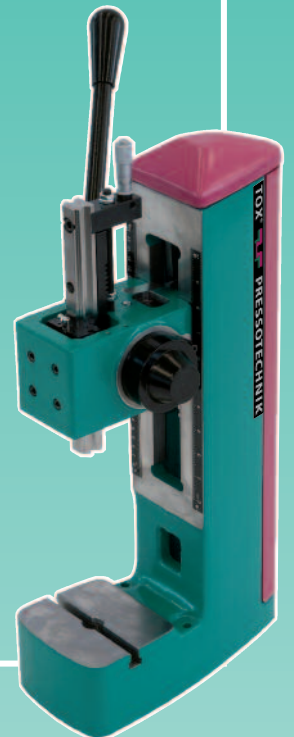




TOX®-FinePress

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

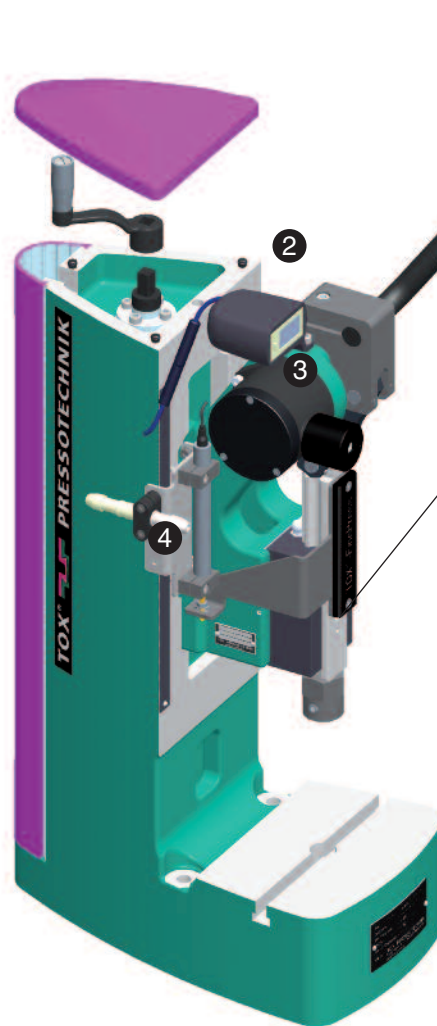


The assignment:

- 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
 - Pressing 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 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
- + Pressing monitor with sensors

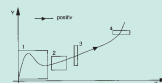
TOX®-FinePress: The expandable, economical program

TOX®-Pneumatic-Controls

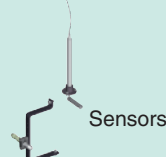


Pneumatic 2-hand safety controls for Pneumatic Presses

TOX®-Pressing Monitor with sensors



Force-travel pressing monitor



Sensors



Optional and retrofittable for all presses

CAD data online:
www.tox-cad.com

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 at hand lever
- High press forces

See page 6/7.



Pneumatic Presses PF

- Multi-stage-pneumatic
- Stroke adjustment as standard
- Optional: position or travel sensor

See page 8/9.



Pneumatic Presses with manual approach PFH

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

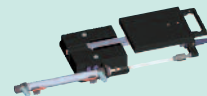
See page 10/11.



Our extensive accessories program provides many options.



All press heads are available separately



Slide tables



Tool fixture



Return stroke lock

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

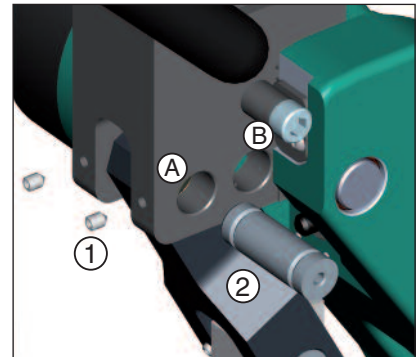
More accessories on page 11.

Optional accessories

- 1 Ergonomic side grip.
- 2 Electric counter, long life battery operated.
- 3 Return stroke lock for Toggle Presses and Rack and Pinion Presses. Includes retract spring.
- 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 dead center.
- 6 Standardized interface for all electrical sensors.

More accessories:
Pressing monitor.

Mounting of slide tables according to frame type.

