

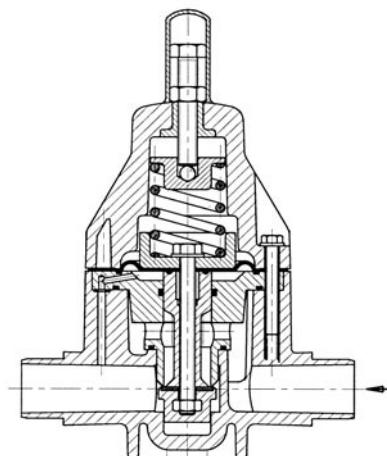
pressure reducing valves

The function of a pressure reducing valve

A pressure reducing valve is installed in-line. It is responsible for maintaining the downstream line pressure to the pressure set at the valve.

The valve works by responding to changes in the downstream pressure. For example, assume that there are normally two open valves downstream from the pressure regulator. When one is closed, the back pressure will increase. As this happens, the pressure reducing valve would close down to maintain the downstream pressure. When the valve is re-opened the pressure reducing valve would also open up again until the set pressure was reached.

Under operating conditions the pressure reducing valve is always open which means that it is balanced between the inlet pressure (primary side) and the lower outlet/working pressure. At any rise of working pressure at the valve outlet a pressure compensation via the control bore takes place at the area below the diaphragm. The higher working pressure activates the large diaphragm and lifts the piston against the spring force. The flow reduces and the working pressure drops until the balanced condition is reached again. When the working pressure drops this procedure is reversed. The spring force opens the valve seat against the lower pressure force below the diaphragm. The flow rises until the balanced condition is reached again.



Pre-setting or re-adjustment of the valve set pressure is made by removing the protective cap and by setting the control screw. The counter nut is tightened after final adjustment. When used with neutral fluids, many of the pressure relief valves can be fitted with a pressure gauge if required.

ASV Stubbe Type 750 Pressure Reducing Valve

Description: In-line adjustable valve used to reduce system pressures and to keep the working pressure constant

Mounting: In any position

Maximum Fluid Pressure at 20°C: 10 bar

Pressure Setting Range: 1 to 6 bar

Hysteresis: Approx. 0.1 to 0.4 bar

Fluid Temperature Range: 0°C-100°C

Construction:

Body: PVDF

Diaphragm: EPDM with PTFE liner on fluid side

Seats and Seals: FPM

End Connections: Fusion spigots

Features: Adjustable at any time, even during use. Constant pressure control to ± 0.2 bar. Installation is independent of flow direction.



MM Fusion Spigots

FPM Seals	Size	Code	Price
	75	1111 79	4727.71
	90	1111 80	6196.30

ASV Stubbe Type 755 and Type 765 Pressure Reducing Valve

Description: In-line adjustable valve used to reduce system pressures and to keep the working pressure constant.

Mounting: In any position

Maximum Fluid Pressure at 20°C: 10 bar

Pressure Setting Range: Type 755: 1 to 9 bar Type 765: 0.5 to 9 bar

Hysteresis: Approx. 0.1 to 0.4 bar

Fluid Temperature Range: 0°C-100°C

Construction:

Body: PVDF

Diaphragm: EPDM with PTFE liner on fluid side

Seats and Seals: FPM

End Connections: Union fusion sockets or fusion spigots

Features: Adjustable at any time, even during use. Constant pressure control to ± 0.2 bar. Vibration free during operation. Installation is independent of flow direction.

Options: 7RTē d VAVU pressure gauge RgR7RSJV`_ d/bfVdež



Type 755

Setting Range
1 to 9 bar

MM Fusion Spigots

FPM Seals

Size	Code	Price
16	1220 83	534.51
20	1220 84	534.51
25	1220 85	809.01
32	1220 86	809.01
40	1220 87	1355.76
50	1220 88	1355.76
63	1220 89	1355.76

MM Union Fusion Sockets

FPM Seals

Size	Code	Price
16	1193 35	554.97
20	1193 36	557.43
25	1193 37	837.00
32	1193 38	848.58
40	1193 39	1409.35
50	1193 40	1437.52
63	1193 41	1488.98

Type 765

Setting Range
0.5 to 9 bar

MM Fusion Spigots

FPM Seals

Size	Code	Price
16	1221 25	603.72
20	1221 26	603.72
25	1221 27	881.75
32	1221 28	881.75
40	1221 29	1760.92
50	1221 30	1760.92
63	1221 31	1760.92

