

# Pressure Control Valves

## Back Pressure Regulators UV 3.0



### Millibar Control Valve

#### Technical Data

Connection DN	15 - 50
Connection G	1/2 - 2
Nominal Pressure PN	1
Inlet Pressure	0.002 - 0.52 bar
K <sub>vs</sub> -Value	0.2 - 3.6 m <sup>3</sup> /h
Temperature	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 3.0 backpressure regulator is a diaphragm-controlled spring-loaded proportional control valve for very small outlet pressures and medium volumes.

This backpressure regulator is manufactured from deep-drawn stainless steel featuring 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 valves 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.

#### Standard

- » all stainless steel construction
- » sense line connection

#### Options

- » pressure gauge connection
- » clean gas version with special connections
- » for toxic or hazardous media: sealed spring cap 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 JIS flanges, NPT, welding spigots; other connections on request
- » special versions on request

Operating instructions, know how and safety instructions must be observed. The pressure has always been indicated as overpressure. We reserve the right to alter technical specifications without notice.



#### K<sub>vs</sub>-Values [m<sup>3</sup>/h] for all body sizes

0.2	0.9	1.5	2.2	2.8	3.6
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#### Setting Ranges [bar]

Setting Ranges [bar]			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

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Materials		
Temperature	80 °C	130 °C
Body, Spring Cap, Internals, Screws	CrNiMo-steel	CrNiMo-steel
Set Screw	CrNiMo-steel M10 with handwheel made of Duroplast	
Spring	CrNi-steel	CrNi-steel
Valve Seal	FKM	FKM
Diaphragm	NBR	EPDM

Dimensions [mm]						
size	nominal diameter G					
	1/2	3/4	1	1 1/4	1 1/2	2
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	nominal diameter DN					
	15	20	25	32	40	50
A <sub>1</sub> *	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					

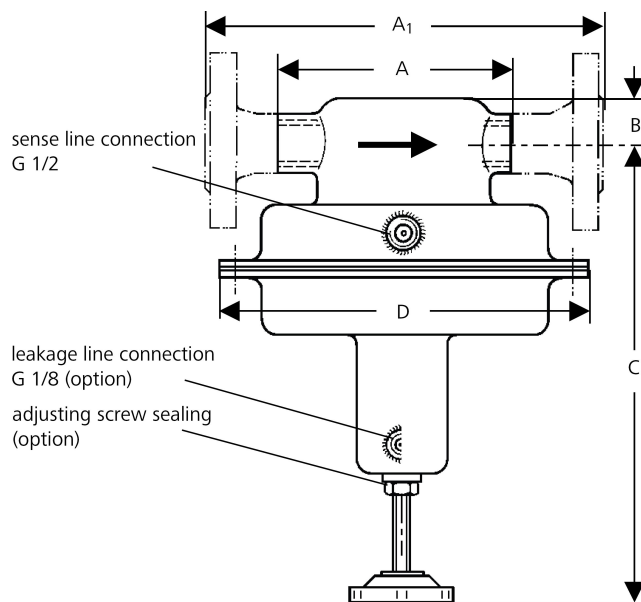
\* Overall length tolerances in acc. with DIN EN 558

Weights [kg]			
diaphragm diameter	nominal diameter		
	G 1/2 - 2	DN 15 - 25	DN 32 - 50
500	13	15	17
360	12,5	14,5	16,5
270	8	10	12
220	6	8	10

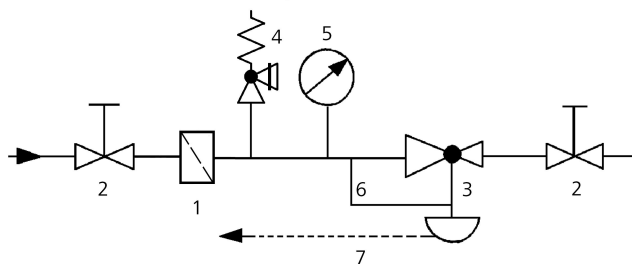
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Special designs on request.  
The pressure has always been indicated as overpressure.  
Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

### Dimensional Drawing



### Recommended Installation



- 1 Strainer\*
- 2 Shut-off Valves
- 3 Backpressure Regulator\*
- 4 Safety Valves\*
- 5 Pressure Gauge
- 6 Sense Line G 1/2
- 7 Leakage Line G 1/8 (option)

Sense line connection 10 - 20 x DN before the valve

\*Use MANKENBERG-Products