

PRESSURE CONTROL

Pressure reducing valve DM 152V

Hygienic valve for ultrapure media and medium flow rates



Technical data

Connection DN	15 - 25; ½" - 1"
Nominal pressure PN	6 - 16
Inlet pressure	up to 15 bar
Outlet pressure	0.3 - 8 bar
K _{vs} value	2 - 5.8 m³/h
Temperature	130 °C / 180 °C
Medium	liquids, gases and steam
*RT = -10 °C up to + 50 °C	

Description

Self-acting pressure reducers are simple control valves offering accurate control while being easy to install and maintain. They control the pressure downstream of the valve without requiring pneumatic or electrical control elements.

The pressure reducing valve DM 152V is a diaphragm-controlled, spring-loaded proportional valve that is primarily used for hygiene applications in the food processing and pharmaceutical industries. The diaphragm is made of EPDM which renders it steamproof up to 180 °C. The valve cone is fitted with a soft seal. No external sense line is required.

The valve is made of stainless steel 1.4404 / 1.4435. It meets ASME BPE design requirements and can be used in CIP and SIP systems. The angled design allows complete draining while the valve is open.

The bonnet with spring module, adjusting screw, diaphragm and internal parts as well as the inlet connection are attached to the body by solid clamps, each with two screws. 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 changing the cone seal in the event of maintenance.

Adjusting the set pressure does not change the overall height of the valve (non-rising adjusting screw).

The outlet pressure to be controlled is balanced across the control unit by the force of the valve spring (set pressure). As the outlet pressure rises above the pressure set using the adjusting screw, the valve cone moves towards the seat and the volume of medium is reduced. As the outlet pressure drops, the valve control orifice increases; when the pipeline is depressurised, the valve is open. Rotating the adjusting screw clockwise increases the outlet 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 V optional IV.

Standard

- » All stainless steel construction
- » Materials FDA and USP Class VI compliant
- » Valve body without dead space
- » Lift blocking for guaranteed open position of the cone (CIP/SIP)
- » Leakage monitoring of the diaphragm through a control bore
- » Surface finish medium-wetted Ra ≤ 0.76 µm and outside Ra ≤ 3.2 µm
- » Clamping flanges DIN 32676
- » Body with clamps
- » Non-rising adjusting screw

Options

- » Body made of stainless steel 1.4435
- » Surface finish medium-wetted Ra ≤ 0.38 µm and outside Ra ≤ 0.76 µm (electropolished)
- » Special connections: Special connections: aseptic flange, screwed conduit or welding ends, other connections on request
- » Special versions on request

Product



Picture similar

Technical specification

K _{vs} values m³/h			
Nominal diameter DN	15	20	25
K _{vs} Row A, B*	2.6	5.4	5.8
Nominal diameter DN	½"	¾"	1"
K _{vs} Series C*	2	2.6	5.4

*In acc. with DIN 32676

Setting range and max. inlet pressure [bar], nominal pressure PN				
pressure range bar	0.3 - 1.3	0.8 - 3	2 - 5	4 - 8
max. inlet pressure bar	10	10	15	15
PN	16 / 6	16 / 6	16 / 10	16 / 16

PRESSURE CONTROL Pressure reducing valve DM 152V

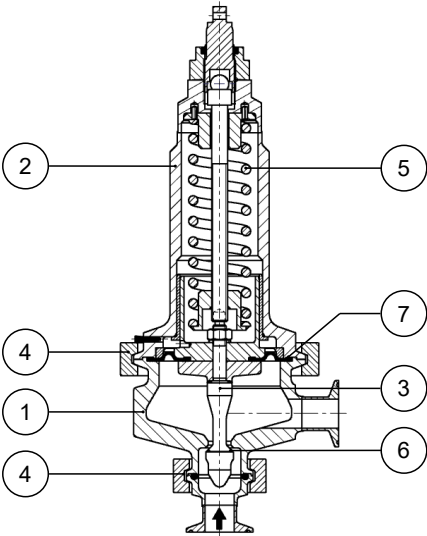
Hygienic valve for ultrapure media and medium flow rates



Materials

Materials*		
1	Body	stainless steel 1.4404 / 316L
2	Bonnet	stainless steel 1.4404 / 316L
3	Internal parts (medium-wetted)	stainless steel 1.4435 / 316L
4	Clamp	1.4301 / 1.4308
5	Spring	stainless steel 1.4310 / 301
6	Valve seal	EPDM
7	Diaphragm	EPDM

*all materials equal or of higher quality



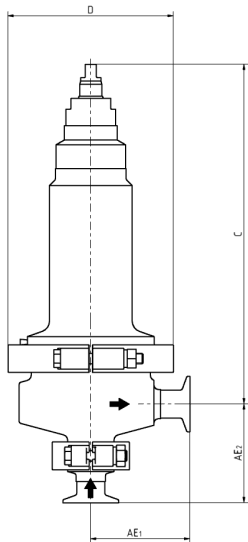
Dimensions and weights

Dimensions [mm]				
Pressure range bar	size	Nominal diameter DN		
		15	20	25
		1/2"	3/4"	1"
0.3 - 1.3	AE ₁ *	90		
0.8 - 3	AE ₂ *	90		
	C	310		
	D	145/190		