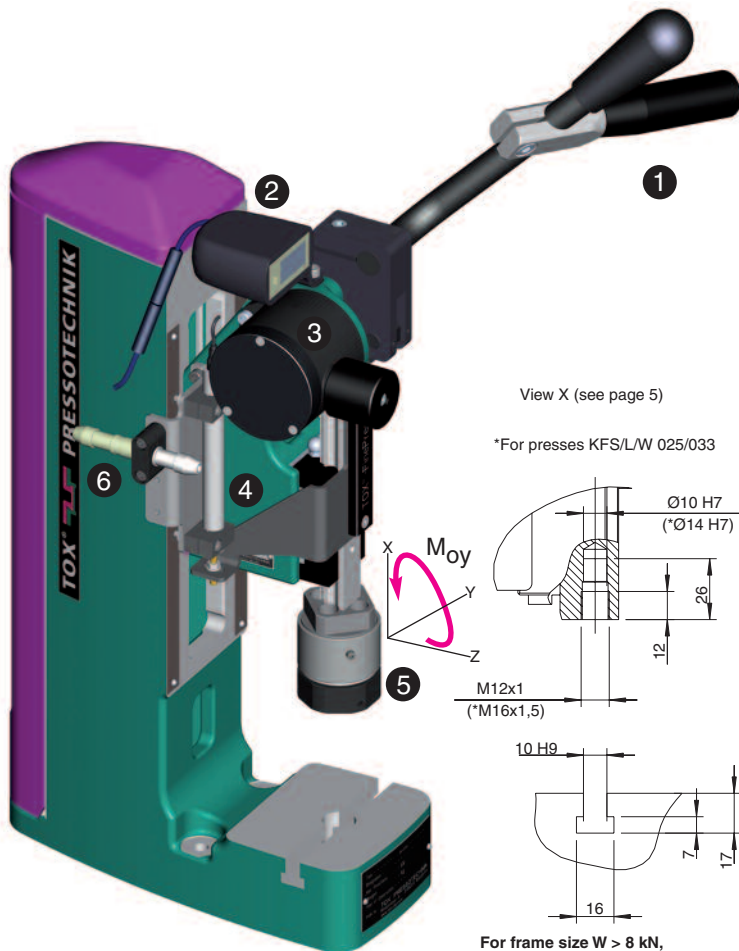


Changing the force-travel-characteristic

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

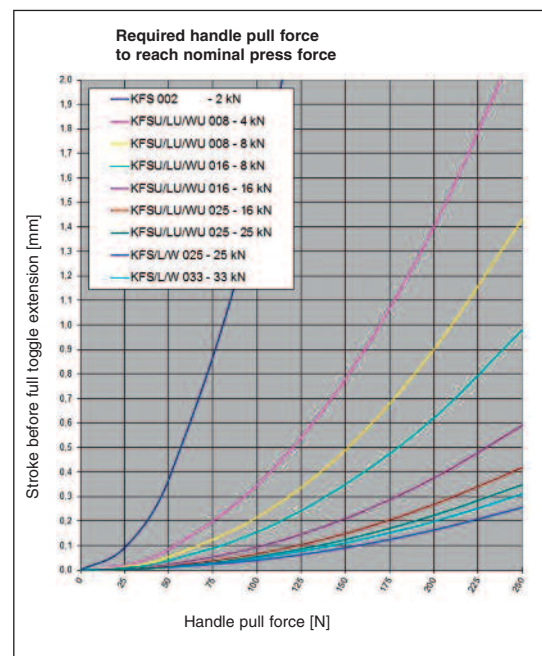
- Remove set screw (1)
- Remove bolt (2). Bolt has tapped hole to facilitate removal
- Reposition bolt from (A) to (B)
- Install set screw (1) in correct location to secure bolt

Caution: Changing the press force also results in a change of the working stroke (see tables for force/travel ranges).



Picture shows optional accessories.

Press force diagram



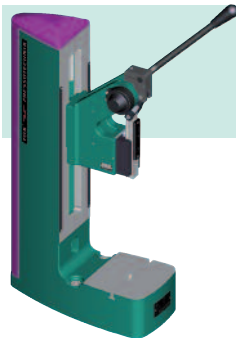
Toggle Presses from 2.5 – 33 kN (560 – 7,400 lbf), high precision, no guide adjustment required, non-rotating ram.
Distinguishable TOX®-FinePress quality!

Toggle Presses with standard frame size type S



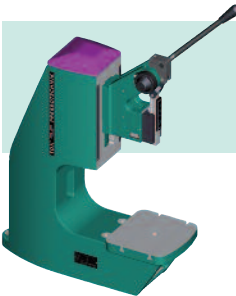
Order no.	Max. press force [kN] [tons]	Max. allowable handle pull force [N]	Max. stroke A* [mm]	Re-turn force [N]	BxT	C	E Ø	F	G	H	Table bore I Ø H7	K	L	M Mmax.	S	Weight [kg]	Max. deflection **	Moy allow. moment [Nm] ***
KFS 002	2.5 0.3	50	42	30	110x90	90	9	72	203	76	20	55	260	465 709	70-200	22.5	0.05	25
KFSU 008	(4) 0.5 8 0.9	220	(55.7) 23.1	(26) 60	130x110	95	9	78	214	94	20	80	285	535 751	70-220	32	0.10	25
KFSU 016	(8) 0.9 16 1.8	220	(45) 20.15	(12) 45	185x120	95	11	79	236	130	20	90	319	555 876	65-200	45	0.25	25
KFSU 025	(16) 1.8 25 2.8	220	(60) 25.3	(5) 35	185x120	95	11	79	236	130	20	90	319	555 991	65-200	45	0.25	25
KFS 025	25 2.8	250	60	30	200x150	105	11	84	269	140	25	110	379	615 1224	60-220	68.5	0.25	70
KFS 033	33 3.7	250	30	70	200x150	105	11	84	269	140	25	110	379	615 1223	50-210	68.5	0.25	70

Toggle Presses with increased open height type L



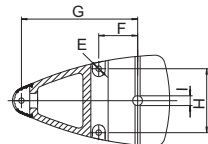
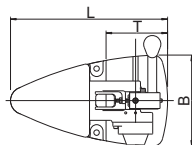
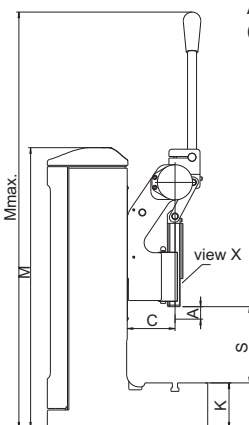
Order no.	Max. press force [kN] [tons]	Max. allowable handle pull force [N]	Max. stroke A* [mm]	Re-turn force [N]	BxT	C	E Ø	F	G	H	Table bore I Ø H7	K	L	M Mmax.	S	Weight [kg]	Max. deflection **	Moy allow. moment [Nm] ***
KFLU 008	(4) 0.5 8 0.9	220	(55.7) 23.1	(26) 60	150x125	120	9	94	263	110	20	95	339	674 886	70-340	45.5	0.10	25
KFLU 016	(8) 0.9 16 1.8	220	(45) 20.15	(12) 45	200x180	165	11	120	330	144	20	115	439	800 1116	65-415	83	0.40	25
KFLU 025	(16) 1.8 25 2.8	220	(60) 25.3	(5) 35	200x180	165	11	120	330	144	20	115	439	800 1231	70-415	83.5	0.45	25
KFL 025	25 2.8	250	60	30	240x220	200	13.5	158	405	164	25	125	534	820 1439	60-420	120	0.45	70
KFL 033	33 3.7	250	30	70	240x220	200	13.5	158	405	164	25	125	534	820 1443	55-415	120	0.45	70

