

# Pressure Control Valves DM 506

## Pressure Reducing Valves

Pressure Reducing Valve for Small Flow Rates



### Technical Data

Connection DN	15
Connection G	1/4
Nominal Pressure PN	315
Inlet Pressure	up to 250 bar
Outlet Pressure	0.3 - 20 bar
K <sub>vs</sub> -Value	0.15 m <sup>3</sup> /h
Temperature	130 °C
Medium	liquids and gases

### 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 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 DM 506 pressure reducing valve is a diaphragm-controlled spring-loaded proportional control valve for small volumes and high inlet pressures.

This pressure reducer is manufactured from deep-drawn stainless steel featuring excellent corrosion resistance. The valve cone is fitted with a soft seal.

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 0.05 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

### 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 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.



### Setting Ranges, K<sub>vs</sub>-Values, Permissible Reduction Ratio

K <sub>vs</sub> -Value	m <sup>3</sup> /h	0.15		
Setting Range	bar	0.3 - 1.5	1 - 6	5 - 20
Nominal Pressure	PN	315 / 2.5	315 / 10	315 / 25
Ratio p <sub>1</sub> /p <sub>2</sub>		20		

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### Materials

Temperature	80 °C	130 °C
Body	CrNiMo-steel	CrNiMo-steel
Bonnet		
Internals		
Set Screw		
Spring	CrNi-steel	CrNi-steel
Valve Seal	EU	FPM optional FFKM, EPDM, PTFE
Diaphragm	NBR	FPM optional EPDM
Protection Foil	PTFE (option)	PTFE (option)

### Dimensions [mm]

size	nominal diameter	
	G 1/4	DN 15
A/A <sub>1</sub>	75	130
B	28	28
C	~105	~105
D	80	80
øE	-	95

### Weights [kg]

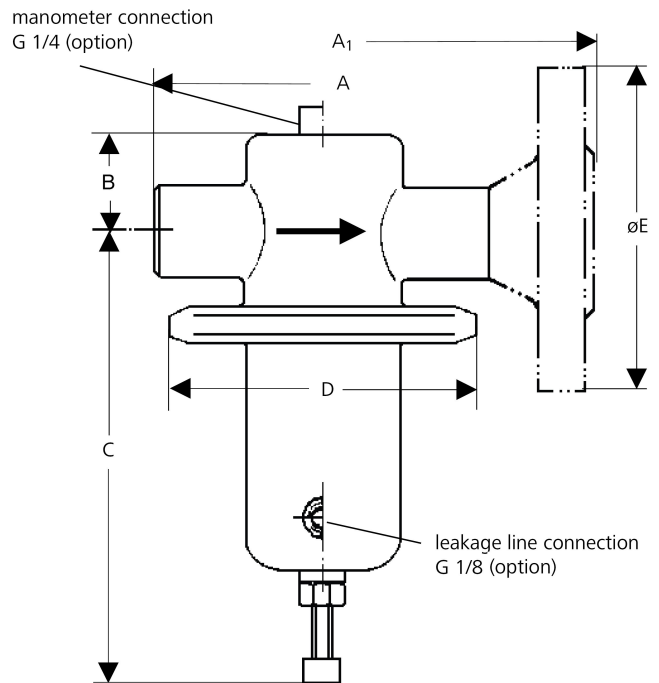
nominal diameter	
G 1/4	DN 15
0.75	2.5

Special designs on request.

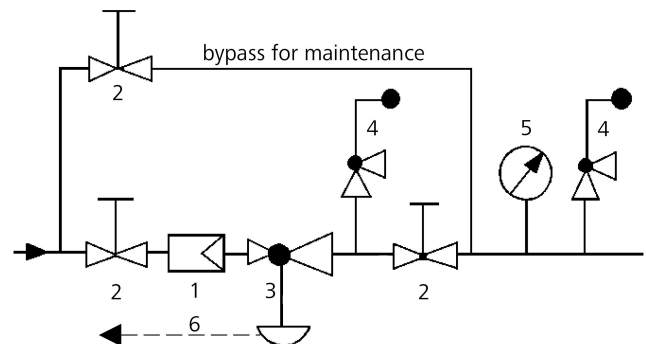
The pressure has always been indicated as overpressure.

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 Pressure Reducer
- 4 Safety Valve
- 5 Pressure Gauge
- 6 Leakage Line G 1/8 (option)

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