

Pressure Control Valves

Backpressure Regulators UV 3.9



Millibar Control Valve

Technical Data

Connection DN	15 - 50
Connection G	1/2 - 2
Nominal Pressure PN	1 - 2,5
Inlet Pressure	0.01 - 1.1 bar
K _{vs} -Value	0.2 - 28 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 3.9 overflow valve is a spring-loaded diaphragm-controlled proportional control valve designed for very low inlet pressures. This bypass valve is manufactured from deep-drawn stainless steel featuring excellent corrosion resistance. The valve cone can be fitted with a soft or metallic seal.

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.

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

Options

- » for toxic or hazardous media: sealed bonnet 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 DIN 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]

0.2	0.9	2.2	3.9	6	12	18	28
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Setting Ranges [bar], Nominal Pressure

0.01 - 0.025	0.02 - 0.06	0.05 - 0.12	0.10 - 0.25	0.2 - 0.5	0.4 - 1.1
PN 1	PN 1	PN 1	PN 1	PN 1	PN 2.5

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Materials

Temperature	80 °C	130 °C
Body	CrNiMo-steel	CrNiMo-steel
Bonnet		
Internals		
Spring		
Set Screw		
Valve Seal	CrNiMo-steel optional EU	CrNiMo-steel optional FPM, EPDM, PTFE
Diaphragm	CR	FPM optional EPDM
Protection Foil for Diaphragm	PTFE (option)	PTFE (option)

Dimensions [mm]

setting range bar	size	nominal diameter						
		G 1/2	G 3/4	G 1	G 1 1/4	G 1 1/2	G 2	
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	
0.4 - 1.1	A	50	45	-	-	-	-	
	C ₁	95	100	-	-	-	-	
	ø D	175	175	-	-	-	-	
0.2 - 0.5	A	55	55	55	-	-	-	
	C ₁	95	100	105	-	-	-	
	ø D	220	220	220	-	-	-	
0.1 - 0.25	A	75	75	75	75	75	-	
	C ₁	95	100	105	110	115	-	
	ø D	270	270	270	270	270	-	
0.05 - 0.12	A	90	90	90	90	90	90	
	A ₁	125	125	125	-	-	-	
	C ₁	95	100	105	110	115	120	
	C ₂	115	120	120	-	-	-	
	ø D	360	360	360	360	360	360	
0.01 - 0.025 0.02 - 0.06	A	80	80	80	160	160	160	
	A ₁	150	150	150	180	180	180	
	C ₁	95	100	105	110	115	120	
	C ₂	115	120	120	125	130	135	
	ø D	500	500	500	500	500	500	
all ranges	C ₃	250	250	250	250	250	250	

Weights [kg]

setting range bar	nominal diameter G					
	1/2	3/4	1	1 1/4	1 1/2	2
0.4 - 1.1	4.5	4.5	-	-	-	-
0.2 - 0.5	6	6	6	-	-	-
0.1 - 0.25	8	8	8	8	8	-
0.05 - 0.12	12.5	12.5	12.5	12.5	12.5	12.5
0.01 - 0.025	13	13	13	13	13	13
0.02 - 0.06	13	13	13	13	13	13

Weights [kg]

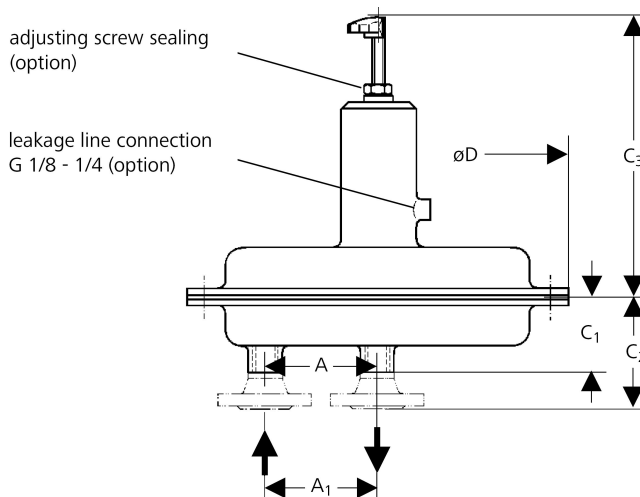
setting range bar	nominal diameter DN					
	15	20	25	32	40	50
0.4 - 1.1	-	-	-	-	-	-
0.2 - 0.5	-	-	-	-	-	-
0.1 - 0.25	-	-	-	-	-	-
0.05 - 0.12	14	14.5	15	-	-	-
0.01 - 0.025	15.5	16	16.5	17.5	18	19.5
0.02 - 0.06	15.5	16	16.5	17.5	18	19.5

Special designs on request.

