Seat Valves

Series SVH04

- actuators are shut-off with virtually zero-leakage, even over a longer period of time
- particularly suitable for mobile machines, thanks to the low-weight design and small dimensions
- can be used as independent valve blocks, or can be attached to the L.8S series of proportional directional valves
- with suitable upstream control valves, all actuators connected to the blocks can be proportionally operated
- additional auxiliary functions can be implemented

1 Description

Series SVH04 low-weight (aluminium) valve blocks feature seat valves and are used to control single or double acting cylinders. They are applied where extremely low levels of leakage are required. The design is based on a direct acting, solenoidoperated 2/2 seat valve that seals in both directions. The valves close the flow path to or from hydraulic actuators with virtually zero leakage.

Where double-acting actuators are to be controlled, the circuit must include a 3-position directional valve situated before the seat valves. In its mid-position, this valve must connect the service ports to tank.

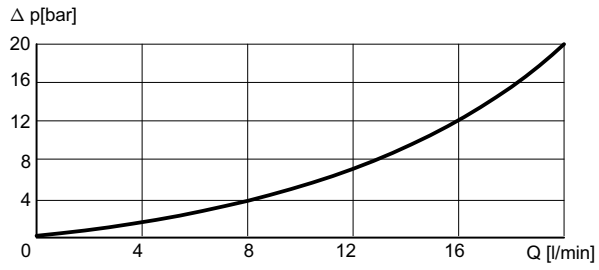
The SVH04 seat valves are available as:

- self-contained monoblocks, with add-on sections
- monoblocks for attaching to the L.8S series of proportional directional valves
- intermediate and end sections for assembling customer-specific valve blocks

1.1 Technical data

General characteristics	Unit	Description, Value
Nominal flow rate	l/min	20
Operating pressure	bar	max. 250
Oil temperature	°C	-20 ... +80
Viscosity range	mm^2/s	10 ... 300
Recommended filtration		NAS 1638 class 9
Nominal voltages	V DC	12 or 24 ±10% Volt DC
Power consumption	W	27
Duty cycle		100%
Enclosure protection		IP65, DIN 40050

1.2 Performance graphs

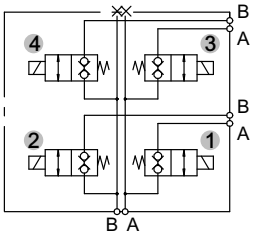


Values apply to one seat-valve cartridge in the energised position, for both flow directions. Measured with oil viscosity 35 mm^2/s

