ROEMHELD

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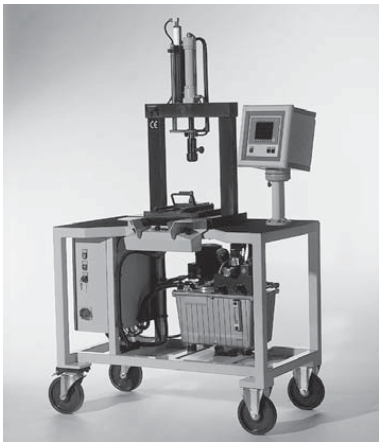
P 6.6062

Press 25 - 63 kN
with press-in force control and graphic recording

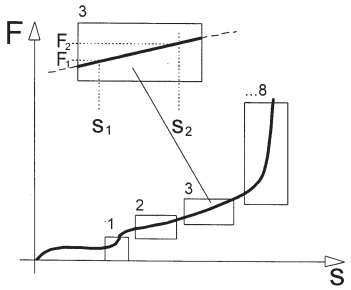


Advantages

- High flexibility in the operative range
- Improved ergonomics
- Quality assurance of pressed joints
- Reduction of assembly time
- Short amortisation time
- Closed force-loop
- Defined press-in forces
- Light component load
- Quick-change tooling system

Press-in force control and interpretation

The press is used for hydraulic pressing in of parts, during the press-in process the complete force progression is valued as a function of the stroke according to programmable criteria in the form of windows.



To evaluate a press-in process the force and stroke measuring system signalises the following states by the singal outputs:

- „IO":press-in process okay
  (no window infringed)
- „NIO": press-in proces faulty
  (at least one window infringed)
- „X_Trig.Ende":
  Max. press-in force obtained
- „Y_Trig.Ende":
  Programmed final position obtained

The signals „X_Trig.Ende" und „Y_Trig. Ende" are processed in the connected programmable control for recognition of the press-in process, i.e. for control of the press-in cylinder.

If there are one or more measured values outside the admissible limit values, there is a NIO error signal, and this is shown by a yellow pilot light in the two-hand operating panel.

Before restart of the press-in device, first the key switch „acknowledge press fault" has to be operated in order to release the press-in device again for cylinder operation. A pilot light at the two-hand operating panel indicates the off-position.

Application

Presses with press-in force control and recording of the press-in force progression are preferably used in assembly processes for production of longitudinal pressed joints; in addition perfect press fit of frictionally-engaged joinings is guaranteed.
Quality assurance and the proof of realisation of longitudinal pressed joints are more and more demanded due to product liability and in accordance with DIN EN ISO 9001:2001. Due to their geometrical and simple shape it is normally cheaper to produce frictionally-engaged assemblies than positive assemblies.

Description

The press-in press is a bench device with press-in force control as well as graphic interpretation of the press-in operation and a complete function unit that consists basically of the 5 base elements mechanical press frame, electro-hydraulic control, table frame, moving mechanism and measuring system.
Above the table plate there are - according to the application of ergonomic design rules - the mechanical press-in frame and the measuring system with the operating panel and the graphic screen. The two-hand operating panel is mounted to the exterior table frame. In the lower table area electric control box and hydraulic power unit are installed. The press is mounted on a moving mechanism with fixed rollers and steering rollers with brake.

Automatic mode:

By operating the mushroom push-buttons at the two-hand operating panel at the same time, the hydraulic cylinder extends in rapid speed (starting from the retracted off-position).

As soon as the hydraulic cylinder has reached the switching position, the control switches automatically to creep speed. Press-in force control is effected during joining of the components. When the maximum press-in pressure is obtained, reversing to retraction is automatically effected and the hydraulic cylinder retracts rapidly until the off-position is obtained and the control is switched off. The automatic mode can only be started, if the hydraulic cylinder is in the retracted off-position.

Setting mode:

In addition, the functions "Extend manually" and "Retract manually" can be separately selected by means of a key switch in the electric control.

In the setting mode, the press-in device can only be operated in creep speed.
The press-in force control is not in operation.

Function triggering is - in all operating conditions - only possible by operating simultaneously both mushroom push-buttons of the two-hand operating panel.

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Technical characteristics

Further functions:

- Manual movement of the press-in cylinder with touch control
- Programming possibilities of a stop time under pressure subsequent to a pressing.
- Time optimisation by adjustable return stroke of the press-in cylinder in automatic mode
- Programming possibility for 32 records with different parameters.
- Display of a test protocol
- 8 evaluation windows per programme selectable
- Graphic presentation of the measuring curve

Data input

The electric control is equipped with a programmable control. Programming contains beside the measuring interpretation the application-oriented data input by records.

