

PRESSURE CONTROL

Pressure reducing valve DM 582

Valve for ultrapure media and small to medium flow rates



Technical data

Connection DN	15 - 50
Nominal pressure PN	16
Inlet pressure	up to 16 bar
Outlet pressure	0.8 - 10 bar
K_{vs} value	1.4 - 5.5 m ³ /h
Temperature	-35 up to 130 °C
Medium	liquids, gases and steam

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 III or V, optional IV.

Standard

- » All stainless steel construction
- » Surface quality medium-wetted $R_a \leq 0.8 \mu\text{m}$
- » Elastomers with FDA and USP Class VI approval
- » Aseptic connections DIN and ASME
- » Non-rising adjusting screw
- » Quick-release body clamp ring
- » PTFE protective foil for the diaphragm

Options

- » Surface quality medium-wetted $R_a \leq 0.4 \mu\text{m}$
- » For toxic or hazardous media, closed bonnet with leakage line connection (incl. set screw seal). Installation with leakage line, which discharges escaping medium safely and without pressure.
- » Pressure range 0.5 - 1.5 bar
- » different materials for diaphragm and seals, suitable for your medium

Product



Picture similar

Technical specification

K_{vs} values [m³/h]

nominal diameter	DN	15 - 25	15 - 50	25 - 50	40 - 50
K_{vs} value	m ³ /h	1.4	2.8	4.2	5.5*

*Only for pressure range 0.8 - 2.5 bar

Setting ranges [bar], nominal pressure, max. inlet pressure [bar]

setting ranges	0.8 - 2.5	2 - 5	4 - 10
max. $p_1 = 16$ bar			

Permissible Reduction Ratio (max. p_1/p_2)

Setting range [bar]	K_{vs} value m ³ /h		
	1.4	2.8	4.2
0.8 - 2.5	35	20	10
2 - 5	15	10	6
4 - 10	15	10	6

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Materials

Materials*	
Housing, bonnet, internal parts	stainless steel 1.4404 / 316L
Spring	stainless steel 1.4310 / 301
Valve seal	EPDM optional FKM, PTFE
Diaphragm	EPDM optional FKM
Protection foil	PTFE

*All materials equal or of higher quality

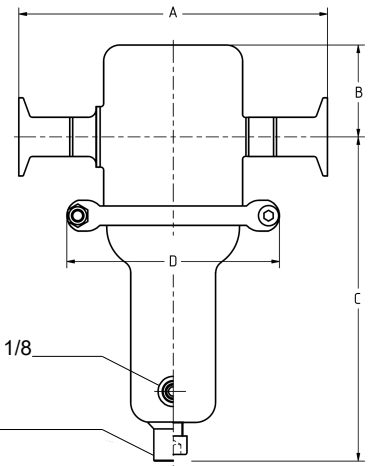
Dimensions and weights

Dimensions [mm] threaded connection BSP and NPT					
size	nominal diameter				
	DN 15	DN 20	DN 25	DN 40	DN 50
A*	160	160	180	200	230
B	60				
C	210				
D	138 / 112				

*overall length tolerances in acc. with DIN EN 558

Weights [kg]					
nominal diameter					
DN 15	DN 20	DN 25	DN 40	DN 50	
3	3	4	4	5	

Customs tariff number	
84811019	

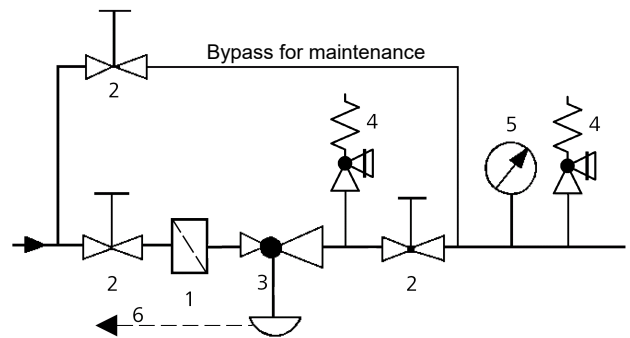


Leakage line connection G 1/8 (option)

Sealed adjusting screw (option)

Recommended installation

- | | |
|---------------------------|--|
| 1 Strainer | 4 Safety valve |
| 2 Shut-off valves | 5 Pressure gauge |
| 3 Pressure reducing valve | 6 Leakage line connection G 1/8 (optional) |



Authorised Distributor:



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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.