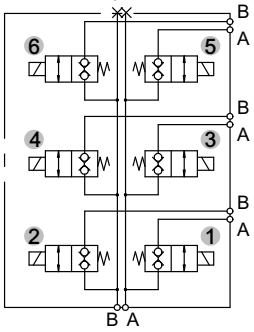
2 Monoblocks with add-on sections

2.1 Symbols for monoblocks

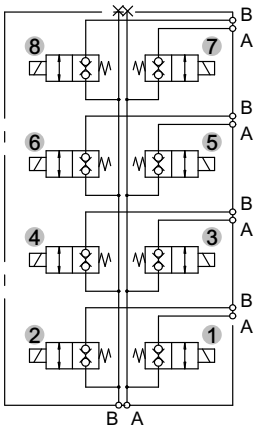
SVH04M44**.-.M..G..
6 actuator ports



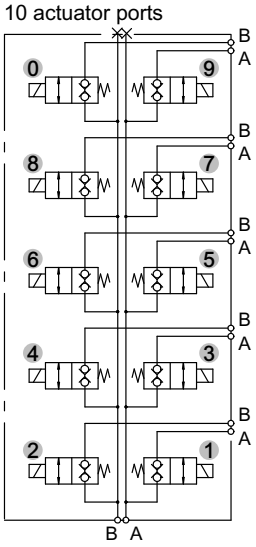
SVH04M66**.-.M..G..
6 actuator ports



SVH04M88**.-.M..G..
8 actuator ports

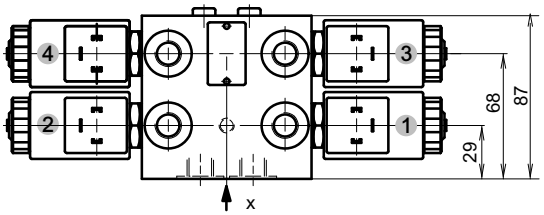


SVH04M00**.-.M..G..
10 actuator ports

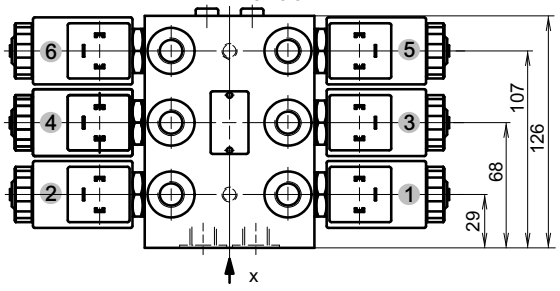


2.2 Dimensions of monoblocks

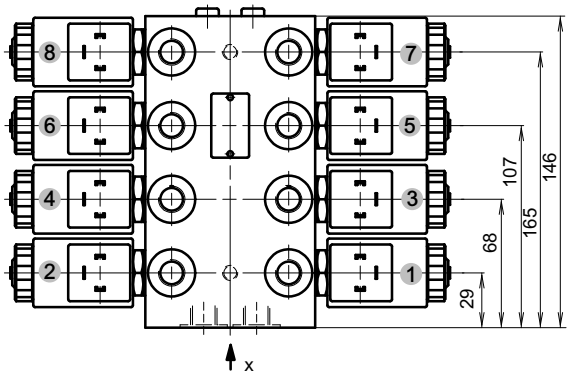
SVH04M44**.-.M..G..
4-fach



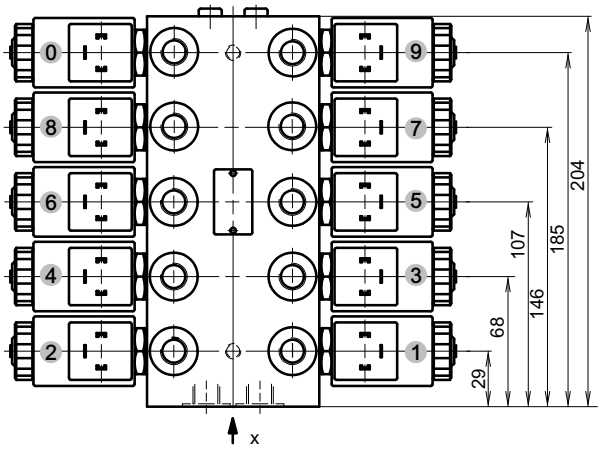
SVH04M66**.-.M..G..
6-fach



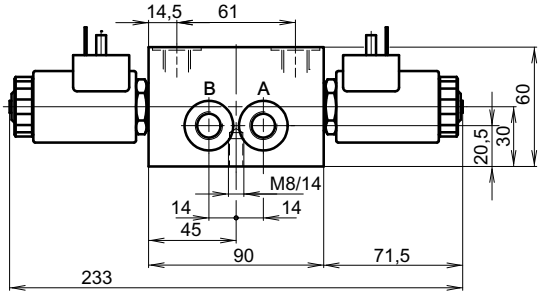
SVH04M88**.-.M..G..
8-fach



SVH04M00**.-.M..G..
10-fach



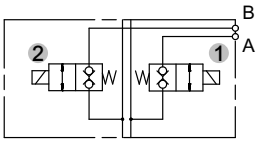
View X



2.3 Symbols for add-on sections

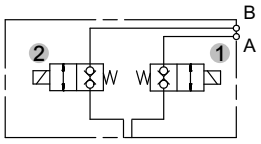
2.3.1 Intermediate sections

SVH04Z22**.-.M..G..



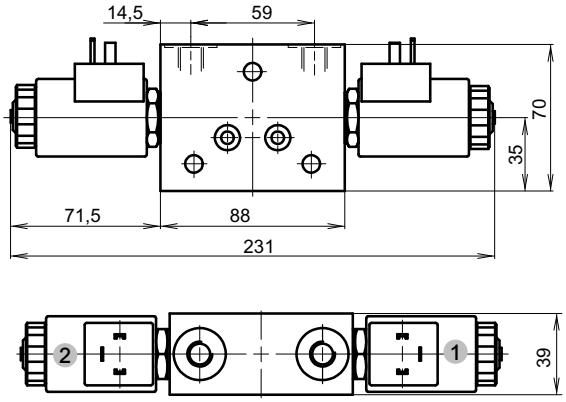
2.3.2 End sections

SVH04A22**.-.M..G..



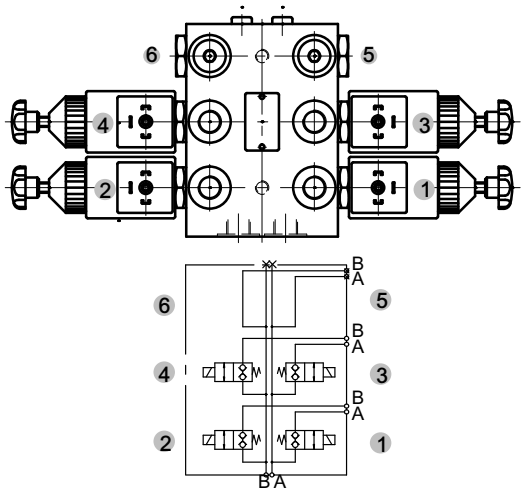
2.4 Dimensions of add-on sections

SVH04.22**.-.M..G..

