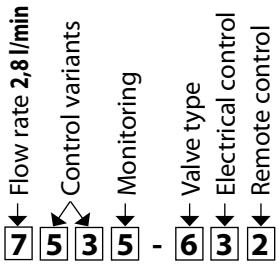
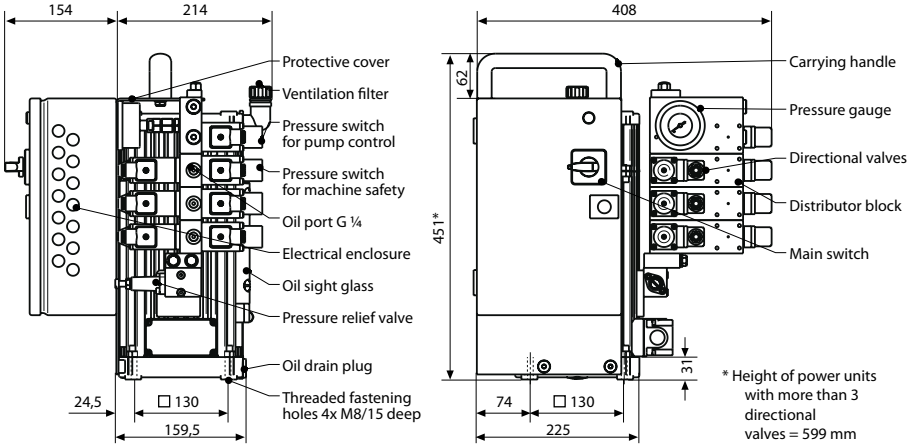
Hydraulic power units
Series 7, 2.8 l/min.

Example of ordering:



The order number for the power unit is obtained by selecting the index numbers for the required variants as shown in the tables below.



For hydraulic circuit diagrams, see pages 3, 4 and 5

Control-variants

	Function	Application, special features	Remote control plug-in	Remote control hard-wired
21	w/o direct. valve (basic unit)	used if the power unit serves as a pressure generator only and if the hydraulic elements (cylinders) are externally controlled, e.g. by hand valves	-	-
22	1 x single-acting	for single-acting cylinders, e.g. for machine vices hydr.-hydr. etc.	1 x	-
23	1 x single-acting	for spring clamping cylinders or roller bars	1 x	-
24	2 x single-acting	clamping circuits with separate control, same pressure, e.g. for reciprocal processing	2 x	-
25	2 x single-acting	simultaneous control, same pressure 1)	-	1 x
26	1 x double-acting	for double-acting clamping elements 2)	1 x	-
27	2 x single-acting	1 HP circuit, 1 LP circuit, separately controlled 1) 3)	-	1 x
28	2 x single-acting	for spring clamping cylinders	2 x	-
29	3 x single-acting	separately controlled, same pressure	3 x	-
30	3 x single-acting	2 clamping circuits simultaneously controlled, 1 clamping circuit separately controlled, same pressure 1)	-	1 x
31	1 x double, 1 x single	separately controlled, same pressure 2)	2 x	-
32	1 x double, 1 x single	separately controlled, same pressure 1) 2)	-	1 x
33	3 x single-acting	2 HP clamping circuits, 1 LP circuit, separately controlled 1) 3)	-	1 x
34	3 x single-acting	2 clamping circuits simultaneously controlled, 1 LP circuit 1) 3)	-	1 x
35	1 x double, 1 x single	1 HP circuit double-acting, 1 LP circuit, separately controlled 1) 2) 3)	-	1 x
36	4 x single-acting	separately controlled, same pressure	4 x	-
37	4 x single-acting	2 x 2 circuits simultaneously controlled, same pressure 1)	-	1 x
38	2 x double-acting	separately controlled, same pressure 2)	2 x	-
39	1 x double, 2 x single	separately controlled, same pressure 2)	3 x	-
40	2 x single-acting	1 HP circuit single-acting, 1 HP circuit for roller bar separately controlled 1)	-	1 x
41	3 x single-acting	2 HP circuit single-acting, 1 HP circuit for roller bar separately controlled 1)	-	1 x
42	3 x single-acting	2 HP circuit single-acting simultaneously controlled, 1 HP circuit for roller bar separately controlled 1)	-	1 x
43	1 x double, 1 x single	1 HP circuit double-acting, 1 HP circuit for roller bar separately controlled 1) 2)	-	1 x
44	4 x single-acting	1 HP circuit single-acting, 2 HP circuit single-acting for 2 cylinders simultaneously controlled, 1 HP circuit for roller bar separately controlled 1)	-	1 x
45	1 x double, 2 x single	1 HP circuit single-acting for cylinder, 1 HP circuit double-acting for roller bar separately controlled 1) 2)	-	1 x
46	5 x single-acting	2 HP circuits single-acting for cylinder simultaneously controlled, 2 x single-acting	-	1 x
		cylinders simultaneously controlled, 1 HP circuit for roller bar separately controlled 1)	-	1 x
47	1 x double, 3 x single	2 HP circuits for single-acting cylinders simultaneously controlled, 1 x HP circuit for double-acting cylinders, 1 HP circuit double-acting for roller bar separately controlled 1) 2)	-	1 x
48	2 x double, 1 x single	2 HP circuits for double-acting cylinders separately controlled, 1 HP circuit double-acting for roller bar separately controlled 1) 2)	-	1 x
49	2 x double, 1 x single	1 x double-acting for clamping on the press bed, 1 x double-acting with safety circuit for clamping on the press slide, 1 x single-acting for roller bars, separately controlled 1) 2)	-	1 x
51	2 x double-acting	separately controlled, same pressure 1) 2)	-	1 x
52	1 x double, 2 x single	1 x double-acting separately controlled, 2 single-acting circuits simultaneously controlled 1) 2)	-	1 x
53	4 x single-acting	2 clamping circuits simultaneously controlled, 1 clamping circuit and 1 LP circuit separately controlled 1) 3)	-	1 x
54	1 x double, 2 x single	1 double-acting and 1 single-acting clamping circuit and 1 LP circuit, separately controlled 1) 2) 3)	-	1 x
55	5 x single-acting	2 x 2 clamping circuits simultaneously controlled, 1 LP circuit separately controlled 1) 3)	-	1 x
56	1 x double, 3 x single	1 double-acting clamping circuit, 2 single-acting clamping circuits simultaneously controlled and 1 LP circuit 1) 2) 3)	-	1 x
57	2 x double, 1 x single	2 double-acting clamping circuits separately controlled and 1 LP circuit 1) 2) 3)		1 x

