

PRESSURE REDUCING VALVE DMV 750

Nominal size DN 65–80

Nominal size 2 1/2"–3"

Nominal pressure PN 10 bar



Features

- pressure setting range 1 to 6 bar
- EPDM diaphragm, PTFE-coated on the medium side
- control valve for large capacities
- for reliable reduction of system pressures to virtually constant working pressures
- constant, low vibration control behavior
- high reproducibility of the set pressure
- pressure setting possible at any time, also during operation
- two lateral threaded connections for pressure gauges or diaphragm pressure gauge guards

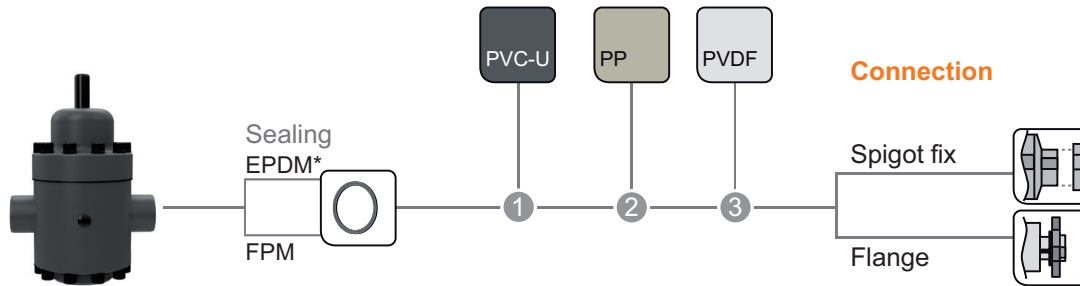
Additional options on request

- silicone free
- pressure presetting
- sealed

www.asv-stuebbe.com/produkte/mess-und-regeltechnik



Pictogram Pressure Reducing Valve DMV 750



Diaphragm PTFE (EPDM)

Pressure Gauge Installation

Valves with 2 Threaded Holes G1/2" incl. Plug

On Demand

- » Sealing
- » Cleaning (Free of Surface Disturbing Substances)



Pressure setting range 1.0–6.0 bar
Pressure settings in 0.5 bar steps

- available
- not available

* EPDM-Sealing in Combination with PVC-U resp. PP-Valve.

Basic Nominal Sizes:

DN 8	DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400
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Connection Material (process connection)

- 1 PVC-U spigot fix
PP/St. flange **DIN, ANSI**
- 2 PP spigot fix*
PP/St. flange **DIN, ANSI**
- 3 PVDF spigot fix*
PP/St. flange **DIN, ANSI**

* only for socket welding.

Pressure Reducing Valve DMV 750

Use

- chemical plant engineering
- industrial plant engineering
- water treatment

Application

- The pressure reducing valve which is directly controlled by the medium, is used in technical processing plants for reducing primary pressures to system dependent working pressures and for controlled maintenance of working pressures.
- Not suitable as an equipment part with safety function according to the Pressure Vessel Directive

Valve function

- The open valve is balanced between the inlet pressure (primary pressure) and the lower working pressure (secondary pressure). If the working pressure exceeds or goes below the desired value, the large area membrane is lifted against the spring force or pressed down by the spring force. The valve starts closing or opening until the balanced condition is reached again, i.e. the working pressure remains constant independent of an increasing or decreasing inlet pressure (as long as the inlet pressure > working pressure).
- The valve piston is designed to match the plastic characteristics and is generously dimensioned for reliably withstanding high closing forces at the valve seat. The diaphragm separates the medium in the valve body from the bonnet and the atmosphere. The principle ensures that the secondary pressure acting on the diaphragm is compensated by the spring force which is held in equilibrium by the pressure setting.

Valve setting

- Set or adjust the working pressure to be kept constant with the aid of pressure gauges (ASV diaphragm pressure gauge guard with pressure gauge, type MDM 902) in the pipe system after removing the protection cap at the adjustment screw. The adjustment screw is secured by a counter nut and can be sealed against unauthorized adjustment, if necessary.
- There is a differentiation between:
Secondary pressure - system closed or
secondary pressure - system dynamically flowing

Flow medium

- Technically pure, neutral and aggressive fluids, provided that the selected valve materials coming into contact with the media are resistant at the operating temperature according to the ASV resistance guide.

