

Pressure Control Valves

Backpressure Regulators UV 4.1

Standard Cast Valve



Technical Data

Connection DN	15 - 150
Nominal Pressure PN	16 - 40
Inlet Pressure	0.02 - 10 bar
K _{vs} -Value	4 - 160 m ³ /h
Temperature	200 °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 4.1 overflow valve is a spring-loaded diaphragm-controlled proportional control valve designed for universal application and large volumes. The valve cone is fitted with a soft 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.

The valves requires a pilot 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

- » open spring
- » pilot line connection

Options

- » sealed spring cover
- » 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]

nom. diam. DN	15	20	25	40	50
K _{vs} -value m ³ /h	4	5	6	20	32

K_{vs}-Values [m³/h]

nom. diam. DN	65	80	100	125	150
K _{vs} -value m ³ /h	50	80	100	140	160

Setting Ranges and max. Inlet Pressure [bar]

setting range	0.02 - 0.25	0.1 - 0.6	0.2 - 1.2	0.8 - 2.5	2 - 5	4.5 - 10*
max. inlet press.	0.5	0.9	1.8	3.75	7.5	15

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Materials				
Temperature	80 °C	130 °C	200 °C	
Body	PN 16	up to DN 25 grey cast iron from DN 40 spheroidal cast iron		
	PN 40	cast steel	cast steel	cast steel
	PN 16 - 40	CrNiMo-steel	CrNiMo-steel	CrNiMo-steel
Diaphragm Housing	steel welded optional CrNiMo-steel			
Bonnet	steel welded optional CrNiMo-steel			
Spring	spring steel C optional CrNiMo-steel			
Valve Seal	NBR	EPDM optional FPM	FEPM	
Diaphragm	CR	EPDM optional FPM	FEPM	
O-Ring	NBR	EPDM optional FPM	FEPM	

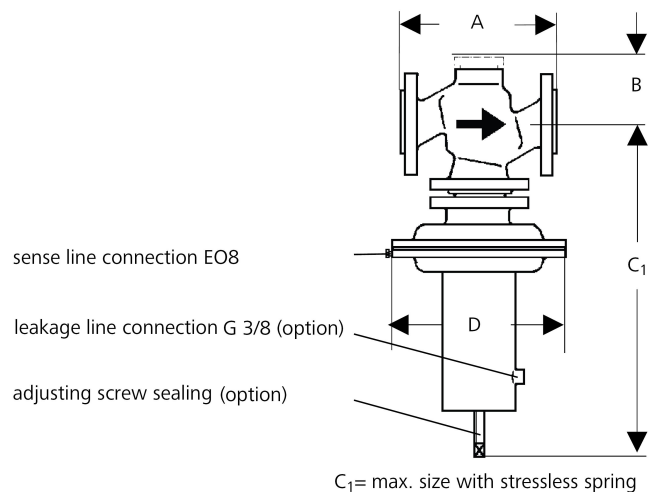
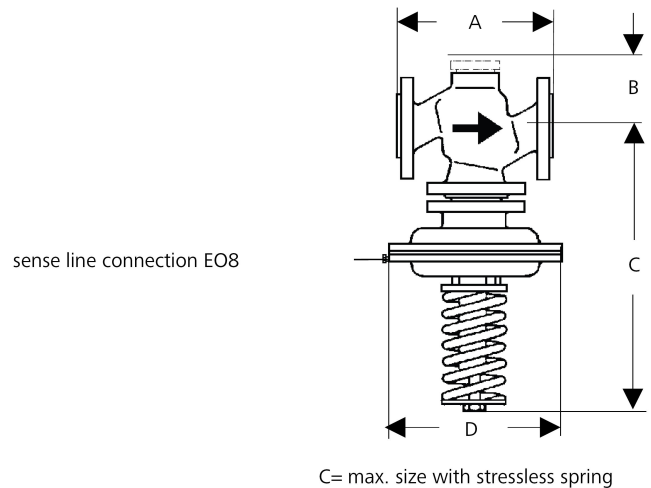
Dimensions[mm]											
setting range bar	size	nominal diameter DN									
		15	20	25	40	50	65	80	100	125	150
all ranges	A	130	150	160	200	230	290	310	350	400	480
	B	55	55	60	75	85	105	105	110	220	220
0.02-0.25 (0.05-0.25 > DN 125)	C	510	510	510	520	520	570	570	570	810	810
	C ₁	640	640	640	680	680	730	730	730	970	970
	D	360	360	360	360	360	360	360	360	500	500
	D	510	510	510	630	630	680	680	680	810	810
0.1 - 0.6	C	510	510	510	630	630	680	680	680	810	810
	C ₁	640	640	640	790	790	840	840	840	970	970
	D	270	270	270	360	360	360	360	360	360	360
	D	510	510	510	630	630	680	680	680	810	810
0.2 - 1.2	C	510	510	510	630	630	680	680	680	810	810
	C ₁	640	640	640	790	790	840	840	840	970	970
	D	220	220	220	270	270	270	270	270	270	270
	D	510	510	510	630	630	680	680	680	810	810
0.8 - 2.5	C	490	490	490	650	650	680	680	680	810	810
	C ₁	620	620	620	810	810	840	840	840	970	970
2 - 5 4.5 - 10	C	490	490	490	650	650	680	680	680	810	810
	C ₁	620	620	620	810	810	840	840	840	970	970
D	175	175	175	220	220	220	220	220	220	220	

Weights PN 16 [kg]											
setting range bar	nominal diameter DN										
		15	20	25	40	50	65	80	100	125	150
0.02 - 0.25	24	24	25	37	40	65	68	72	112	132	
0.1 - 0.6	26	26	27	39	42	67	70	74	114	134	
0.2 - 1.2	22	22	23	35	38	63	66	70	110	130	
0.8 - 10	20	20	21	33	36	61	64	68	108	128	

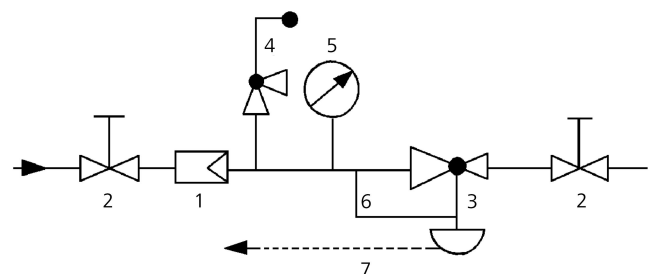
Weights PN 40 [kg]											
setting range bar	nominal diameter DN										
		15	20	25	40	50	65	80	100	125	150
0.02 - 0.25	25	25	26	40	42	68	72	75	120	145	
0.1 - 0.6	27	27	28	42	44	70	74	77	122	147	
0.2 - 1.2	23	23	24	38	40	66	70	73	118	143	
0.8 - 10	21	21	22	36	38	64	68	71	116	141	

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 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.
use MANKENBERG-Products