

PRESSURE CONTROL

Back pressure regulators UV 5.1

Valve for medium to high flow rates



Technical data

Connection DN	15 - 50
Connection G	1/2 - 2
Nominal pressure PN	16
Inlet pressure	0.02 - 12 bar
K _{vs} value	3.5 - 22 m³/h
Temperature	130 °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 5.1 back pressure regulator is a spring-loaded diaphragm-controlled and balanced proportional control valve for universal application. This bypass valve is manufactured from deep-drawn stainless steel featuring excellent corrosion resistance. The valve cone is fitted with a soft seal.

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 range is very easy and without 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.

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
- » Quick-release body clamp ring

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
- » 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

Product



Picture similar

Technical specification

K_{vs} values [m³/h]

nominal diameter	DN	15	20	25	32	40	50
	G	1/2	3/4	1	1 1/4	1 1/2	2
K _{vs} value	m³/h	3.5	3.5	4	22	22	22

Setting ranges [bar], Nominal pressure

Setting range	bar	6 - 12	4 - 8	2 - 5	0.8 - 2.5
nominal pressure	PN	16	16	10	6

Setting ranges [bar], Nominal pressure

Setting range	bar	0.3 - 1.1	0.1 - 0.5	0.02 - 0.12
nominal pressure	PN	16	16	10

Materials

Materials*	
Temperature	130 °C
Body	stainless steel 1.4404 / 316L
Bonnet	stainless steel 1.4404 / 316L
Screws	stainless steel 1.4404 / 316L
Adjusting screw	stainless steel 1.4404 / 316L
Internals	Stainless steel, PTFE
Spring	stainless steel 1.4310 / 301
Valve seal	EPDM optional FKM or PTFE
Diaphragm	EPDM optional FKM
Protective foil for diaphragm	PTFE (option)

*All materials equal or of higher quality

Dimensions and weights

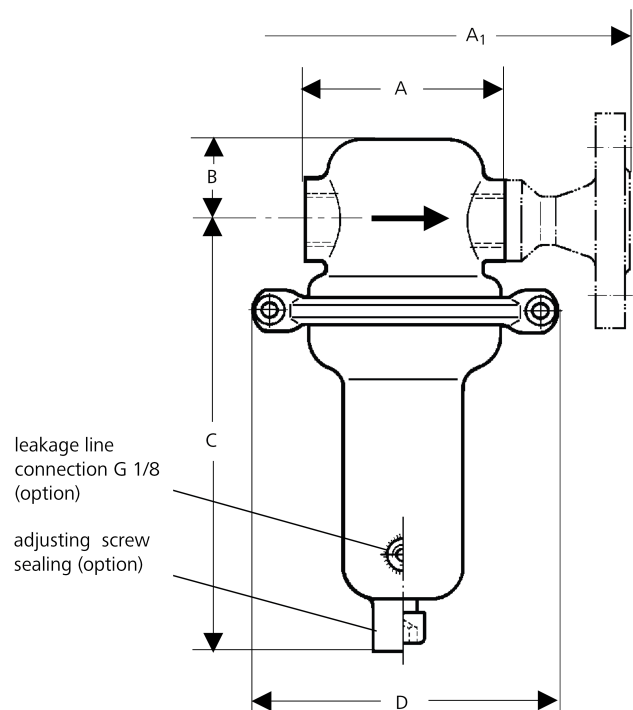
Dimensions [mm] sleeve connection							
setting range bar	size	nominal diameter					
		G 1/2	G 3/4	G 1	G 1 1/4	G 1 1/2	G 2
		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50
all ranges	A*	90	90	136	130	145	185
	A ₁ *	200	200	200	180	200	230
	B	40	40	40	110	110	110
0.02 - 0.12	C	270	270	270	285	285	285
	D	360	360	360	360	360	360
0.1 - 0.5	C	270	270	270	285	285	285
	D	264	264	264	264	264	264
0.3 - 1.1	C	270	270	270	285	285	285
	D	200	200	200	200	200	200
0.8 - 12	C	205	205	205	218	218	218
	D	138	138	138	138	138	138

*overall length tolerances in acc. with DIN EN 558

Weights [kg]				
setting range bar	nominal diameter			
	G 1/2 - 1	G 1 1/4 - 2	DN 15 - 25	DN 32 - 50
0.02 - 0.12	13	14.4	14	16.4
0.1 - 0.5	6.5	8	7.5	10
0.3 - 1.1	5.5	7	6.5	9
0.8 - 12	2.5	4	3.5	6

Customs tariff number

84814010



Recommended installation

- | | |
|---------------------------|-------------------------|
| 1 Strainer | 4 Safety valve |
| 2 Shutoff valves | 5 Pressure gauge |
| 3 Back pressure regulator | 6 Leakage line (option) |

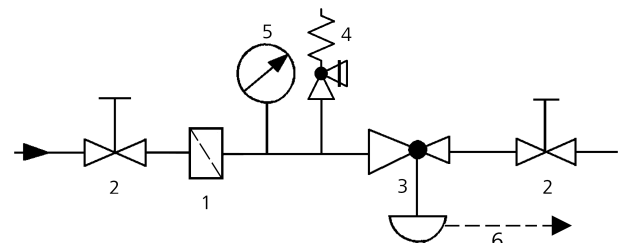
Authorised Distributor:



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47400 Petaling Jaya,
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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.