








Mechanical equipment

- Pneumatic stamping-unit
- Hand-toggle-lever presses



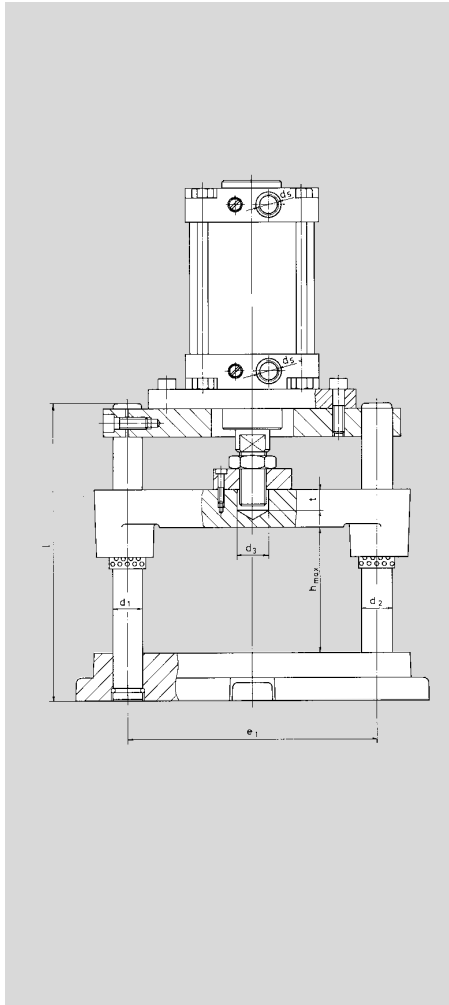
Mechanical equipment



ST 1092 page 7.03	ST 9041 page 7.04	ST 9062 page 7.05	ST 9067 page 7.05	ST 9072 page 7.06	ST 9075 page 7.07
ST 1292 					
ST 9120 page 7.08 ST 9122 ST 9124 ST 9126 					

Pneumatic-stamping-units

with die-sets made of special grey cast iron



Pneumatic-stamping units consisting of die-sets with ball guide, traverse, threaded flange and pneumatic cylinder

Application:

Cutting, bending, trimming, riveting, flanged and assembly working operations

Description:

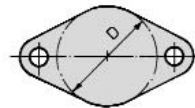
The traverse will be clamped to the pillars above the die sets upper plate and of use for the attachment of the pneumatic cylinder. The piston rod of the pneumatic cylinder is fastened onto the die-sets upper plate by help of the threaded flange.

Order example: Pneumatic-stamping-unit with die-set made of special grey cast iron with round working surface **ST 1092**

