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 at-tached to the L.8S series of proportional directional valves
- With suitable upstream control valves, all actuators con-nected 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.

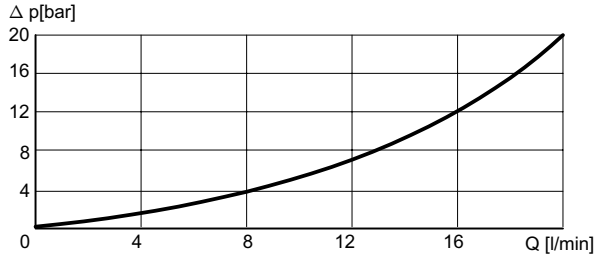
The SVH04 seat valves are available as:

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

1.2 Performance graphs

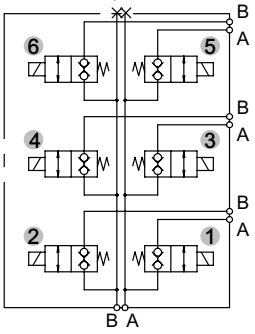


Values apply to one seat-valve cartridge in the energised position, for both flow directions. Measured with oil viscosity 35 mm^2/s

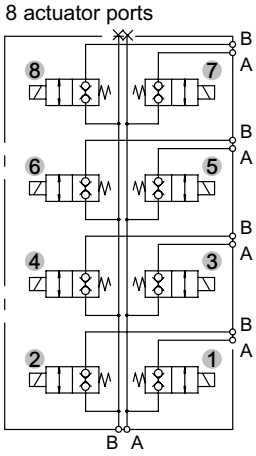
2 Monoblocks with add-on sections

2.1 Symbols for monoblocks

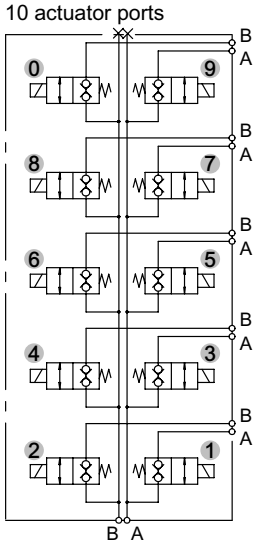
SVH04M66**.-.M..G..
6 actuator ports



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

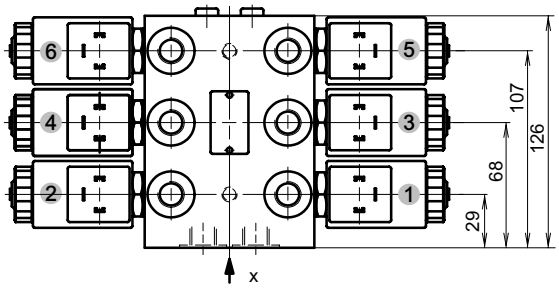


SVH04M00**.-.M..G..
10 actuator ports

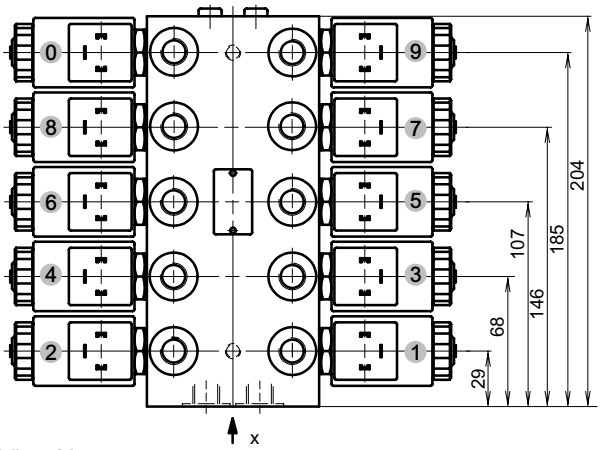


2.2 Dimensions of monoblocks

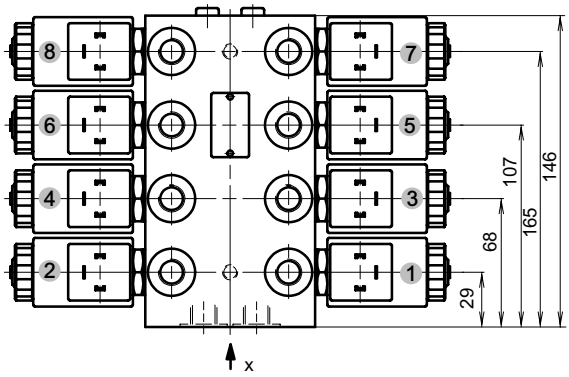
SVH04M66**.-.M..G..



