

## PRESSURE CONTROL

# Back pressure regulators UV 5.5

Valve for small to medium flow rates

# MANKENBERG

### Technical data

Connection DN	15 - 50
Connection G	1/2 - 2
PS <sub>max</sub> *	20 bar
Outlet pressure	0.5 - 20 bar
K <sub>vs</sub> value	1.3 - 7.5 m <sup>3</sup> /h
Temperature	-40 up to 200 °C
Medium	liquids, gases and steam
*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 5.5 back pressure regulator is a spring-loaded proportional control valve for universal application at small and medium flow rates. The valve body and medium-wetted internal parts are made of stainless steel 316L featuring excellent corrosion resistance. The valve cone is fitted either with a metallic or 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.

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, optional IV.

### Standard

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

### Options

- » different materials for diaphragm and seals, suitable for your medium
- » Special connections: Aseptic, ANSI or JIS flanges, welding ends, other connections on request
- » Special materials such as Duplex, Superduplex, Hastelloy® or titanium, others on request
- » Special versions on request

### Product



Picture similar

### Technical specification

#### K<sub>vs</sub> values [m<sup>3</sup>/h]

nominal diameter	DN 15 - 50			DN 25 - 50
m <sup>3</sup> /h	1.3	2.4	4.2	7.5

#### Setting ranges [bar], PS<sub>max</sub> at RT [bar]

setting range	0.5 - 2	1 - 4	2 - 7	5 - 20
PS <sub>max</sub> at RT	20/20			

#### Max. operating pressure [bar] at reference temperature [°C]

T	-10 - 50	100	130	200
p	20	20	20	16

## Materials

Materials*			
Temperature	80 °C	130 °C	200 °C
Body	1.4408 / 316L		
Bonnet	1.4404 / 316L		
Internals	1.4404 / 316L + 1.4462 / 318LN		
Adjusting screw	A4		
Spring	1.4310 / 304 / 1.7102 / J157 + Delta Tone		
Hard seal	1.4404 / 316L		
Soft seal	NBR	EPDM optional FKM	-
O-ring	NBR	EPDM optional FKM	FEPM

\*All materials equal or of higher quality

## Dimensions and weights

### Dimensions [mm] threaded connection BSP and NPT

size	Connection G					
	1/2	3/4	1	1 1/4	1 1/2	2
A	135	135	135	190	190	190
B	68	68	68	68	68	68
C <sub>1</sub>	205	205	205	205	205	205
C <sub>2</sub>	275	275	275	275	275	275
øD	110	110	110	110	110	110

### Dimensions [mm] flange connection EN 1092 and ANSI 150, 300

size	nominal diameter DN					
	15	20	25	32	40	50
A	230	230	230	230	230	230
B	68	68	68	68	68	68
C <sub>1</sub>	205	205	205	205	205	205
C <sub>2</sub>	275	275	275	275	275	275
øD	110	110	110	110	110	110
øE	95	105	115	140	150	165
F	19	22	23	26	26	30

### Weights [kg] screwed connection BSP and NPT

Pressure range bar *	Connection G					
	1/2	3/4	1	1 1/4	1 1/2	2
0,5 - 2 / 1 - 4	6.6	6.6	6.6	6.6	6.6	6.6
2 - 7	8.6	8.6	8.6	8.6	8.6	8.6
5 - 20	9.6	9.6	9.6	9.6	9.6	9.6

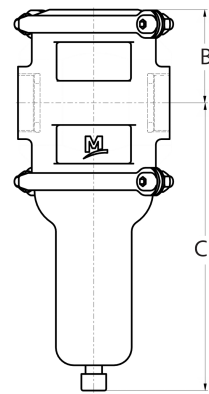
### Weights [kg] flange connection EN 1092 and ANSI 150, 300

Pressure range bar *	nominal diameter DN					
	15	20	25	32	40	50
0,5 - 2 / 1 - 4	7.6	7.6	7.6	8.6	8.6	8.6
2 - 7	8.6	9.6	9.6	10.6	10.6	10.6
5 - 20	10.6	10.6	10.6	11.6	12.6	12.6

