

Pressure reducer for liquids and gases
up to 130 °C

Technical Data

Connection	DN 15 - 150
Nominal Pressure	Inlet PN 16 - 40 Outlet PN 1 - 16
Inlet Pressure	up to 40 bar
Outlet Pressure	0.02 - 10 bar in 6 setting ranges
K _{vs} -value	4 - 160 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 613 pressure reducing valve is a diaphragm-controlled spring-loaded and balanced proportional control valve for large volumes. The valve body is made of cast iron, the control mechanism is a welded assembly. The valve cone is fitted with a soft seal (up to 80/130 °C).

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.

The DM 613 pressure reducer requires a pilot line (to be installed on-site).

STANDARD EQUIPMENT

- Open spring
- Pilot line connection

OPTIONS

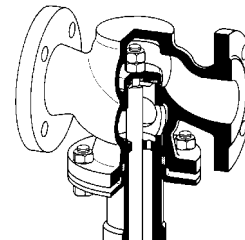
- Sealed bonnet
- For toxic or hazardous media: sealed bonnet complete with leakage line connection (incl. sealed adjusting screw). Must be installed with a leakage line capable of draining leaking medium safely and without pressure
- Various diaphragm and seal materials suitable for your medium
- Special versions on request

Operating instructions, Know How and Safety instructions must be observed.

The pressure has been always indicated as overpressure.

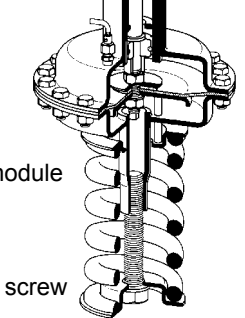
We reserve the right to alter technical specifications without notice.

body with valve

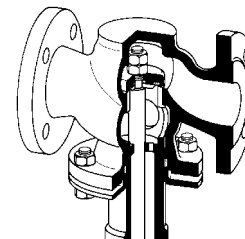


spring module

adjusting screw

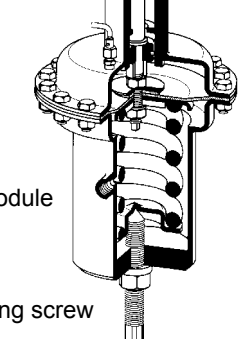


body with valve



spring module

adjusting screw



K _{vs} -value [m ³ /h]										
DN	15	20	25	40	50	65	80	100	125	150
m ³ /h	4	5	6	20	32	50	80	100	140	160

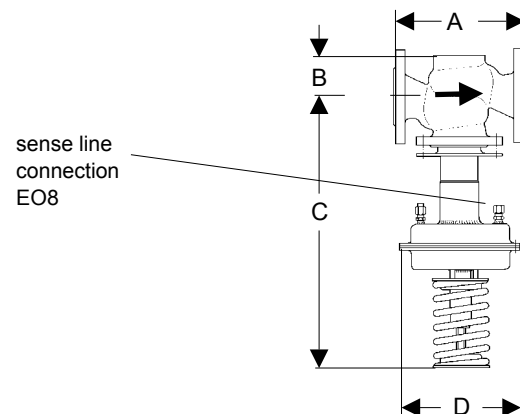
Setting Ranges [bar]						
DN 15-50	0.02 - 0.25	0.1 - 0.6	0.2 - 1.2	0.8 - 2.5	2 - 5	4.5 - 10
DN 65-100	0.02 - 0.25	0.1 - 0.6	0.2 - 1.2	0.8 - 2.5	2 - 5	4 - 8
DN 125+150	0.05 - 0.25	0.1 - 0.6	0.2 - 1.2	0.8 - 2.5	2 - 3.5	2 - 5
PN	40/1	40/1	40/2.5	40/6	40/10	40/16