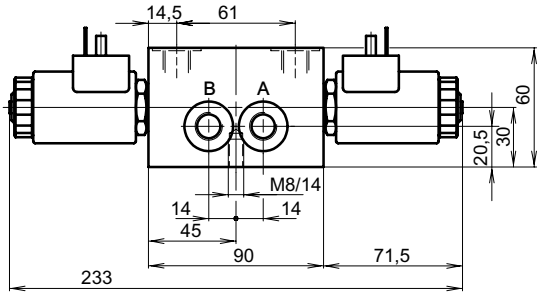
SVH04M00**.-.M..G..



SVH04M88**.-.M..G..



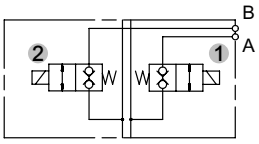
View X



2.3 Symbols for add-on sections

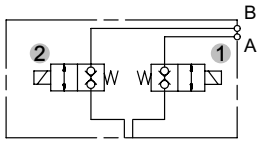
2.3.1 Intermediate sections

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



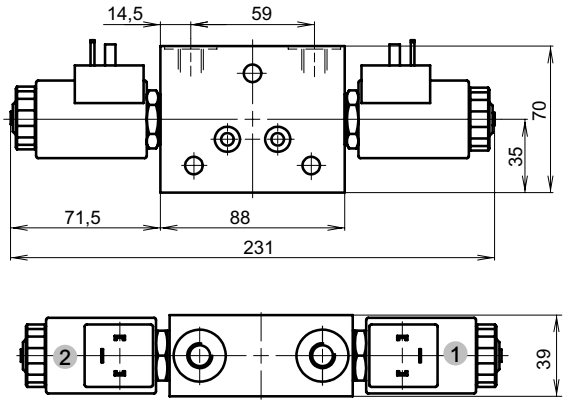
2.3.2 End sections

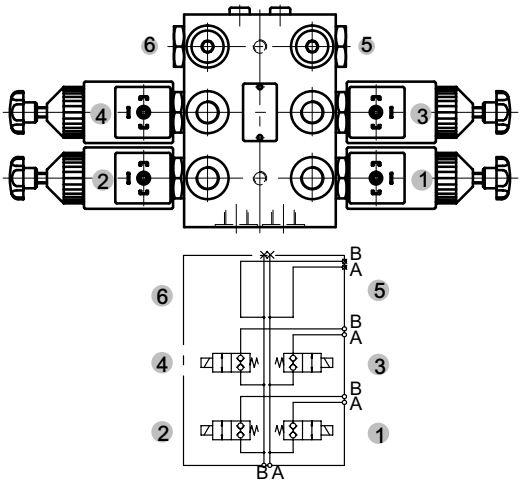
SVH04A22**.-.M..G..



2.4 Dimensions of add-on sections

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

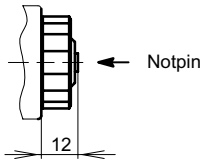
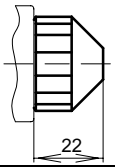
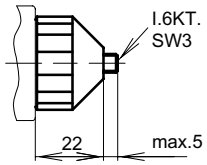
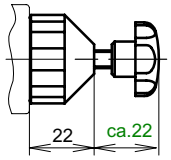




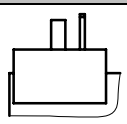
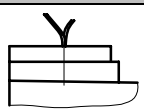
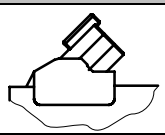
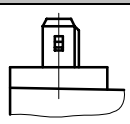
2.5 Assembly example

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 (cable length 500 mm) F	Deutsch DT04-2P-EP04 with diode P6KE33CA D	AMP Junior Timer with diode P6KE33CA J
			

2.8 Ordering Code

S	V	H	0	4	M	6	6	*	*	N	-	0	M	1	4	G	1	2	/		X= [3]