Toggle Presses with increased throat depth type W



Order no.	Max. press force [kN] [tons]	Max. allowable handle pull force [N]	Max. stroke A* [mm]	Re-turn force [N]	BxT	C	E Ø	F	G	H	Table bore I Ø H7	K	L	M Mmax.	S	Weight [kg]	Max. deflection **	Moy allow. moment [Nm] ***
KFWU 008	(4) 0.5 8 0.9	220	(55.7) 23.1	(26) 60	200x200	300	13.5	145	500	100	20	150	624	745 961	210-360	103	0.20	25
KFWU 016	(8) 0.9 16 1.8	220	(45) 20.15	(12) 45	240x230	300	13.5	145	520	100	20	180	654	775 1091	195-325	165	0.30	25
KFWU 025	(16) 1.8 25 2.8	220	(60) 25.3	(5) 35	240x230	300	13.5	145	520	100	20	180	654	775 1206	205-325	165	0.35	25
KFW 025	25 2.8	250	60	30	300x250	300	13.5	160	530	100	25	190	674	805 1424	190-340	197	0.35	70
KFW 033	33 3.7	250	30	70	300x250	300	13.5	160	530	100	25	190	674	805 1428	185-335	197	0.35	70

All dimensions in mm *Stroke at lever angle 90° **Press head in uppermost position ***Ram in bottom dead center
() = for alternative toggle lever position C = Throat depth E = Mounting bore S = Open height, adjustable



Ordering example:

KFS 008 + options e.g.

+ ZR-L2.001

Return stroke lock

+ ZEZ 001

Counter

Max. press force
Toggle Press
frame type S

Please order all other accessories and controls separately.

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

Optional accessories

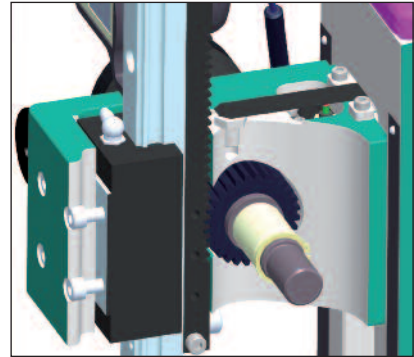
- 1 Ergonomic side grip.
- 2 Electric counter, long life battery operated.
- 3 Return stroke lock for Toggle and Rack and Pinion Presses.
- 4 Travel sensor.
- 5 Tool fixture. Also available with 3-in-1 tool clamping concept, with or without force sensor.
- 6 Standardized interface for all electrical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

More accessories:
Pressing monitor.

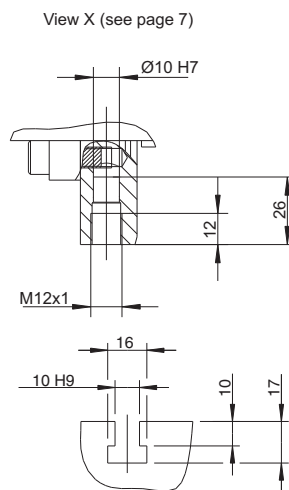
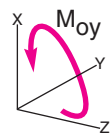
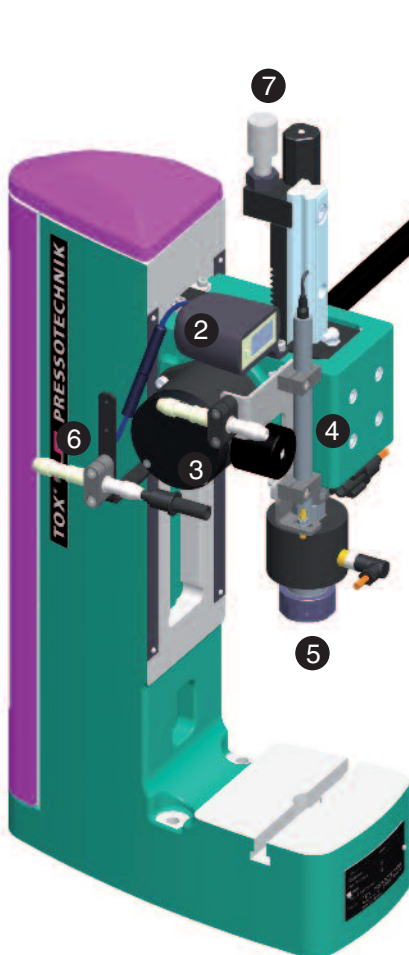
Mounting of slide tables according to frame type.

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 working stroke.

Picture shows optional accessories.

