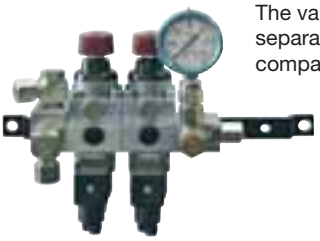
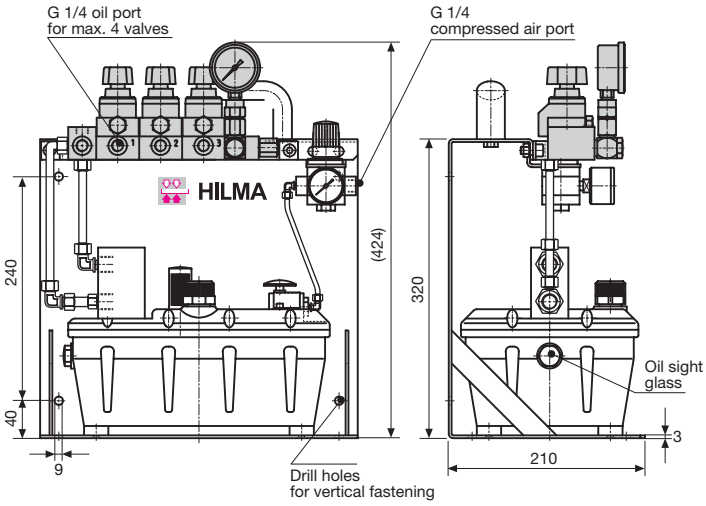
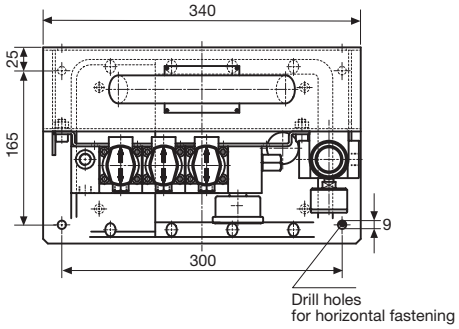
Pneumatic-hydraulic clamping pump

100 or 400 bar with a flow of 0.8 l/min.



The valve unit can also be fastened separately to the machine bed as a compact unit using screws.





Application and description:

This compact pneumatic-hydraulic clamping pump, ready for installation, is particularly suitable for small and medium clamping applications on presses and machines.
The clamping circuits are activated using hand valves. A separate valve is provided for each clamping circuit. The hand valves can also be fastened together as a complete valve package in a position which is readily accessible to the operator, e.g. near to the machine bed (see illustration above).
The clamping pump operates intermittently under automatic pressure control, i.e. when the set pressure is reached, the motor is automatically switched off. In the version fitted with a machine safety device, a pressure switch signals a pressure drop to the machine.
The clamping pump may be connected to any compressed air network with a pressure reducer. It is equipped with a pressure control valve for regulating the air pressure, a pressure gauge, oil sight glass, hand valves, handle, cover sheet, connector block, silencer, oil filling and pressure switch (optional extra). On request, versions with pilot-controlled valves or for double-acting applications are also available.

Technical data:

Max. pump displacement:	0.8 l/min at 0 bar 0.3 l/min at 400 bar
Max. operating pressure:	100 or 400 bar
Min. operating pressure:	100 bar
Max. air pressure:	4.0 bar
Min. air pressure:	2.0 bar
Total tank volume:	2.4 litres
Useable tank volume:	1.9 litres
Hydraulic fluid:	Hydraulic oil HLP 32/ VG32
Weight:	16 kg
Oil port:	G 1/4
Compressed air port:	G 1/4
Noise level:	80 dBA
Temperature range:	between 5° and 35°C

Hilma-Römheld GmbH
Schützenstraße 74 · D-57271 Hilchenbach
Phone +49 (0) 2733 / 281-0 · Fax +49 (0) 2733 / 281-113 · www.hilma.de

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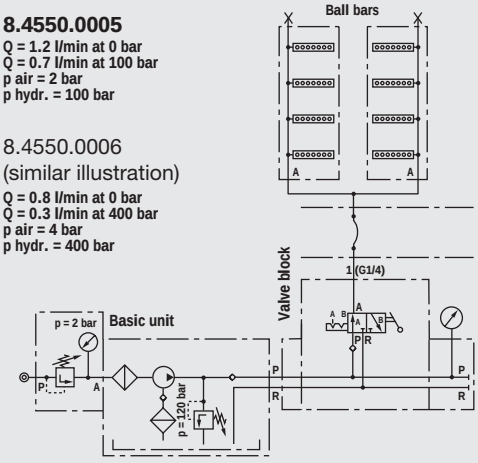
Control configurations