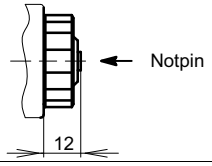
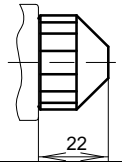
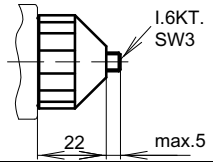
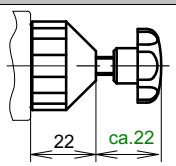


2.5 Assembly example

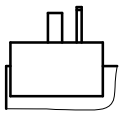
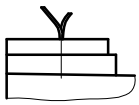
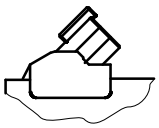
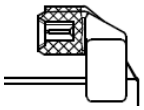
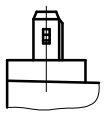
SVH04M64**D-0M..G.. X=56



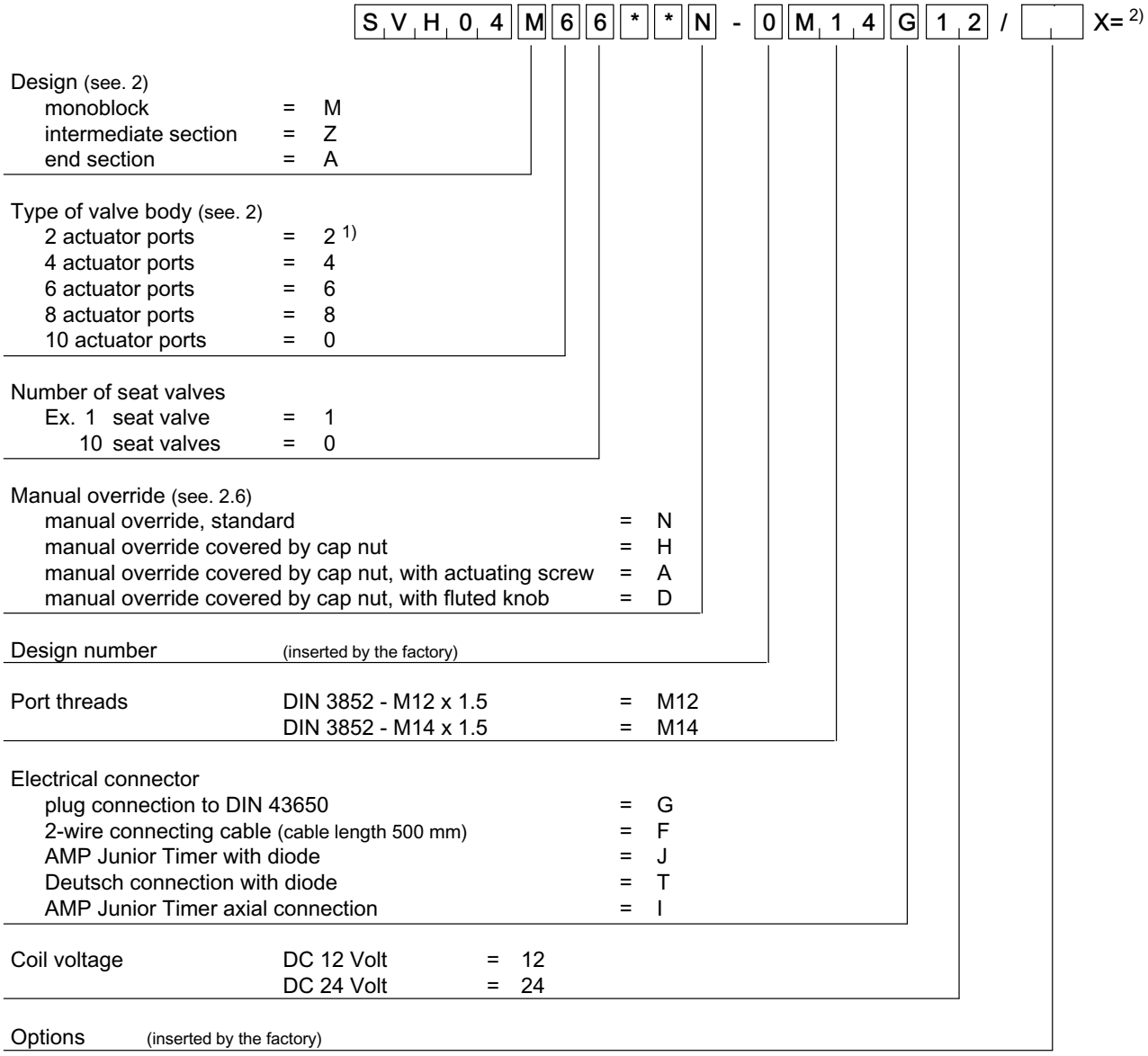
2.6 Manual override

Standard N	covered by cap nut H	covered by cap nut, with actuating screw A	covered by cap nut, with fluted knob D
			

2.7 Electrical connectors

Plug connection to DIN 43650 G	2-wire connecting (cable length 500 mm) F	Deutsch DT04-2P-EP04 with diode P6KE33CA T	AMP Junior Timer axial connection I	AMP Junior Timer with diode P6KE33CA J
				

2.8 Ordering Code



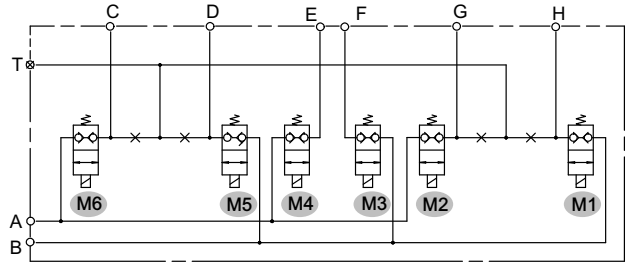
1) Only intermediate and end sections.