MM Union Fusion Sockets

FPM Seals

Size	Code	Price
16	1193 77	622.97
20	1193 78	626.27
25	1193 79	907.48
32	1193 80	919.95
40	1193 81	1808.34
50	1193 82	1835.70
63	1193 83	1887.17

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The function of a pressure relief valve

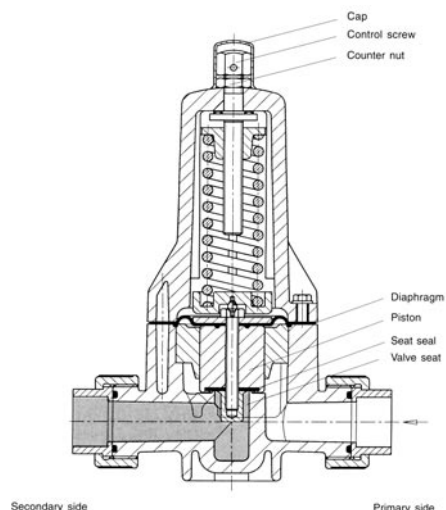
A pressure relief valve is most often used to protect a system from over-pressurisation, but it can also be used to maintain a constant upstream pressure or even as a non-return valve in certain installations.

Not normally installed as an in-line valve, it only opens when the system pressure exceeds the pressure set against the diaphragm of the valve. When this happens, the excess pressure forces the valve piston off its seat, compressing the spring and allowing fluid to flow through the valve body to discharge. Damping at the valve piston suppresses vibration and fluttering.

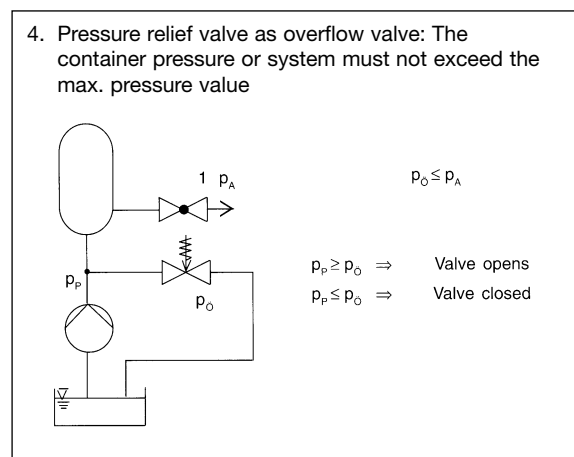
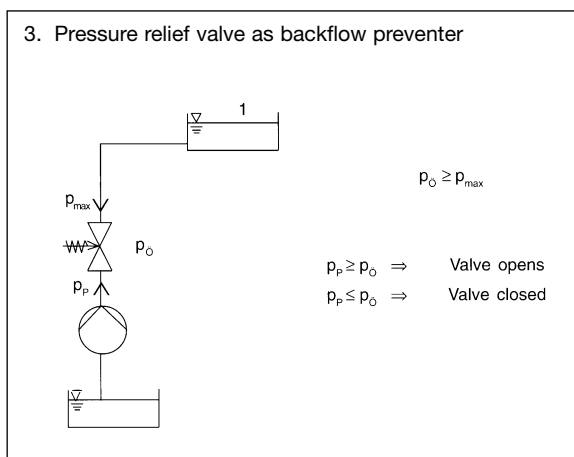
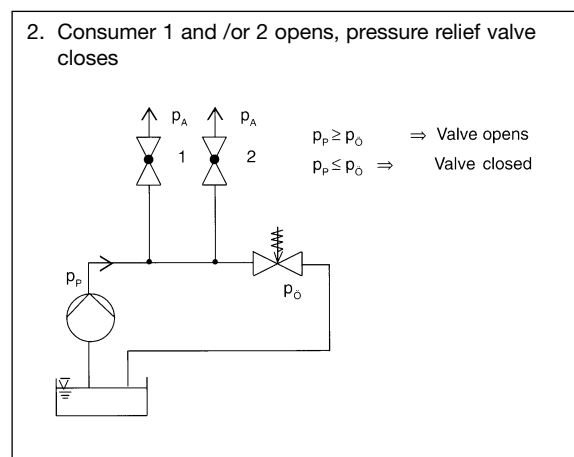
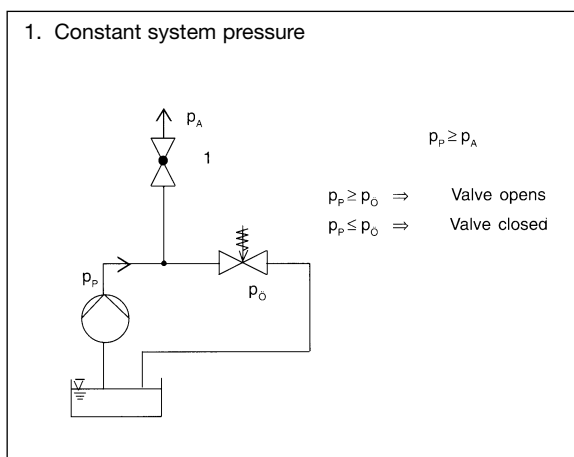
The pre-formed diaphragm allows full opening of the valve whilst separating the fluid in the lower body from the bonnet and therefore the atmosphere. The seal is additionally secured by crimped seal O-rings at the diaphragm.