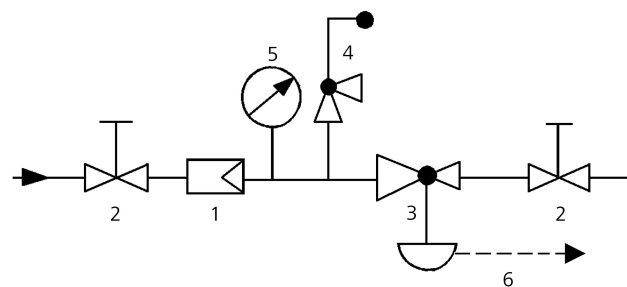
The pressure has always been indicated as overpressure.

Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

Dimensional Drawing



Recommended Installation



- 1 Strainer
 - 2 Shutoff valves
 - 3 Overflow Valve
 - 4 Safety Valve
 - 5 Pressure Gauge
 - 6 Leakage Line G 1/8 - 1/4 (option)
- use MANKENBERG-Products

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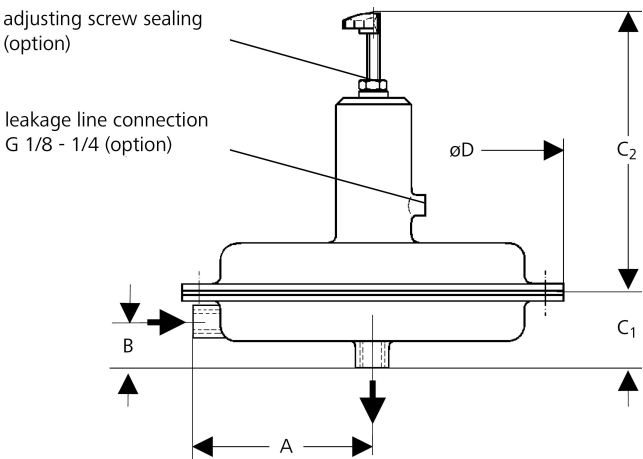
Materials		
Temperature	80 °C	130 °C
Body	CrNiMo-steel	CrNiMo-steel
Bonnet		
Internals		
Spring		
Set Screw		
Valve Seal	CrNiMo-steel optional EU	CrNiMo-steel optional FPM, EPDM or PTFE
Diaphragm	CR	FPM optional EPDM
Protection Foil for Diaphragm	PTFE (option)	PTFE (option)

Dimensions [mm]			
setting range bar	size	G 1/2	
0.2 - 0.5	A	100	
	B	65	
	C ₁	95	
	ø D	220	
0.1 - 0.25	A	126	
	A ₁	65	
	C ₁	95	
	ø D	270	
0.05 - 0.12	A	167	
	A ₁	65	
	C ₁	95	
	ø D	360	
all ranges	C ₂	250	

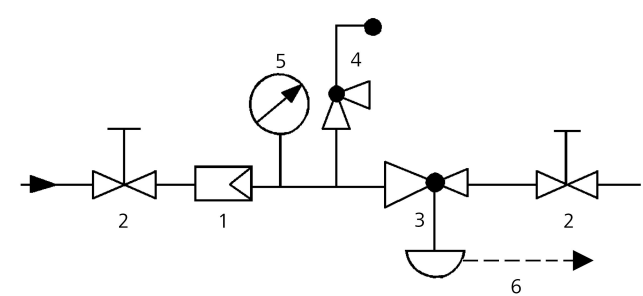
Weights [kg]		
setting range bar	G 1/2	
0.2 - 0.5	6	
0.1 - 0.25	8	
0.05 - 0.12	12.5	

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Dimensional Drawing



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