2) Empty stations in blocks (see 2.5). Unless otherwise stated, the stations beginning from the highest number will be left empty.

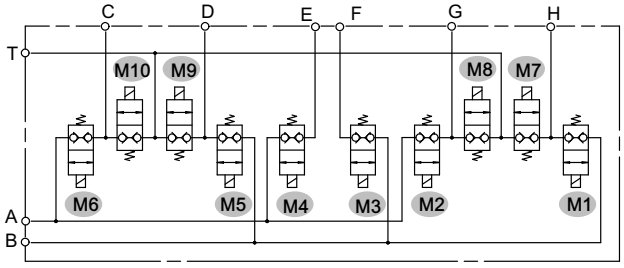
3 Diverter valves

3.1 Symbol / Assembly example

SVH04WV6**.-0M16G.. without float position

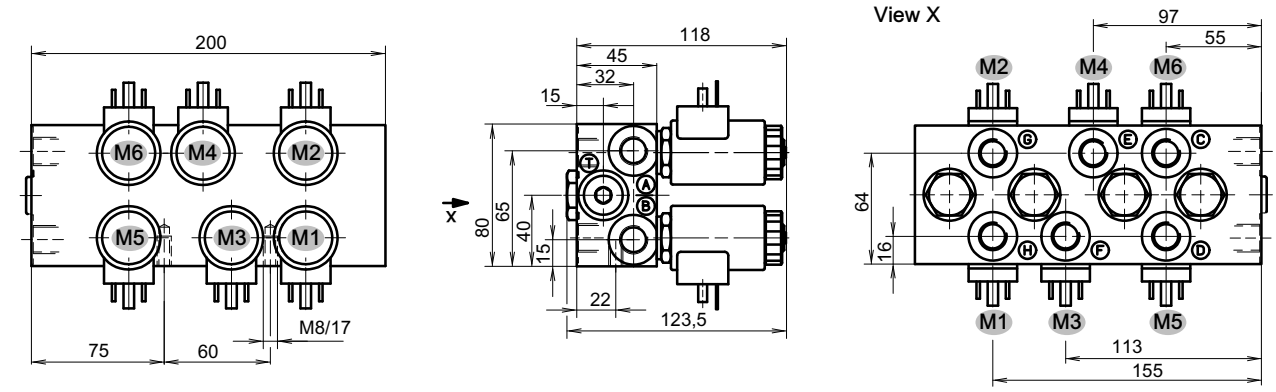


SVH04WV633.-0M16G.. with float position

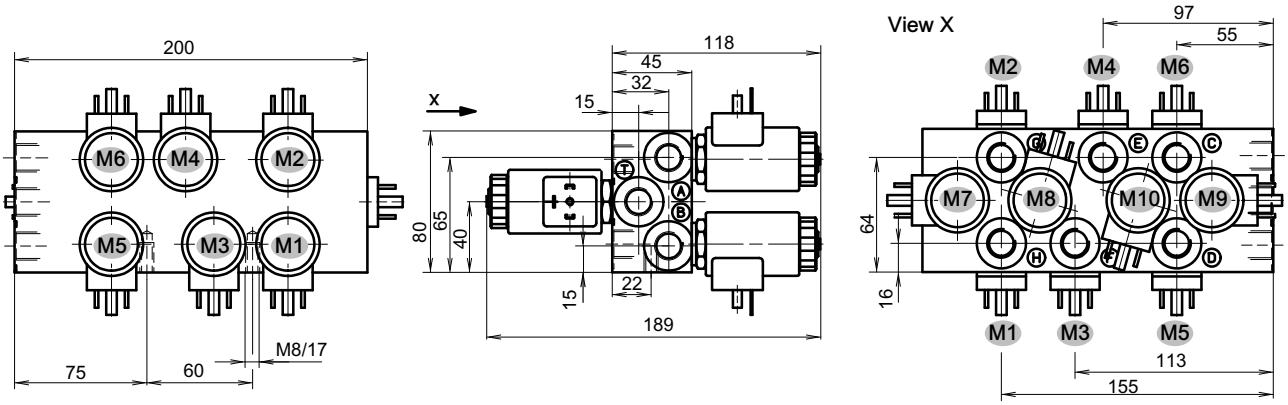


3.2 Dimensions

SVH04WV6**.-0M16G..