D = 200 mm

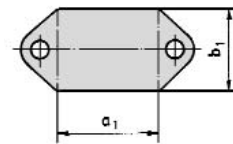
Add **200**

Order number **ST 1092.200**



Round Working surface
like ST 1002,
however with longer
pillars

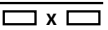
Order-no. **ST 1092.**



Rectangular Working surface
like ST 1202,
however with longer
pillars

Order-no. **ST 1292.**

Add size to order number



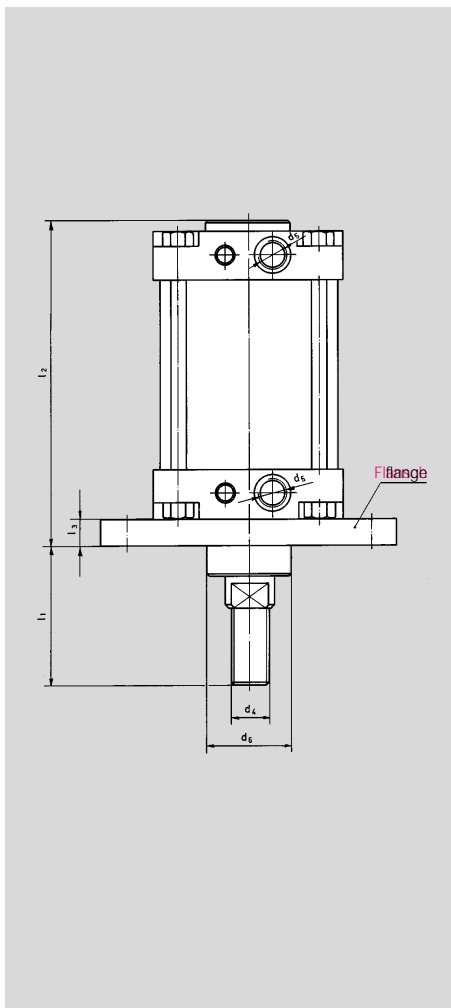
Working surface		d ₃	d ₅	e ₁	h _{max.}	t	d ₁ /d ₂ x l*)	Pneumatic cylinder		Compressive force F at 6 bar	▲ ▲
round D	rectangular a ₁ x b ₁							Diameter	Stroke		
125		25	G 3/8"	184	115	15	24/25 x 280	80	50	3015 N	125
	125 x 80	25	G 3/8"	184	115	15	24/25 x 280	80	50	3015 N	125 x 080
	125 x 100	25	G 3/8"	184	115	15	24/25 x 280	80	50	3015 N	125 x 100
160		25	G 1/2"	229	130	15	30/32 x 315	100	50	4712 N	160
	160 x 125	25	G 1/2"	229	130	15	30/32 x 315	100	50	4712 N	160 x 125
200		32	G 1/2"	269	165	20	30/32 x 355	125	100	7360 N	200
	200 x 100	32	G 1/2"	269	165	20	30/32 x 355	125	100	7360 N	200 x 100
	200 x 125	32	G 1/2"	269	165	20	30/32 x 355	125	100	7360 N	200 x 125
	200 x 160	32	G 1/2"	269	165	20	30/32 x 355	125	100	7360 N	200 x 160
250		42	G 3/4"	335	170	28	38/40 x 400	160	100	12060N	250
	250 x 200	42	G 3/4"	335	170	28	38/40 x 400	160	100	12060N	250 x 200

*) Denote different lengths of pillars on your order

Pneumatic-stamping-units



Pneumatic cylinders with flange



DIN/ISO 6431

Note: When using cylinders without flange the next size is suitable for the traverse. Screw on from underneath! If required enlarge the length l of the pillars appropriately. Hydro-supported pneumatic cylinders upon request.

Order example: Pneumatic cylinder with flange
ST 9041
 Cylinder-Diameter 80, Stroke 50 mm
 Add **080 x 050**
 Order number **ST 9041.080 x 050**