Design (see. 2)

monoblock	=	M
intermediate section	=	Z [1]
end section	=	A [1]

Type of valve body (see. 2)

2 actuator ports	=	2 [2]
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

Manual override (see. 2.6)

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

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	=	D

Coil voltage

DC 12 Volt	=	12
DC 24 Volt	=	24

Variants / special features (inserted by the factory)

1) Can be combined with LM06

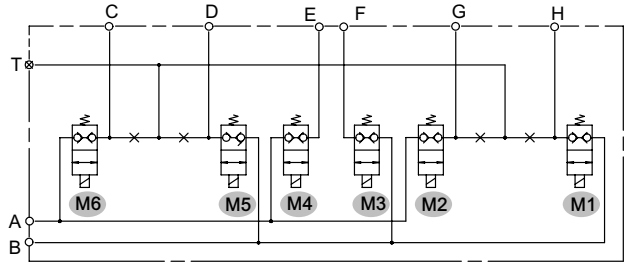
2) Only intermediate and end sections

3) Empty stations in blocks (see 2.7). Unless otherwise stated, the stations beginning from the highest number will be left empty.

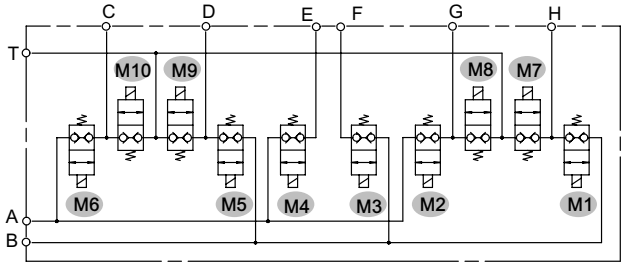
3 Diverter valves

3.1 Symbol / Assembly example

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

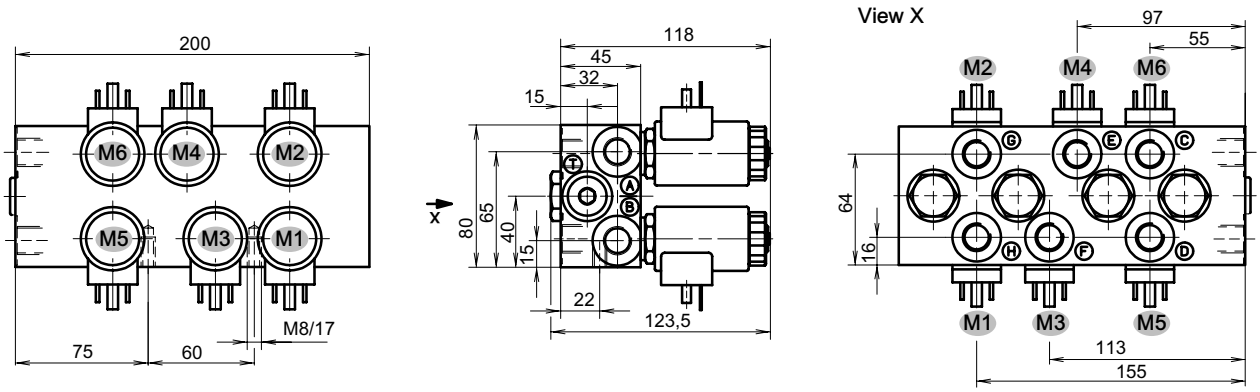


SVH04WV633.-0M16G.. with float position

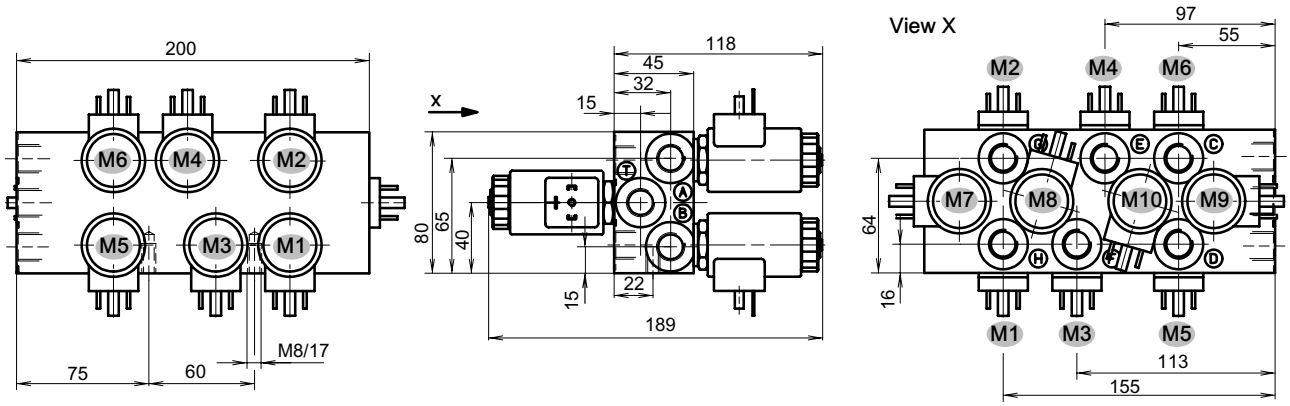


3.2 Dimensions

SVH04WV6**.-0M16G..



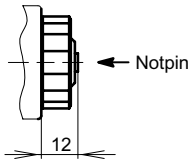
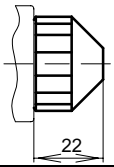
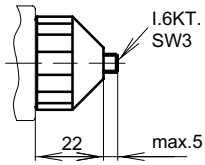
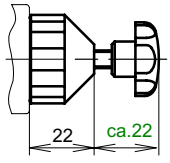
