Pressure Reducing Valves DM 618Z

Standard Cast Valve for Steam

Technical Data

Connection DN	15 - 100
Nominal Pressure PN	16 - 40
Inlet Pressure	up to 40 bar
Outlet Pressure	0.8 - 10 bar
K_{vs}-Value	4.5 - 115 m³/h
Temperature	250 °C
Medium	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 pressure reducing valve DM 618Z is a diaphragm-operated, spring-loaded and balanced proportional valve for high flow rates. The valve body is made of cast steel, the internal parts are of stainless steel 316L. The valve cone is fitted with a metallic seal.

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 valves requires a sense line (to be installed on-site).

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 (metal sealing cone - 0.1 % K_{vs} value).

Standard

» Body made of GS-C 25 1.0619 (A216-WCB)*
» Medium wetted internal parts made of stainless steel 316L / Duplex
» Closed spring cap with leakage line connection and sealed adjusting screw
» Balanced cone for controlling the outlet pressure independently from the initial pressure
» Sense line connection
» EPDM elastomeres

Options

» Various diaphragm and seal materials suitable for your medium

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]								
Sitz	15	20	25	40	50	65	80	100
I	4,5	8	8	32	40	90	100	115
II*				20	20	50	50	50
III*				12	12	32	32	32

*optional

Setting Ranges [bar], Nominal Pressure PN			
bar	0.8 - 2.5	2 - 5	4 - 10
PN	40/6	40/10	40/16

max. Operating Pressures [bar] with Operating Temperature[°C]					
T	-10 °C	130 °C	150 °C	200 °C	250 °C
bar	40	38	36	33	30

Reduction Ratio (max. p_1/p_2)			
setting ranges	nominal diameter		
	DN 15 - 25	DN 40 - 50	DN 65 - 100
4 - 10 bar	10 : 1	8 : 1	5 : 1
2 - 5 bar	20 : 1	15 : 1	10 : 1
0.8 - 2.5 bar	30 : 1	20 : 1	12 : 1

e.g.: set pressure 0.8 bar = max. inlet pressure 24 bar (30 x 0.8)

Pressure Reducing Valves DM 618Z

Standard Cast Valve for Steam

Materials	
Body	GS-C 25 1.0619 (A216-WCB)*
Diaphragm Housing	stainless steel 1.4404 (SS316L)
Medium wetted Internal Parts	stainless steel 1.4404 / 1.4462 (SS316L / Duplex)
Valve Seal	stainless steel 1.4404
Diaphragm	EPDM**
O-ring	EPDM**

* body optionally made of stainless steel 1.4408 (CF8M)
** elastomeres optionally made of FKM, NBR or other materials

Dimensions[mm]								
size	nominal diameter DN							
	15	20	25	40	50	65	80	100
A	130	150	160	200	230	290	310	350
B	60	60	60	75	75	112	112	112
C	380	380	380	540	540	610	610	610
D	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4

Weights [kg]							
nominal diameter DN							
15	20	25	40	50	65	80	100
11	12	13	37,5	40	72	75	82

Custom Tariff Number
84811019

Please specify on order:

- nominal diameter
- K_{vs} value
- body material
- nominal pressure
- pressure range
- elastomeres

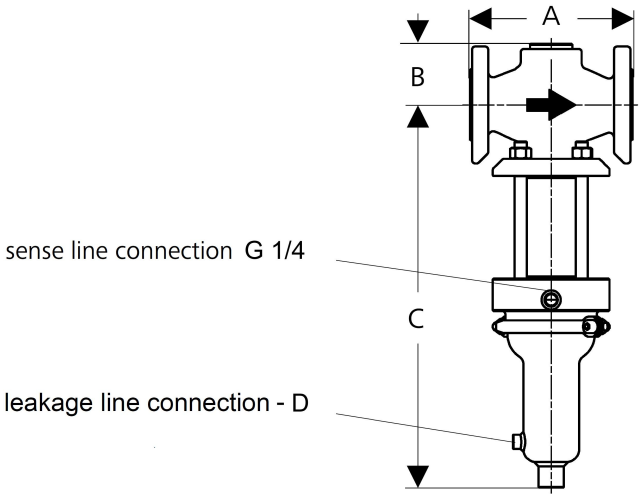
example:
DM 618Z, DN 100, PN 40, K_{vs} 115 m³/h, 2 - 5 bar, GS-C25, EPDM

Typical Applications

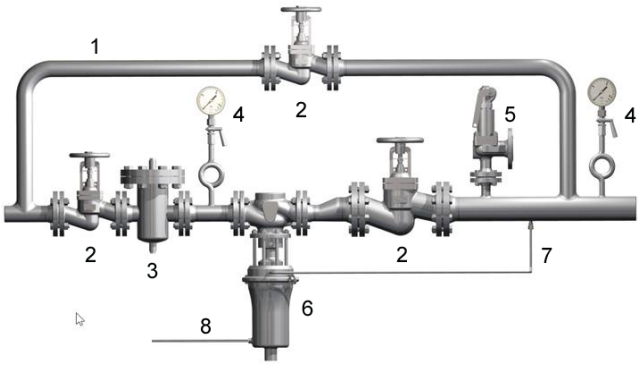
- Conventional fuel supply and residues disposal (int.al. KKS Code: EKG, ENX)
- Water supply and disposal – distribution system (int.al. KKS Code: GHC, GQA)
- Drying of solid matter (int.al. KKS Code: HTN)
- Conventional heat generation (int.al. KKS Code: HTQ)
- Steam, water, gas cycle condensate system (int.al. KKS Code: LCA, LCW)
- Water treatment and distribution (int.al. KKS Code: PCB)
- Cooling water systems (int.al. KKS Code: PCC)
- Generation of working air (int.al. KKS Code: SCA)

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 Bypass for Maintenance
2 Shut-off Valves
3 Strainer
4 Pressure Gauge
5 Safety Valves
6 Pressure Reducer
7 Sense Line
8 Leakage Line

sense line connection 10 - 20 x DN behind the valve
use MANKENBERG-Products

Installation in a horizontal line without strain with the spring cap pointing vertically downwards in such a way that the arrow on the body points in the direction of flow.