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



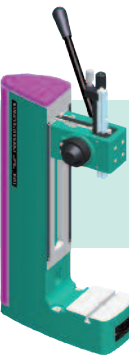
Order no.	Max. press force		Handle pull force	Max. stroke over lever rotation	Return force							Table bore						Weight	Max. deflection	Moy allow. moment
	[kN]	[tons]										[N]	A	[N]						
ZFS 002	2.5	0.3	200	60/228°	60	110x90	90	9	72	203	76	20	55	260	465 522	55-190	22	0.05	25	
ZFS 004	4	0.5	300	80/218°	60	130x110	95	9	78	214	94	20	80	285	535 690	80-230	33	0.05	25	

All dimensions in mm

*Press head in uppermost position

**Ram in bottom dead center

Rack and Pinion Presses with increased open height type L



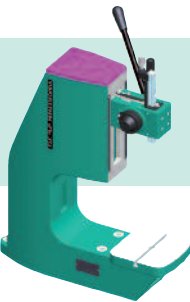
Order no.	Max. press force		Handle pull force	Max. stroke over lever rotation	Return force							Table bore						Weight	Max. deflection	Moy allow. moment***
	[kN]	[tons]										[N]	A	[N]	BxT					
ZFL 004	4	0.5	300	80/218°	60	150x125	120	9	94	263	110	20	95	339	674 830	85-355	47	0.05	25	

All dimensions in mm

*Press head in uppermost position

**Ram in bottom dead center

Rack and Pinion Presses with increased throat depth type W



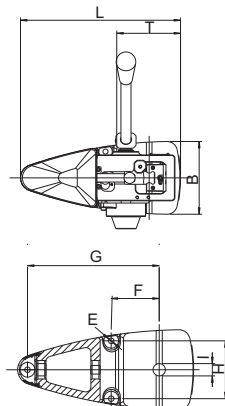
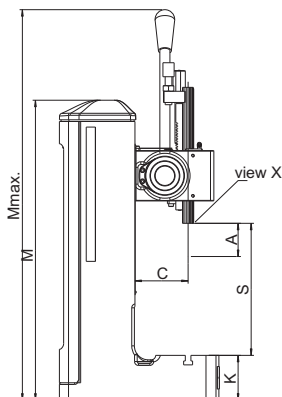
Order no.	Max. press force		Handle pull force	Max. stroke over lever rotation	Return force						Table bore							Weight	Max. deflection	Moy allow. moment
	[kN]	[tons]									[N]	A								
ZFW 004	4	0.5	300	80/218°	60	200x200	300	13.5	145	500	100	20	150	624	745 900	225-370	104	0.05	25	

All dimensions in mm

*Press head in uppermost position

**Ram in bottom dead center

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



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 available separately.
Prices on 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:
Pressing monitor.

Mounting of slide tables according to frame type.

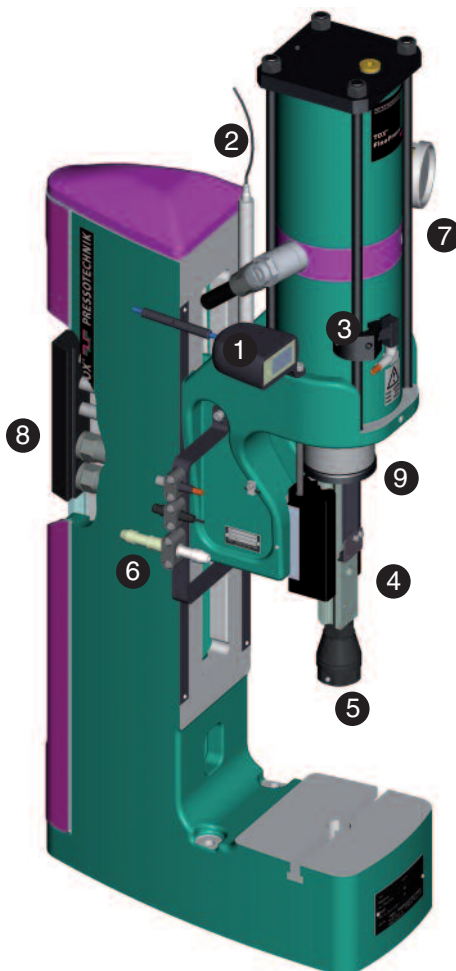
Scope of delivery:

- 7 Adjustable end position damping.
- 8 Clean plumbing. Air connections integrated on frame.
- 9 Stroke adjustment over entire travel.

Integrated accessories



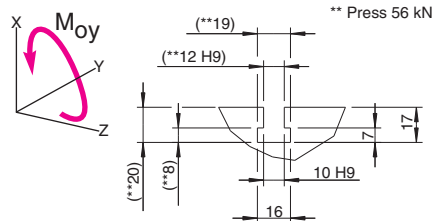
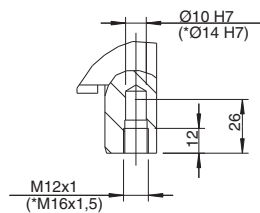
Option: sensor for bottom end position.
Order no.: ZUT 000



The TOX®-Pneumatic Cylinder features the latest seal technology for smooth, trouble-free operation. These seals provide a more reliable operation than pneumatic cylinders with flat seals.

View X (see page 9)

*Presses > 13,5 kN



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

Picture shows optional accessories.

