

# Pressure Control Valves DM 462

## Pressure Reducing Valves

Valve for Hygiene Applications | Ultrapure Media



### Technical Data

Connection DN	25 - 100
Nominal Pressure PN	2.5 - 10
Outlet Pressure	0.3 - 5 bar
Inlet Pressure	up to 8 bar
K <sub>vs</sub> -Value	4.4 - 50 m <sup>3</sup> /h
Temperature	180 °C
Medium	liquids, gases and steam

### Description

Medium-controlled 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 DM 462 pressure reducing valve is a twin seat diaphragm-controlled spring-loaded proportional control valve which is primarily used for hygienic applications in the food processing and pharmaceutical industries. A PTFE protective foil renders the diaphragm physiologically safe and steamproof up to 180 °C. The valve does not require an external pilot line.

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 bonnet, 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 outlet pressure to be controlled is balanced across the diaphragm 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 the VDI/VDE guideline 2174 a leakage rate of 0.5 percent of the constant volume flow is permitted for the valve in closed position..

### Standard

- » all stainless steel construction
- » non increasing adjusting screw
- » quick-release body clamp ring
- » diaphragm protected by PTFE foil

### Options

- » polished version for food, pharmaceutical and superclean applications, surface roughness: Ra ≤ 0.25/ ≤ 0.4/ ≤ 0.8/ ≤ 1.6 μm
- » 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]

nominal diameter DN					
25	40	50	65	80	100
4.4	14	16	40	45	50

### Setting Ranges [bar] and Nominal Pressure PN

nominal diameter DN		
40 - 100	25 - 100	25 - 100
0.3 - 1.1	0.8 - 2.5	2 - 5
PN 10/2.5	PN 10/6	PN 10/10

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### Materials

Temperature	130 °C	180 °C
Body, Spring, Internals	SST 316L	SST 316L
Valve Seal	EPDM	FEPM
Spring	CrNi-steel	CrNi-steel
Diaphragm	EPDM	FPM
Protection Foil for Diaphragm	Option	PTFE

### Dimensions [mm]

size	nominal diameter DN (clamping flanges)					
	25	40	50	65	80	100
AE	100	115	125	175	175	175
C	205	230	230	515	515	515
D	138	200	200	240	240	240

### Weights [kg]

nominal diameter DN (clamping flanges)						
25	40	50	65	80	100	
2.5	6.5	6.5	26	26	26	

Special designs on request.

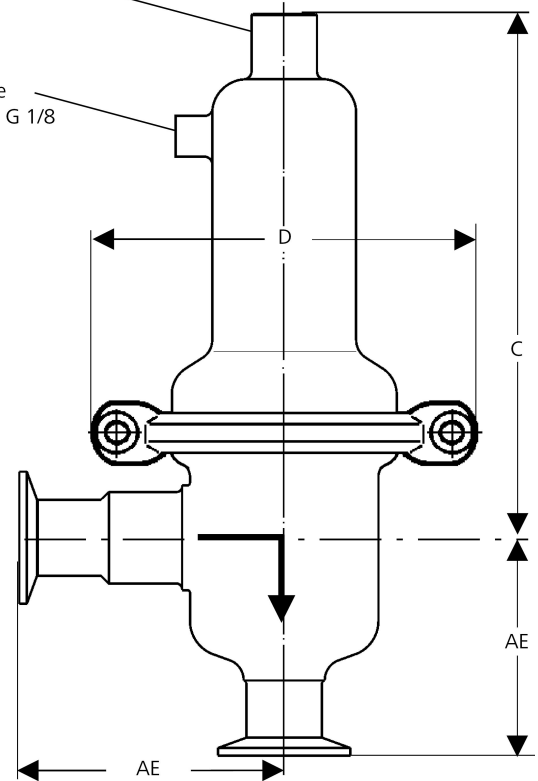
The pressure has always been indicated as overpressure.

Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

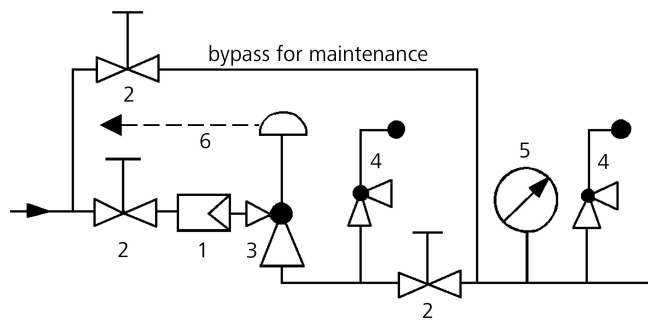
### Dimensional Drawing

adjusting screw  
sealing (option)

leakage line  
connection G 1/8  
(option)



### Recommended Installation



- 1 Strainer
- 2 Shutoff valves
- 3 Pressure Reducer
- 4 Safety Valve
- 5 Pressure Gauge
- 6 Leakage Line G 1/8 (option)

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