PRESSURE CONTROL

Pressure reducing valve DM 586

Millibar control valve for medium to high flow rates

Technical data

Connection DN	20 - 50
Connection G	3/4 - 2
Nominal pressure PN	16
Inlet pressure	up to 16 bar
Outlet pressure	0.003 - 0.95 bar
K_{vs} value	7 - 22 m³/h
Temperature	-35 up to 130 °C
medium	gases and liquids

*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 DM 586 pressure reducing valve is a diaphragm-controlled, springloaded and balanced proportional control valve for high flow rates especially for the control of millibar ranges. The valve is completely made of high-quality stainless steel with excellent corrosion resistance. The valve cone is soft-seated.
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.
The design data refer to the maximum inlet pressure, the outlet pressure is limited by the setting range.

Standard

- All stainless steel construction
- Non-rising adjusting screw
- Sense line connection
- Balanced cone for controlling the outlet pressure indipendently from the inlet pressure

Options

- Pressure gauge connection
- Electro-pneumatic actuation
- For toxic or hazardous media: sealed spring cap 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
- Small K_{vs}-value for nominal size DN 40 + DN 50
- Special connections: Aseptic, ANSI or JIS flanges, NPT, welding spigots; other connections on request
- Special versions on request

Product

Picture similar

Technical specification

K_{vs} values [m³/h]					
nominal diameter	G	3/4	1	1 1/2	2
	DN	20	25	40	50
K_{vs} value	m³/h	7	8	22 (8*)	22 (8*)

*option

Setting ranges [bar], nominal pressure for gases				
0.003 - 0.015	0.008 - 0.03	0.02 - 0.12	0.1 - 0.65	0.3 - 0.95
16/0.1	16/1	16/1	16/1	16/2.5

Setting ranges [bar], nominal pressure for fluids		
0.02 - 0.12	0.1 - 0.65	0.3 - 0.95
16/1	16/1	16/2.5

Permissible Reduction Ratio (max. p_1/p_2)			
setting range [bar]	K_{vs} value m³/h		diaphragm ø [mm]
	7 + 8	22	
0.003 - 0.015	2000	2000	500
0.008 - 0.03	600	375	360
0.02 - 0.12	350	350	360
0.1 - 0.65	300	300	200
0.3 - 0.95	170	170	200

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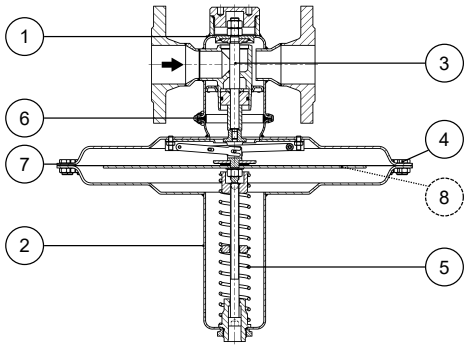
Materials

Materials*		
1	Body	stainless steel 1.4404 / 316L
2	Bonnet	stainless steel 1.4404 / 316L
3	Internals	stainless steel 1.4404 / 316L
4	Screws	stainless steel 1.4404 / 316L
5	Spring	stainless steel 1.4310 / 301
6	Valve seal	EPDM or FKM
7	Diaphragm	EPDM optional FKM
8	Protection foil (option)	PTFE

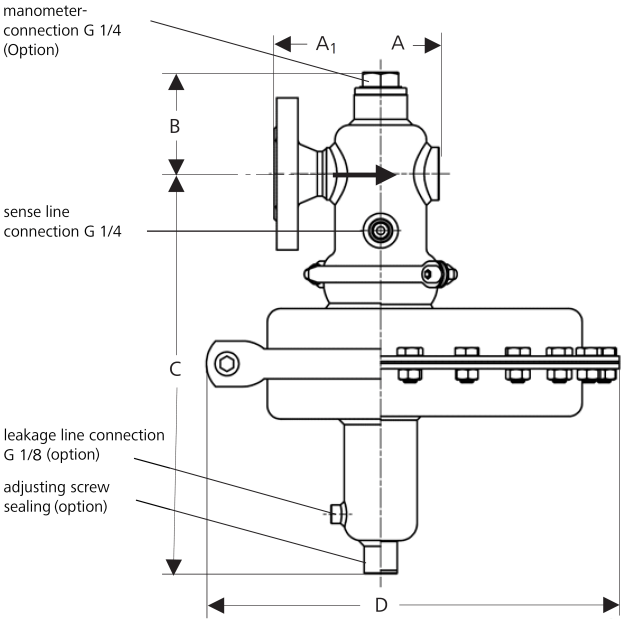
*All materials equal or of higher quality



Dimensions and weights

Dimensions [mm] threaded connection BSP and NPT							
setting ranges bar	size	nominal diameter / K_{vs} value					
		G 3/4 DN 20	G 1 DN 25	G 1 1/2 DN 40		G 2 DN 50	
		7 m³/h	8 m³/h	8 m³/h	22 m³/h	8 m³/h	22 m³/h
all ranges	A*	91	85	145	145	185	185
	A_1*	150	160	200	200	230	230
	B	76	76	76	80	76	80
0.003 - 0.015	C	390	390	390	390	390	390
0.008 - 0.03		305	305	305	305	305	305
0.003 - 0.015	D	500	500	500	500	500	500
0.008 - 0.03		360	360	360	360	360	360
0.02 - 0.12		360	360	360	360	360	360
0.1 - 0.65		264/210	264/210	264/210	264/210	264/210	264/210
0.3 - 0.95		264/210	264/210	264/210	264/210	264/210	264/210

*overall length tolerances in acc. with DIN EN 558



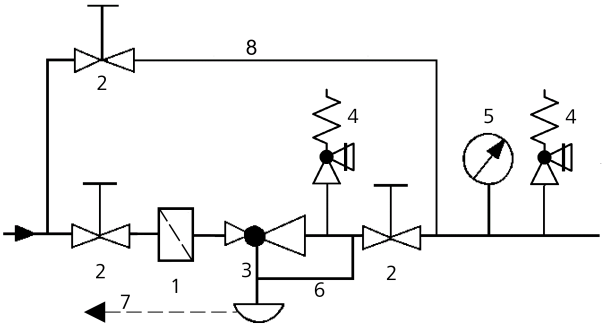
Weights [kg]								
setting ranges bar	sleeve connection				flange connection			
	G 3/4	G 1	G 1 1/2	G 2	DN 20	DN 25	DN 40	DN 50
0.003 - 0.015	18	18.5	19	20	20.5	21	23	25
0.008 - 0.03	14.5	15	15.5	16	16.5	17	19	21
0.02 - 0.12	14.5	14.5	15	15.5	16.5	17	17.5	20.5
0.1 - 0.65	8.5	8.5	8.5	9.5	10.5	10.5	13.5	14.5
0.3 - 0.95	8	8	9	9.5	10.5	11	13.5	14.5

Customs tariff number
84811019

Recommended installation

1	Strainer	5	Pressure Gauge
2	Shut-off valves	6	Sense line G 1/4*
3	Pressure reducing valve*	7	Leakage Line G 1/8
4	Safety valves*	8	Bypass for maintenance

*Sense line connection 10 - 20 x DN behind the valve



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.

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