59 | 56 |
| ZAK-K25.000 | 25,0 | 2,8 | KFS/L/W 025.000 KFS/L/W 025.002 | 25 kN 25 kN | 0,5% 0,5% | 38 | 10 | M12x1 | 13 | 10 | 26 | 59 | 56 |
| ZAK-K34.000 | 34,0 | 3,8 | KFS/L/W025.001 KFS/L/W 025.002 KFS/L/W 033 PFHL/W 022 PFHL/W 033 | 25 kN 25 kN 33 kN 22,5 kN 34,5 kN | 0,7% 0,7% 0,5% 0,8% 0,5% | 50 | 14 | M16x1,5 | 15 | 10 | 26 | 67,5 | 62 |
| ZAK-P34.000 | 34,0 | 3,8 | PFL/W 022 PFL/W 033 | 22,5 kN 34,5 kN | 0,8% 0,5% | 50 | 14 | M16x1,5 | 15,5 | 10 | 26 | 67,5 | 62 |
| ZAK-K57.000 | 57,0 | 6,4 | PFHL/W 056 | 57,5 kN | 0,5% | 50 | 14 | M16x1,5 | 15,5 | 10 | 26 | 67,5 | 62 |
| ZAK-P57.000 | 57,0 | 6,4 | PFL/W 056 | 57,5 kN | 0,5% | 50 | 14 | M16x1,5 | 15,5 | 10 | 26 | 67,5 | 62 |

A special lever clamping fixture is available for our hand lever presses to perform the recommended annual recertification.

Nominal voltage: 1,10 mV/V
Temperature range: -10°C — 65°C
Input voltage: 10 V DC

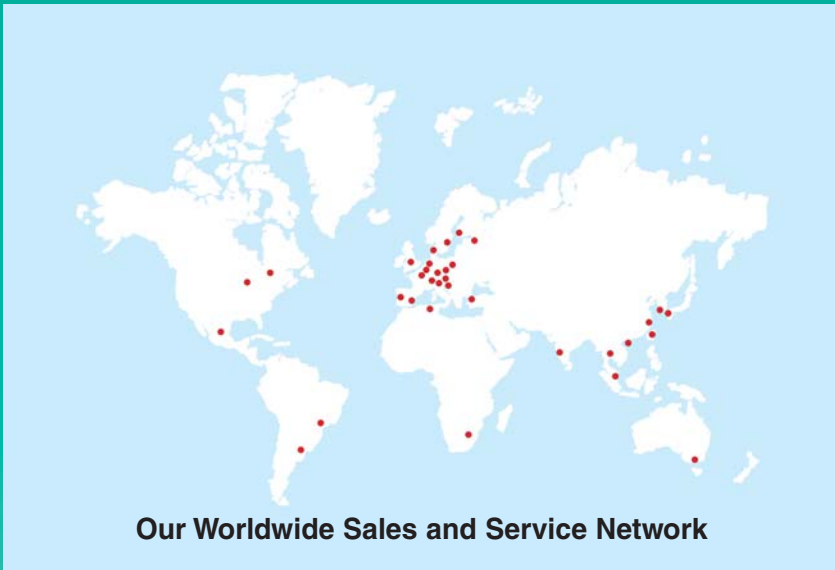
*The types ZAK-...04 feature a mechanical overload protection. The guidance accuracy is thereby reduced.

Counter ZEZ 001 for Hand Presses, ZPZ 001 for Pneumatic Presses



The electric counter type ZEZ or the pneumatic counter type ZPZ provide a quick means of checking the produced quantities on the eight digits display. The counter can be easily

mounted on any of our presses. The electrical counter is powered by a long life battery. **No external power required!**



Product Range

TOX®-Powerpackage



TOX®-PowerKurver



TOX®-ElectricDrive



TOX®-FinePress



TOX®-Presses



TOX®-Controls,
TOX®-Monitoring



TOX®-Joining-
Systems



TOX®-Tongs



TOX®-Punching
TOX®-Coining



TOX®-Press-Fitting



TOX®-Production
Systems



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