Flow direction

- always in the direction of the arrow, see graphics „Sectional drawing“

ASV resistance guide

www.asv-stuebbe.de/pdf_resistance/300051.pdf

Process temperature

- See graphics „Pressure/temperature diagram“

Process pressure

- See graphics „Pressure/temperature diagram“

Nominal pressure (H₂O, 20 °C)

- PN 10 bar

Size

- DN 65–80

Pressure setting range

- 1–6 bar

Working pressure

- set pressure minus flow dependent pressure reduction (see characteristic curves):
Secondary pressure 1–6 bar

Constant working pressure

- approx. ± 0.2 bar

Hysteresis

- Difference between opening and closing pressure
approx. 0.1–0.4 bar

Actuation

- medium controlled

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Device connection

- see graphics
„Pictograph pressure reducing valve DMV 750“

Material with medium contact

Housing/bonnet:

- PVC-U, PP, PVDF

Diaphragm:

- PTFE
(EPDM diaphragm, PTFE-coated on the medium side)

Sealing:

- EPDM, FPM

Material without medium contact

Screws:

- Stainless steel (1.4301)

Mounting position

- as required

Color

- PVC-U: gray, RAL 7011
- PP: gray, RAL 7032
- PVDF: opaque, yellowish-white

Pressure gauge connection

- The pressure reducing valves can be factory fitted with a pressure gauge for neutral media. The resistance of the pressure gauge material has to be taken into consideration for other medium types.

Pressure gauge preparation

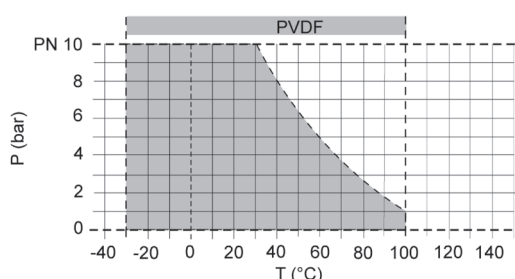
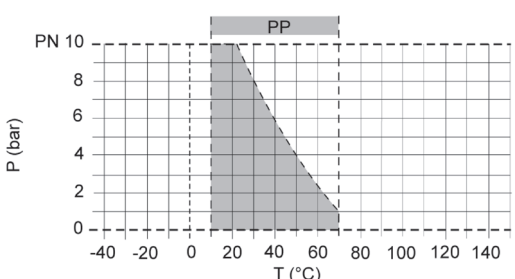
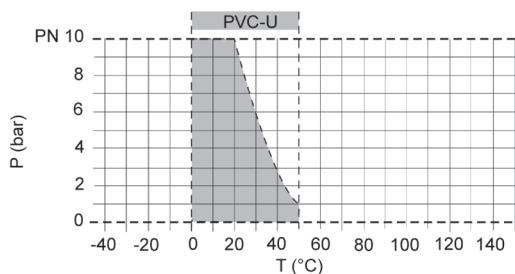
- Housing bore on both sides G 1/2" with plug