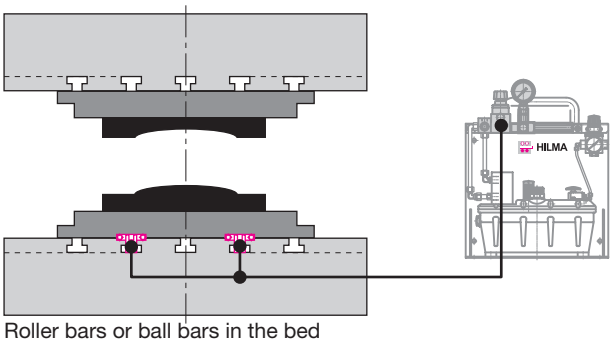
Part no.	Operating pressure (bar)	Function	Control
8.4550.0005	100	1 circuit for single-acting cylinder, e.g. for ball bars	without pressure switch
8.4550.0006	400	1 circuit for single-acting cylinder, e.g. for roller bars	without pressure switch
8.4550.0007	400	2 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 1 x clamping on the ram	with machine safety
8.4550.0008	400	3 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 2 x clamping on the ram	with machine safety
8.4550.0009	400	3 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 1 x clamping on the ram and 1 x lifting of roller bars	with machine safety
8.4550.0010	400 + low pressure 100	3 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 1 x clamping on the ram and 1 x lifting of ball bars (100 bar)	with machine safety
8.4550.0011	400	4 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 2 x clamping on the ram and 1 x lifting of roller bars	with machine safety
8.4550.0012	400+ low pressure 100	4 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 2 x clamping on the ram and 1 x lifting of ball bars (100 bar)	with machine safety
8.4550.0013	400	3 circuits for single-acting cylinders, e.g. 1 x clamping on the bed and 2 x clamping on the ram	without machine safety

Hydraulic schematics

8.4550.0005
Q = 1.2 l/min at 0 bar
Q = 0.7 l/min at 100 bar
p air = 2 bar
p hydr. = 100 bar

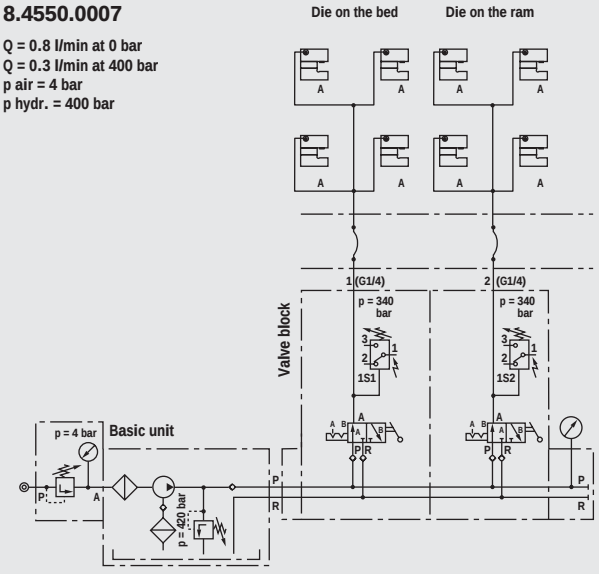
8.4550.0006
(similar illustration)
Q = 0.8 l/min at 0 bar
Q = 0.3 l/min at 400 bar
p air = 4 bar
p hydr. = 400 bar