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



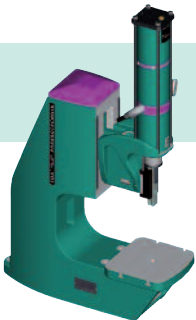
Pneumatic Presses with standard frame size type S

Order no.	Max. press force** [kN] [tons]	Max. stroke A	Max. return force [kN] at 6 bar	BxT	C	E Ø	F	G	H	Table bore I Ø H7	J	K	L	M Mmax.	S	Weight [kg]	Max. de- flec- tion*	Moy allow. moment [Nm]***
PFS 002	2 0.2	80	1	110x90	90	9	72	203	76	20	1/4	55	260	465 673	70-125	25	0.05	25



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	BxT	C	E Ø	F	G	H	Table bore I Ø H7	J	K	L	M Mmax.	S	Weight [kg]	Max. de- flec- tion*	Moy allow. moment [Nm]***
PFL 004	4.0 0.5	80	1	150x125	120	9	94	263	110	20	1/4	95	339	674 1167	100-295	51	0.15	25
PFL 008	8.5 1.0	80	4	150x125	120	9	94	263	110	20	1/2	95	339	674 919	70-270	57	0.20	25
PFL 013	13.5 1.5	80	4	200x180	165	11	120	330	144	20	1/2	115	439	800 1189	75-370	96	0.50	25
PFL 022	22.5 2.5	80	11	200x180	165	11	120	330	144	20	1/2	115	439	800 1048	90-370	116	0.45	70
PFL 033	34.5 3.8	80	11	240x220	200	13.5	158	405	164	25	1/2	125	534	820 1215	95-380	150	0.45	70
PFL 056	57.5 6.4	80	11	260x220	240	13.5	178	487	190	30	1/2	160	614	860 1549	95-385	227	0.85	70



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	BxT	C	E Ø	F	G	H	Table bore I Ø H7	J	K	L	M Mmax.	S	Weight [kg]	Max. de- flec- tion*	Moy allow. moment [Nm]***
PFW 004	4.0 0.5	80	1	200x200	300	13.5	145	500	100	20	1/4	150	624	745 1237	240-310	107	0.20	25
PFW 008	8.5 1.0	80	4	200x200	300	13.5	145	500	100	20	1/2	150	624	745 989	210-285	114	0.25	25
PFW 013	13.5 1.5	80	4	240x230	300	13.5	145	520	100	20	1/2	180	654	775 1164	210-280	177	0.45	25
PFW 022	22.5 2.5	80	11	240x230	300	13.5	145	520	100	20	1/2	180	654	775 1023	225-280	198	0.35	70
PFW 033	34.5 3.8	80	11	300x250	300	13.5	160	530	100	25	1/2	190	674	805 1200	225-300	226	0.35	70
PFW 056	57.5 6.4	80	11	300x280	355	13.5	210	625	130	30	1/2	215	789	825 1514	215-295	303	0.65	70

All dimensions in mm

*Press head in uppermost position

**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)

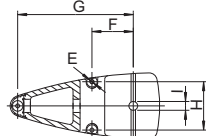
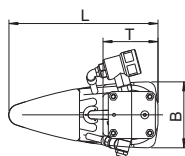
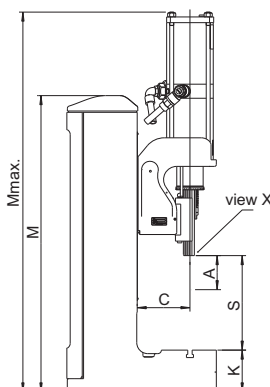
***Ram in bottom dead center

C = Throat depth

E = Mounting bore

J = Connection [inch]

S = Open height, adjustable



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 available separately.
Prices on request.

Precision linear ball rail guide for ram

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:

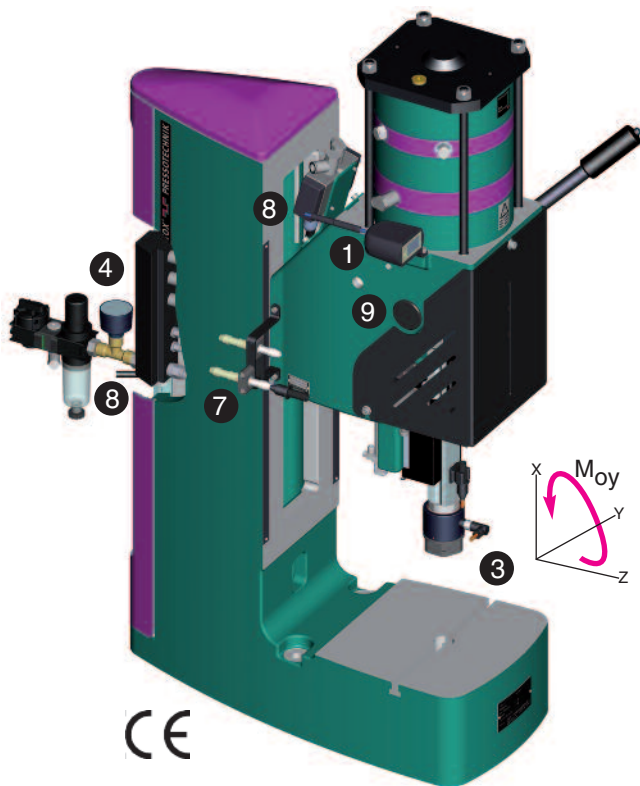
Pressing monitor.
Mounting of slide tables according to frame type.

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:

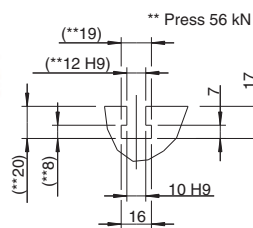
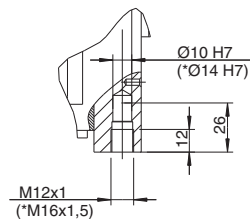
The press ram is moved forward over a toggle mechanism by pulling on the hand lever. Pressing the start button on the lever, after a limit switch is tripped, results in a 6 mm long pneumatic power stroke. Releasing the lever or the start button ends the power stroke.



