

Pressure Control Valves

Pressure Reducing Valves DM 582

Valve for Medium Flow Rate



Technical Data

| | |
|------------------------|-------------------------------|
| Connection DN | 20 - 50 |
| Connection G | 3/4 - 2 |
| Nominal Pressure PN | 40 (flanges) 100 (threads) |
| Inlet Pressure | up to 40 bar |
| Outlet Pressure | 0.8 - 12 bar |
| K _{vs} -Value | 1.4 - 4.2 m ³ /h |
| Temperature | - 35 up to 130 °C |
| Medium | liquids and gases |

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 DM 582 pressure reducing valve is a diaphragm-controlled spring-loaded proportional control valve made completely of stainless steel. The valve cone is provided with a soft seal.

Changing the control pressure setting does not affect the 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.

The maximum admissible downstream pressure is the 1.5-fold value of the set pressure, unless otherwise indicated.

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.

Standard

- » Completely made of stainless steel
- » Non rising adjusting screw
- » Quick closing device
- » Teflon protective foil for the diaphragm
- » Manometer connection

Options

- » Bright refined outer surface
- » Electro-pneumatic actuation
- » For toxic or hazardous media the valve must be provided with a sealed spring cap with leak line connection (incl. sealed adjusting screw). Upon installation a leak line must be laid draining possibly penetrating medium in a pressure-free and hazard-free way.
- » Various diaphragm and seal materials suitable for your medium. Kindly consult us if you have a problematic medium.
- » Special connections: Aseptic, ANSI or JIS flanges, NPT, welding spigots; other connections on request
- » Special versions available upon 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_{vs} Values [m³/h]

| | | | | | |
|-----------------------|-------------------|-----|-----|-------|-----|
| nominal diameter | G | 3/4 | 1 | 1 1/2 | 2 |
| | DN | 20 | 25 | 40 | 50 |
| K _{vs} value | m ³ /h | 1.4 | 4.2 | 4.2 | 4.2 |

Setting Ranges [bar], Nom. Pressure, max. Inlet Pressure [bar]

| | | | |
|------------|-------------|-------------|-------------|
| 0.8 - 2.5 | 2 - 5 | 4 - 8 | 6 - 12 |
| PN 16-40/6 | PN 16-40/10 | PN 16-40/16 | PN 16-40/16 |
| 5 - 15 | 12 - 30 | 24 - 40 | 36 - 40 |

Permissible Reduction Ratio (max. p₁/p₂)

| | | | |
|--------------------|---|-----|-----|
| setting ranges bar | K _{vs} -Values m ³ /h | | |
| | 1.4 | 2.8 | 4.2 |
| 0.8 - 2.5 | 35 | 20 | 10 |
| 2 - 5 | 15 | 10 | 6 |
| 4 - 8 | 15 | 10 | 6 |
| 6 - 12 | 15 | 10 | 6 |
| 10 - 16 | 13 | 7 | 4 |

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| Materials | |
|------------------|------------------------------------|
| Temperature | 130°C |
| Body, Spring Cap | CrNiMo-steel |
| Internals | |
| Spring | CrNi-steel |
| Valve Sealing | EPDM optional FKM, PEAK, PTFE, NBR |
| Diaphragm | EPDM optional FKM, NBR |
| Protection Foil | PTFE |

| Dimensions [mm] | | | | | | | | |
|-----------------|------------------|-----|---------|-----|-------|-------|-------|-------|
| size | nominal diameter | | | | | | | |
| | G 3/4 | G 1 | G 1 1/2 | G 2 | DN 20 | DN 25 | DN 40 | DN 50 |
| A* | 155 | 155 | 200 | 230 | 200 | 200 | 200 | 230 |
| B | 70 | | | | | | | |
| C | 220 | | | | | | | |
| D | 138 / 110 | | | | | | | |

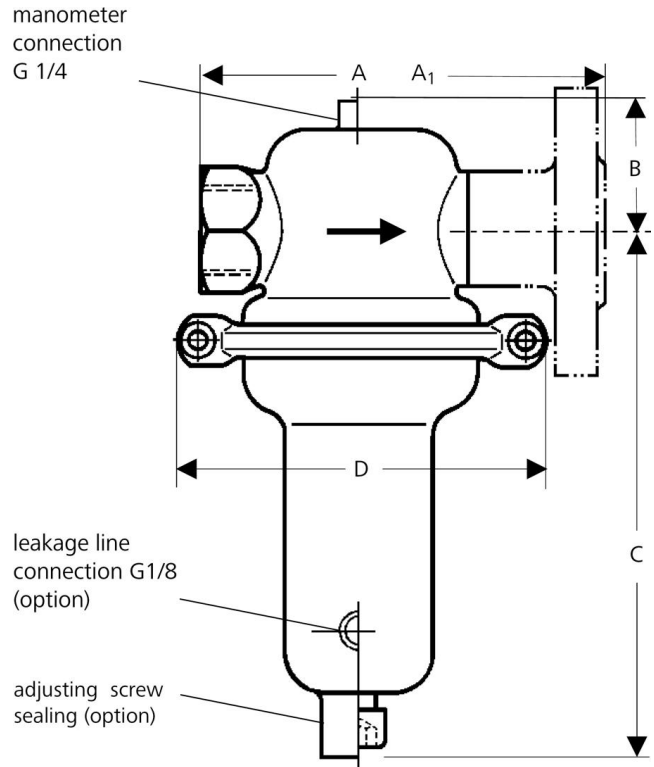
* Overall length tolerances in acc. with DIN EN 558

| Weights[kg] | | | | | | | | |
|------------------|-----|---------|-----|-------|-------|-------|-------|--|
| nominal diameter | | | | | | | | |
| G 3/4 | G 1 | G 1 1/2 | G 2 | DN 20 | DN 25 | DN 40 | DN 50 | |
| 1.5 | 2 | 3 | 3.5 | 3.5 | 4.5 | 5.5 | 6.5 | |

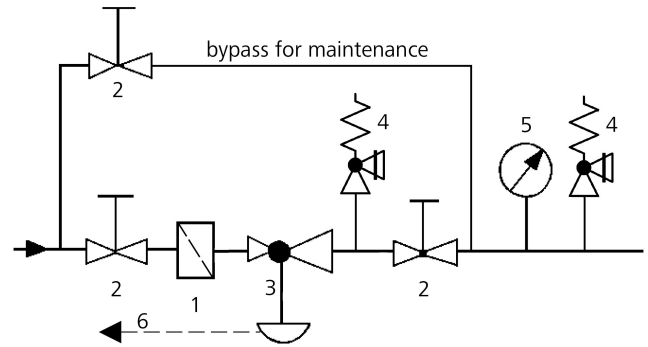
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Special designs on request.
The pressure has always been indicated as overpressure.
Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

Dimensional Drawing



Recommended Installation



- 1 Strainer*
- 2 Shut-off Valves
- 3 Pressure Reducer*
- 4 Safety Valves*
- 5 Pressure Gauge
- 6 Sense Line (option)
- 7 Leakage Line (option)

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