SVH04WV633.-0M16G..



3.3 The seat-valve functions

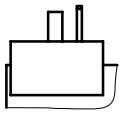
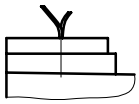
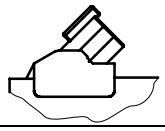
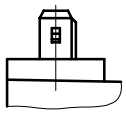
- M1 : directional function at H
- M2 : directional function at G
- M3 : directional function at F
- M4 : directional function at E
- M5 : directional function at D
- M6 : directional function at C
- M7 : float position at H
- M8 : float position at G
- M9 : float position at D
- M10 : float position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

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
			

BUCHER
hydraulics

3.5 Electrical connectors

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

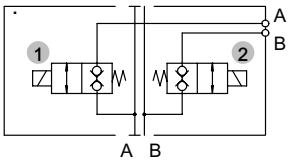
Coil voltage
- DC 12 Volt = 12
- DC 24 Volt = 24

Variants / special features (inserted by the factory)

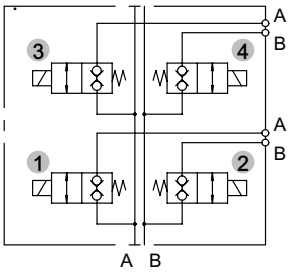
4 Single and multi-monoblocks for attaching to L.8S valves

4.1 Symbols

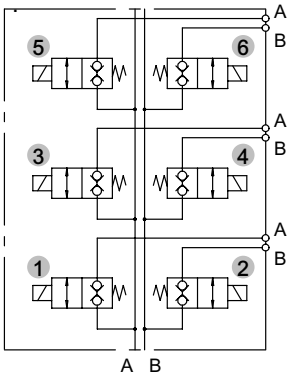
SVH04M228S.-.



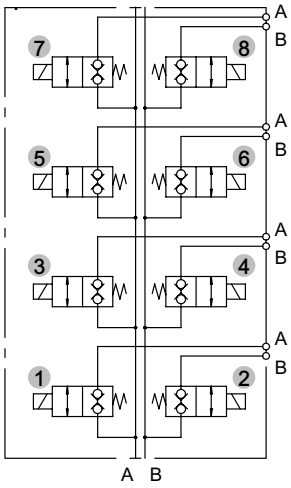
SVH04M448S.-.



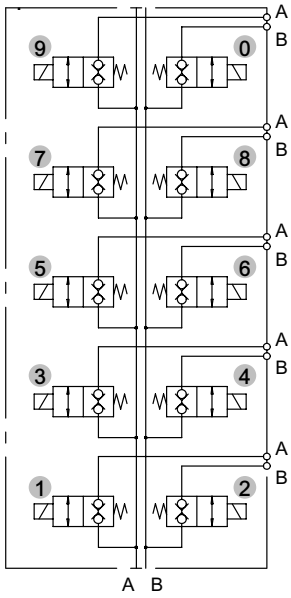
SVH04M668S.-.