Pressure Control Valves

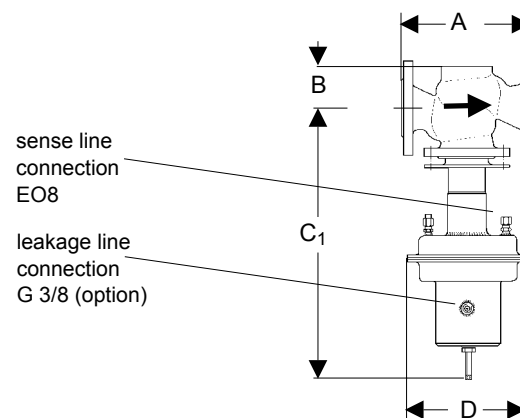
DM 613

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Materials			
Temperature		80 °C	130 °C
Body	PN 16	up to DN 25 grey cast iron ab DN 40 spheroidal cast iron	
	PN 25 /40	cast steel	cast steel
	PN 16 - 40	CrNiMo-steel	CrNiMo-steel
Diaphragm Housing		steel welded optional CrNiMo-steel	
Bonnet		steel welded optional CrNiMo-steel	
Spring		spring steel C optional CrNi-steel	
Valve Seal		NBR	EPDM optional FPM
Diaphragm		CR	EPDM optional FPM
O-ring (balance)		NBR	EPDM optional FPM



Dimensions [mm]											
size	pressure range	nominal diameter DN									
	bar	15	20	25	40	50	65	80	100	125	150
A	0.02 - 5/8/10	130	150	160	200	230	290	310	350	400	480
B		55	55	55	75	75	105	105	105	220	220
C	4.5 - 8/10	520	520	520	680	680	760	760	760	940	940
C ₁	2 - 3.5/5	650	650	650	840	840	920	920	920	1100	1100
D	0.8 - 2.5	175	175	175	220	220	220	220	220	220	220
C	0.2 - 1.2	540	540	540	680	680	760	760	760	840	840
C ₁		670	670	670	840	840	920	920	920	1000	1000
D		220	220	220	270	270	270	270	270	270	270
C	0.1 - 0.6	540	540	540	680	680	760	760	760	840	840
C ₁		670	670	670	840	840	920	920	920	1000	1000
D		270	270	270	360	360	360	360	360	360	360
C	0.02 / 0.05	540	540	540	560	560	640	640	640	840	840
C ₁	-	670	670	670	720	720	800	800	800	1000	1000
D	0.25	360	360	360	360	360	360	360	360	500	500



E = max. size with stressless spring

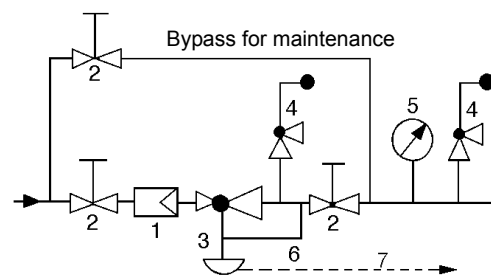
Weights [kg]											
nominal pressure	pressure range	nominal diameter DN									
	bar	15	20	25	40	50	65	80	100	125	150
PN 16	0.8 - 5/8/10	17	17	18	30	33	55	58	62	100	120
	0.2 - 1.2	19	19	20	32	35	57	60	64	102	122
	0.1 - 0.6	23	23	24	36	39	61	64	68	106	126
	0.02/0.05 - 0.25	23	23	24	34	37	59	62	66	112	132
PN 25/40	0.8 - 5/8/10	18	18	19	33	35	58	62	65	108	133
	0.2 - 1.2	20	20	21	35	37	60	64	67	110	135
	0.1 - 0.6	24	24	25	39	41	64	68	71	114	139
	0.02/0.05 - 0.25	24	24	25	37	39	62	66	69	120	145

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.

Recommended Installation



- 1 Strainer
- 2 Shutoff Valves
- 3 Pressure Reducer
- 4 Safety Valve
- 5 Pressure Gauge
- 6 Sense Line EO8
- 7 Leakage Line G 3/8 (option)

Sense line connection 10 - 20 x DN behind the valve

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