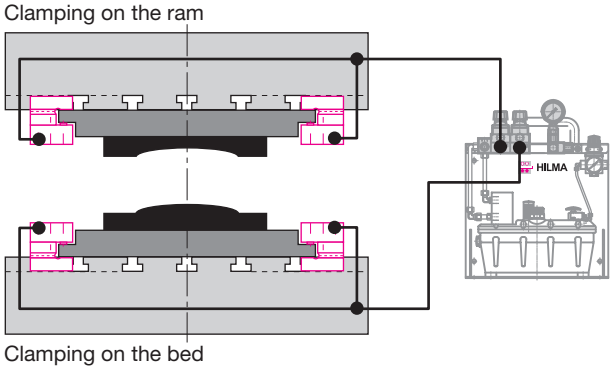




Roller bars or ball bars in the bed

8.4550.0007
Q = 0.8 l/min at 0 bar
Q = 0.3 l/min at 400 bar
p air = 4 bar
p hydr. = 400 bar





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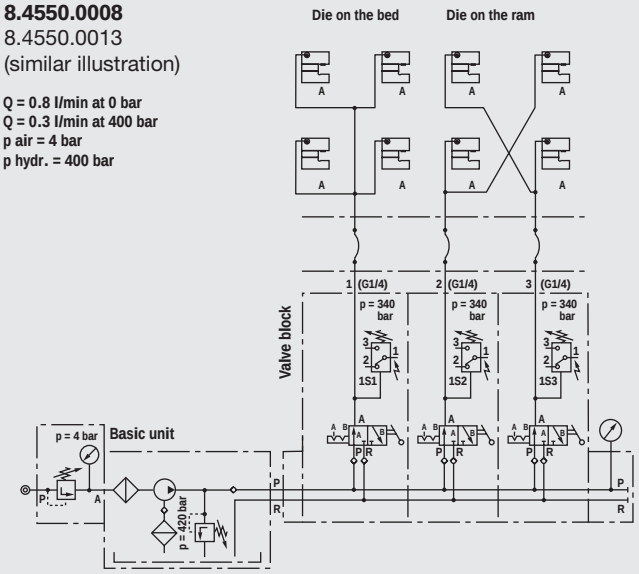
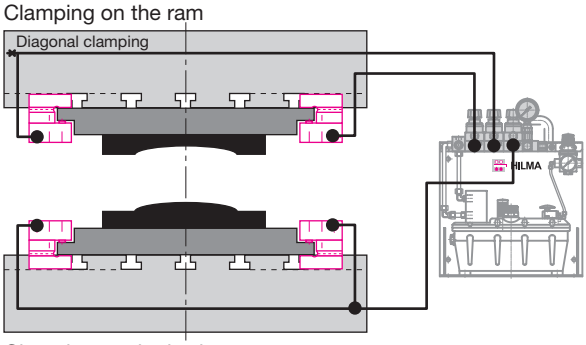
8.4550.0008
8.4550.0013
(similar illustration)

Q = 0.8 l/min at 0 bar
Q = 0.3 l/min at 400 bar
p air = 4 bar
p hydr. = 400 bar



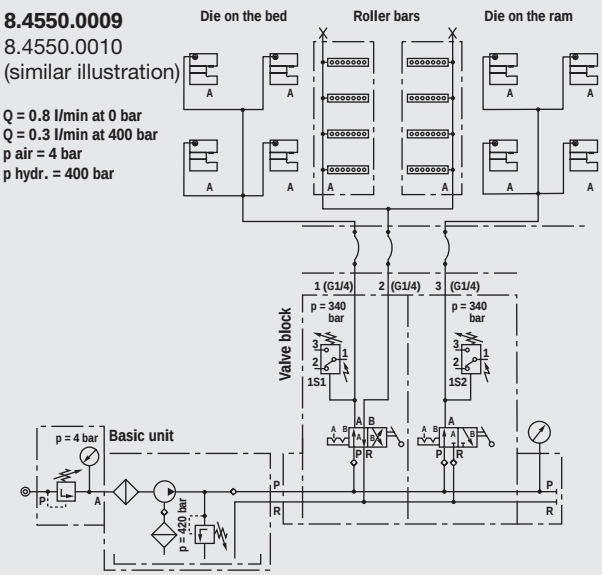
Clamping on the ram



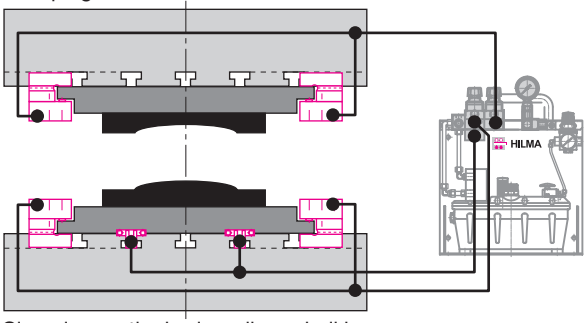
Clamping on the bed

8.4550.0009
8.4550.0010
(similar illustration)