SVH04M888S.-.

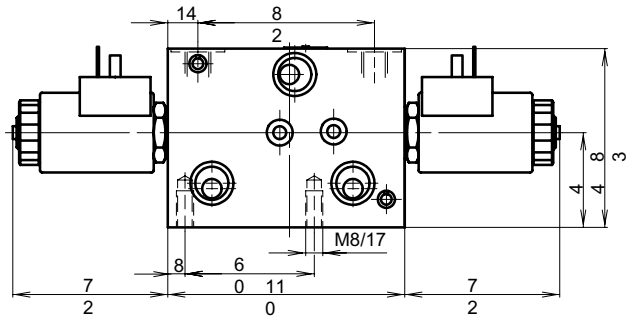


SVH04M008S.-.

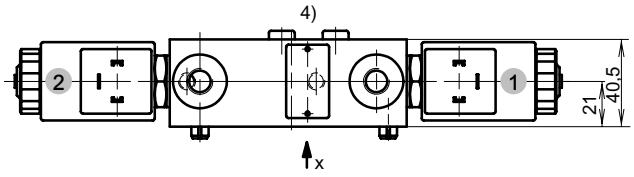


4.2 Dimensions

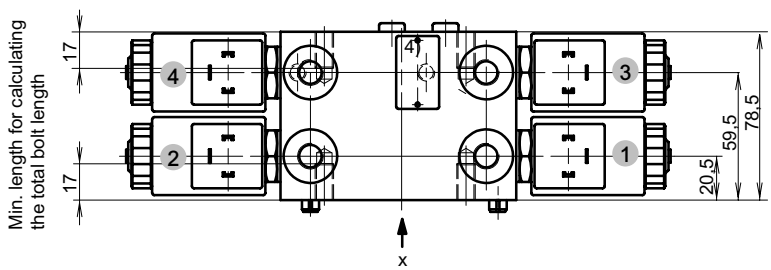
View X



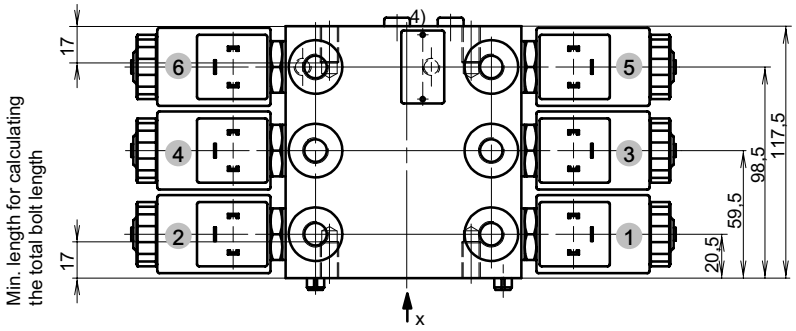
SVH04M228S.-...



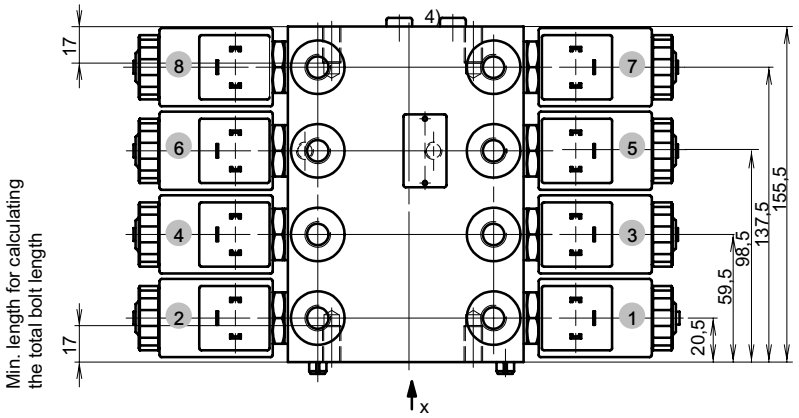
SVH04M448S.-..