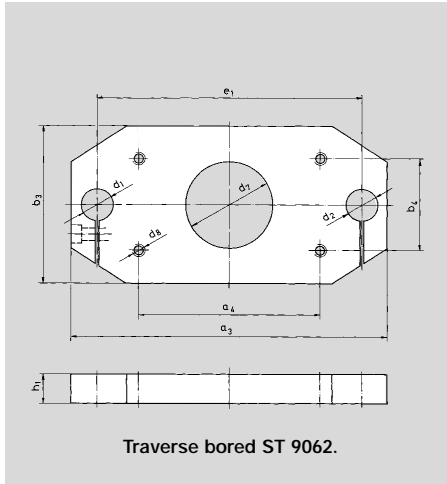
Add size to order number

Order-no. **ST 9041.** x

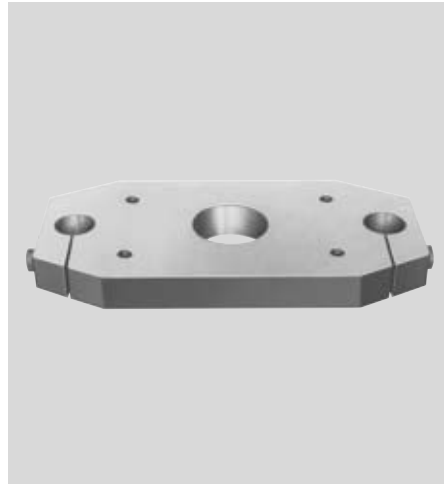
Cylinder-diameter	Cylinder-stroke	Compressive force F at 6 bar	d_4	d_5	d_6	l_1	l_2	l_3	▲
80	50	3015 N	M 20 x 1,5	G 3/8"	48	70	148	18	080 x 050
100	50	4712 N	M 20 x 1,5	G 1/2"	52	75	159	18	100 x 050
125	100	7360 N	M 27 x 2	G 1/2"	60	99	186	20	125 x 100
160	100	12060 N	M 36 x 2	G 3/4"	80	132	205	25	160 x 100
200 (without flange)	100	18840 N	M 36 x 2	G 3/4"	80	142	217	25	200 x 100

Pneumatic-stamping-units

Traverses and threaded flanges



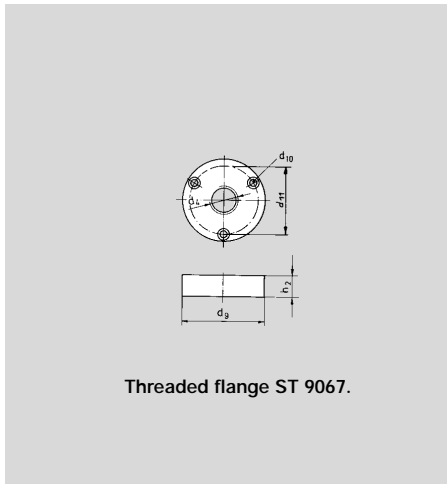
Traverse bored ST 9062.



Traverses suitable to pneumatic-stamping units with die-sets made of special grey cast iron and for pneumatic cylinders ST 9041

The traverses are also deliverable without boreholes d_7 and d_8 .

Order example: Traverses suitable to pneumatic-stamping units with die-sets made of special grey cast iron **ST 9062**
Space of the pillars $e_1 = 184$ mm
Add **184**
Order number **ST 9062.184**



Threaded flange ST 9067.



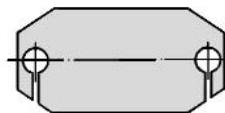
Threaded flange for pneumatic cylinder ST 9041.

Order example: Threaded flange **ST 9067**
 $d_4 = M 20 \times 1,5$
Add **20**
Order number **ST 9067.20**



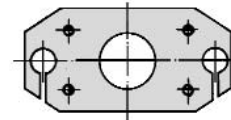
Threaded flange single Add size to order number
Order-no. **ST 9067.**

d_4	d_9	d_{10}	d_{11}	e_1	h_2	▲
M 20 x 1,5	70	M 6	56	184	16	20
M 20 x 1,5	70	M 6	56	229	16	20
M 27 x 2	80	M 8	62	269	20	27
M 36 x 2	105	M 8	85	335	28	36



Traverse not bored without threaded flange Add size to order number
Order-no. **ST 9061.**

a_3	b_3	d_1	d_2	h_1	▲
228	115	24	25	28	184
280	135	30	32	28	229
320	160	30	32	38	269
400	200	38	40	38	335