*overall length tolerances in acc. with DIN EN 558

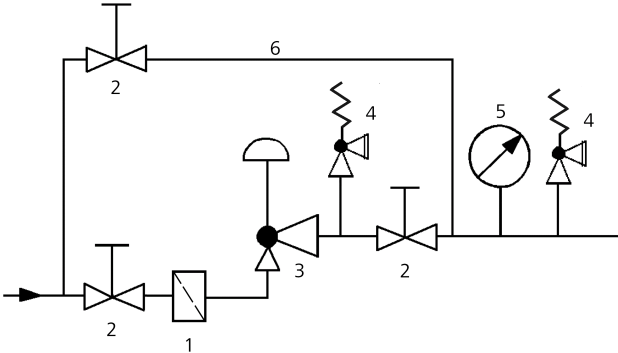
Weights [kg]			
Pressure range bar	Nominal diameter DN		
	15	20	25
	1/2"	3/4"	1"
0.3 - 1.3	11		
0.8 - 3			

Customs tariff number	
84811019	



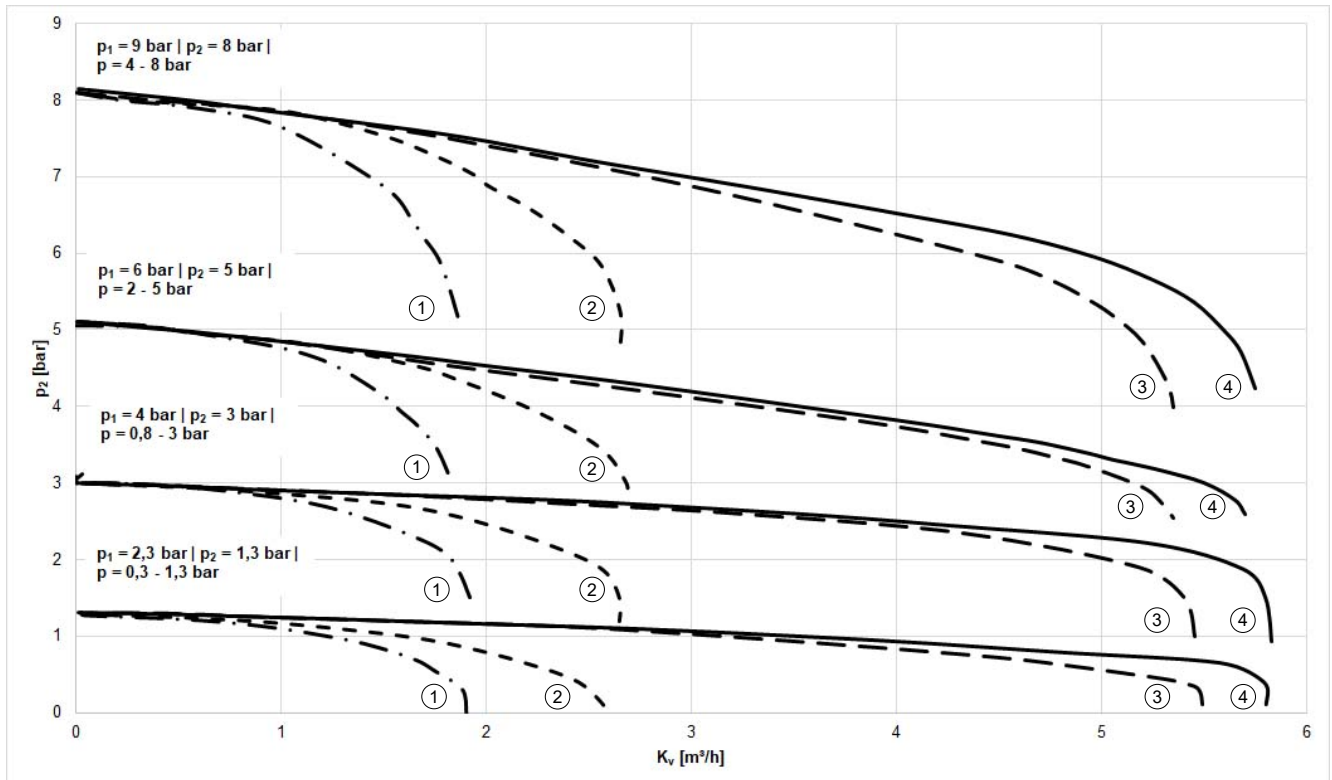
Recommended installation

- | | |
|--------------------|--------------------------|
| 1 Strainer | 4 Safety valves |
| 2 Shut-off valves | 5 Pressure gauge |
| 3 Pressure Reducer | 6 Bypass for maintenance |



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 characteristics



1: DN 1/2"

2: DN 15; 3/4"

3: DN 20; 1"

4: DN 25

Please also consider the pertinent article [How to read flow characteristics.](#)