SVH04WV633.-0M16G..

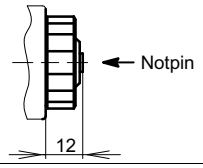
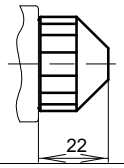
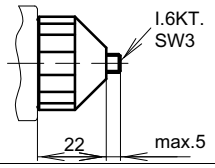
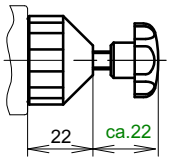


3.3 The seat-valve functions

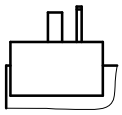
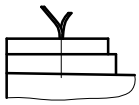
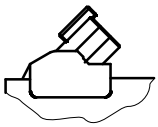
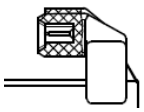
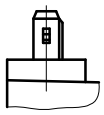
- M1 : directional function at H
- M2 : directional function at G
- M3 : directional function at F
- M4 : directional function at E
- M5 : directional function at D
- M6 : directional function at C
- M7 : float position at H
- M8 : float position at G
- M9 : float position at D
- M10 : float position at C

BUCHER
hydraulics

3.4 Manual override

Standard N	covered by cap nut H	covered by cap nut, with actuating screw A	covered by cap nut, with fluted knob D
			

3.5 Electrical connectors

Plug connection to DIN 43650 G	2-wire connecting (cable length 500 mm) F	Deutsch DT04-2P-EP04 with diode P6KE33CA T	AMP Junior Timer axial connection I	AMP Junior Timer with diode P6KE33CA J
				

3.6 Ordering Code

S	V	H	0	4	W	V	6	3	3	N	-	0	M	1	6	G	1	2	/	

Directional functions:
- CDEFGH = 6
- C EFGH = 5
- C EFG = 4

Without float position = *
With float position at C = 1
With float position at D = 2
With float position at C and D = 3

Without float position = *
With float position at G = 1
With float position at H = 2
With float position at G and H = 3

Manual override:
- manual override, standard = N
- manual override covered by cap nut = H
- manual override covered by cap nut, with actuating screw = A
- manual override covered by cap nut, with fluted knob = D

Design number (inserted by the factory)

Port threads: DIN 3852 - M16 x 1.5 = M16

Electrical connector:
- plug connection to DIN 43650 = G
- 2-wire connecting cable (cable length 500 mm) = F
- AMP Junior Timer with diode = J
- Deutsch connection with diode = T
- AMP Junior Timer axial connection = I

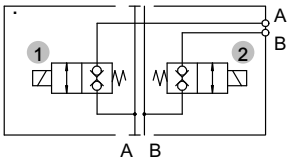
Coil voltage:
- DC 12 Volt = 12
- DC 24 Volt = 24

Options (inserted by the factory)

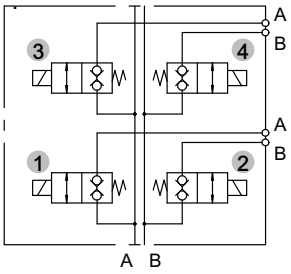
4 Single and multi-monoblocks for attaching to L.8S valves

4.1 Symbols

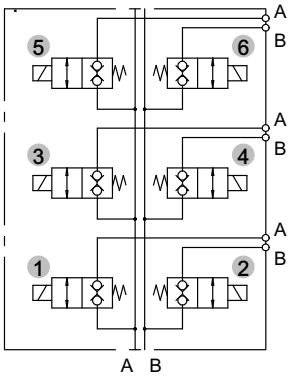
SVH04M228S.-.



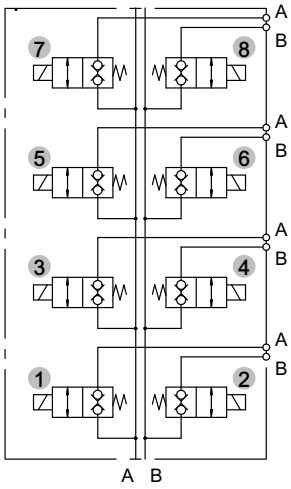
SVH04M448S.-.



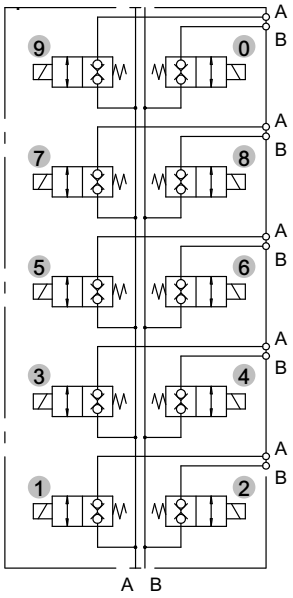
SVH04M668S.-.



SVH04M888S.-.