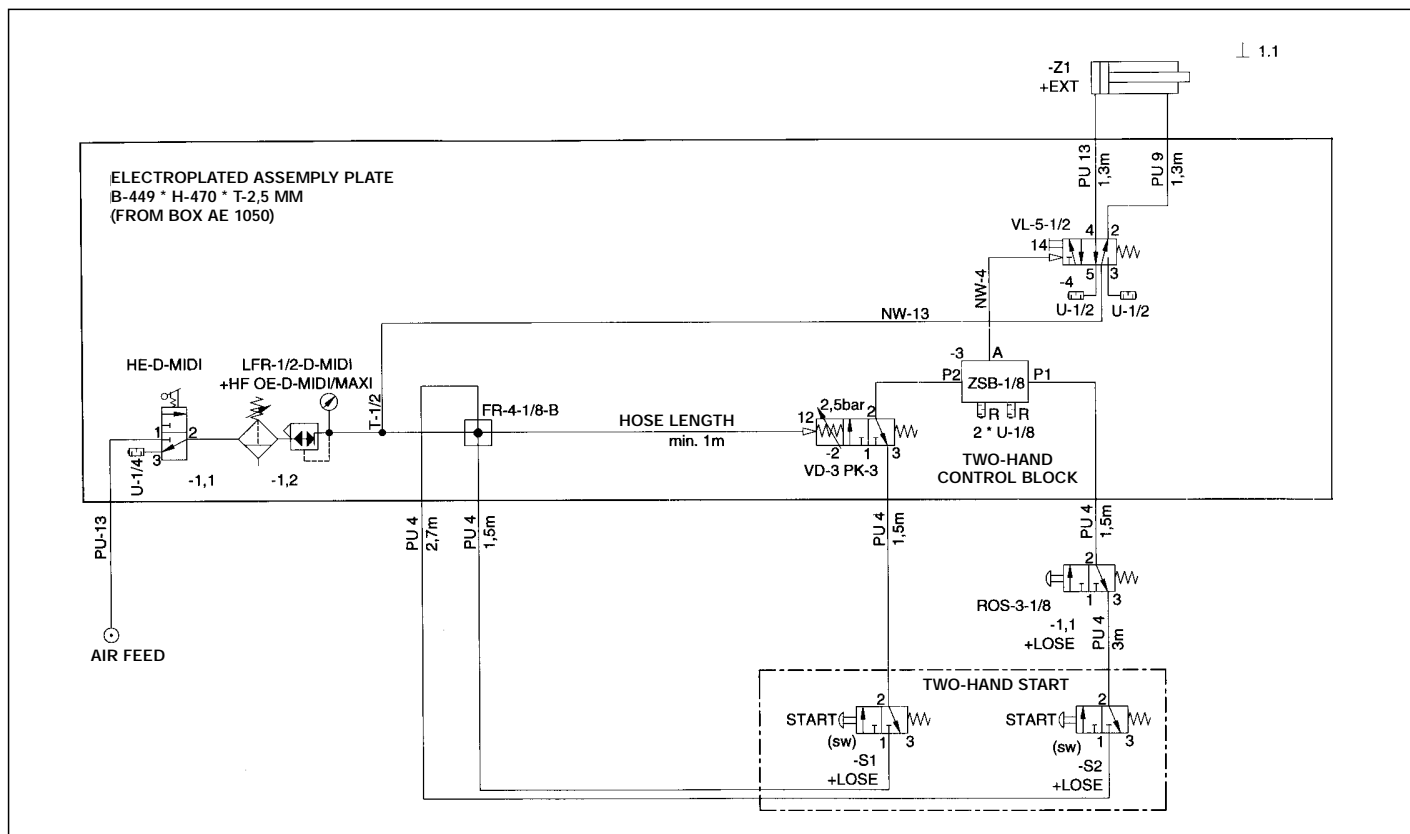
Traverse bored without threaded flange Add size to order number
Order-no. **ST 9062.**

a_4	b_4	d_7	d_8	▲
126	63	52	M 10	184
150	75	56	M 12	229
180	90	74	M 14	269
230	115	110	M 16	335

