

Sequence valves with check valve type VR

Pressure valves influence the pressure within a hydraulic system. The type illustrated below is a sequence valve which generates a constant pressure difference between inlet and outlet of the flow. The flow in opposite direction (reflow) is unhindered via a by-pass check valve. This valve shows minor leakage like other spool valves in flow direction V → F.

These pre-load valves are used, for example, as drop protection in fork lift trucks, safeguarding the lifting cylinder during lowering to prevent continued travel if the fork accidentally gets caught (accident protection), or preventing undesired oscillations by increasing the back pressure when used as pre-load valve in return pipes.

Features and benefits:

- Compact screw-in valve

Intended applications:

- Industrial trucks
- Lifting devices



Nomenclature:	Sequence valve
Design:	Screw-in valve Combination with housing for pipe connection
Adjustment:	Fixed (non-adjustable)
p_{max}:	315 bar
Δp_{max}:	15 bar
Q_{max}:	120 lpm

Design and order coding example

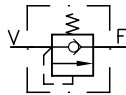
VR 3	3	C	
			Design with housing
			<ul style="list-style-type: none"> ■ Cartridge valve ■ Versions with housing for pipe connection ■ Design with metric fine thread
			Pre-load pressure Open-up pressure Δp _{max} 3 to 15 bar
Basic type, size	Type VR, size 1 to 4		

Function

VR



Screw-in valve

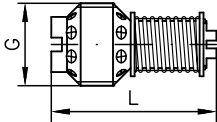


Version with housing for pipe connection

General parameters and dimensions

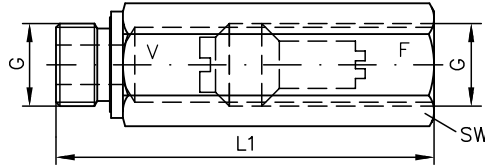
VR 3 3 C

Insert valve



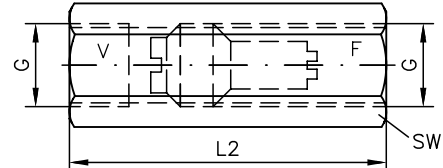
VR 4 9 E

Version with housing



VR 1 15 G

Version with housing



	Q_{\max} [lpm]	Δp_{\max} [bar] ¹⁾	Dimensions [mm]					m [g] ²⁾
			G (BSPP)	L	L1	L2	SW = a/f	
VR 1	15	3, 5, 7, 9, 12, 15	G 1/4 (A)	31	78	66	SW 19	15/120
VR 2	40	3, 5, 7, 9, 12, 15	G 3/8 (A)	36	82	70	SW 22	25/160
VR 3	65	3, 5, 7, 9, 12	G 1/2 (A)	42	96	80	SW 27	40/270
VR 4	120	3, 5, 7, 9, 12	G 3/4 (A)	54	106	100	SW 32	80/400

1) The selected pre-load pressure e.g. opening pressure cannot be altered

2) Individual valve/design with housing

Associated technical data sheets:

- Sequence valves type VR: [D 7340](#)

Similar products:

- Pressure limiting valves type MV, SV etc.: [D 7000/1](#), [D 7000 M](#)
- Miniature pressure limiting valves MVG etc.: [D 7000/1](#), [D 7000 M](#)
- Piloted pressure valves type DV: [D 4350](#)
- Pressure limiting valves type CMV: [D 7710 MV](#)