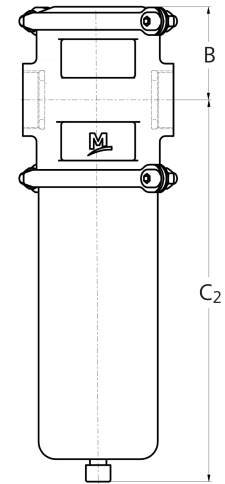
### Customs tariff number

84814010

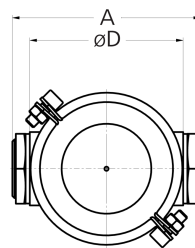
Setting Range  
0,5 - 2 bar, 1 - 4 bar



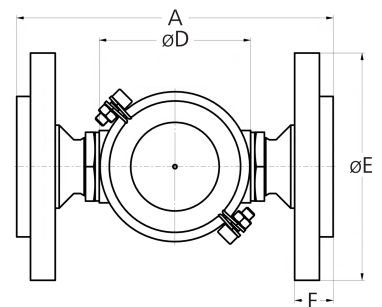
2 - 7 bar, 5 - 20 bar



Screwed Connection  
BSP and NPT

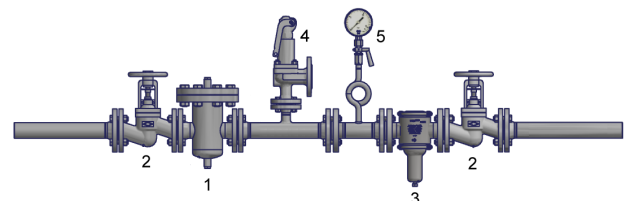


Flange Connection  
EN 1092 and ANSI



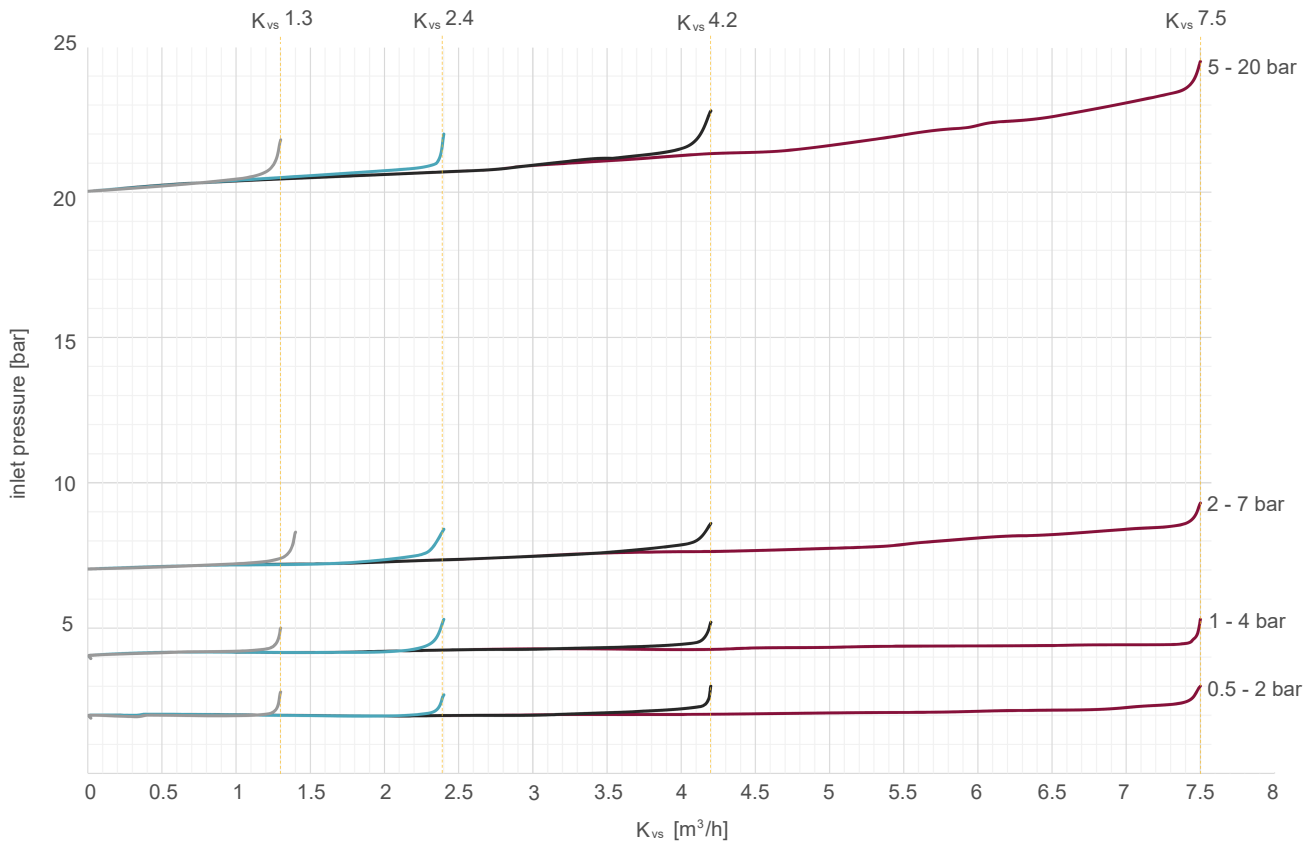
## Recommended installation

- |                           |                  |
|---------------------------|------------------|
| 1 Strainer                | 4 Safety valve   |
| 2 Shut-off valves         | 5 Pressure gauge |
| 3 Back pressure regulator |                  |



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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Please send us your enquiry and allow us to advise you. Special designs on request.  
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