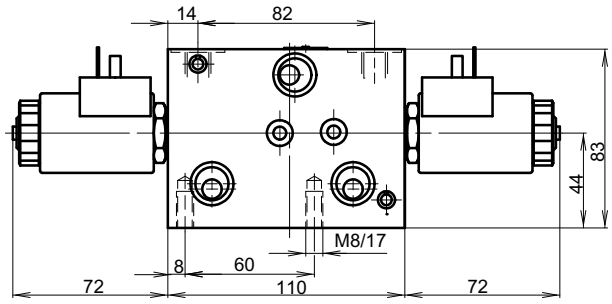


SVH04M008S.-.

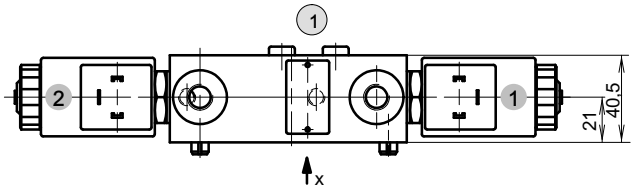


4.2 Dimensions

View X

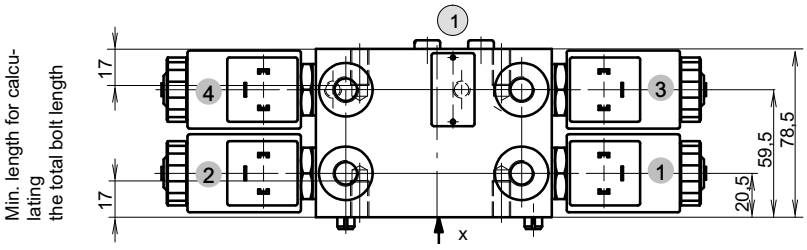


SVH04M228S.-...

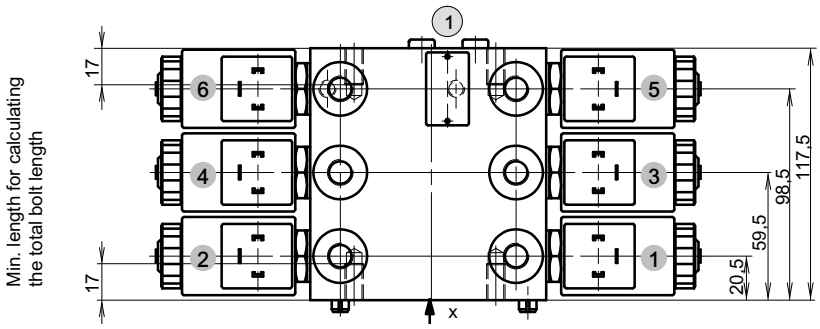


1	Threaded plugs for the end of block must be ordered separately (ordering number: 100224628).

SVH04M448S.-..



SVH04M668S.-..



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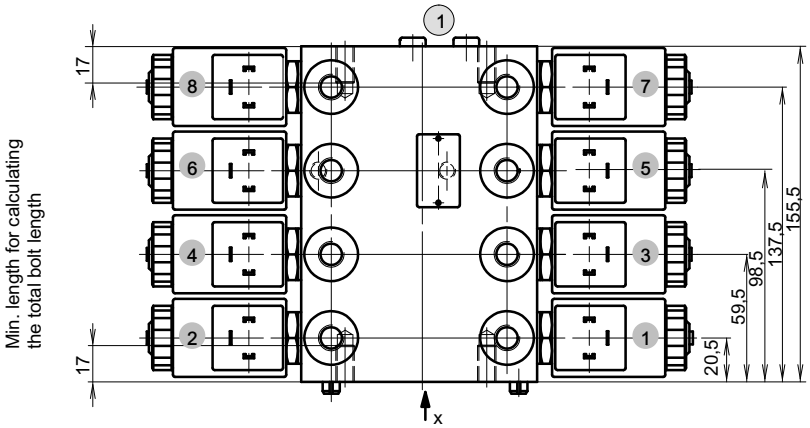
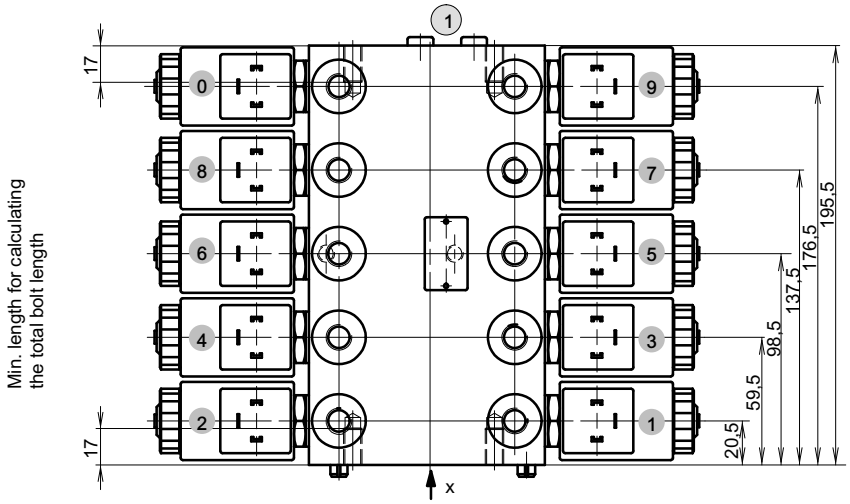


