

Pressure Control Valves

Backpressure Regulators UV 4.7, 4.8

Valves for Aggressive Media and Large Flow Rates



Technical Data

Connection DN	50 - 100
Nominal Pressure PN	16
Inlet Pressure	0.02 - 10 bar
K _{vs} -Value	32 - 100 m ³ /h
Temperature	130 °C
Medium	liquids and gases

Description

Medium-controlled overflow valves are simple control valves offering accurate control while being easy to install and maintain. They control the pressure upstream of the valve without requiring pneumatic or electrical control elements.

The UV 4.7 and 4.8 overflow valves are spring-loaded diaphragm-controlled and balanced proportional control valves for large volumes. The valve cone is fitted with a soft seal (up to 130 °C). This bypass valve is manufactured from deep-drawn stainless steel featuring excellent corrosion resistance.

The inlet pressure to be controlled is balanced across the valve seat by the force of the valve spring (set pressure). If the inlet pressure rises above the set pressure, the valve opens. With decreasing inlet pressure the valve control orifice reduces, when the pipeline is depressurised the valve is closed. Rotating the adjusting screw clockwise increases the inlet pressure.

The valves requires a sense line (to be installed on-site).

These valves are no shut-off elements ensuring a tight closing of the valve. In accordance with the VDI/VDE guideline 2174 a leakage rate of 0.05 percent of the constant volume flow is permitted for the valve in closed position.

Standard

- » all stainless steel construction
- » sense line connection

Options

- » for toxic or hazardous media: sealed spring cap complete with leakage line connection (incl. sealed adjusting screw). Must be installed with a leakage line capable of draining leaking medium safely and without pressure
- » various diaphragm and seal materials suitable for your medium
- » special connections: Aseptic, ANSI or JIS flanges, welding spigots; other connections on request
- » special versions on request

Operating instructions, know how and safety instructions must be observed. All the pressure has always been indicated as overpressure. We reserve the right to alter technical specifications without notice.



K_{vs}-Values [m³/h]

nominal diameter DN

50	65	80	100
32	50	80	100

Setting Ranges [bar], Nominal Pressure

4.5 - 10	2 - 5	0.8 - 2.5	0.2 - 1.2	0. - 0.6	0.02 - 0.25	0.02 - 0.15
PN 16	PN 10	PN 6	PN 2.5	PN 1	PN 1	PN 1

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Materials	
Temperature	130 °C
Body	CrNiMo-steel
Diaphragm Housing	CrNiMo-steel
Spring Cap	CrNiMo-steel
Spring	CrNi-steel
Valve Seal	EPDM optional FPM
Diaphragm	EPDM optional FPM
O-Ring	EPDM optional FPM

setting range bar	DN 50				DN 65			
	A	C	C ₁	D	A	C	C ₁	D
4.5 - 10	230	610	750	220	290	750	890	220
2 - 5	230	610	750	220	290	750	890	220
0.8 - 2.5	230	610	750	220	290	750	890	220
0.2 - 1.2	230	610	750	270	290	750	890	270
0.1 - 0.6	230	610	750	360	290	750	890	360
0.02 - 0.25	230	500	640	360	290	640	780	360
0.02 - 0.15	230	500	640	500	290	640	780	500

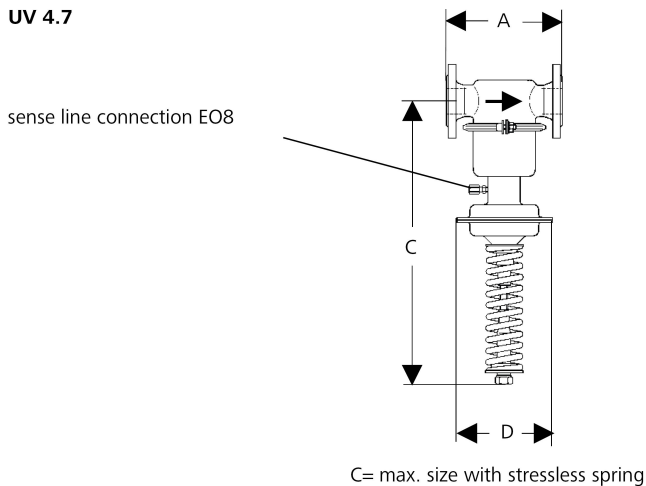
setting range bar	DN 80				DN 100			
	A	C	C ₁	D	A	C	C ₁	D
4.5 - 10	310	750	890	220	350	750	890	220
2 - 5	310	750	890	220	350	750	890	220
0.8 - 2.5	310	750	890	220	350	750	890	220
0.2 - 1.2	310	750	890	270	350	750	890	270
0.1 - 0.6	310	750	890	360	350	750	890	360
0.02 - 0.25	310	640	780	360	350	640	780	360
0.02 - 0.15	310	640	780	500	350	640	780	500

setting range bar	nominal diameter DN			
	50	65	80	100
4.5 - 10	30	31	33	35
2 - 5	30	31	33	35
0.8 - 2.5	30	31	33	35
0.2 - 1.2	33	34	36	38
0.1 - 0.6	36	37	39	41
0.02 - 0.25	37.5	38.5	38.5	38.5
0.02 - 0.15	37.5	38.5	38.5	38.5

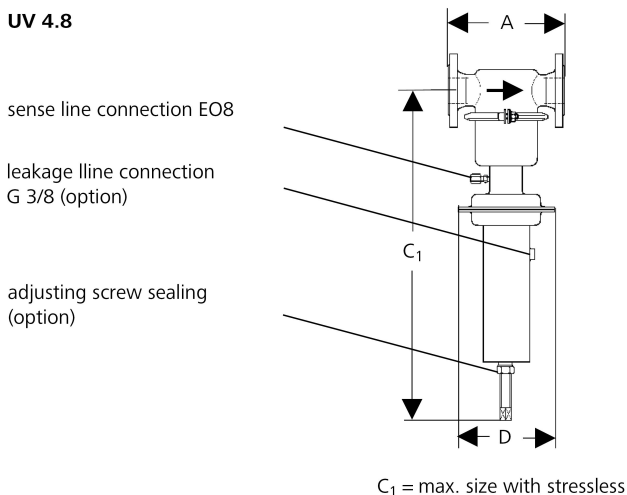
Special designs on request.
The pressure has always been indicated as overpressure.
Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

Dimensional Drawing

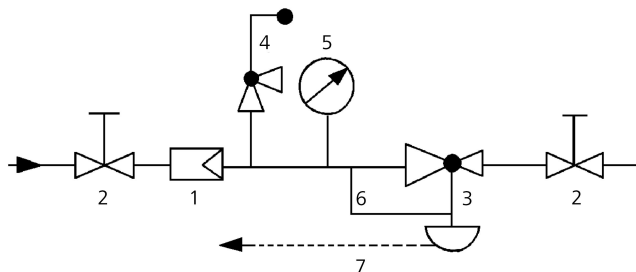
UV 4.7



UV 4.8



Recommended Installation



- 1 Strainer
 - 2 Shut-off Valves
 - 3 Overflow Valve
 - 4 Safety Valves
 - 5 Pressure Gauge
 - 6 Sense Line EO8
 - 7 Leakage Line G 3/8 (option)
- sense line connection 10 - 20 x DN before the valve.
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