Pressure gauge

- Chemical version, damped
- Chemical version, undamped
- Contact pressure gauge

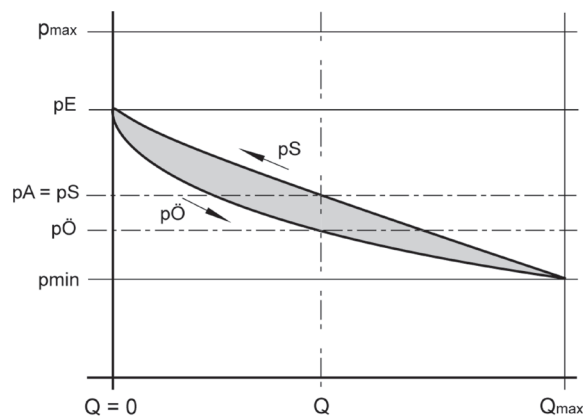
Pressure Reducing Valve DMV 750

Pressure/temperature diagram



Description	
P	Operating pressure
T	Temperature

Operating behavior



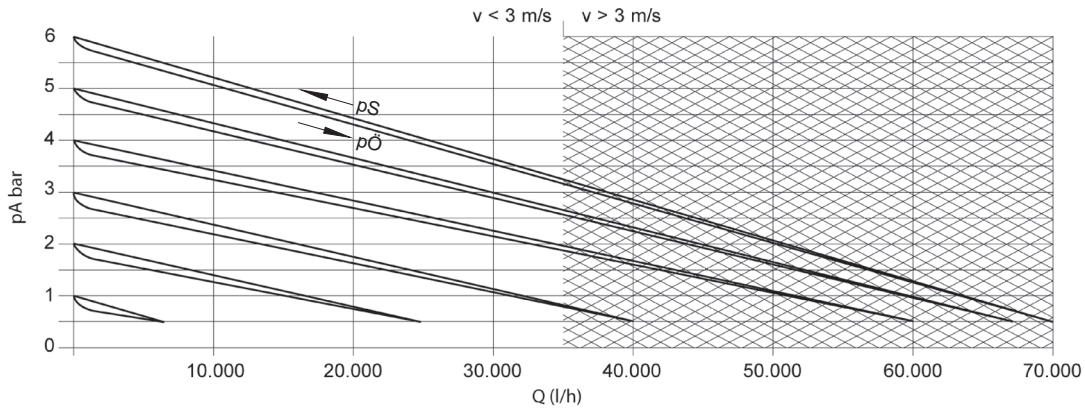
Description	
p_{max}	Maximum pressure
p_{min}	Minimum pressure
p_A	Working pressure
p_E	Set pressure
$p_A - p_E$	Flow dependent pressure reduction
p_O	Opening pressure
p_S	Closing pressure
$p_O - p_S$	Hysteresis
Q	Flow
Q_{max}	Maximum flow

The pressure/temperature limits of the materials are valid for the stated nominal pressures and a service life of 25 years. These values are guide values for flow medium types which do not negatively impact the physical and chemical characteristics of the valve material. It may be necessary to take diminution factors into consideration.

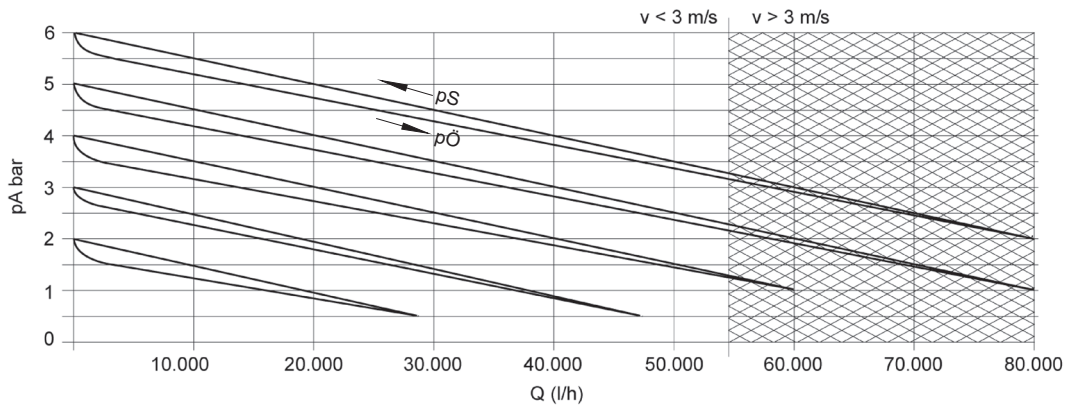
The durability of wear parts depends on the operating conditions of the application.

