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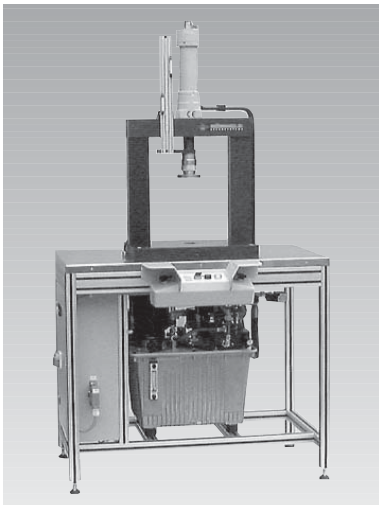
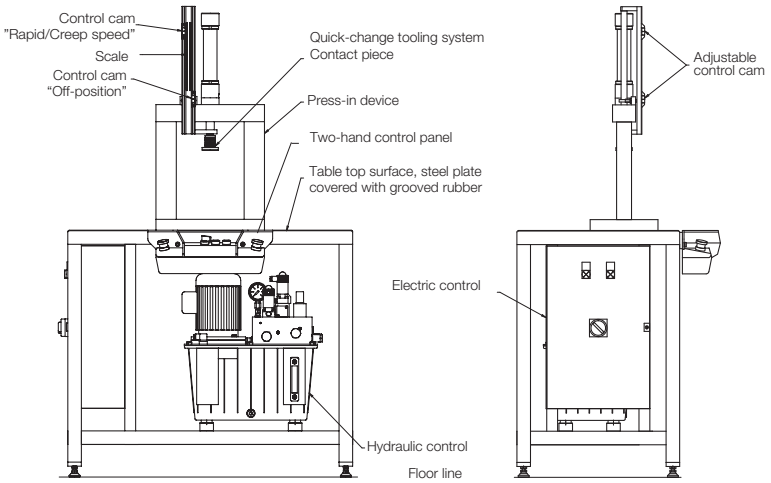
Issue 9-07 E

P 6.6055

Press-In Devices 25 -100 kN
bench devices with electro-hydraulic control





Application
Press-in devices for assembly are preferably used in assembly processes for production of longitudinal pressed joints. In addition, the assembly conditions require frequently a rigid O-shaped press-in frame.

Advantages
- High flexibility in assembly
- Quality assurance of operation
- Reduction of assembly time
- Short amortisation time
- Closed force-loop
- Defined force ratios
- Light component load
- Quick-change tooling system

Industry/applications (selection)
– Drive technology, gears box assembly
– Couplings, cardan shafts
– Compressors, pumps, hydraulic elements
– Industrial fittings
– Materials-handling technology
– Automotive industry and their suppliers
– Machine tool building
– Building and agricultural machines
– Electronics

Description
Press-in device as bench device is a complete functional unit and consists of 3 basic components: mechanical press-in device, electro-hydraulic control and underframe for tables. Above the table plate there are - according to the application of ergonomic design rules - the mechanical press-in device and at the table frame the two-hand operating panel. The electric control box and the hydraulic power unit are installed in the lower table area. Due to safety reasons, operation of the hydraulic cylinder is always made by a two-hand operating panel. The press-in device is equipped with a rapid and creep speed control and a return stroke limitation.

Application and installation instructions
When installing the press-in device it has to be considered that it will be installed on a plain surface and will be carried by all 4 legs. According to the operating instructions the electric connection has to be effected and the hydraulic power unit must be filled with mineral oil.

Aplication example
This installation is adapted to the assembly process of electric motors: with a triple press-in device 3 stator bushings are pressed in into the housings in one cycle.
This corresponds to the assembly sequence of the preceding and following assembly steps in production, so that there will not be any waiting times.
The press-in device realises in each press-in axis a press-in force control, thereby the quality of the operation and a reliable further processing are guaranteed.

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Functions

Automatic mode

By operating the mushroom push-buttons at the two-hand operating panel simultaneously, the hydraulic cylinder extends rapidly starting from the retracted off-position.
When the 1st proximity switch “rapids/creep speed” is actuated, the control switches automatically during the motion to creep speed. When the maximum press-in pressure is obtained, reversing to retraction is automatically effected and the hydraulic cylinder retracts rapidly until the 2nd proximity switch “Off-position” is actuated. The switching points of the proximity switches are continuously adjustable. The lamps at the two-hand operating panel indicate if the off-position and the maximum press-in pressure are achieved. The automatic mode can only be started, if the hydraulic cylinder is in the retracted off-position.

Setting mode

In addition, the functions “Extend” and “Retract” can be separately selected by means of a selector switch at the two-hand operating panel. In the setting mode, the press-in device can only be operated in creep speed. The proximity switches are 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.