Q = 0.8 l/min at 0 bar
Q = 0.3 l/min at 400 bar
p air = 4 bar
p hydr. = 400 bar



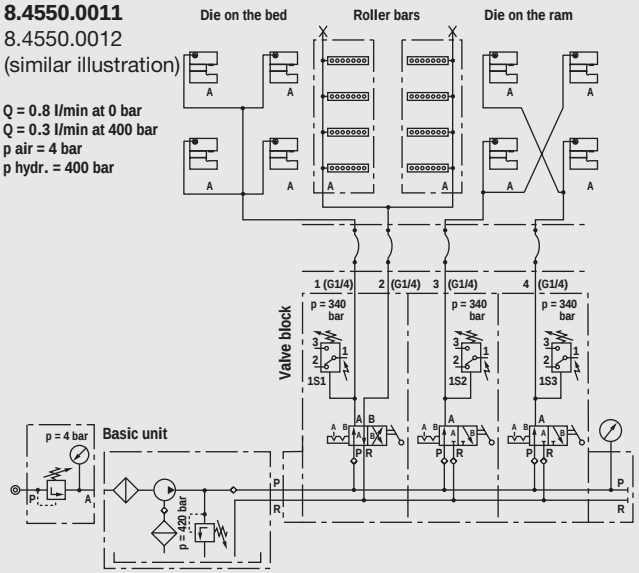
Clamping on the ram



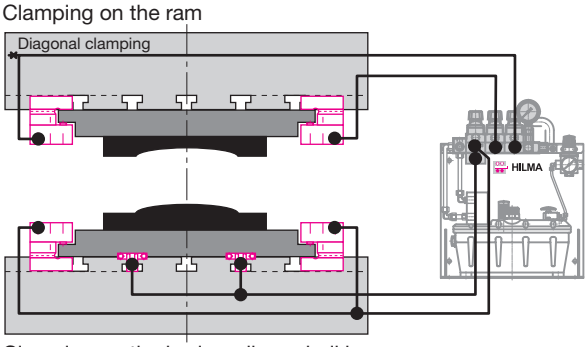
Clamping on the bed + roller or ball bars

8.4550.0011
8.4550.0012
(similar illustration)

Q = 0.8 l/min at 0 bar
Q = 0.3 l/min at 400 bar
p air = 4 bar
p hydr. = 400 bar



Clamping on the ram



Clamping on the bed + roller or ball bars

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Accessories

High-pressure hoses NW4

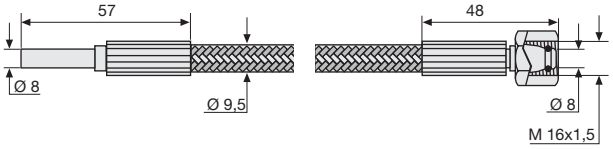
The freely selectable hose lengths should be generously dimensioned, in order to avoid kinking, chafing, torsion, pulling and crushing loads as well as too tight bending radii. Hoses must be protected against hot chips. Bursting pressure: 2000 bar, minimum bending radius: 100 mm
For more information, see DIN 20066.

Part no. for variable lengths and connections

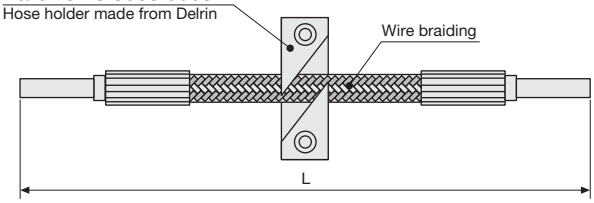
4 . 500 . 1500 . 2 . 3

- Hose inside diameter (mm)
- Operating pressure max.. 500 bar
- Hose length L (mm)
- Hose connection left side
- Hose connection right side

High-pressure hose

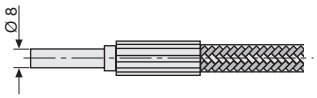


Part no. 5.5065.0003
Hose holder made from Delrin

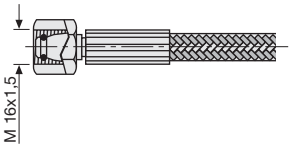


Hose connections left side / right side

2



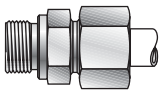
3



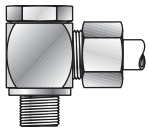
Preferred lengths of type 4.500.XXXX.3.3
Both ends with a hose connection union nut M16 x 1.5 (available from stock)

Part no.	Length	Connection
2.7001.0131	600 mm	both sides M 16 x 1.5
2.7001.0133	800 mm	both sides M 16 x 1.5
2.7001.0137	1200 mm	both sides M 16 x 1.5
2.7001.0141	1600 mm	both sides M 16 x 1.5