Characteristic curves

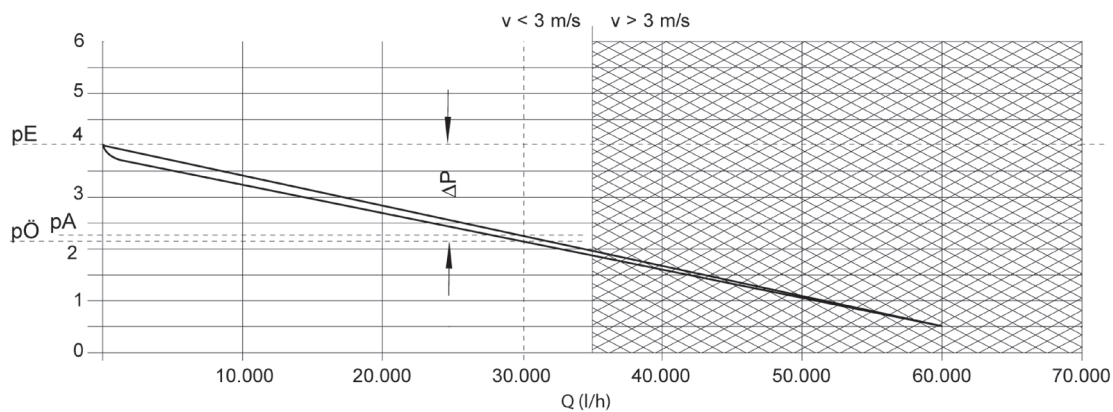
DN 65



DN 80



Design example DN 65



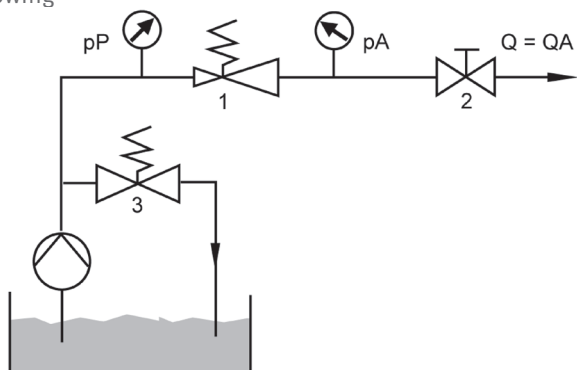
	Description						
Δp	Pressure loss	p_E	Set pressure	p_O	Opening pressure	v	Speed
p_A	Working pressure	p_S	Closing pressure	Q	Flow		

The valve is set tight at 4 bar. Desired flow rate 30,000 l/h, medium H₂O.
 According to the curve, this results in the following values:
 Set pressure p_E : 4 bar, pressure reduction: 1.8 bar, working pressure p_A : 2.2 bar

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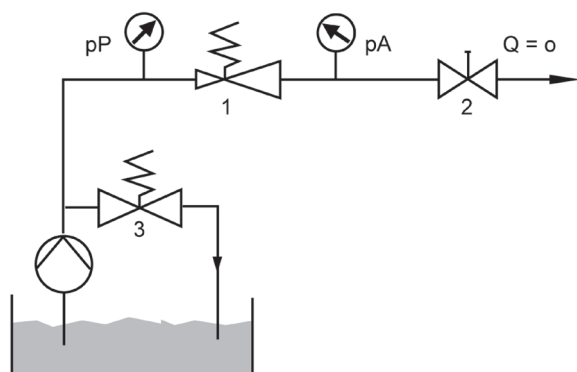
Applications for pressure reducing valves

Example 1: Secondary pressure - system dynamically flowing



If the stop valve is closed, the working pressure p_A increases by the amount of the closing pressure p_S .

Example 2: secondary pressure - system closed

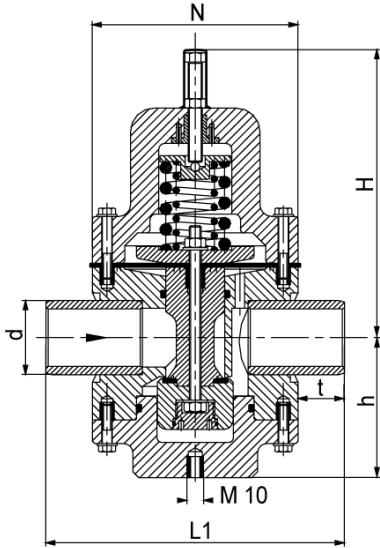


If the stop valve is opened, the working pressure p_A drops by the amount of the opening pressure $p_Ö$.

	Description
p_A	Working pressure
p_P	Pump pressure
Q	Flow
Q_A	Flow in working point
1	Pressure reducing valve
2	Stop valve
3	Pressure relief valve

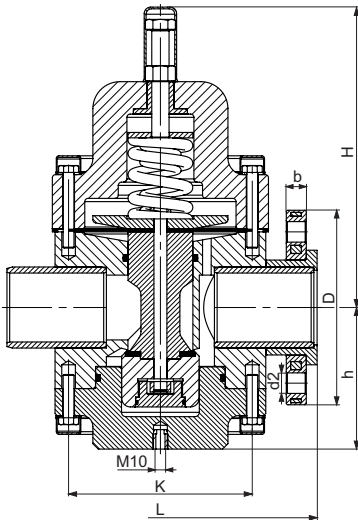
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Connection spigot