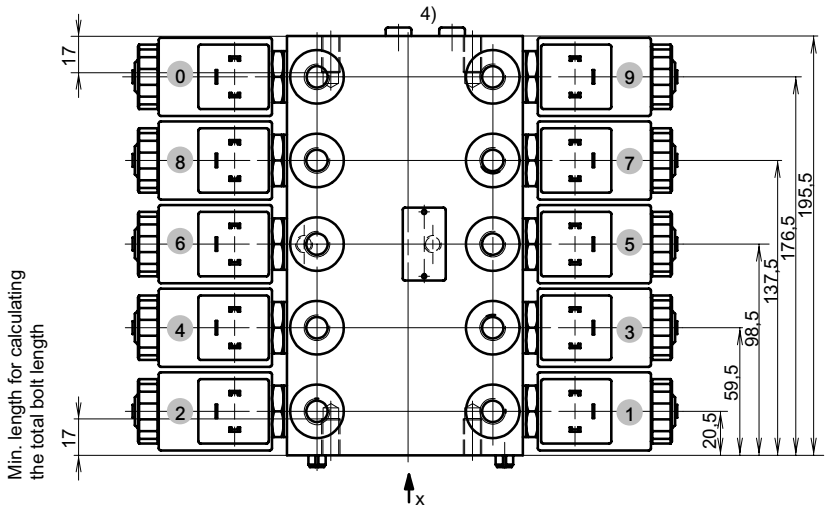
SVH04M668S.-..



SVH04M888S.-..



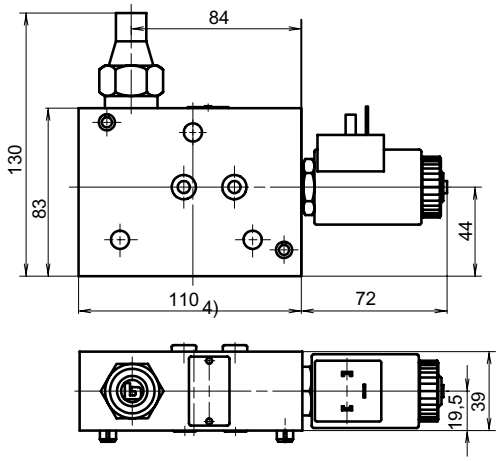
SVH04M008S.-..

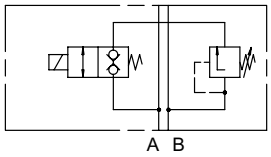


4) Threaded plugs for the end of block must be ordered separately (ordering-No.: 100224628)

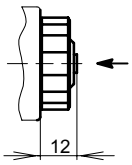
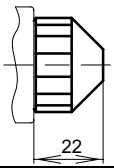
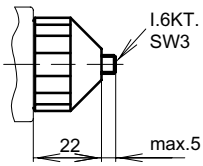
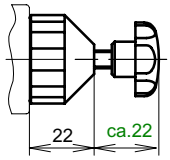
4.3 Seat valve with pressure relief valve

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

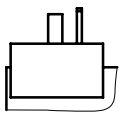
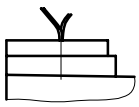
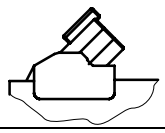
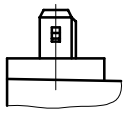




4.4 Manual override

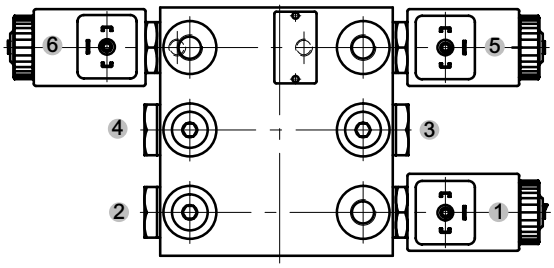
Standard	covered by cap nut	covered by cap nut, with actuating screw	covered by cap nut, with fluted knob
N	H	A	D
			

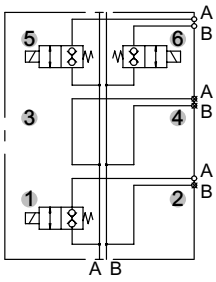
4.5 Electrical connectors

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

4.6 Assembly example

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





4.7 Ordering Code

S	V	H	0	4	M	2	2	8	S	N	-	0	M	1	4	G	1	2	/		X= 6)

Type of valve body

1 actuator port with pressure relief valve 5)	=	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	=	D

Coil voltage

DC 12 Volt	=	12
DC 24 Volt	=	24

Variants / special features (inserted by the factory)

