



Pressure reducer for steam up to 190 °C, liquids and gases up to 130 °C

Technical Data

Connection	G 1/2 - 2 DN 15 - 50
Nominal Pressure	Inlet PN 16 - 40 Outlet PN 1 - 16
Inlet Pressure	up to 40 bar
Outlet Pressure	0.02 - 12 bar in 7 setting ranges
K _{vs} -value	4 - 18 m ³ /h
Tightness	acc. VDI/VDE-guideline 2174 (leakage rate ≤ 0.05 % of K _{vs} -value)

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 652 pressure reducing valve is a diaphragm-controlled spring-loaded and balanced proportional control valve for universal application.

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

The spring module comprising spring cover, spring, setting spindle, 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 setting spindle, 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 setting spindle clockwise increases the outlet pressure.

The DM 652 pressure reducer requires a pilot line (to be installed on-site).

STANDARD EQUIPMENT

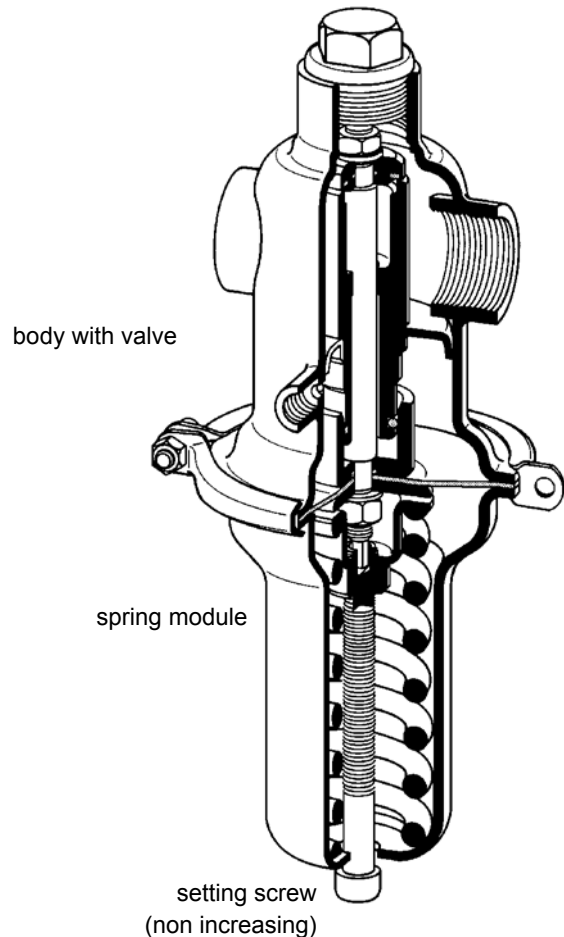
- All stainless steel construction
- Non-rising setting spindle
- Quick-release body clamp ring
- Pilot line connection
- Diaphragm protected by PTFE foil (only for pressure ranges 0.8 - 12 bar)

OPTIONS

- Pressure gauge connection
- Internal pilot line
- Oil and grease-free version for oxygen
- Clean gas version with special connections
- Water-cooled thermal protection for steam up to 220 °C
- For toxic or hazardous media: sealed spring cover complete with leakage line connection (incl. sealed setting spindle). 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.

We reserve the right to alter technical specifications without notice.



K _{vs} -values [m ³ /h]							
nominal diameter	G	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
K _{vs} -value	m ³ /h	4	5	6	12	16	18

Setting Ranges [bar], Nominal Pressure			
0.02-0.12	0.1-0.5	0.3-1.1	0.8-2.5
PN 16-40/1	PN 16-40/1	PN 16-40/2.5	PN 16-40/6

Setting Ranges [bar], Nominal Pressure		
2 - 5	4 - 8	6 - 12
PN 16-40/10	PN 16-40/16	PN 16-40/16

Permissible Reduction Ratio (max. p ₁ /p ₂)		
setting range bar	nominal diameter	
	G 1/2 - 1 DN 15 - 25	G 1 1/4 - 2 DN 32 - 50
0.02 - 0.12	80	50
0.1 - 0.5	40	25
0.3 - 1.1	30	18
0.8 - 12	20	12

Pressure Control Valves

DM 652

Pressure reducer for steam up to 190 °C, liquids and gases up to 130 °C
balanced valve with high flow rates and low leakage depending of soft seal