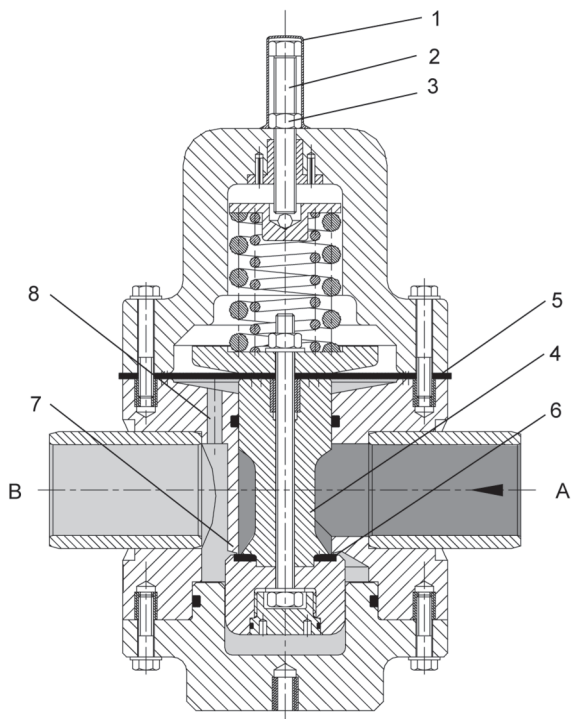
d (mm)	75	90
DN (mm)	65	80
DN (inch)	2 1/2	3
b	19.0	21.0
d2	18.0	18.0
D	186.0	201.0
h	121.0	143.0
H	265.0	340.0
K	145.0	160.0
L	290.0	368.0
L1	284.0	360.0
N	195.0	250.0
t	44.0	55.0

Connection flange



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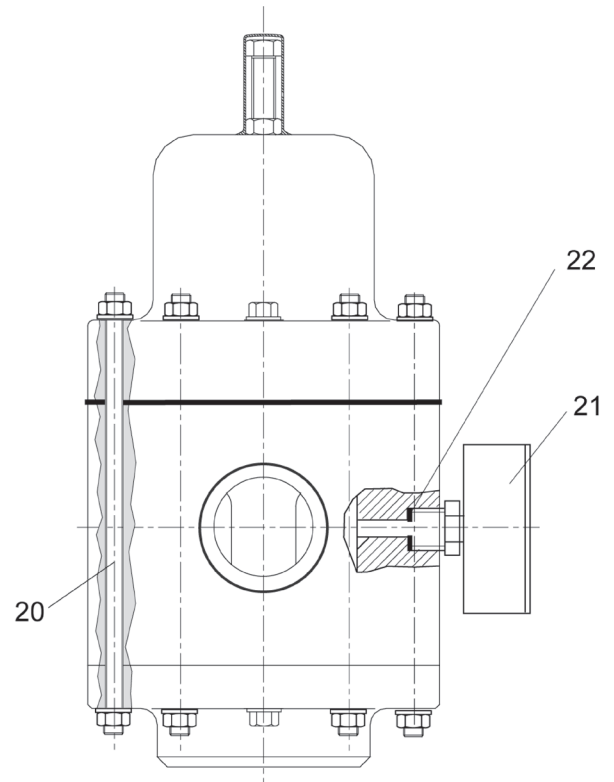
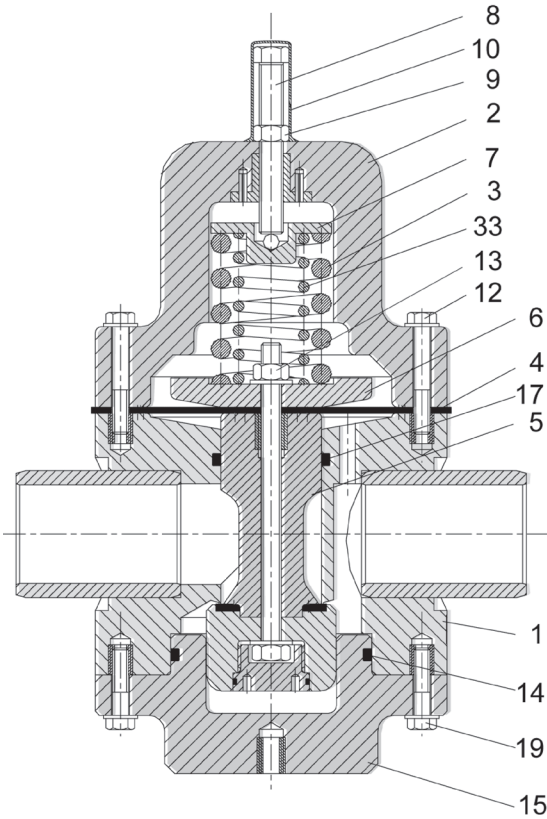
Sectional drawing