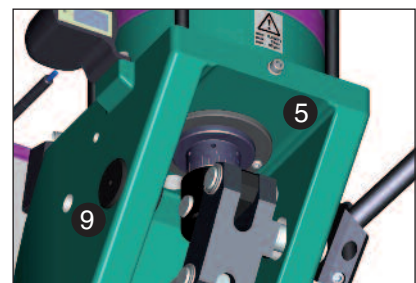
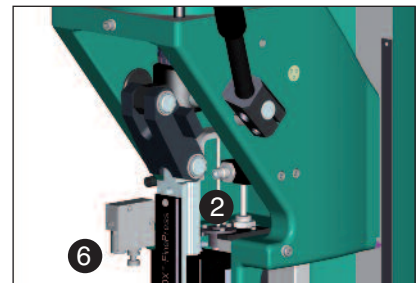
Picture shows optional accessories.

View X (see page 11)

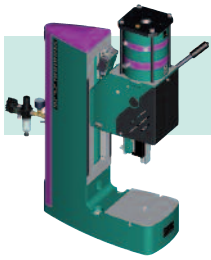
* Presses > 13,5 kN



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



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** [kN] [tons]	Max. stroke A	Max. return force [N]**	BxT	C	E Ø	F	G	H	Table bore I Ø H7	J	K	L	M Mmax.	S	W	Weight [kg]	Max. de- flec- tion*	Moy allow. moment [Nm]***
PFHL 008	8.5 1.0	60	85	150x125	120	9	94	263	110	20	1/4	95	339	674 860	30-265	144	61	0.10	25
PFHL 013	13.5 1.5	60	85	200x180	165	11	120	330	144	20	1/4	115	439	800 999	35-375	105	95	0.20	25
PFHL 022	22.5 2.5	60	73	200x180	165	11	120	330	144	20	1/4	115	439	800 999	25-330	105	120	0.35	70
PFHL 033	34.5 3.8	60	73	240x220	200	13.5	158	405	164	25	1/4	125	534	820 1107	35-355	101	157	0.45	70
PFHL 056	57.5 6.4	60	73	260x220	240	13.5	178	487	190	30	1/4	160	614	860 1273	55-340	101	232	0.70	70



Pneumatic Presses with increased throat depth type W

Order no.	Max. press force** [kN] [tons]	Max. stroke A	Max. return force [N]**	BxT	C	E Ø	F	G	H	Table bore I Ø H7	J	K	L	M Mmax.	S	W	Weight [kg]	Max. de- flec- tion*	Moy allow. moment [Nm]***
PFHW 008	8.5 1.0	60	85	200x200	300	13.5	145	500	100	20	1/4	150	624	745 945	205-285	—	115	0.20	25
PFHW 013	13.5 1.5	60	85	240x230	300	13.5	145	520	100	20	1/4	180	654	775 1039	200-280	—	177	0.20	25
PFHW 022	22.5 2.5	60	73	240x230	300	13.5	145	520	100	20	1/4	180	654	775 974	190-240	—	200	0.25	70
PFHW 033	34.5 3.8	60	73	300x250	300	13.5	160	530	100	25	1/4	190	674	805 1092	210-275	—	234	0.35	70
PFHW 056	57.5 6.4	60	73	300x280	355	13.5	210	625	130	30	1/4	215	789	825 1233	185-245	—	308	0.45	70

All dimensions in mm

*Press head in uppermost position

***Ram in bottom dead center

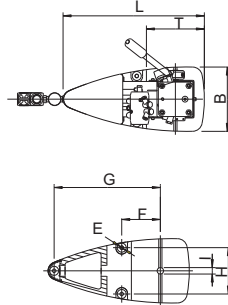
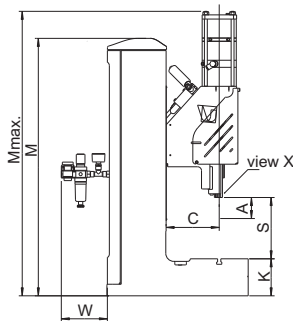
**at 6 bar air pressure (max. operating pressure 6 bar, min. 2.5 bar)

C = Throat depth

J = Connection [inch]

E = Mounting bore

S = Open height, adjustable



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 available separately.
Prices on request.

Operator friendly and retrofittable

Universal base FinePress UUF 1-045.000



Option:

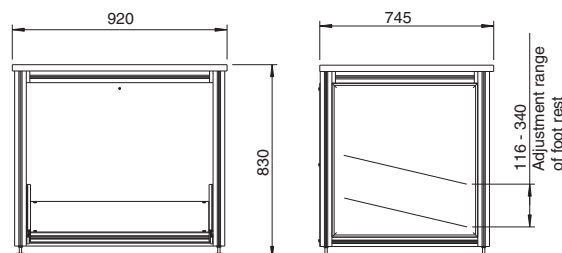
- Swivel casters



Meets latest ergonomic guidelines for maximum operator comfort.

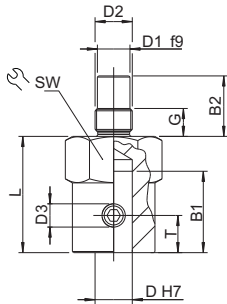
Ordering description for options:

- 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 Adjustable foot rest for standard base UUF 1-45



Max. load 450 kg (990 lbs)

Tool fixture



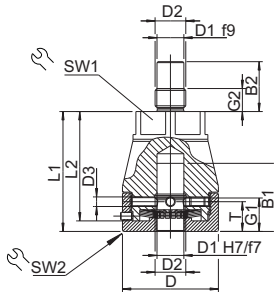
This simple tool fixture is screwed into the ram thread. It centers the tool via the precision bore D and provides fixation of the tool using a set screw.

