



**ROEMHELD**  
HILMA ■ STARK

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# P 1.102

## ECO Press-In Devices in Portal Design

Hydraulic drive, max. press-in force 40 to 100 kN  
with rapid/creep speed control by travel time programming



### Advantages

- High forces / rigid frames
- No cost and time-consuming project planning
- Easy retrofitting of functions or components
- Standardized drilling patterns for workpiece and tool holders provided by the customer
- Interchangeability of the individual elements by standardized drilling patterns
- Ergonomically designed operation
- Closed adhesion
- Reduction of assembly time
- Process safety
- Sales of individual components
- Plug & Play
- High degree of operator friendliness

### Application

These press-in devices are preferably used in assembly processes for the production of longitudinal pressed joints, riveted joints as well as for pressing out and testing of components.

### Principal use

- Drive technology, gears box assembly
- Couplings, cardan shafts
- Compressors, pumps, hydraulic elements
- Industrial fittings
- Mechanical engineering
- Components for construction and agricultural machinery
- Electronics

### Operation

For safety reasons, the press-in device is equipped with a two-hand operation. This has a divided design (two separate push-buttons) to allow workpiece feeding from the front. Alternatively, it is also possible to provide safety light grids or a protective covering. In such applications, function triggering is made by a push-button.

### Available on request:

- Workplace lighting
- Aluminium profile table frame
- Tool holders
- Joining tools

### Description

The base frame is designed as a working table. Below the table plate there is the electric control and the power unit that control the hydraulic press-in cylinder at the portal.

The steel base plate of the portal frame is installed flush with the table plate in the working table, so that the working surface is plane and edges are avoided.

On the base plate any workpiece carriers such as sliding tables can be mounted.

The piston rod of the press-in cylinder is equipped with a quick-changing device, at which the press-in tools can be mounted. This can optionally be replaced by other tool holders.

Thanks to the modular design, the functions of the control as well as mechanical components can be easily exchanged or retrofitted.

### modupress

#### Press-in device

Part no. 6421-5XX-XXX



### Technical data

Max. press-in force: 40, 63, 100 kN  
Stroke: 100, 200, 300, 400 mm  
Drive: hydraulic  
Frame type: portal

### Control variant 1

Rapid/creep speed control  
by travel time programming

### Operations

- Two-hand operation
- Start button  
(for version with safety light curtain)



### modupress interfaces

- Base plate:  
140x140 – 4xM10, 2xØ 18H7, 1xØ 50H7
- Tool holder:  
In the bolt circle Ø 84 mm  
4 counterbores M6

### Accessories

- Workpiece feeders  
as per data sheet P 9.100
- Protection cabins  
as per data sheet P 9.200
- Change tools  
as per data sheet P 9.300

### Control variants

The ECO press-in device in portal design is equipped with pressure switch-over and travel time programming to adjust the switching position "rapid/creep speed" and the "return stroke limitation".

## Functional description

### Input and output functions

Time panel mounted at the frame, 4 inch (other sizes on request, functions adjustable via time)

- Position - return stroke limitation
- Position - switching rapid/creep speed
- Max. press-in force ( via pressure reducing valve at the power unit)
- Hold time in lowest press-in position

### Functional description

#### Normal operation (press-in operation)

By operating the two mushroom push-buttons at the two-hand operating panel at the same time, the press-in cylinder extends (starting from the off-position). As soon as the first adjusted time mark (s) is obtained, or the time (s) has passed, the press-in cylinder switches automatically from rapid speed to creep speed.

After reaching the set maximum force, the press-in cylinder retracts to the off-position that is adjustable by the time. The preset maximum force is maintained for 1s in the lowest joining position in order to safely terminate the joining process.

If the two-hand operation is released in an intermediate position, the press-in cylinder remains in this position.

When pressing the push-buttons again, the press-in cylinder moves at rapid speed to the off-position. Only after reaching the off-position, the press-in cylinder can be extended again.

### Manual mode (setting mode)

By means of a selector switch in the electric control, the press-in cylinder can be extended or retracted by manual control.

Thus, it is possible to move to the workpiece specific stroke points of the press-in cylinder in order to sense and adjust the time.

The press-in cylinder moves only at creep speed.

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

### Code for part numbers - portal ECO

6 4 2 1 - 5 X X - X X X

#### Clear width

- 1 = 350 mm
- 2 = 460 mm
- 3 = 540 mm

#### Clear height

- 1 = 200 mm
- 2 = 250 mm
- 3 = 300 mm
- 4 = 350 mm
- 5 = 400 mm
- 6 = 450 mm
- 7 = 500 mm
- 8 = 550 mm
- 9 = 600 mm