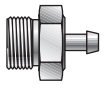
Male stud coupling



90° swivel banjo coupling



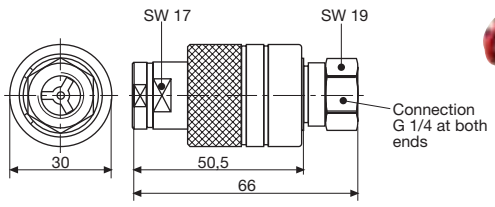
Screwed fitting



Pressure reducer:	**9511-005**
Male stud coupling G 1/4	**2.8001.0004** (for pipe diameter 8 mm)
Swivel banjo coupling G 1/4	**2.8029.0002** (for pipe diameter 8 mm)
Screwed fitting G 1/4 hose connection	**3890-093**
High-pressure hose, black	**3890-131**

Quick disconnect

Part no.	Designation
9384-006	Quick disconnect, complete
9384-101	Coupler
9384-206	Fitting



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Power units with large displacement

Technical data

Max. flow	4,2 l/min.
Max. operating pressure	400 bar
Tank volume	9 l
Oil port	G 3/8
Hydraulic fluid	Hydraulic oil HLP 46 to DIN 51524
Motor voltage	380-420 V/50 Hz/3~
Motor rating	2,2 kW
Type of valve	Seat valves, leak proof, max. 500 bar
Solenoid voltage	24 VDC
Protection	IP 54
Dimensions (LxBxH)	approx. 400 x 400 x 600 mm depending on displacement and valve design
Weight	approx. 40 - 60 kg depending on design

Frame-type power unit for 3 forging presses:
12 clamping circuits with pressure reduction for temperature compensation
high pressure 4.2 l/min., 400 bar
cooling return flow: 45 l/min., 10 bar

Technical data

Max. flow	45 l/min.
Max. operating pressure	400 bar
Other technical data will be made available during the course of the project	

Planning and installation of complete oil-hydraulic systems including complex electrical controls, designed to suit Hilma-Römheld clamping elements used by our customers.
Suitable for all clamping elements used on presses, especially on power and forging presses.

Our large range of power units and clamping elements for presses enables us to meet your specific requirements.

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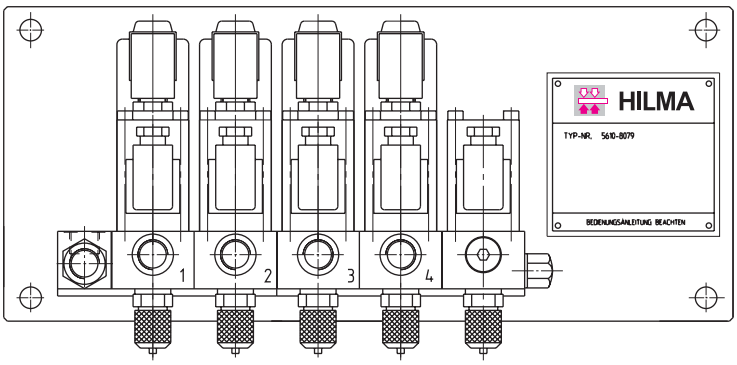
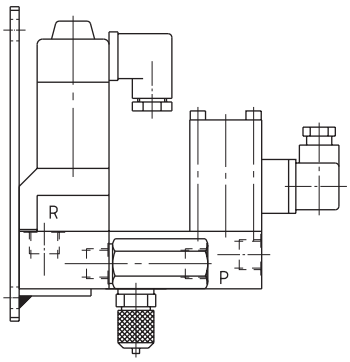
Valve packages fastened to the press ram or the press bed





4-circuit valve packages with pump pressure switch

Technical data

Max. flow	**8 l/min**
Oil port	G 3/8
Hydraulic fluid	Hydraulic oil HLP 46 to DIN 51524
Type of valve	Seat valves, leak proof, max. 500 bar
Solenoid voltage	24 V DC

Other versions are available upon request

The service we offer you

In addition to the cost effectiveness of our products, our customers also benefit from our efficient service.

Our service includes
- preparation and installation of hydraulic systems to suit specific applications
- manufacture, installation and commissioning of complete hydraulic systems
- repair and maintenance of hydraulic cylinders, clamping elements and power units supplied
- trouble-shooting and repair on the customer‘s premises
- constant repair service and fast response on our premises

All over the world our service is ready to act and to guarantee immediate help.

Specially trained, experienced staff make sure that problems are solved rapidly and proficiently.

You can rely on it!

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