Hilma-Römheld GmbH
Schützenstraße 74 · 57271 Hilchenbach, Germany
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	Function	Application, special features	Remote control plug-in	Remote control hard-wired
58	2 x double, 1 x single	1 x double-acting for clamping on the press bed, 1 x double-acting with safety circuit for clamping on the press slide, 1 x single-acting for ball bars, separately controlled 1) 2) 3)	-	1 x
59	2 x double-acting	1 x double-acting for clamping on the press bed, 1 x double-acting with safety circuit for clamping on the press slide, separately controlled 1) 2)	-	1 x

1) This control variant is only supplied with lockable hard-wired remote control and pilot lamp
2) The double-acting function is obtained by simultaneous operation of two 3/2 directional control valves
3) LP circuit with adjustable closing valve. Pressure setting range 40 - 100 bar.

Monitoring system

1	without machine safety	with oil level and temperature switch
5	with machine safety	with oil level and temperature switch

Machine safety

In-line pressure switch connected to the machine controls. Switch setting is 15% min. below clamping pressure. Only once the set pressure has been reached can the machine be operated.
If pressure drops below setting, the machine is automatically stopped.

Oil level and temperature switch

Oil level switch and temperature switch are provided to automatically switch off the pump motor if there is lack of oil, or if temperature exceeds 60°C. Both conditions are indicated by a pilot lamp on the electric enclosure.

Valve package

6	Pressure relief valve and pressure switch not lockable	24 V DC	HAWE hole pattern	HAWE

* Control configuration 21 without valves

Pressure relief valve and pressure switch

The operating pressure is infinitely variable between 100 and 400 bar.

Directional seat valves

With HAWE hole pattern, mounting dimensions as per HAWE data sheet D7470, size 1

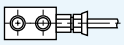
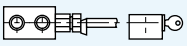
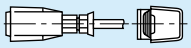
Electrical controls

0	without controls	without terminal box	-	[2]) Motor-voltage 380-420 V 50Hz, 3~
1	without controls	with terminal box	-	
2	with controls	without remote control	-	
3	with controls	with remote control	plug-in [1])	
4	with controls	with remote control	hard-wired	

[1]) The remote control of clamping systems used in presses is always hard-wired
[2]) Other voltages upon request

The power unit is supplied ready for connection including the necessary electrical and hydraulic equipment. The complete electrical system is installed in an enclosure. On request, the power unit is supplied without electrical control, with or without terminal box.

