Pressure Control Valves

Pressure Reducing Valves DM 701

Valve for High Pressures for Small Flow Rates

Technical Data

Connection DN	15 - 50
Nominal Pressure PN	315
Inlet Pressure	up to 160 bar
Outlet Pressure	0.5 - 40 bar
K_{vs}-Value	0.2 - 5.5 m^3/h
Temperature	500 °C
Medium	steam

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 701 pressure reducing valve is a piston controlled, spring loaded proportional control valve for small capacities with small pressure drops. The valve cone is fitted with a metallic seal.

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

These valves are no shut-off elements ensuring a tight closing of the valve. In accordance with the VDI/VDE guideline 2174 a leakage rate of 0.05 percent of the constant volume flow is permitted for the valve in closed position.

Standard

» open spring
» pilot line connection

Options

» mid section for higher temperatures (400 - 500 °C)
» various diaphragm and seal materials suitable for your medium
» special versions on request

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 [m^3/h]

seat	nominal diameter DN					
	15	20	25	32	40	50
I	0.2	0.25	0.25	0.4	0.4	1
II	0.9	0.9	0.9	2.5	2.5	3.5
III	1.8	2	2.2	3.9	3.9	5.5

Pressure Control Valves

Pressure Reducing Valves DM 701

Valve for High Pressures for Small Flow Rates

Materials PN 16	
Temperature	300°C
Body	cast steel
Bottom Part	cast steel
Spring	spring steel C
Internals	on request
Piston	
O-Ring	NBR or EPDM

Materials PN 25 - 40			
Temperature	300°C	350°C	400°C
Body	cast steel	cast steel	cast steel
Bottom Part	cast steel	cast steel	cast steel
Mid Section	-	-	GS 17 CrMo 55
Spring	spring steel C	spring steel C	spring steel C
Internals	on request		
Piston			
O-Ring	NBR or EPDM	NBR or EPDM	NBR or EPDM

Materials PN 63 - 315			
Temperature	350°C	400°C	500°C
Body	C 22 N	C 22 N	10 CrMo 9-10
Bottom Part	cast steel	cast steel	cast steel
Mid Section	-	GS 17 CrMo 55	GS 17 CrMo 55 or 10 CrMo 9-10
Spring	spring steel C	spring steel C	spring steel C
Internals	on request		
Piston			
O-Ring	NBR or EPDM	NBR or EPDM	NBR or EPDM

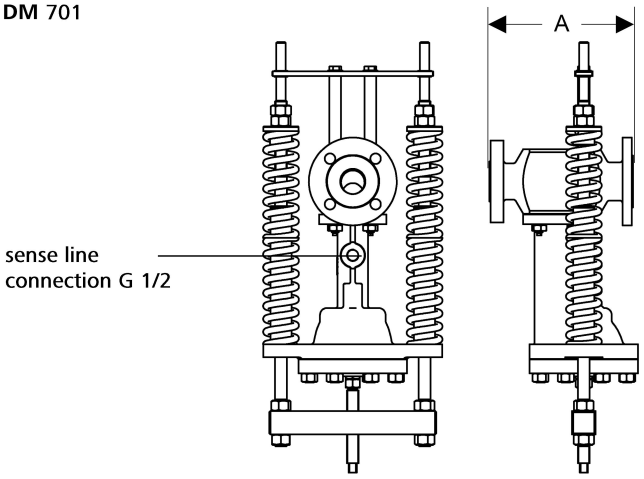
Dimensions [mm]							
nominal pressure	size	nominal diameter DN					
		15	20	25	32	40	50
PN 16 - 40	A	130	150	160	180	200	230
PN 63 - 100		210	230	230	260	260	300
PN 250 - 315		210	260	260	300	300	350

As the DM 701 pressure reducing valve is designed specifically for your operating data and may vary considerably in terms of construction, we are unable at this stage to give any dimensions or weights. Please contact us if you have specific queries.

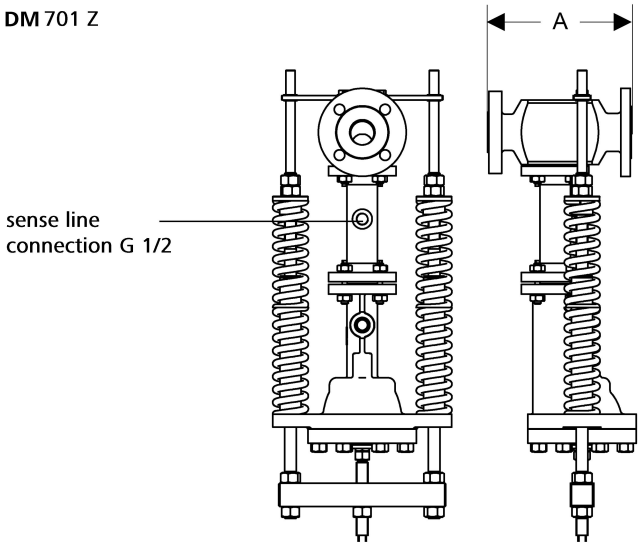
Special designs on request.
The pressure has always been indicated as overpressure.
Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

Dimensional Drawing

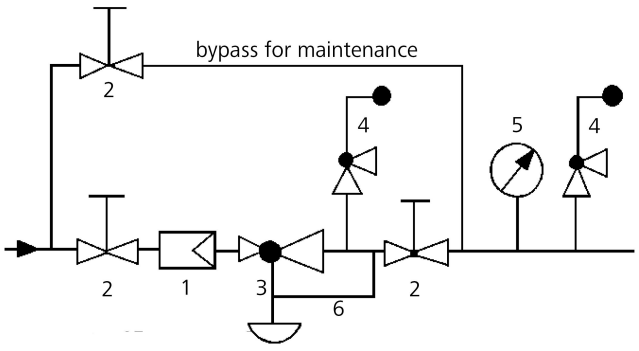
DM 701



DM 701 Z



Recommended Installation



1 Strainer
2 Shut-off Valves
3 Pressure Reducer
4 Safety Valves
5 Pressure Gauge
6 Sense Line G 1/2

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