

PRESSURE CONTROL

Back pressure regulators UV 4.1

Valve for medium to very high flow rates



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, gases and steam
*RT	-10 °C TO + 50 °C

Description

Self-acting back pressure regulators 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 back pressure regulator is a balanced 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 valve 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 DIN EN 60534-4 and/or ANSI FCI 70-2 they may feature a leakage rate in closed position in compliance with the leakage classes V optional IV.

Standard

- » Open spring
- » Sense line connection

Options

- » Bonnet
- » Electro-pneumatic actuation
- » 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

Product



Picture similar

Technical specification

K_{vs} values [m ³ /h]						
nominal diameter	DN	15	20	25	40	50
K_{vs} value	[m ³ /h]	4	5	6	20	32

K_{vs} values [m ³ /h]						
nominal diameter	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	bar	0.02 - 0.25	0.1 - 0.6	0.2 - 1.2
max. inlet press.	bar	0.5	0.9	1.8
setting range	bar	0.8 - 2.5	2 - 5	4.5 - 10
max. inlet press.	bar	3.75	7.5	15

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Materials

Materials			
Temperature	80 °C	130 °C	200 °C
Body	cast steel optional stainless steel		
Diaphragm housing	steel welded optional stainless steel		
Bonnet	steel welded optional stainless steel		
Spring	spring steel C optional stainless steel		
Valve seal	NBR	EPDM optional FKM	FEPM
Diaphragm	CR	EPDM optional FKM	EPDM with protection foil
O-ring	NBR	EPDM optional FKM	FEPM

*All materials equal or of higher quality

Dimensions and weights

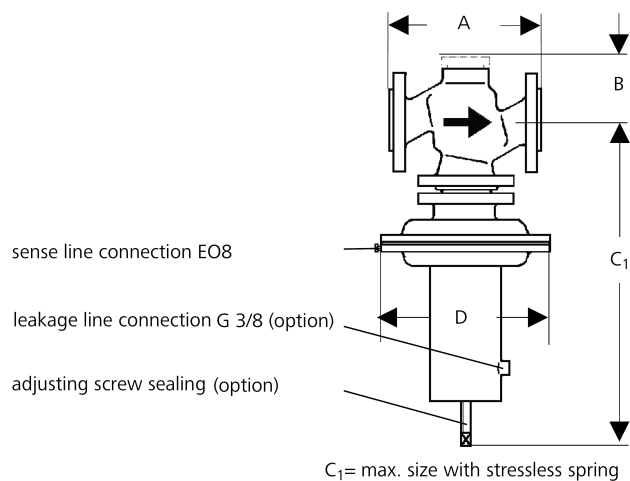
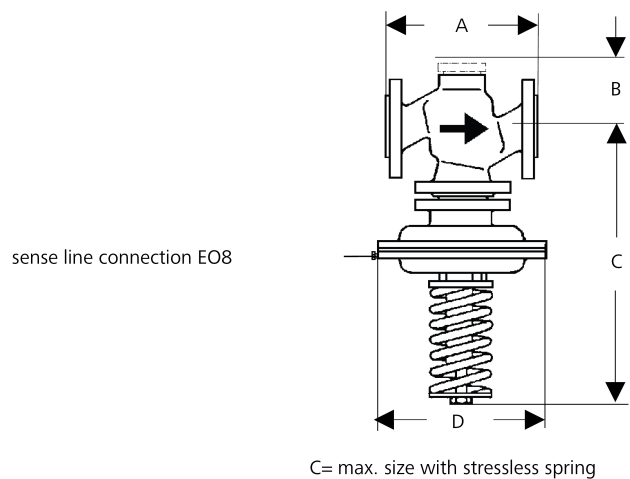
Dimensions [mm]											
setting range bar	size	nominal diameter DN									
		15	20	25	40	50	65	80	100	125	150
all ranges	A*	130	150	160	200	230	290	310	350	400	480
	B	55	55	60	75	85	105	105	110	220	220
0.02-0.25 (0.05-0.25 > DN 125)	C	510	510	510	520	520	570	570	570	810	810
	C ₁	640	640	640	680	680	730	730	730	970	970
	D	360	360	360	360	360	360	360	360	500	500
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
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	270	270	270	360	360	360	360	360	360	360
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	175	175	175	220	220	220	220	220	220	220
	D	175	175	175	220	220	220	220	220	220	220

*overall length tolerances in acc. with DIN EN 558

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	

Customs tariff number
84814010



Please send us your enquiry and allow us to advise you. Special designs on request.
The pressure has always been indicated as overpressure. Mankenberg reserves the right to alter technical specifications without notice.

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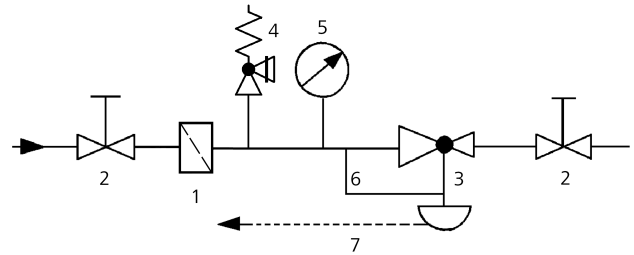
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Recommended installation

- | | | | |
|---|-------------------------|---|-----------------------------|
| 1 | Strainer | 5 | Pressure gauge |
| 2 | Shut-off valves | 6 | Sense line EO8 |
| 3 | Back pressure regulator | 7 | Leakage line G 3/8 (option) |
| 4 | Safety valve | | |



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