Remote control pendant

0		without remote control	
1	Selector switch	-	
2	Selector switch	with pilot lamp	
4	Key-operated switch	with pilot lamp	
5	Foot switch	-	

Selector switch

e.g. for simple and clear controls.

Key-operated switch

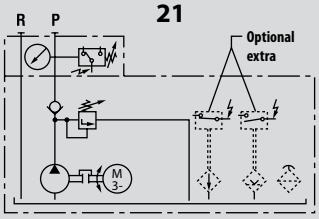
Prevents unauthorised operation

Foot switch

Housing made from rugged aluminium diecasting provided with protective cover. It is recommended that two hands are used for workpiece loading and positioning.
Observe accident prevention regulations!

Hydraulic circuit diagrams / Control variants

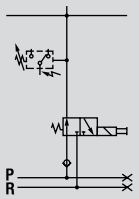
21



Basic unit

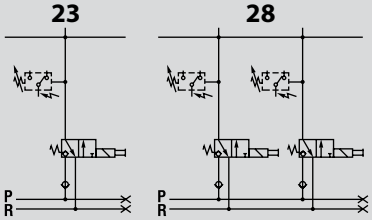
22

Pressure switch for machine safety (optional extra)



clamping circuit
100 - 400 bar

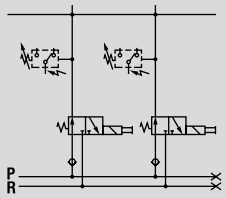
23 / 28



23	28
clamping circuit 100 - 400 bar	2 clamping circuits each 100 - 400 bar
separately controlled	each separately controlled

Control configuration for spring clamping cylinder

24 + 25

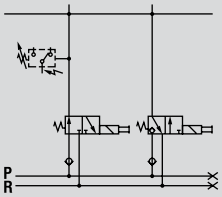


2 clamping circuits
each 100 - 400 bar

24 separately controlled

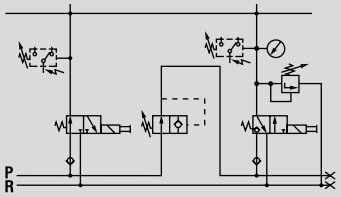
25 simultaneously controlled

26



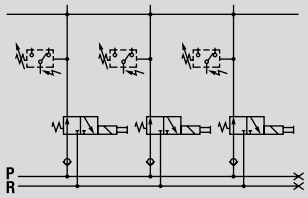
2 clamping circuits
each 100 - 400 bar
1X double-acting

27



Clamping circuit	LP circuit
100 - 400 bar	40 - 100 bar
separately controlled	separately controlled

29 + 30

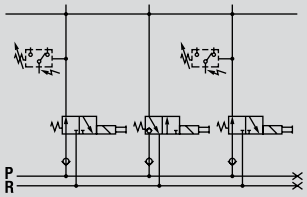


3 clamping circuits, each 100 - 400 bar

29 separately controlled

30 simultaneously controlled | separately controlled

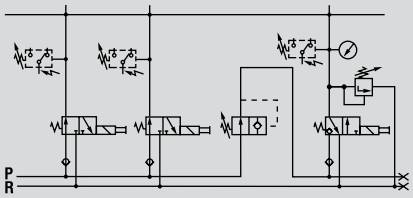
31 + 32



31 3 clamping circuits, each 100 - 400 bar

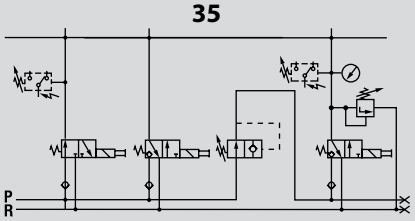
32 1X double-acting | separately controlled

33 + 34



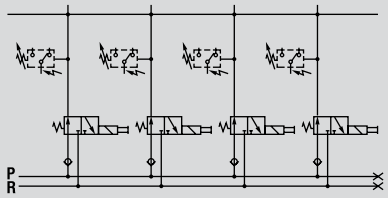
2 clamping circuits	LP circuit
100 - 400 bar	40 - 100 bar
33 separately controlled	separately controlled
34 simultaneously controlled	separately controlled