Pneumatic-stamping-units



steering mechanism and table



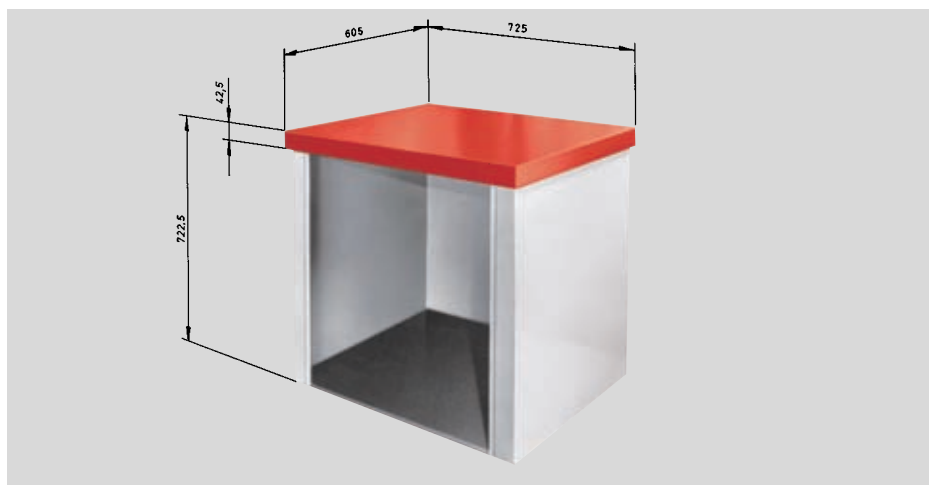
Pneumatic two-hand safety control consists of:

- Quick air-relief valve
- Pneumatic valve
- Two-hand control block
- Two-hand start
- Maintenance unit
- Manual sliding valve
- Pressure gauge with control lever valve
- Sound absorber

Mount cylinder complete on assembly plate with accessories and connecting hoses.

Order example: Pneumatic two-hand safety control **ST 9070**

Order number **ST 9070**



Mounting table as base for pneumatic-stamping-units

Order example: Mounting table **ST 9072.01**
Order number **ST 9072.01**

Pneumatic-stamping-units

built up complete



Pneumatic-stamping-unit ready for work, with table and both hands safety steering mechanism

Use: cutting, bending, trimming, riveting, flanging and mounting work cycles

If not specified otherwise, the stamping-unit ST 1092 respectively ST 1292 is mounted in the middle of the table. As a standard there are 3 mounting possibilities. If you need another position of the stamping-unit, please indicate so on your order.

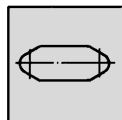
Order example: Pneumatic-stamping-unit built up complete **ST 9075**

Position to the operation side 02

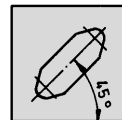
Working surface $a_1 \times b_1 = 200 \times 100$ mm

Add **02.200 x 100**

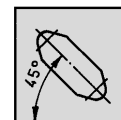
Order number **ST 9075.02.200 x 100**



Operation side



Operation side



Operation side

Add size to order number

Order-no. **ST 9075.01.**

Order-no. **ST 9075.02.**

Order-no. **ST 9075.03.**

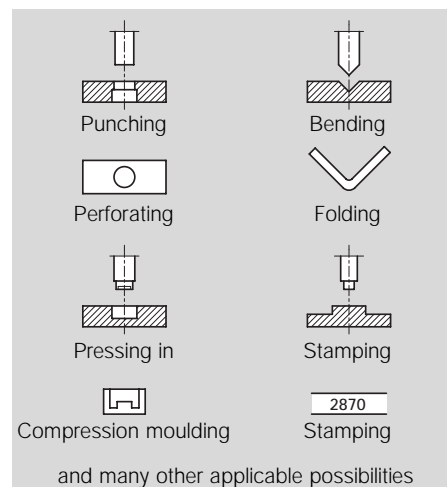
x

Working surface round D	Working surface rectangular $a_1 \times b_1$	Pneumatic connection	Pneumatic cylinder diameter	Pneumatic cylinder stroke	Compressive F force at 6 bar	▲	▲
125	125 x 80 125 x 100	G 3/8"	80	50	3015 N	125	
		G 3/8"	80	50	3015 N		125 x 080
		G 3/8"	80	50	3015 N		125 x 100
160	160 x 125	G 1/2"	100	50	4712 N	160	
		G 1/2"	100	50	4712 N		160 x 125
200	200 x 100 200 x 125 200 x 160	G 1/2"	125	100	7360 N	200	
		G 1/2"	125	100	7360 N		200 x 100
		G 1/2"	125	100	7360 N		200 x 125
		G 1/2"	125	100	7360 N		200 x 160
250	250 x 200	G 3/4"	160	100	12060N	250	
		G 3/4"	160	100	12060N		250 x 200