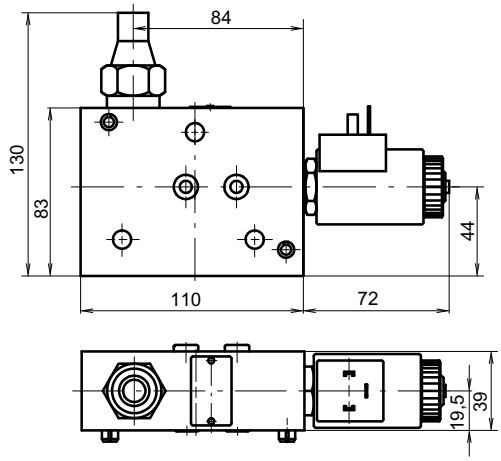
SVH04M008S.-..

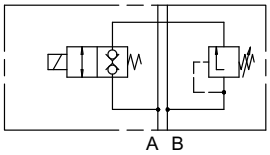


1	Threaded plugs for the end of block must be ordered separately (ordering number: 100224628).

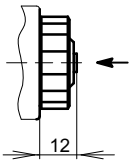
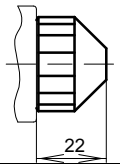
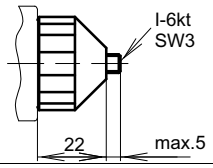
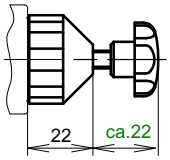
4.3 Seat valve with pressure relief valve

SVH04M118S.-0***G.. p= ... bar

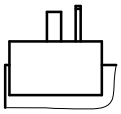
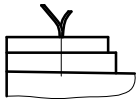
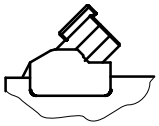
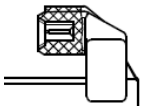
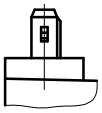




4.4 Manual override

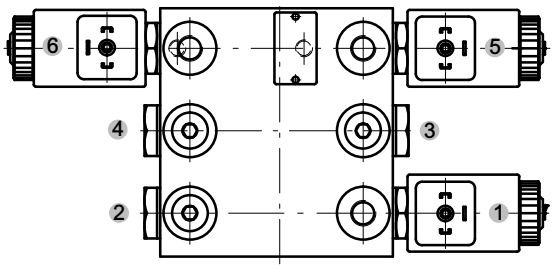
Standard N	covered by cap nut H	covered by cap nut, with actuating screw A	covered by cap nut, with fluted knob D
			

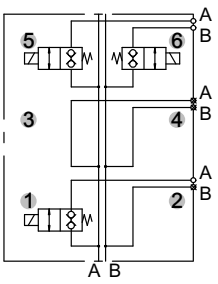
4.5 Electrical connectors

Plug connection to DIN 43650 G	2-wire connecting (cable length 500 mm) F	Deutsch DT04-2P-EP04 with diode P6KE33CA T	AMP Junior Timer axial connection I	AMP Junior Timer with diode P6KE33CA J
				

4.6 Assembly example

SVH04M638SN-0M..G.. X=234





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4.7 Ordering Code

S	V	H	0	4	M	2	2	8	S	N	-	0	M	1	4	G	1	2	/		X= [2]

Type:
- 1 actuator port with pressure relief valve [1] = 1
- 2 actuator ports = 2
- 4 actuator ports = 4
- 6 actuator ports = 6
- 8 actuator ports = 8
- 10 actuator ports = 0

Number of seat valves
Ex. 1 seat valve = 1
10 seat valves = 0

With interface for series L.8S valves = 8S

Manual Override
- manual override, standard = N
- manual override covered by cap nut = H
- manual override covered by cap nut, with actuating screw = A
- manual override covered by cap nut, with fluted knob = D

Design number (inserted by the factory)

Port threads
- DIN 3852 - M12 x 1.5 = M12
- DIN 3852 - M14 x 1.5 = M14
- without (Ex.: SVH04M118S..) = ***

Electrical connector:
- plug connection to DIN 43650 = G
- 2-wire connecting cable (cable length 500 mm) = F
- AMP Junior Timer with diode = J
- Deutsch connection with diode = T
- AMP Junior Timer axial connection = I

Coil voltage
- DC 12 Volt = 12
- DC 24 Volt = 24

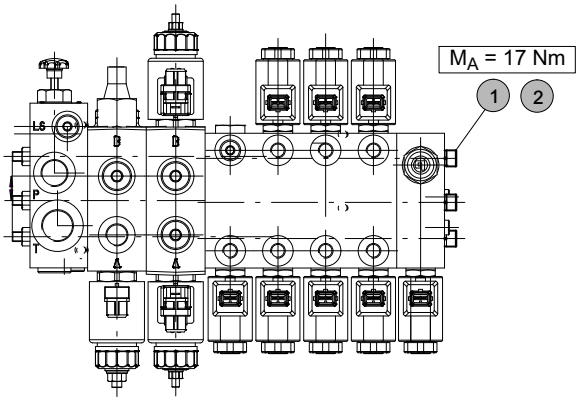
Options (inserted by the factory)

1) Please specify the required pressure setting in bar.