35



2 clamping circuits 100 - 400 bar	LP circuit
	40 - 100 bar
1X double-acting	separately controlled

36 + 37

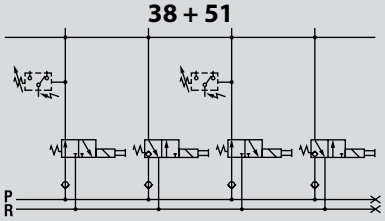


4 clamping circuits, each 100 - 400 bar

36 separately controlled

37 simultaneously controlled | simultaneously controlled

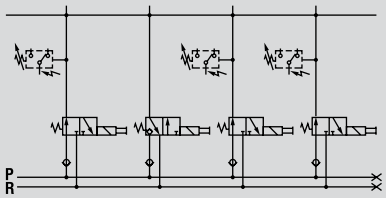
38 + 51



4 clamping circuits, each 100 - 400 bar

1X double-acting	1X double-acting
separately controlled	separately controlled

39 + 52

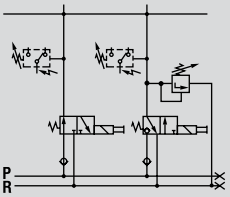


4 clamping circuits, each 100 - 400 bar

39 1X double acting | separately controlled

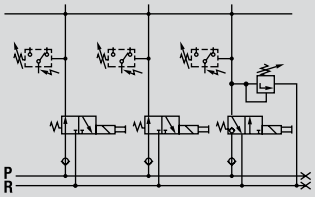
52 1X double acting | simultaneously controlled

40



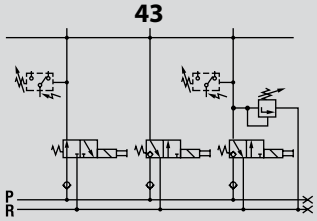
1 damping circuit	1X roller bar
100 - 400 bar	100 - 400 bar
1X single-acting	separately controlled

41 + 42



2 damping circuits (2 X single-acting)	1X roller bar
each 100 - 400 bar	100 - 400 bar
41 separately controlled	separately controlled
42 simultaneously controlled	

43



2 clamping circuits	1 X roller bar
each 100 - 400 bar	100 - 400 bar
1X double-acting	separately controlled

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Schützenstraße 74 · 57271 Hilchenbach, Germany
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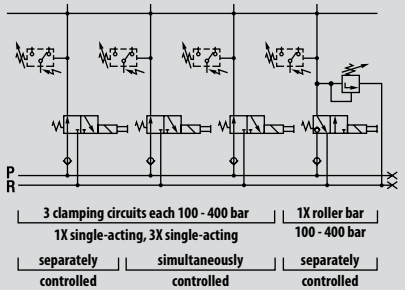
Hydraulic circuit diagrams / Control variants

44



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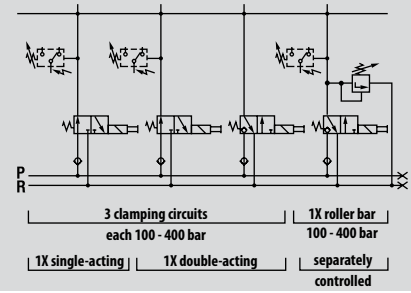

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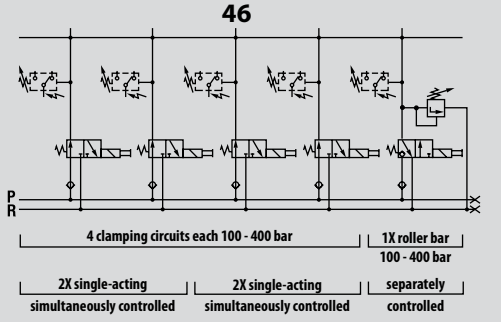

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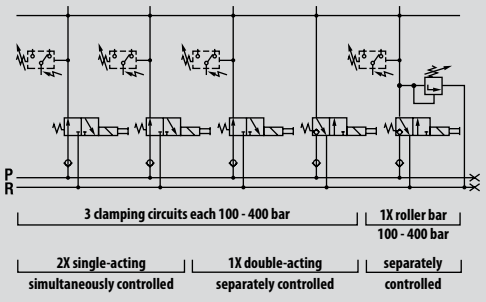