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

Type Order no.	B1	B2	D _{H7}	D1	D2	D3	G	L	SW	T
ZA 10.10.000	25	26	10	10	M12x1	M8	10	35	30	10
ZA 10.12.000	30	26	12	10	M12x1	M8	10	45	30	12
ZA 14.10.000	25	26	10	14	M16x1.5	M8	12	35	30	10
ZA 14.20.000	45	26	20	14	M16x1.5	M10	12	60	41	20

All dimensions in mm

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



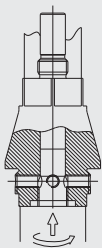
In most conventional small presses, the tool is mounted directly on the press ram and held in place with a set screw. If the thread in the set screw bore is damaged, the ram has to be replaced, which is expensive. Therefore, **TOX® PRESSOTECHNIK** has developed the 3 in 1 solution for:

- 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

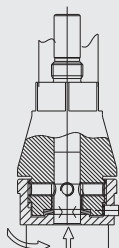
The tool can be inserted directly into the threaded pilot bore.



Choice ②

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

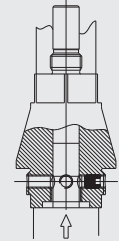
Advantage:
No damage to tool fixture. Zero clearance and detachable.
Tool weight max. 4 kg.



Choice ③

Conventional set screw clamping is also possible for existing tooling.

Advantage:
Prevents damage to ram.



Type Order no.	B1	B2	D	D1	D2	D3	G1	G2	L1	L2	SW1	SW2	T
ZA 010.001	32	26	38	10	M12x1	M5	13	10	54	51	24	36	13
ZA 014.001	33	26	50	14	M16x1.5	M5	17	12	62.5	57	32	46	15.5

SW 46 has a height of 11 mm. A suitable open end wrench type CZG (8 mm) can be found in TOX® data sheet 80.100.

All dimensions in mm

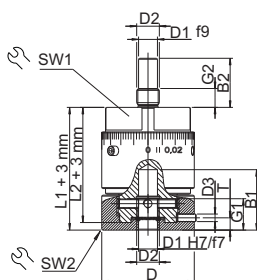
Ordering example:

ZA 010.001

Version
Shank-Ø D1
Accessory type

3 in 1 Tool fixture with force sensor ZAK See page 15.

3 in 1 Tool fixture with fine adjustment ZF



Micrometer adjustment for end of stroke. Applicable to all Toggle Presses.

Toggle Presses reach their maximum force at the bottom dead center. The

micrometer fine adjustment allows for precise stroke adjustment in a 1/100 mm range. This tool fixture offers three tool mounting possibilities ①, ②, ③ (see above).

Type Order no.	Press force	B1	B2	D	D1	D2	D3	G1	G2	L1	L2	SW1	SW2	T
ZF 001	≤ 25 kN	32	26	49	10	M12x1	M5	18	10	61	58	36	46	13
ZF 002	≥ 25 kN*	33	26	54	14	M16x1.5	M5	17	12	66.5	61	36	46	15.5

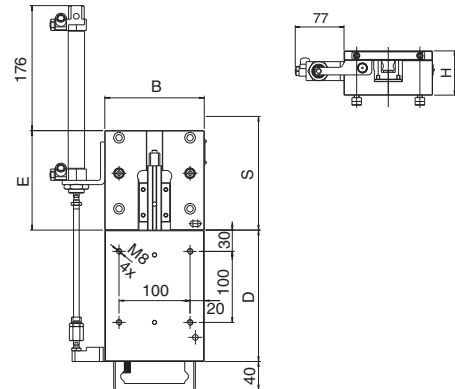
* Note thread size

All dimensions in mm

Slide Table ZHST, simplify your press feeding requirements

Especially designed for 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

+ ZHSP 001.000

└─ Position sensor

Technical details

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

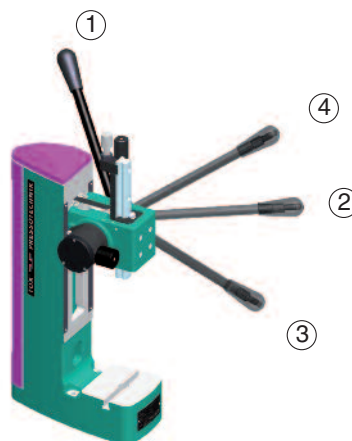
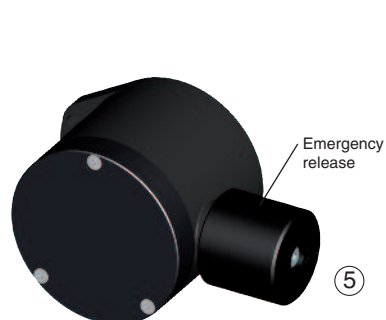
Special accessories

To be ordered separately for slide table ZHST 080.160 P:

- End position sensors for pull and push cylinders (order no. ZHSP 001.000)

Type Order no.	Max. Load	Travel S mm	Pressure area B x E mm	Table height H mm	Flange depth E mm	Slide length D mm	Pull/push force at 6 bar
ZHST 080.160	150 kN	160	140 x 140	70	140	185	
ZHST 080.160 P	150 kN	160	140 x 140	70	140	185	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 therefore 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.

