

# Pressure Control Valves

## Back Pressure Regulators UV 1.8

Valves for Medium and Large Flow Rates



### Technical Data

Connection DN	25 - 100
Connection G	25 - 50
Nominal Pressure PN	16
Inlet Pressure	2 - 16 bar
K <sub>vs</sub> -Value	6 - 50 m <sup>3</sup> /h
Temperature	300 °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 1.8 backpressure regulator is a spring-loaded seat-controlled proportional control valve featuring diaphragm, piston or bellows control. It is designed for hygienic applications and medium volumes of high-viscosity media. The valve cone can be fitted with a metallic or soft seal.

This valve is manufactured from deep-drawn stainless steel featuring excellent corrosion resistance. It contains virtually no dead pockets and is suitable for use in CIP and SIP systems. The angled design allows complete draining.

The spring module comprising spring cap, spring, adjusting screw, diaphragm and internal components, is connected to the valve body only by means of a clamp ring and two bolts. Changing the diaphragm or the complete spring assembly for a different control pressure range is extremely simple and does not call for special tools. The same applies to servicing and maintenance.

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.

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 III or V:

Leakage class III (metal sealing cone) = 0.1 % K<sub>vs</sub> value

Leakage class V (soft seal cone) =  $1.8 \times 10^{-5} \times \Delta p \times D^*$  [l/h]

\*D=seat diameter

### Options

- » polished version for food, pharmaceutical and superclean applications, surface roughness Ra ≤ 0,25 oder 0,4 oder 0,8 μm
- » 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 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]

seat	nominal diameter DN						
	25	32	40	50	65	80	100
I	6	6	6	12	15	20	35
II	-	12	12	15	20	35	40
III	-	-	15	20	35	40	50

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Materials			
Temperature	80 °C	130 °C	300 °C
Body	CrNiMo-steel	CrNiMo-steel	CrNiMo-steel
Spring Cap	steel welded optional CrNiMo-steel		
Spring	spring steel optional CrNiMo-steel		
Soft Seal	NBR	EPDM optional FPM	-
Metallic Seal	CrNiMo-steel	CrNiMo-steel	CrNiMo-steel
Diaphragm	CR	EPDM optional FPM	-
O-Ring	NBR	EPDM optional FPM	-
Bellow	CrNiMo-steel	CrNiMo-steel	CrNiMo-steel

Dimensions [mm]							
size	nominal diameter DN						
	25	32	40	50	65	80	100
A1	100	105	115	125	145	155	175
B	100	105	115	125	145	155	175
C	on request						
ø D							

Dimensions [mm]				
size	nominal diameter G			
	1	1 1/4	1 1/2	2
A	80	80	80	80
B	80	80	80	80
C	on request			
ø D				

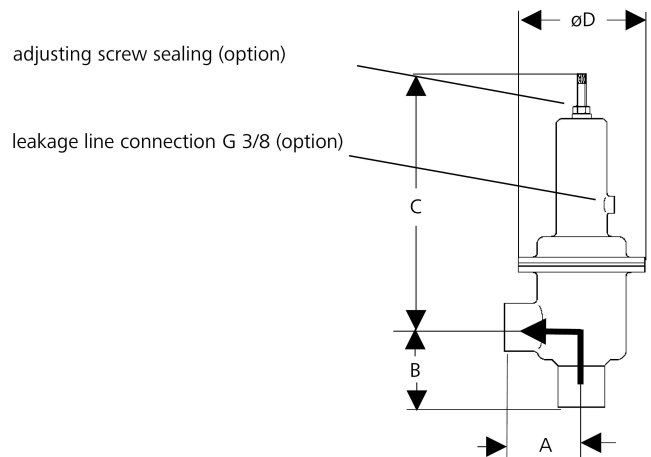
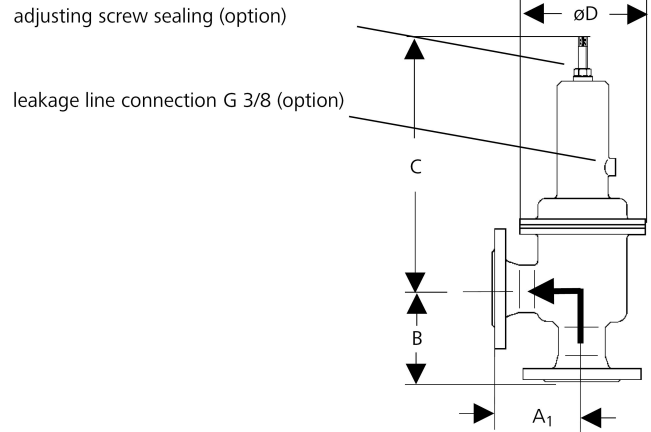
Weights [kg]							
nominal diameter DN							
25	32	40	50	65	80	100	
10.2	11.5	12	13.5	14	14.7	15.6	

Weights [kg]			
nominal diameter G			
1	1 1/4	1 1/2	2
8.5	8.8	9	9.4

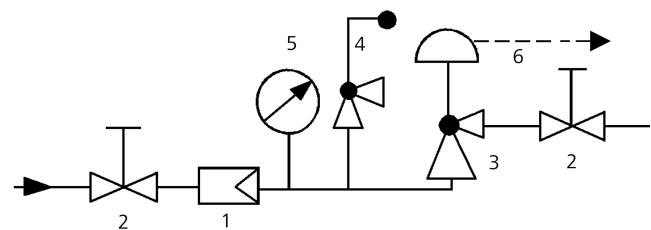
**Customs Tariff Number**  
84814010

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 Shutoff valves
  - 3 backpressure regulator
  - 4 Safety Valve
  - 5 Pressure Gauge
  - 6 Leakage Line G 3/8 (option)
- use MANKENBERG-Products