#### Press-in force

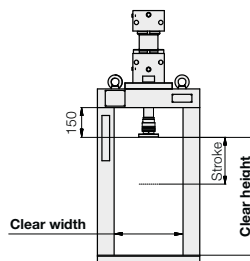
- 1 = 40 kN
- 2 = 63 kN
- 3 = 100 kN

#### Stroke

- 1 = 100 mm
- 2 = 200 mm
- 3 = 300 mm
- 4 = 400 mm

#### Control variant

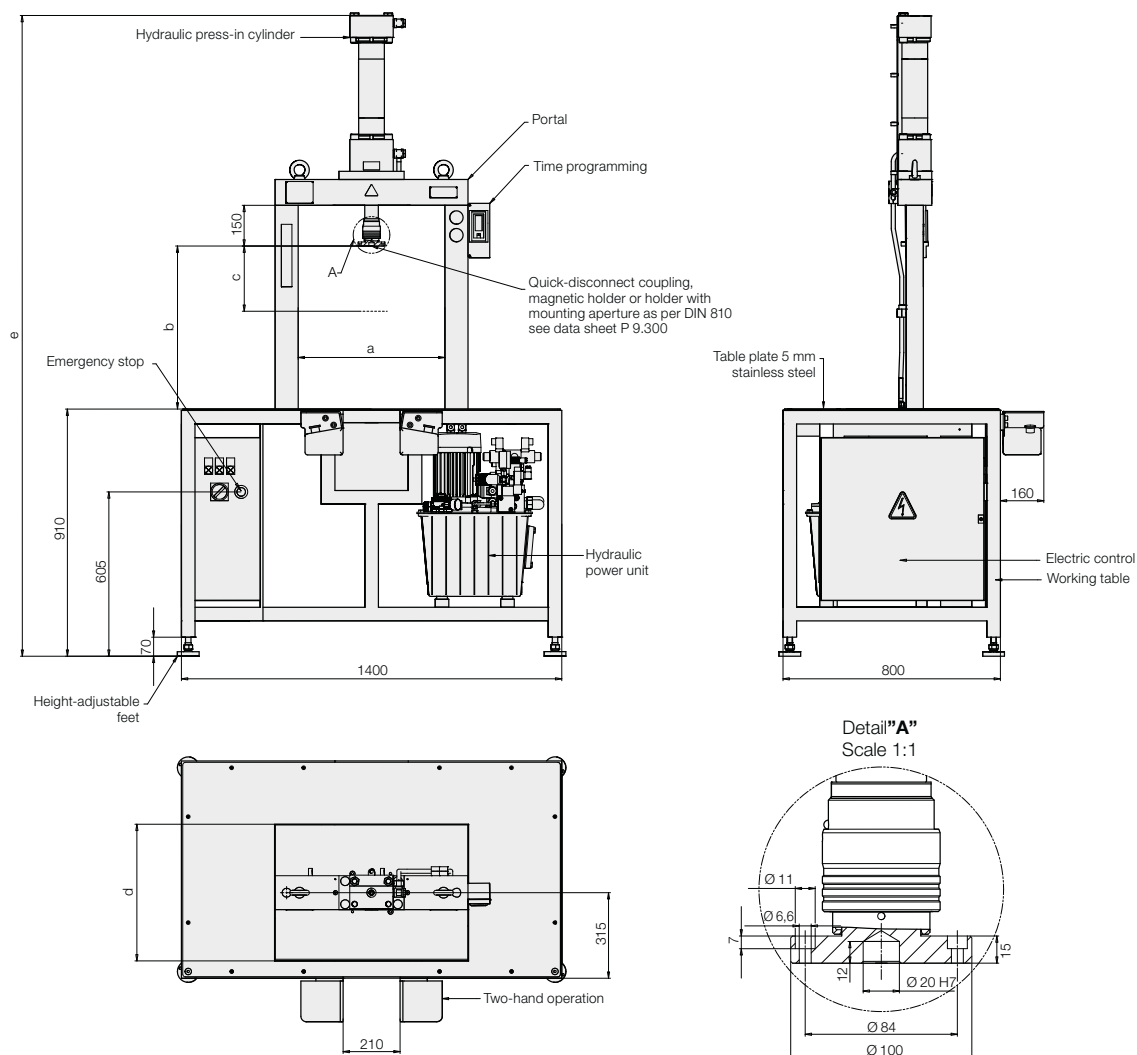
- 1 = pressure switch-over with travel time programming



### Example of ordering

6421-513-211 = Portal,  
clear depth 350 mm,  
clear height 300 mm,  
63 kN,  
stroke 100 mm,  
pressure switch-over

## Dimensions • Technical data



### Technical data

Press-in force	[kN]	40 / 63 / 100
a = clear width	[mm]	350 / 460 / 540
b = clear height	[mm]	200 / 250 ... 600
c = cylinder stroke	[mm]	100 / 200 / 300 / 400
d = depth base plate (results from "a")	[mm]	315 / 400 / 500
e = total height	[mm]	1355 + b + stroke
Speed - creep speed	[mm/s]	approx. 10–30
Speed - rapid speed	[mm/s]	approx. 75–100

### Service note:

We also carry out maintenance work for you.  
For example, the semi-annual stop time measurement as per ZH1/45+6.  
Please contact us.

### Base plate