One record consists of the input of:

- Maximum press-in pressure
- Position off-position
- Switching position rapid/creep speed
- 8 measuring windows

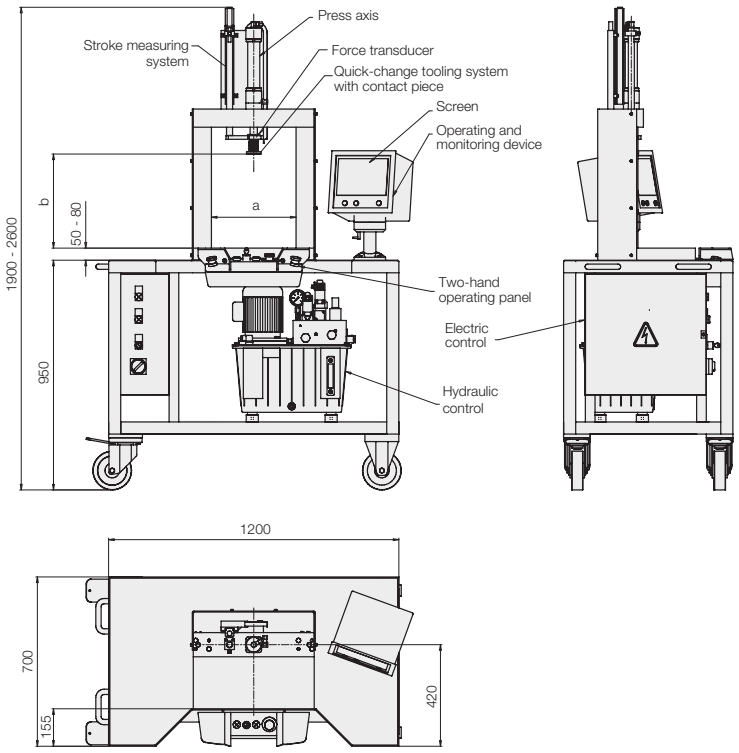
One measuring window consists of the input of:

- Maximum and minimum stroke
- Maximum and minimum force

Up to 32 records can be programmed. The input of records is made by the operating panel on the table frame. Activation of the desired record is made by input of the corresponding record-no.

Data output

An interface RS 232 is available to take the records and the data output.

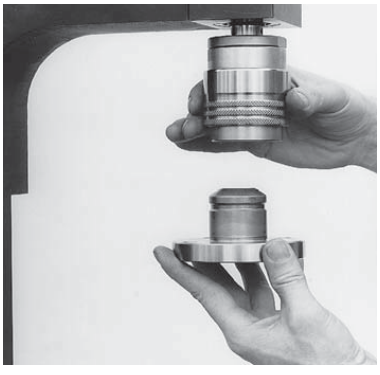


Technical characteristics

Part-no.	Stroke [mm]	Press-in force [kN]	a [mm]	b [mm]	Rating [kW]	v-press-in stroke [mm/s]	v-rapid speed Extending [mm/s]	v-rapid speed Retracting [mm/s]
6600-130	250	25	250	300	0,75	20	78	130
6600-131	360	25	350	400	0,75	20	78	130
6600-132	250	40	250	300	1,1	18	75	126
6600-133	360	40	350	400	1,1	18	75	126
6600-134	400	63	330	450	1,5	18	80	135
6600-135	500	63	460	550	1,5	18	80	135

Quick-change tooling system

The quick-change tooling system offers the possiblity to change to other contact pieces within a very short time.
Uncoupling of the quick-change tooling system is made by lifting of the exterior sleeve only. The contact piece can be detached and changed. After release of the exterior sleeve the quick-change tooling system engages automatically and locates the contact piece in a defined position. In unloaded mode the contact pieces are self-centering. During pressing-in the forces are compensated by the contact piece and introduced to a spherical surface support, thereby they can allign themselves parallel to the centre line and compensate the elastic deformation of the components. A gentle press-in operation without lateral forces on the workpieces is realised.



Application and installation instructions

When installing the press pay attention to a flat floor.
All 4 feet of the table frame must contact the floor. According to the operating instructions the electric connection has to be effected and the hydraulic power unit must be filled with mineral oil during installation.