	Description
A	Primary side
B	Secondary side
1	Protection cap
2	Adjustment screw
3	Counter nut
4	Piston
5	Diaphragm
6	Flat sealing ring
7	Valve seat
8	Control bore hole

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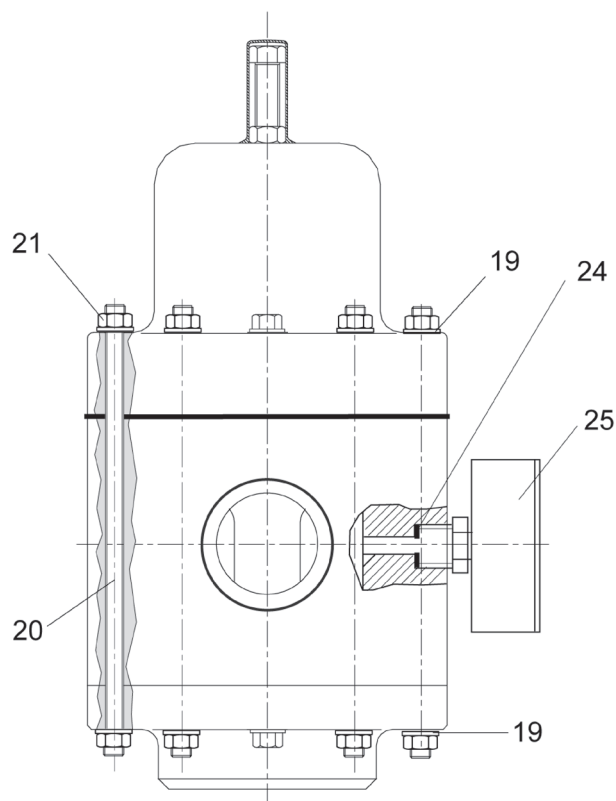
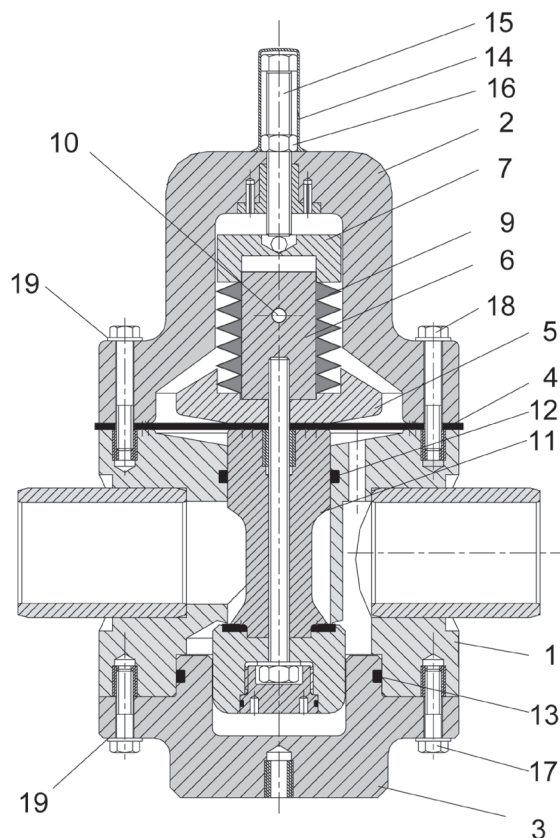
Components DN 65



Quantity	Description
1	Valve body
2	Bonnet
3	Pressure spring
4	Diaphragm
5	Piston, complete
6	Spring plate
7	Pressure plate
8	Adjustment screw
9	Counter nut
10	Cap
12	Screw
13	Hexagon nut
14	O-ring
15	Flange
17	O-ring
19	Screw
20	Threaded rod
21	Pressure gauge (option)
22	Flat sealing ring (option)
33	Pressure spring

Pressure Reducing Valve DMV 750

Components DN 80



Quantity	Description
1	Housing, complete
2	Bonnet
3	Valve cover
4	Diaphragm
5	Spring plate
6	Guiding mandrel
7	Pressure piece
9	Disc spring
10	Steel ball
11	Piston, complete
12	O-ring
13	O-ring
14	Protection cap
15	Adjustment screw
16	Counter nut
17	Screw
18	Screw
19	Washer
20	Threaded rod
21	Hexagon nut
24	Flat sealing ring (option)
25	Pressure gauge (option)