Variants (selection)

- Base plate additionaly equipped with diagonal slots as per DIN 650
– Table frame out of aluminium
– Contact piece as per DIN 810
– Press-in frame with additional protection cover
– Additional equipment for press-in force control

Special versions on request

Quick-change tooling system

The quick-change tooling system offers the possibility to change to other press-in 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 pieces 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.

Contact pieces

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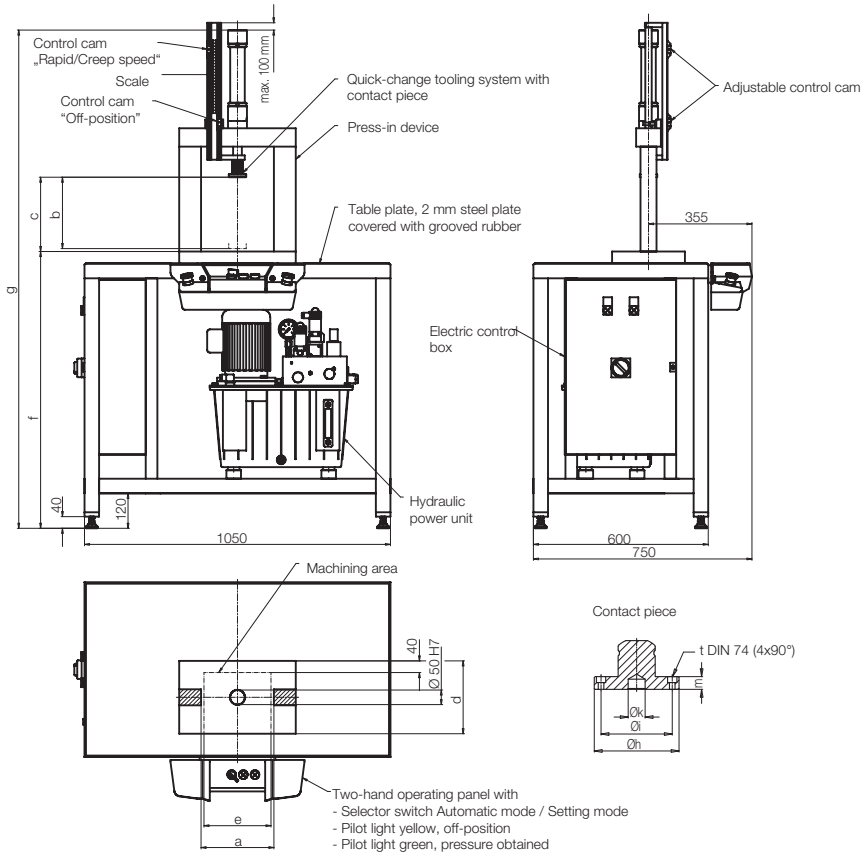
Technical characteristics



Press-in device		**6605-30X-XXX**	**6605-35X-XXX**	**6605-40X-XXX**	**6605-45X-XXX**	**6605-50X-XXX**	**6605-55X-XXX**	**6605-60X-XXX**	**6605-65X-XXX**
Nominal pressure force	[kN]	25	25	40	40	63	63	100	100
a = clear width	[mm]	250	350	250	350	330	460	430	600
b= cylinder stroke	[mm]	as per customer's specifications, see code for part-nos.							
c= clear height	[mm]	as per customer's specifications, see code for part-nos.							
d	[mm]	250	315	250	315	315	400	400	500
e= machining area	[mm]	250	330	250	330	330	330	330	330
f	[mm]	950	960	950	960	960	973	973	990
g= f+c+b+	[mm]	255	267	260	272	325	345	366	391
h	[mm]	60	60	60	60	100	100	100	100
i	[mm]	40	40	40	40	84	84	84	84
k	[mm]	12 H7 x 6	12 H7 x 6	12 H7 x 6	12 H7 x 6	20 H7 x 10	20 H7 x 10	20 H7 x 10	20 H7 x 10
m	[mm]	10	10	10	10	15	15	15	15
t as per DIN 74	[mm]	Jm5	Jm5	Jm5	Jm5	Km6	Km6	Km6	Km6
Flow rate	(l/min)	1.5/4.4	1.5/4.4	2.0/6.8	2.0/6.8	3.3/11.9	3.3/11.9	5.1/15.6	5.1/15.6
Max. operating pressure	[bar]	200/40	200/40	200/40	200/40	200/40	200/40	200/40	200/40
Oil volume of the reservoir	[l]	27	27	27	27	40	40	40	40
Rating	[kW]	0.75	0.75	1.1	1.1	1.5	1.5	2.2	2.2
Electric connection		3/PE (50 Hz 400 V)							
Code classIP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	
v-press-in stroke	[mm/s]	20	20	18	18	18	18	18	18
v-rapid speed extend	[mm/s]	78	78	75	75	80	80	70	70
v-rapid speed retract	[mm/s]	130	130	126	126	135	135	115	115
Contact piece		**6604-161**	**6604-161**	**6604-161**	**6604-161**	**6604-166**	**6604-166**	**6604-166**	**6604-166**

