

PRESSURE CONTROL

Back pressure regulators UV 7.5

Millibar control valve for small to medium flow rates

Technical data

Connection DN	15 - 50
Connection G	1/2 - 2
Nominal pressure PN	16
Inlet pressure	16 bar
K_{vs} value	0.25 - 4.8 m ³ /h
Temperature	-35 up to 130 °C
Medium	liquids and gases

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 7.5 backpressure regulator is a diaphragm-controlled spring-loaded proportional control valve for very small outlet pressures and medium volumes. The valve body and medium-wetted internal parts are made of stainless steel 316Ti and 316L featuring excellent corrosion resistance. The valve cone is soft-seated.

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

- » Housing and media-exposed internal parts made of 316Ti and 316L stainless steel
- » DIN or ANSI flanges, threaded sockets G or NPT
- » Non-rising adjusting screw
- » Quick-release body clamp ring

Options

- » Pressure gauge connection
- » Clean gas version with special connections
- » For toxic or hazardous media: sealed bonnet complete with leakage lineconnection (incl. sealed adjusting screw). Must be installed with a leakage line capable of draining leaking medium safely and without pressure
- » different materials for diaphragm and seals, suitable for your medium
- » Special connections: Aseptic, ANSI or DIN flanges, NPT, welding spigots; other connections on request
- » Special versions on request

Product



Picture similar

Technical specification

K_{vs} values [m³/h] for all body sizes

0.25	0.65	1	2.3	4.8
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diaphragm [mm] setting ranges [bar] for gases

ø 220	0.1 - 0.7	0.04 - 0.20	0.015 - 0.050
ø 270	0.015 - 0.085		0.008 - 0.030
ø 360	0.01 - 0.04		0.002 - 0.020
ø 360	0.003 - 0.020		0.001 - 0.006

diaphragm [mm] Setting ranges [bar] for liquids

ø 220	0.1 - 0.7
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Materials

Materials		
Temperature	80 °C	130 °C
Body	1.4571 / 316Ti + 1.4404 / 316L	
Bonnet	1.4404 / 316L	
Internals	1.4404 / 316L	
Adjusting screw	A4	
Spring	1.4310 / 304	
Soft seal	NBR	EPDM optional FKM
Diaphragm	NBR	EPDM optional FKM

*All materials equal or of higher quality

Dimensions and weights

Dimensions [mm] threaded connection BSP and NPT						
size	nominal diameter G					
	1/2	3/4	1	1 1/4	1 1/2	2
A ₁ *	175	175	175	230	230	230
B	35	35	35	35	35	35
C	300	300	300	300	300	300
øD	= diaphragm diameter, see table setting ranges					

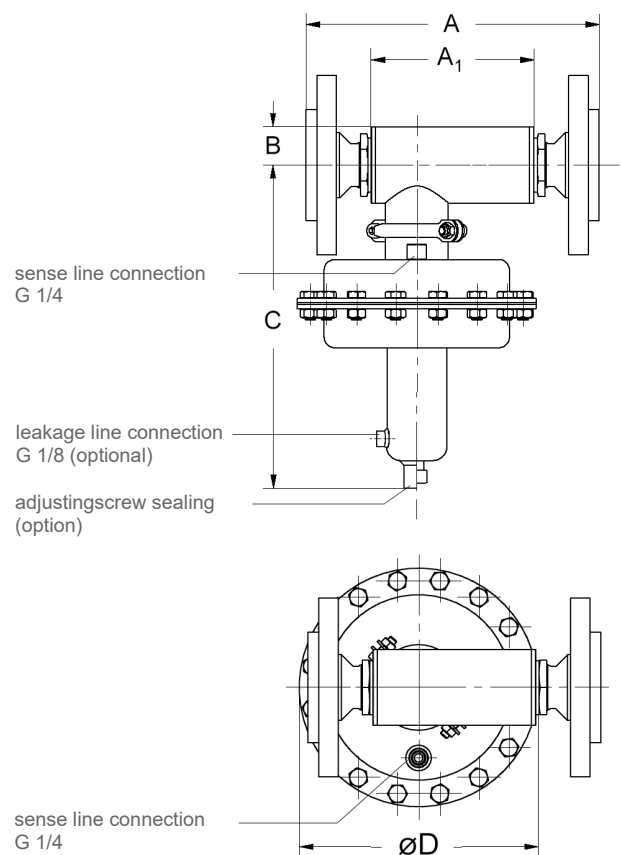
Dimensions [mm] flange connection EN 1092 and ANSI 150, 300						
size	nominal diameter DN					
	15	20	25	32	40	50
A*	270	270	270	270	270	270
B	35	35	35	35	35	35
C	300	300	300	300	300	300
øD	= diaphragm diameter, see table setting ranges					

*overall length tolerances in acc. with DIN EN 558

Weights [kg] threaded connection BSP and NPT						
Diaphragm	nominal diameter G					
	1/2	3/4	1	1 1/4	1 1/2	2
ø 220	7.6	7.6	7.7	8.1	8.3	8.7
ø 270	9.6	9.6	9.7	10.1	10.3	10.7
ø 360	14.6	14.6	14.8	15.2	15.4	15.8
ø 500	17.1	17.1	17.3	17.7	17.9	18.3

