RE 21 460/06.02

Replaces: 10.95

Check valve; hydraulically pilot operated Types SV and SL

Nominal size 6
Series 6X
Maximum operating pressure 315 bar
Maximum flow 60 L/min



Type SL 6 PB1-6X...

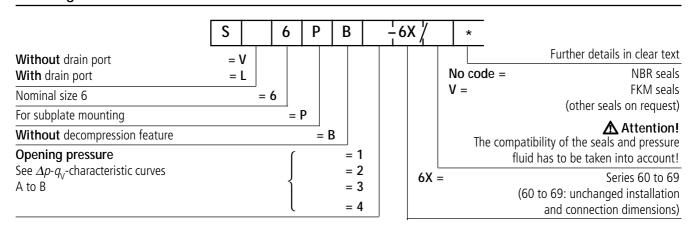
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Features

- For subplate mounting, porting pattern to ISO 4401 and CETOP – RP 121 H, with locating pin hole; Subplates to catalogue sheet RE 45 052 (separate order), see page 4
- With or without drain port
- 4 opening pressures, optional

Ordering details



Preferred types (readily available)

Туре	Material No.
SL 6 PB1-6X/	00491117
SV 6 PB1-6X/	00494086

Preferred types and standard components are highlighted in the RPS (Standard Price list).



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Version SV

A E

Version SL (with drain port)



Function, section

The SV and SL valves are hydraulic pilot operated check valves of poppet type design which may be opened to permit flow in the reverse direction.

These valves are used for the isolation of operating circuits which are under pressure, i.e. as a safe guard against the lowering of a load when a line break occurs or against creeping movements of hydraulically locked actuators.

The valve basically comprises of the housing (1), the poppet (2), a compression spring (3) and the control spool (4).

Type SV... (without drain port)

The valve permits free-flow from A to B. In the reverse direction the poppet (2) is held firmly on to its seat in addition to the spring force by the system pressure.

By applying pressure to pilot connection X, the control spool (4) is moved to the right. This lifts poppet (2) off its seat, now the valve also permits free-flow from B to A.

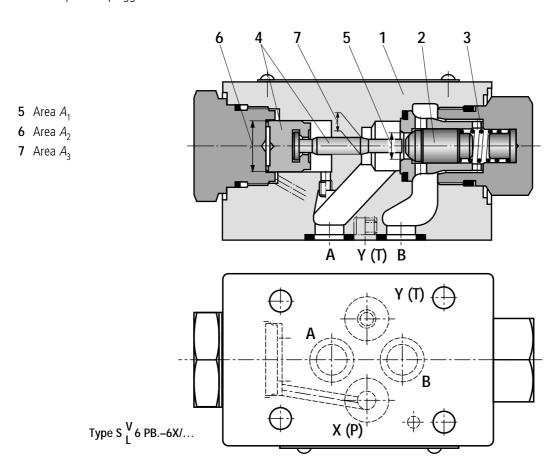
In order to ensure that the valve opens due to pressure applied to the pilot piston (4), a certain minimum pilot pressure is required, (see page 3)

The drain port Y is plugged.

Type SL... (with drain port)

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

The difference lies in the additional drain port Y. Here, the annular area of the control spool (4) is separated from the port A. Pressure present in port A acts only on area A_3 (7) of the control spool (4).

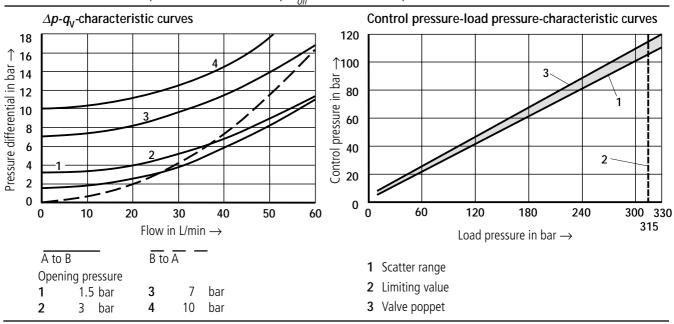


General

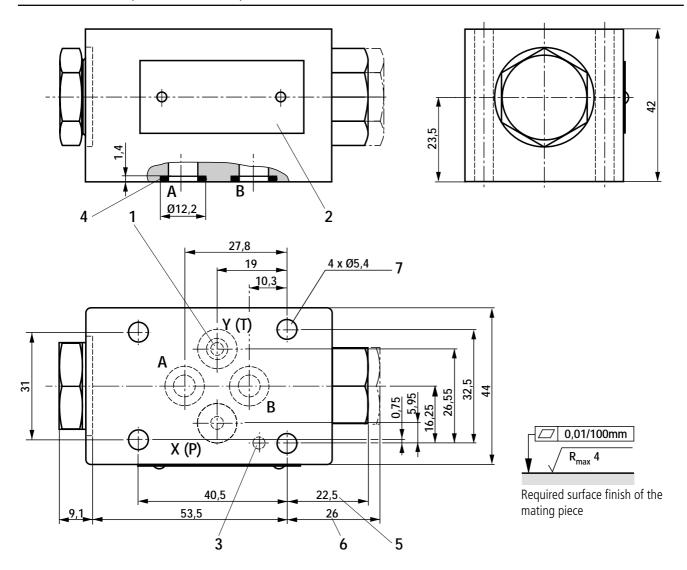
Installation			Optional
Ambient temperature range		°C	− 30 + 80 (NBR seals)
		°C	− 20 + 80 (FKM seals)
Weight		kg	Approx. 0.8
Hydraulic			
Maximum operating pressure		bar	315
Maximum flow		L/min	60
Direction of flow		Free-flow from A to B, from B to A when pilot operated	
Control pressure bar		5 to 315	
Control volume	Port X	cm ³	0.68
	Port Y (only type SL)	cm ³	0.58
Control areas	Area A ₁	cm ²	0.42
(areas according to sectional	Area A ₂	cm ²	1.33
drawing, see page 2)	Area A ₃	cm ²	0.19
Pressure fluid			Mineral oil (HL, HLP) to DIN 51 524 ¹⁾ ; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil) ¹⁾ ; HEPG (polyglycols) ²⁾ ; HEES (synthetic ester) ²⁾ ; other pressure fluids on request
Pressure fluid temperature range °C °C		− 30 + 80 (NBR seals)	
		− 20 + 80 (FKM seals)	
Viscosity range		mm²/s	2.8 500
Degree of contamination			Maximum permissible degree of contamination of the pressure fluid is to NAS 1638 class 9. We therefore recommend a filter with a minimum retention rate of $\beta_{10} \ge 75$.

¹⁾ Suitable for NBR **and** FKM seals

Characteristic curves (measured with HLP46, ϑ_{oil} = 40 °C \pm 5 °C)



²⁾ Only suitable for FKM seals



- 1 Port Y with valve type "SL" (with valve type "SV" this port is plugged)
- 2 Name plate
- 3 Locating pin hole 3 x 8 DIN EN ISO 8752 Material No. 00005694 (separate order)
- **4** Same seal rings for ports A, B, X, Y
- 5 Dimension for valve with opening pressure types "1", "2", "3"
- **6** Dimension for valve with opening pressure type "4"
- **7** Through-hole for valve fixing screws

Subplates

G 341/01 (G 1/4)

G 342/01 (G 3/8)

G 502/01 (G 1/2)

Subplates to catalogue sheet RE 45 052 and

Valve fixing screws

M5 x 50 DIN 912–10.9; $M_A = 8.9$ Nm must be ordered separately.

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. It must be remembered that our products are subject to a natural process of wear and ageing.