

1.7

Pilot operated check valve

Type SV / SL6...L6X

Size 6 Up to 315 bar Up to 60 L/min

Contents

Function and configurations	02
Symbols	02
Ordering code	03
Technical data	03
Characteristic curves	04
Unit dimensions	05

Features

- For sub-plate mounting, porting pattern conforms to DIN 24 340 form A, ISO 4401 and CETOP 121 H
- With or without drain port
- 4 cracking pressures



Function and configurations

Valves of types SV and SL are pilot operated check valves of poppet design that can be opened in the checked direction. These valves are used to isolate pressurised working circuits, to prevent a load from lowering in the event of a pipe rupture or to protect hydraulically isolated actuators from creeping down.

They basically consist of the housing (1), the poppet (2), a compression spring (3) and the pilot piston (4). **Type SV ... (without drain port)**

Fluid may flow freely from A to B. In the reverse

direction, the poppet (2) is held firmly on to its seat both by the compression spring and the system pressure.

By applying pressure to pilot connection X, the pilot piston (4) is moved to the right. This lifts poppet (2) off its seat, then fluid flows from B to A.

In order to ensure that the valve opens due to pressure applied to the pilot piston, a certain minimum pilot pressure is required (see next page). The drain port Y is plugged.

Type SL... (with drain port)

In principle, the function of this valve corresponds to that of type SV.

The difference lies in the additional drain port Y for type SL, the annular area of the pilot piston (4) is separated from the port A. Pressure present in port A acts only on area A3 (7) of the pilot.

It is used in the situation having load on port A when valve opens, while type SV is used in that unloading on port A when this valve opens.





Type: S^V_L6PB.-L6X/...

- 1 Housing
- 2 Poppet
- 3 Compression spring
- 4 Pilot piston
- 5 Area A1
- 6 Area A2
- 7 Area A3

Symbols





SV6PB.-L6X/...

SL6PB.-L6X/... (with drain port)

Ordering code



Technical data

Weight	kg	Approx.0.8
Installation position		Optional
Flow direction		A to B flow freely, B to A flow under pilot
Operating pressure	bar	To 315
Pilot pressure	bar	5 to 315
Control flow -Port X	cm ³	0.68
-Port Y(only type SL)	cm ³	0.58
Control area-area A1	cm ²	0.42
-area A2	cm ²	1.33
-area A3	cm ²	0.19
Viscosity range	mm²/s	2.8 to 500
Fluid temperature range °C	°C	-30 to +80 (NBR seal)
Fluid temperature range	Ľ	-20 to +80 (FKM seal)
Fluid		Mineral oil suit for NBR and FKM seal
		Phosphate ester for FKM seal
Degree of contamination		Maximum permissible degree of fluid contamination:
		Class 9. NAS 1638 or 20/18/15, ISO4406

Characteristic curves

(Measured at ϑ_{oil} =40°C ±5°C , using HLP46)



Pilot pressure/load pressure curves



1 Spread 2 Limit value

(Dimensions in mm)

Unit dimensions

. .





It must be ordered separately if connection plate is needed. Type:

G341/01(G1/4), G341/02 (M14×1.5)

G342/01(G3/8), G342/02(M18×1.5)

G502/01(G1/2), G502/02(M22×1.5)



Requirement for mounting surface

Valve mounting screws:

Internal hexagon screw GB/T 70.1-10.9 $M5 \times 50$, tightening torque M_A =8.9Nm

- 1 Port Y with valve type "SL" (in valve type "SV" this port is plugged)
- 2 Nameplate
- 3 O-Ring 9.25 x 1.78 (Ports A, B, X, Y)
- 4 For valve with cracking pressure version "1", "2", "3" PB
- 5 For valve with cracking pressure version "4" PB
- 6 For valve with PA
- 7 Through-hole for valve mounting screws



mounting surface