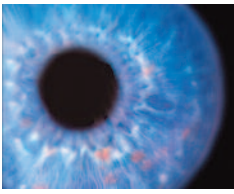
Ergonomic side grip ZEH 018



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 required manual force, not 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"	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, approach/return strokes actuated by push buttons. (Enclosure per EN 574).		2-hand control unit	2-hand control unit	–	–	–	–
	1/4"									
STE 325-500	1/2"	Electric	2-hand safety controls series 500. Cycle initiation by push buttons, from simple to complex program sequences by PLC.		2-hand control unit	Air pressure switch	yes	yes	–	–
STE 336-500	yes						yes	yes	yes	

Jog mode not possible.

Scope of delivery:

Electric: All required electric components, emergency-stop, power supply, function keys, etc. are included.

Pneumatic: Includes all required valves and an air servicing unit as well as flow controls for approach and return speed.

Ordering example:

STE 325-500-1/2"

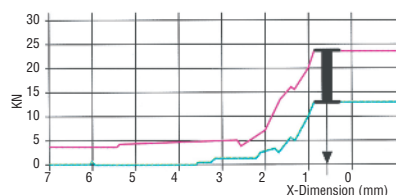
└─ Size variant for pneumatic supply
└─ Ordering description

TOX®-Monitoring at a glance

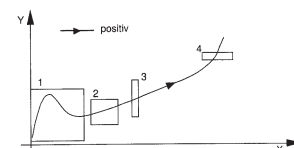
CEP 400/400T	Force monitoring for clinching processes	EPW 400	Force-travel measurement
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CEP 400 Process Monitor



EPW Pressing Monitor



The following items complete the TOX®-FinePress program:

Suitable sensors consisting of 3 components: 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 at 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	for press type	Type	for press type	Type	for press type	Type	for press type
ZW-K 075.001	KFS 002 KFSU/KFLU/KFWU 008	ZW-Z 075.000	ZFS 002	ZW-P 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	KFSU/KFLU/KFWU 016 KFSU/KFLU/KFWU 025	ZW-Z 100.000	ZFS/L/W 004				
ZW-K 075.003	KFS/KFL/KFW 025 KFS/KFL/KFW 033			ZW-P 100.000	PFS 002 PFL/W 004		

Ordering example:

ZW-K 075.002

Type 002
 75 mm
 Potentiometer travel measurement for Toggle Presses

Technical data:	ZW-P / ZW-Z100	ZW-PH / ZW-K075 / ZW-Z075
Type:	Travel sensor	Travel sensor
Electric range:	100 mm + -1 mm	75 mm + -1 mm
Output voltage:	0 ... 10 V, 10 V ... 0 V	10 ... 0 V, 0 V ... 10 V
Linearity tolerance:	+ -0.1 %	+ -0.1 %
Resolution:	< 0.01 mm	< 0.01 mm
Mechanical travel:	105 mm	80 mm

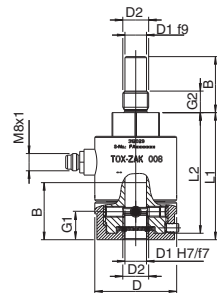
3 in 1 Tool fixture with force sensor type ZAK

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]	for press type	Nominal force of press	Measuring accuracy (depending on press)	B	D	D1	D2	G1	G2	L1	L2
ZAK 001*	1.0 0.1	for special applications		0.5 %	26	55	10	M12x1	13	10	74	71
ZAK-K04.000*	4.0 0.5	KFS 002	2.5 kN	0.8 %	26	55	10	M12x1	13	10	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 %	26	55	10	M12x1	13	10	86	83
ZAK-P04.000*	4.0 0.5	PFS 002 PFL/W 004	2.0 kN 4.0 kN	1.0 % 0.5 %	26	55	10	M12x1	13	10	86	83
ZAK-K08.000	8.0 0.9	KFSU/LU/WU 008 PFHL/W 008	8.0 kN 8.5 kN	0.5 % 0.5 %	26	38	10	M12x1	13	10	59	56
ZAK-K16.000	16.0 1.8	KFSU/LU/WU 016 PFHL/W 013	16.0 kN 13.5 kN	0.5 % 0.6 %	26	38	10	M12x1	13	10	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 %	26	38	10	M12x1	13	10	59	56
ZAK-K25.000	25.0 2.8	KFSU/LU/WU 025	25 kN	0.5 %	26	38	10	M12x1	13	10	59	56
ZAK-K34.000	34.0 3.8	KFS/L/W 025 KFS/L/W 033 PFHL/W 022 PFHL/W 033	25 kN 33 kN 22.5 kN 34.5 kN	0.7 % 0.5 % 0.8 % 0.5 %	26	50	14	M16x1.5	15.5	12	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 %	26	50	14	M16x1.5	15.5	12	67.5	62
ZAK-K57.000	57.0 6.4	PFHL/W 056	57.5 kN	0.5 %	26	50	14	M16x1.5	15.5	12	67.5	62
ZAK-P57.000	57.0 6.4	PFL/W 056	57.5 kN	0.5 %	26	50	14	M16x1.5	15.5	12	67.5	62

Nominal voltage: 1.10 mV/V
 Temperature range: -10 °C – 65 °C
 Input voltage: 10 V DC

*The types ZAK-...001/04 provide a mechanical overload protection. As a result, the guidance accuracy is reduced.

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



With the help of the electric counter type ZEZ and the pneumatic counter type ZPZ, the production quantities can be displayed on the eight digit display. The counter can be easily

mounted on any press.

The electrical counter is powered by a long life battery. **No external power supply required!**



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