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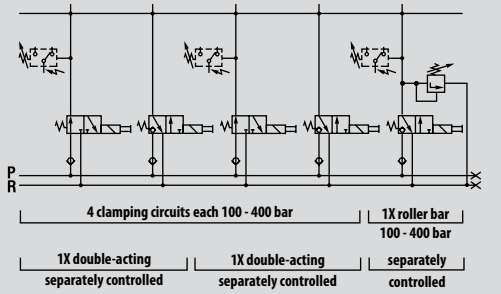

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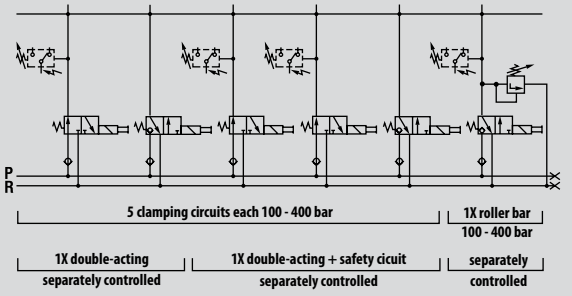

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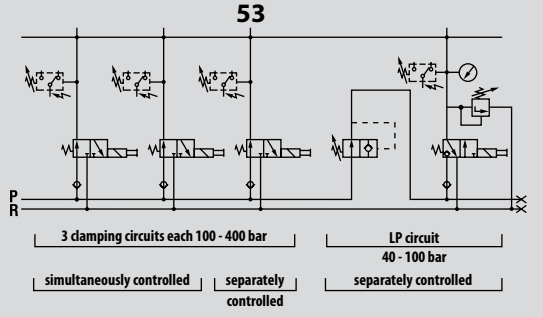

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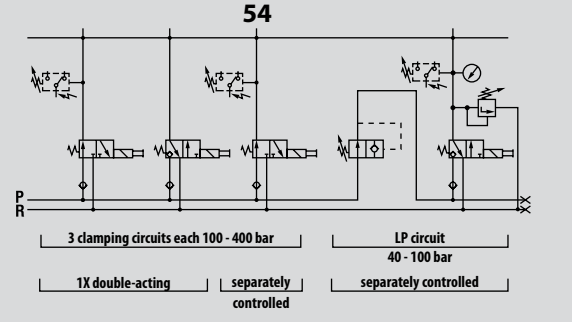

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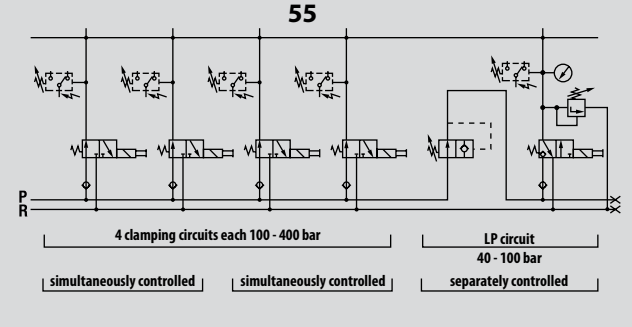