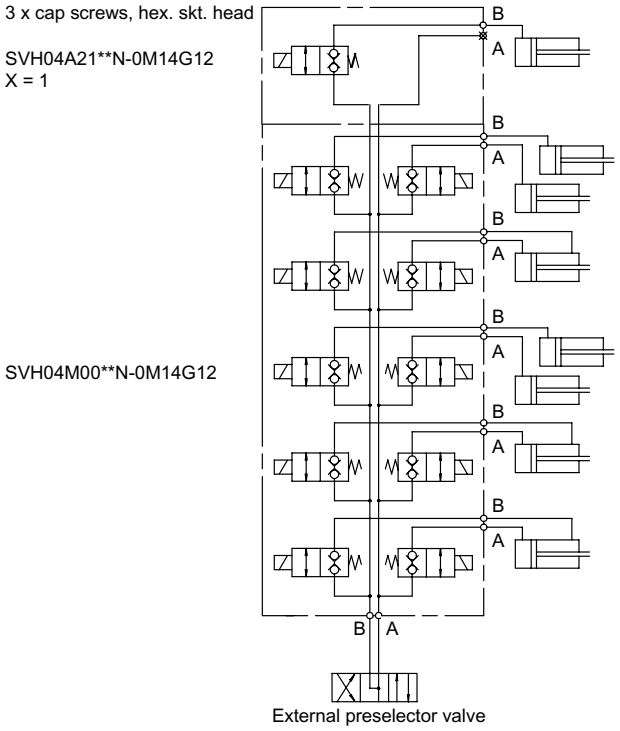
5) Please specify the required pressure setting in bar.

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

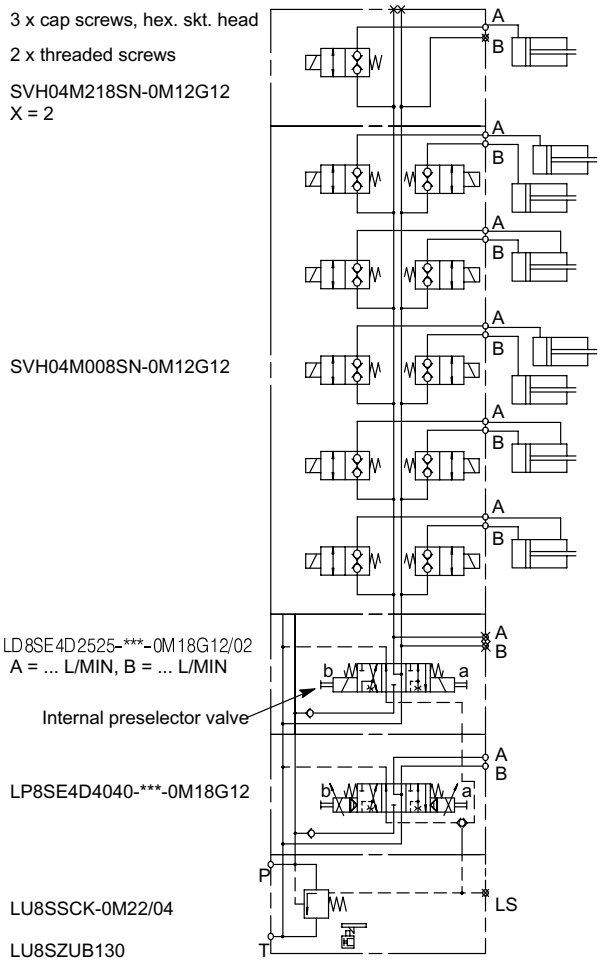
For the end of the block: 2 pcs. threaded plug with profiled sealing ring, M8x1, ordering-no.: 100224628

5 Application examples

5.1 Monoblock



5.2 Monoblock attached to a series L.8S valve



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.

BUCHER
hydraulics

info.kl@bucherhydraulics.com www.bucherhydraulics.com

© 2015 by Bucher Hydraulics GmbH, D-79771 Klettgau
All rights reserved.
Data is provided for the purpose of product description only, and must not be construed as warranted characteristics in the legal sense. The information does not relieve users from the duty of conducting their own evaluations and tests. Because the products are subject to continual improvement, we reserve the right to amend the product specifications contained in this catalogue.

Classification: 430.300.430.390.