2) Empty stations in blocks (see 4.6).
Unless otherwise stated, the stations beginning from the highest number will be left empty.

For the end of the block: 2 pcs. threaded plug with profiled sealing ring, M8x1, ordering-no.: 100224628

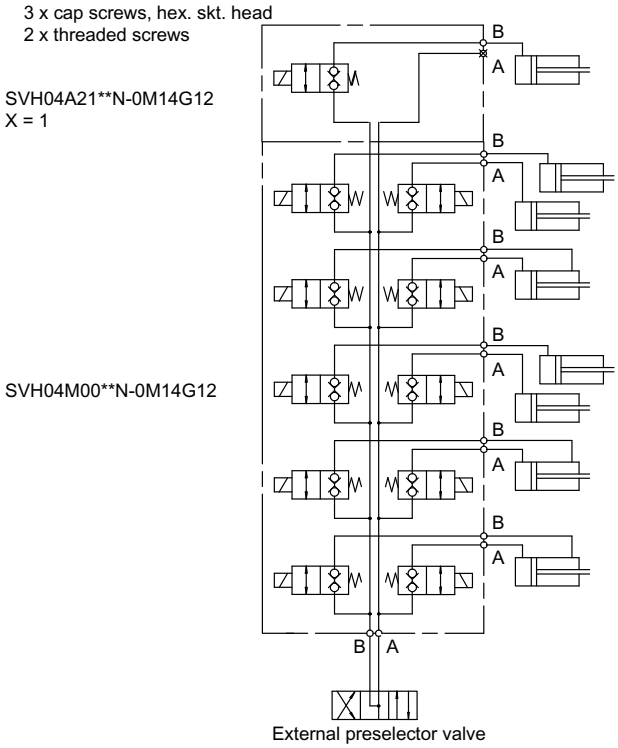
5 Installation note



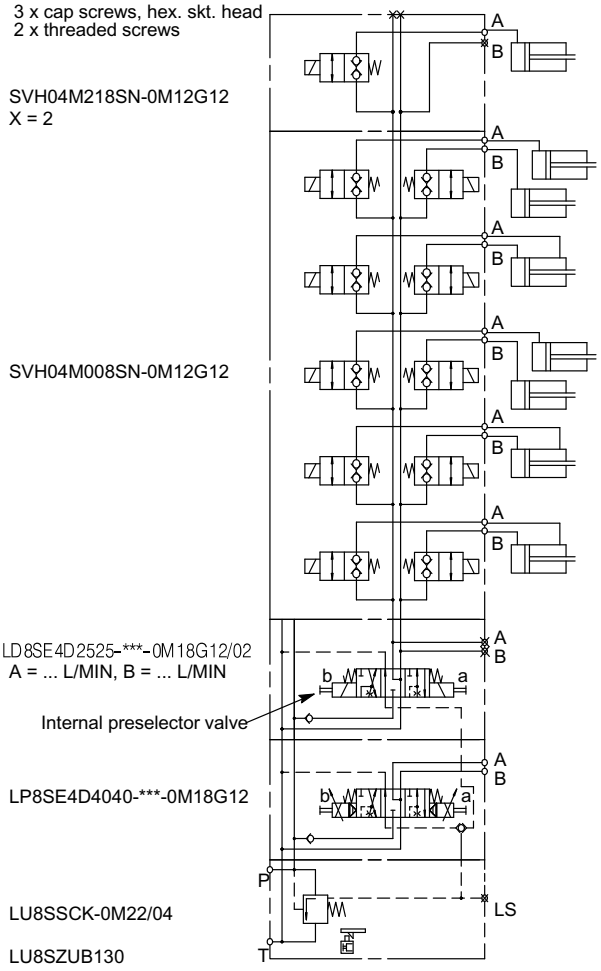
1	3x cap screw, hex. skt. head
2	3x washer

6 Application examples

6.1 Monoblock



6.2 Monoblock attached to a series L.8S valve



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Specific functional features:

- Actuator ports A and B are shut-off with virtually zero leakage.
- Double-acting cylinders are controlled in both directions by energising the seat valves A and B and using the preselector valve to determine the direction.
- Single-acting cylinders are controlled in both directions by energising the seat valve and, to extend the cylinder, operating the preselector valve.
- A float function is obtained by energising seat valves A and B.

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Classification: 430.310.430.390.