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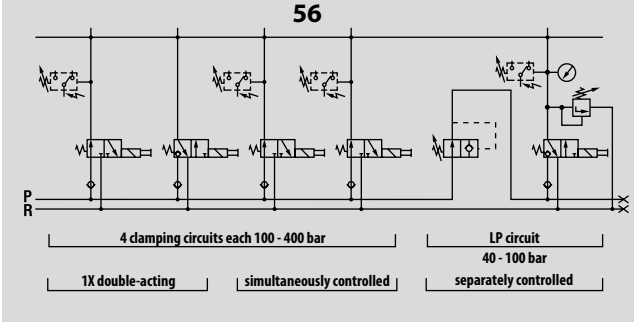
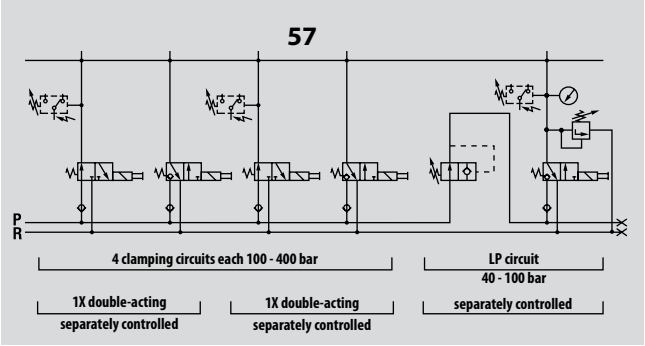
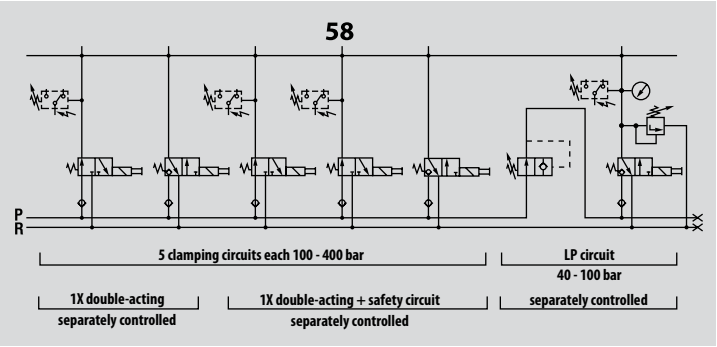
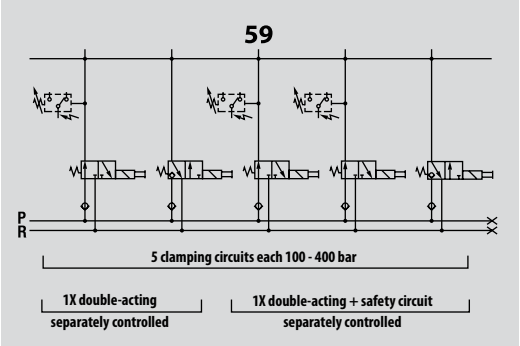


Hydraulic circuit diagrams / Control variants







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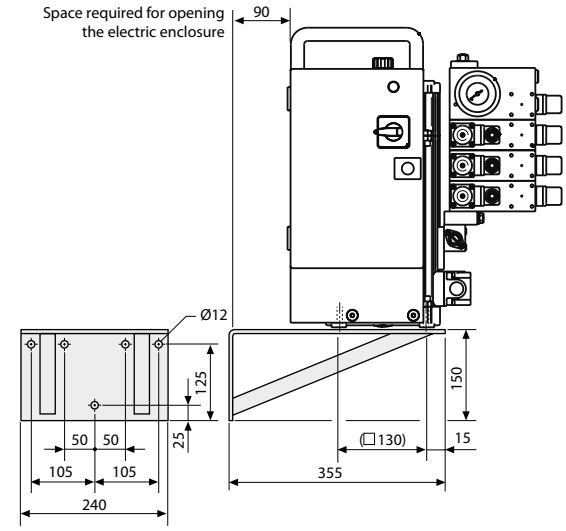
Wall bracket

For fastening the power unit on machine columns, supports, walls etc.

Part no. 5100-001

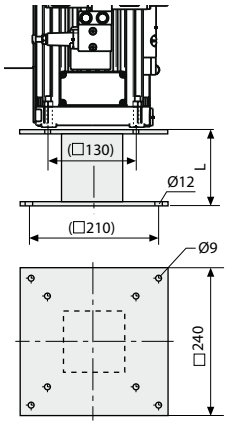


Pedestal

For fastening the power unit on the floor, on machine beds, on the press head etc.

Part no. 5100-002 for L = 250 mm

Part no. 5100-003 for L = 1000 mm



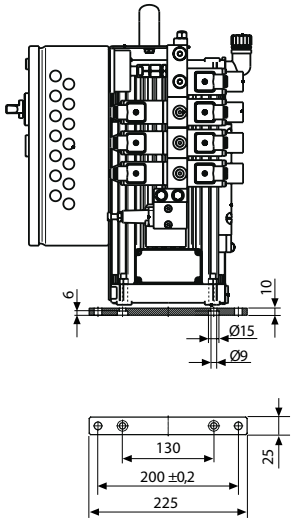
Mounting bars

are fastened to the underside of the oil reservoir using screws. The brackets extending on the sides are used for fastening the power unit from above using screws M10.

Supply package:
2 mounting bars
4 pan headscrews M8 x 16, DIN 7984

Part no. 5.0495.0908

For power units series 6 and 7 mounting bars are part of the supply.



For other hydraulic accessories, please see product group 11