Toggle-lever presses

compressive force 2.5 kN – 16 kN

STEINEL
NORMALIEN



Characteristics

High compressive force from 2500 up to 16000 N with only little force needed at the hand lever. Large ram stroke resp. slide stroke. The whole toggle-lever unit is adjustable in the height by a threaded spindle, adjustment with a setscrew. Work table with T-slot mounting for tool attachment. Clearance bore-hole in the middle of the table. Compact and stable type of construction, little space required.

Special technical features

The hand lever, which can be adjusted 360° and thereby allows for the easiest lever movement for any assembly process.

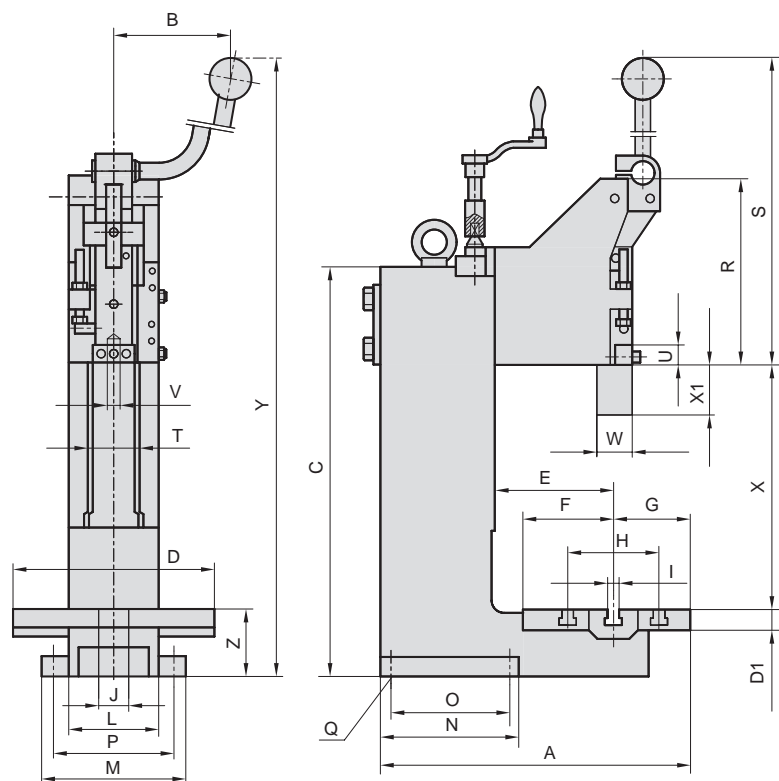
Technical data	ST 9120	ST 9122	ST 9124	ST 9126
Compressive force ca. 1 mm before the bottom dead center kN	2,5	5	8 + 12	8 + 16
Overhang mm	90	90	120	160
Ram stroke mm	0–42	0–40	0–45	0–58
Pitch range of the toggle lever unit mm	75–195	75–200	75–235	105–325
Smallest distance between table and ram (stroke at the bottom, toggle-lever unit at the bottom) mm	33	25	30	42
Largest distance between table and ram (stroke on top, toggle-lever unit on top) mm	195	195	243	325
Mounting surface at the ram mm	27 x 30	33 x 48	33 x 48	48 x 65
Truing-up trunnion bore in the ram mm	10 ^{H7}	10 ^{H7}	10 ^{H7}	15 ^{H7}
Mounting surface table mm	150 x 100	190 x 110	200 x 165	300 x 230
Center bore in the table (falling through bore-hole) mm	25	30	40	80
Width of groove mm	10	10	10	10
Height of the press mm	400	420	500	710
Base space mm	150 x 200	180 x 240	180 x 310	300 x 420
Space requirement mm	150 x 600	180 x 665	180 x 819	230 x 1150
Weight kp	10	20	32	79