Weights [kg] flange connection EN 1092 and ANSI 150, 300						
Diaphragm	nominal diameter DN					
	15	20	25	32	40	50
ø 220	9.3	9.9	10.3	12.3	13.1	14.3
ø 270	11.3	11.9	12.3	14.3	15.1	16.3
ø 360	16.4	17	17.4	19.4	20.2	21.4
ø 500	18.9	19.5	19.9	21.9	22.7	23.9

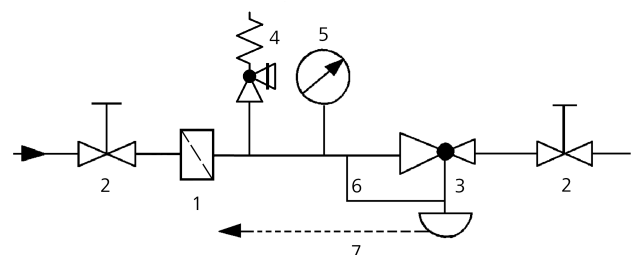
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Recommended installation

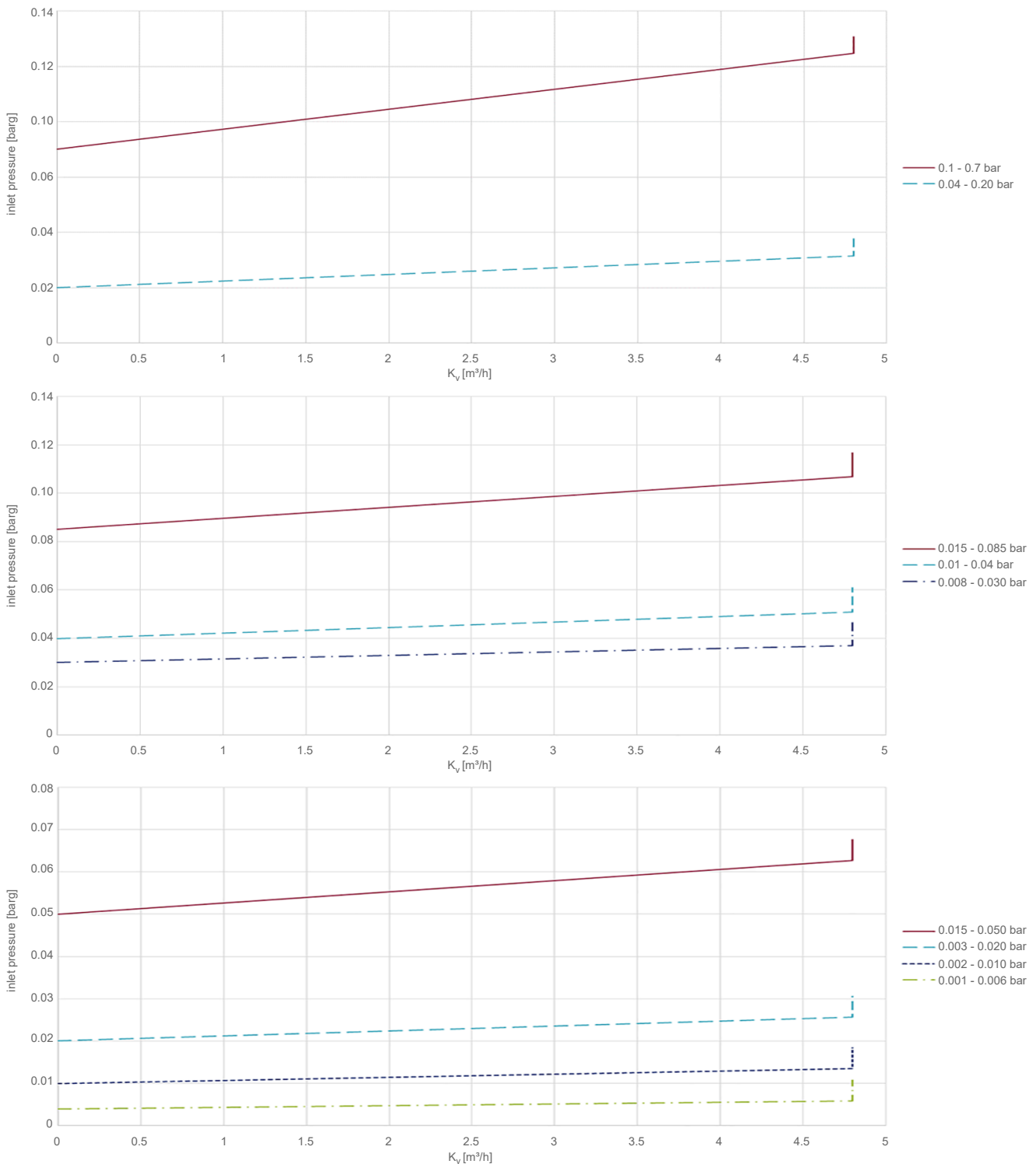
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|---------------------------|-------------------------------|
| 1 Strainer | 5 Pressure gauge |
| 2 Shut-off valves | 6 Sense line G 1/4 |
| 3 Back pressure regulator | 7 Leakage line G 1/8 (option) |
| 4 Safety valve | |

Sense line connection 10 - 20 x DN before the valve



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.

Flow chart



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