

# Pressure Control Valves

## Backpressure 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

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 3.0 overflow valve is a diaphragm-controlled spring-loaded proportional control valve for very small outlet pressures and large volumes.

This overflow valve 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 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

- » all stainless steel construction
- » pilot line connection

### Options

- » pressure gauge connection
- » oil and grease-free version for oxygen
- » clean gas version with special connections
- » 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<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] diaphragm diameter 500 mm

0.002 - 0.003	0.003 - 0.015	0.008 - 0.03	0.012 - 0.07
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### Setting Ranges [bar] diaphragm diameter 360 mm

0.004 - 0.006	0.005 - 0.032	0.015 - 0.06	0.025 - 0.14
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### Setting Ranges [bar] diaphragm diameter 270 mm

0.008 - 0.016	0.015 - 0.032	0.02 - 0.12	0.05 - 0.28
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### Setting Ranges [bar] diaphragm diameter 220 mm

0.015 - 0.030	0.025 - 0.125	0.05 - 0.22	0.1 - 0.52
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### Materials

Temperature	80 °C	130 °C
Body Bonnet, Internals, Screws	CrNiMo-steel	CrNiMo-steel
Set Screw	CrNiMo-steel M10 with handwheel made of Duroplast	
Spring	CrNi-steel	CrNi-steel
Valve Seal	FPM	FPM
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]

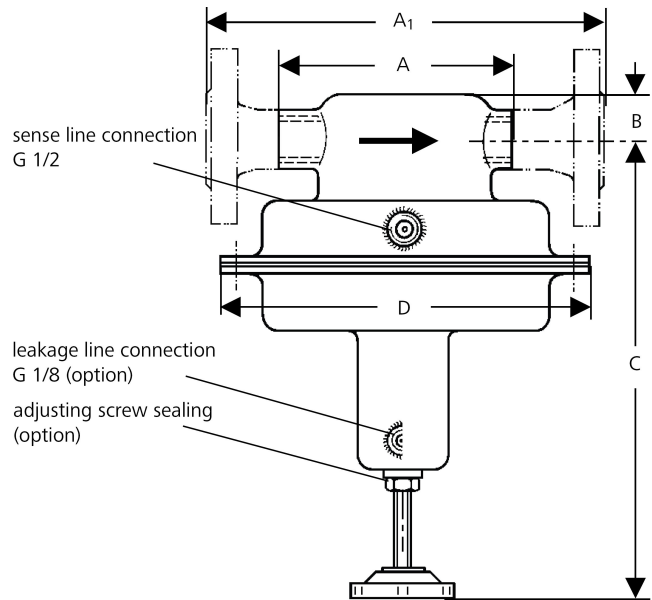
size	nominal diameter DN					
	15	20	25	32	40	50
A1	240	240	250	250	260	260
B	35	35	35	40	45	50
C	320	330	330	340	350	360
D	= diaphragm diameter see table setting ranges					

### Weights [kg]

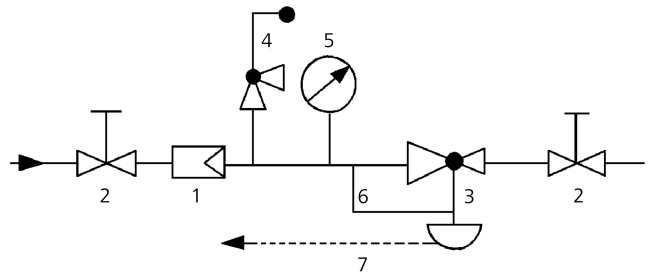
diaphragm diameter	nominal diameter		
	G 1/2 - 2	DN 15 - 25	DN 32 - 50
500	13	15	17
360	12,5	14,5	16,5
270	8	10	12
220	6	8	10

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 G 1/2
  - 7 Leakage Line G 1/8 (option)
- sense line connection 10 - 20 x DN before the valve.  
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