

PRESSURE CONTROL

Back pressure regulators UV 3.0

Millibar control valve for small to medium flow rates



Technical data

Connection DN	15 - 50
Connection G	1/2 - 2
Nominal pressure PN	1
Inlet pressure	0.002 - 0.52 bar
K _{vs} value	0.2 - 3.6 m ³ /h
Temperature	130 °C
Medium	gases and liquids
*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 3.0 backpressure regulator is a diaphragm-controlled spring-loaded proportional control valve for very small outlet pressures and medium volumes. The valve is completely made of high-quality stainless steel with excellent corrosion resistance. 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

- » All stainless steel construction
- » Sense line connection

Options

- » Pressure gauge connection
- » 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.
- » different materials for diaphragm and seals, suitable for your medium
- » Special connections: Aseptic, ANSI or JIS 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

0.2	0.9	1.5	2.2	2.8	3.6
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Setting ranges [bar] for gases

Setting ranges [bar] for gases			diaphragm [mm]
0.002 - 0.004	0.003 - 0.015		ø 500
0.004 - 0.010	0.005 - 0.032		ø 360
0.008 - 0.016	0.015 - 0.065	0.05 - 0.28	ø 270
0.015 - 0.03	0.025 - 0.125	0.1 - 0.52	ø 220

Setting ranges [bar] for liquids

0.05 - 0.28	ø 270
0.1 - 0.52	ø 220

Materials

Materials*		
Temperature	80 °C	130 °C
Body, Bonnet, Internals, Screws	stainless steel 1.4404 / 316L	stainless steel 1.4404 / 316L
Adjusting screw	stainless steel M10 with handwheel made of Duroplast	
Spring	stainless steel 1.4310 / 304	stainless steel 1.4310 / 304
Valve seal	FKM	FKM
Diaphragm	NBR	EPDM

*All materials equal or of higher quality

Dimensions and weights

Dimensions [mm]						
size	nominal diameter DN					
	15	20	25	32	40	50
A*	165	170	170	180	180	180
B	35	35	35	40	45	50
C	320	330	330	340	350	360
D	diaphragm diameter see table setting ranges					

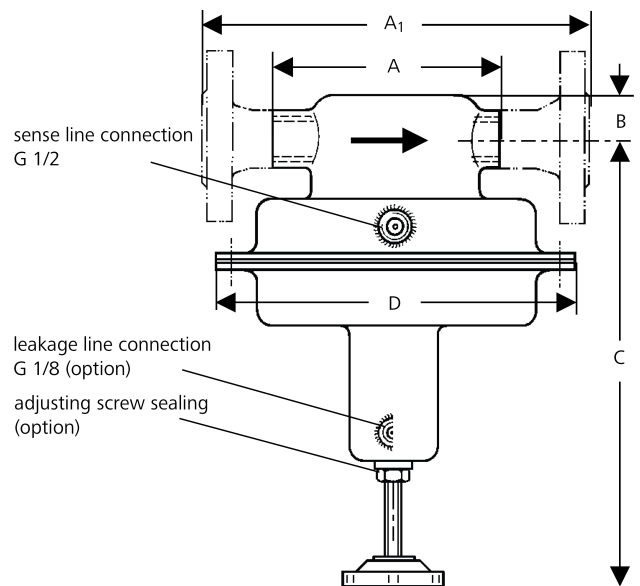
Dimensions [mm]						
size	Connection G					
	1/2	3/4	1	1 1/4	1 1/2	2
A ₁ *	240	240	250	250	260	260
B	35	35	35	40	45	50
C	320	330	330	340	350	360
D	diaphragm diameter see table setting ranges					

*overall length tolerances in acc. with DIN EN 558

Weights [kg]			
Diaphragm diameter mm	nominal diameter		
	G 1/2 - 2	DN 15 - 25	DN 32 - 50
ø 500	13	15	17
ø 360	12.5	14.5	16.5
ø 270	8	10	12
ø 220	6	8	10

Customs tariff number

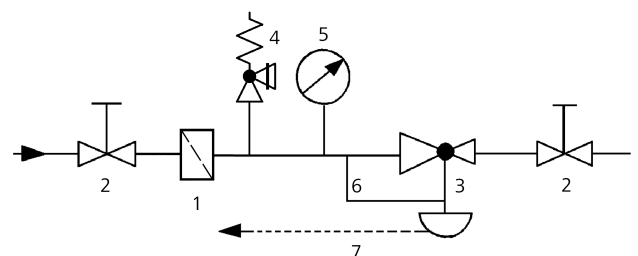
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Recommended installation

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

Sense line connection 10 - 20 x DN before the valve



Authorised Distributor:



46, Jalan SS 22/21, Damansara Jaya,
47400 Petaling Jaya,
Selangor Darul Ehsan, Malaysia.

Email: ampmech@ampmech.com
Website: www.ampmech.com

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.