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Code for part numbers

Code for part numbers

6605-XX X - XXX

30 = 25 kN pressure force, 250 mm clear width
35 = 25 kN pressure force, 350 mm clear width
40 = 40 kN pressure force, 250 mm clear width
45 = 40 kN pressure force, 350 mm clear width
50 = 63 kN pressure force, 330 mm clear width
55 = 63 kN pressure force, 460 mm clear width
60 = 100 kN pressure force, 430 mm clear width
65 = 100 kN pressure force, 600 mm clear width

0 = 100 mm cylinder stroke
1 = 160 mm cylinder stroke
2 = 200 mm cylinder stroke
3 = 250 mm cylinder stroke
4 = 320 mm cylinder stroke
5 = 400 mm cylinder stroke
6 = 500 mm cylinder stroke

XXX = Clear height (dimension c) in mm, Range of height: 0 - 800 mm. **Note:** The clear height must be bigger than the cylinder stroke!

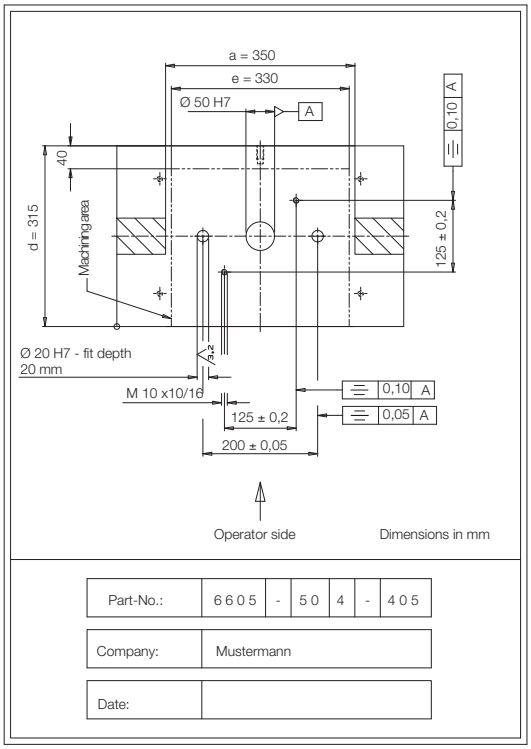
Drilling pattern

Please indicate the desired drilling pattern with complete dimensions of shape and position in the following cartoon on page 5 and join this information to your order. Please consider that machining is only admissible **within the indicated machining area**:

- max. diameter of bore holes : 75 mm
- max. diameter of internal threads: : M 16
- max. bore quality as per DIN 7151 : 7
- max. admissible number of bore holes : 4
- max. number of internal threads : 6
- min. admissible tolerance of length : ± 0.02mm

Example of ordering:

Press-in device with:
- 63 kN pressure force
- 330 mm clear width
- 320 mm cylinder stroke
- 405 mm clear height
- 2 fit holes 20 H7-fit depth 20 mm
- 2 internal threads M10 – 10 deep



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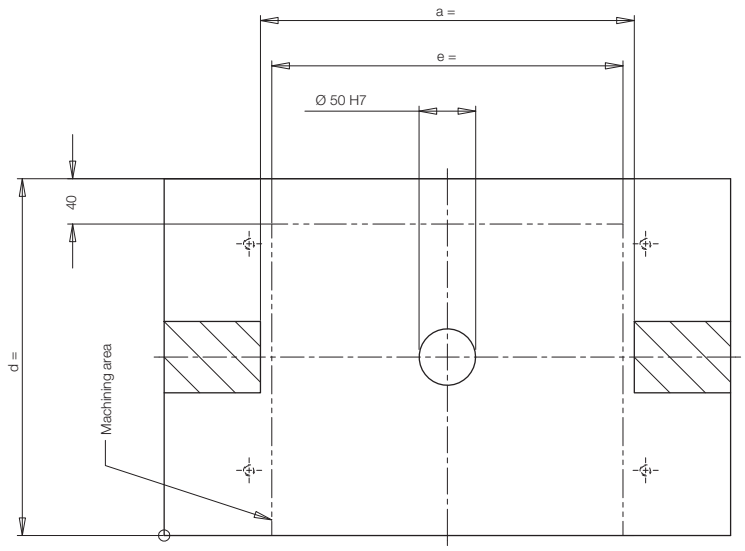
Order pattern
Fax +49 6405/89-211



Note:
Dimensions a, d and e see dimension chart on page 3.

Operator side

Dimensions in mm

Part-No.:	6 6 0 5	-				

Company:	
Date:	