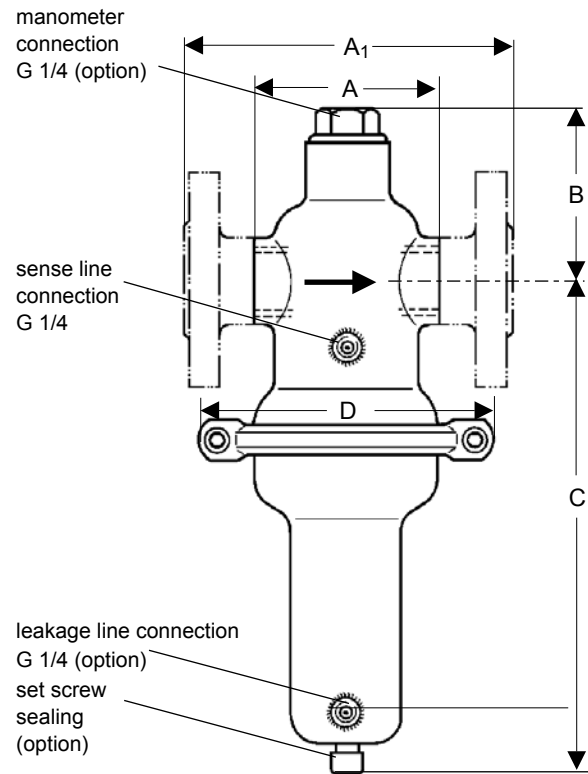


Materials		
Temperature	130 °C	for steam 190 °C
Body, Spring Cap, Internals, Screws	CrNiMo-steel	CrNiMo-steel
Spring	CrNi-steel	CrNi-steel
Valve Seal	FEPM optional EPDM or FPM	FEPM optional PTFE
Diaphragm	EPDM optional FPM	EPDM
Protection Foil	PTFE pressure range 0.8 - 12 bar with FEPM-softseal: standard other pressure ranges and softseals: option	

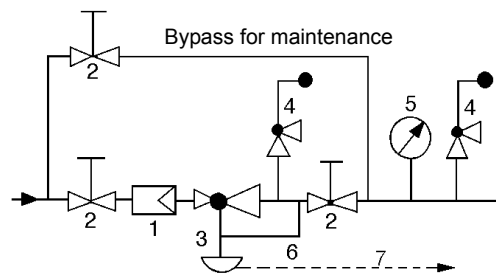
Dimensions [mm]							
pressure range [bar]	size	nominal diameter					
		G 1/2 DN 15	G 3/4 DN 20	G 1 DN 25	G 1 1/4 DN 32	G 1 1/2 DN 40	G 2 DN 50
all ranges	A	85	91	85	130	145	185
	A ₁	130	150	160	180	200	230
	B	76	76	76	90	90	90
0.02 - 0.12	C	300	300	300	300	300	300
	D	360	360	360	360	360	360
0.1 - 0.5	C	300	300	300	300	300	300
	D	264	264	264	264	264	264
0.3 - 1.1	C	300	300	300	300	300	300
	D	200	200	200	200	200	200
0.8 - 2.5	C	235	235	235	235	235	235
	D	138	138	138	138	138	138
2 - 5	C	235	235	235	235	235	235
	D	138	138	138	138	138	138
4 - 8	C	235	235	235	235	235	235
	D	138	138	138	138	138	138
6 - 12	C	235	235	235	235	235	235
	D	138	138	138	138	138	138

Weights [kg]						
pressure range [bar]	nominal diameter G					
	1/2	3/4	1	1 1/4	1 1/2	2
0.02 - 0.12	3.1	3.1	3.1	4	4	4
0.1 - 0.5	6.1	6.1	6.1	7	7	7
0.3 - 1.1	7.1	7.1	7.1	8	8	8
0.8 - 12	13.5	13.5	13.5	14.4	14.4	14.4

Weights [kg]						
pressure range [bar]	nominal diameter DN					
	15	20	25	32	40	50
0.02 - 0.12	4.9	4.9	4.9	8	8	8
0.1 - 0.5	7.9	7.9	7.9	11	11	11
0.3 - 1.1	8.9	8.9	8.9	12	12	12
0.8 - 12	15.3	15.3	15.3	18.4	18.4	18.4



Recommended Installation



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

Sense line connection 10 - 20 x DN behind the valve

We reserves the right, to alter or improve the designs or specifications of the products described herein without notice.
Special designs on request.