Order example: Toggle-lever press with 5 kN compressive force
Order number **ST 9122**

Convertible by change of the bearing bolt
12 kN max. Stroke 25 mm
16 kN max. Stroke 25 mm

Toggle-lever presses

Drawing dimensions

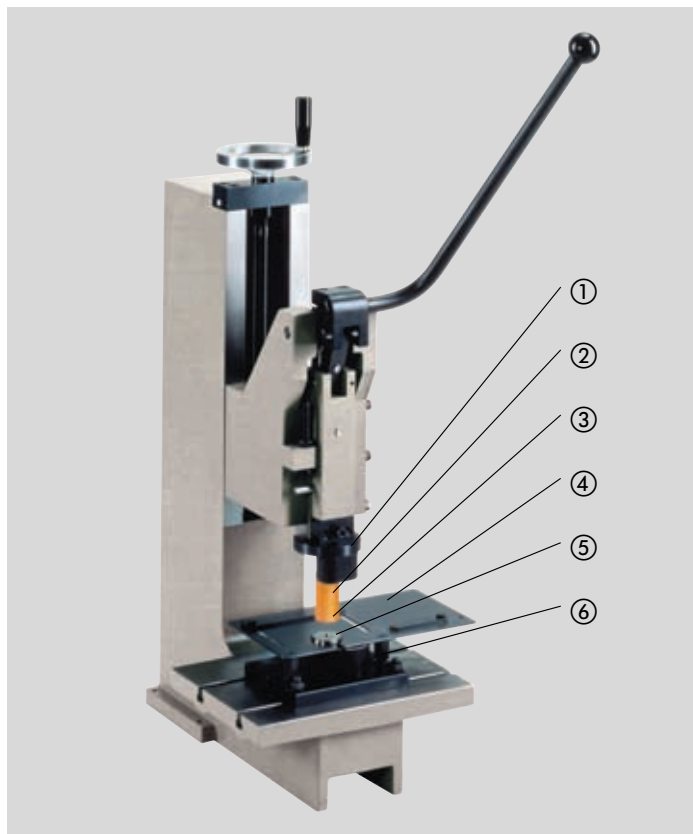


Dimensions	ST 9120	ST 9122	ST 9124	ST 9126
kN	2,5	5	8 + 12	8 + 16
A	200	230	315	420
B	65	90	133	120
C	320	345	415	590
D	150	180	200	300
D 1	22	24	21	25
E	90	90	120	160
F	60	60	93	130
G	40	40	75	100
H	-	-	-	100
I	10	10	10	10
J	25	30	40	80
K	25	30	40	60
L	56	80	90	120
M	90	130	140	160
N	110	115	140	160
O	85	95	120	130
P	74	110	120	144
Q	Ø 7	Ø 9	Ø 9	Ø 9
R	145	172	190	270
S	350	408	508	708
T	30	48	48	65
U	25	21	21	29
V	Ø 10 ^{H7}	Ø 10 ^{H7}	Ø 10 ^{H7}	Ø 15 ^{H7}
W	27	33	33	48
X	75-195	65-195	75-243	100-325
X 1	0-42	0-48	0-45	0-58
Y	480-597	533-668	642-820	933-1160
Z	52	55	72	125

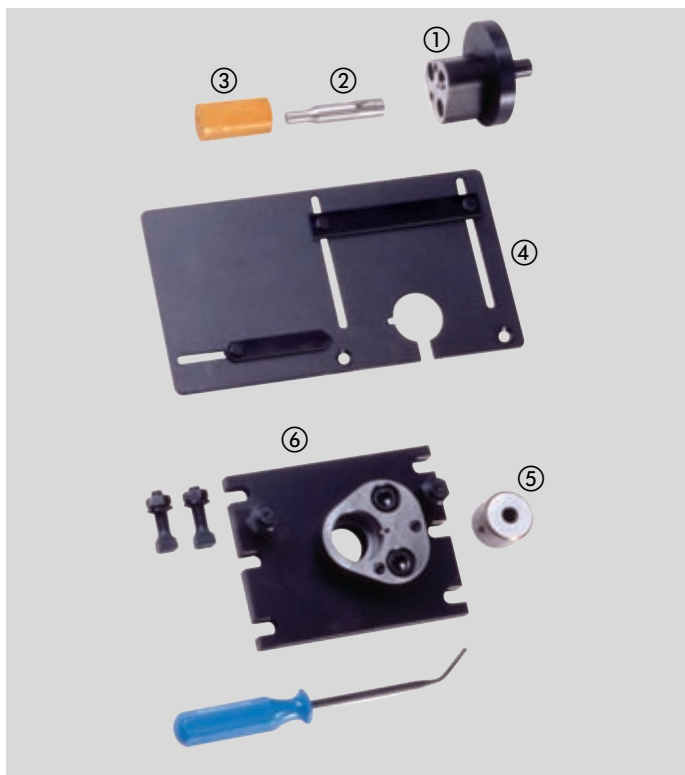
Toggle-lever presses

Accessories

STEINEL[®]
NORMALIEN

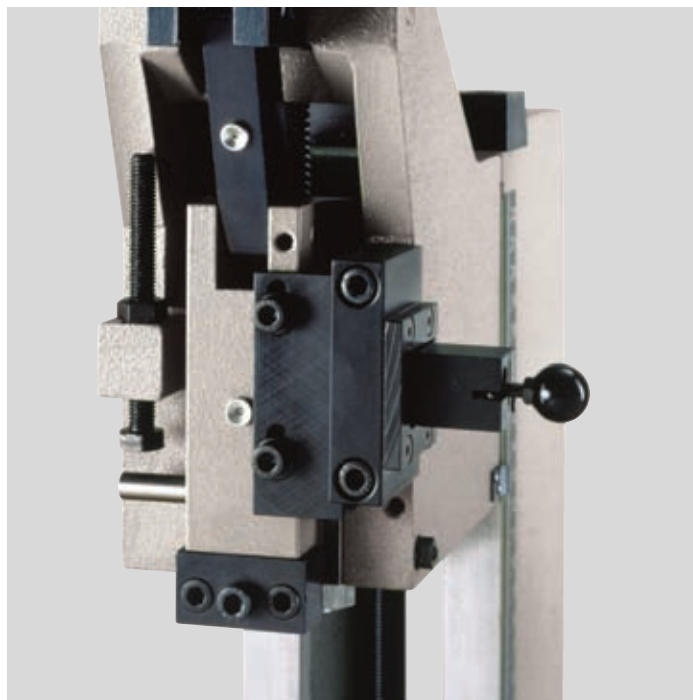


Quick-change cutting punch system



Price and delivery upon request

1. Quick-change punch holder
2. Quick-change punch
3. Urethane stripper
4. Support with adjustable end stops
5. Quick-change die
6. Quick-changer for dies



Return stroke blocking mechanism

for toggle-lever presses 2.5 kN – 8/16 kN

When precise embossing, bending, riveting and cutting work is of importance, the return stroke blocking mechanism guarantees that the ram reaches the exact bottom dead center.

The return stroke safety is triggered 8 mm before the ram reaches the bottom dead center.

After a complete stroke cycle, only about 18 mm return stroke is necessary. This corresponds to pulling the hand-lever back 60° in order to be able to start the next stroke.

The blocking mechanism can easily be locked and unlocked as required. Subsequent installation is possible without any problems.