When the system pressure falls back to below the set pressure, the spring forces the piston back into the seat, closing the valve.

Pre-setting or re-adjustment of the valve set pressure is made by removing the protective cap and by setting the control screw. The counter nut is tightened after final adjustment. When used with neutral fluids, many of the pressure reducing valves can be fitted with a pressure gauge if required.



Applications for Pressure Relief Valves



X = valve opens
Y = valve closed
pmax = max. pressure
pA = working pressure
pP = pump pressure
pO = opening pressure

ASV Stubbe Type 712-R Pressure Relief and Non-Return Valve

Description: Adjustable pressure relief and overflow valve, back pressure safe

Mounting: In any position

Maximum Fluid Pressure at 20°C: 10 bar

Pressure Setting Range: 0.3 to 10 bar

Opening Pressure: Approx. 0.5 bar

Hysteresis: Approx. 0.3 bar

Fluid Temperature Range: 0°C-100°C

Construction:

Body: PVDF

Diaphragm: EPDM with PTFE liner on fluid side

Seats and Seals: FPM

End Connections: Union fusion sockets or fusion spigots

Features: Unique design: valve acts as a non-return valve, if there is no pressure on the inlet side. Adjustable at any time, even during use. Vibration free during operation. Maintenance free. High reproducibility, low hysteresis.

Options: Factory fitted pressure gauge available on request.



Setting Range - 0.3 to 10 bar

MM Fusion Spigots

FPM Seals	Size	Code	Price
	16	1467 00	443.81
	20	1467 01	443.81
	25	1467 02	686.86
	32	1467 03	686.86
	40	1467 04	1062.61
	50	1467 05	1062.61
	63	1467 06	1062.61

MM Union Fusion Sockets

FPM Seals	Size	Code	Price
	16	1466 70	467.85
	20	1466 71	471.18
	25	1466 72	719.19
	32	1466 73	1066.77
	40	1466 74	1120.67
	50	1466 75	1147.23
	63	1466 76	1189.53

ASV Stubbe Type 712 Pressure Relief Valve

Description: Adjustable pressure relief valve

Mounting: In any position

Maximum Fluid Pressure at 20°C: Sizes 75mm & 90mm: 10 bar; 110mm: 6 bar

Pressure Setting Range: Choice of 0.3 to 4 bar, 0.5 to 6 bar or 0.5 to 10 bar

Opening Pressure: Approx. 0.3 to 0.5 bar

Hysteresis: Maximum approx. 1 bar

Fluid Temperature Range: 0°C-100°C

Construction:

Body: PVDF

Diaphragm: EPDM with PTFE liner on fluid side

Seats and Seals: FPM

End Connections: Fusion spigots

Features: Adjustable at any time, even during use. Vibration and flutter free during operation. Maintenance free.

Setting Range
0.5 to 10 bar

MM Fusion Spigots

FPM Seals	Size	Code	Price
	75	1129 13	4132.62
	90	1129 16	5430.83



ASV Stubbe Type 718 Pressure Relief Valve

Description: Adjustable pressure relief valve

Mounting: In any position

Maximum Fluid Pressure at 20°C: 10 bar

Pressure Setting Range: 0.5 to 10 bar

Opening Pressure: Approx. 0.5 bar

Fluid Temperature Range: 0°C-100°C

Flow Rate: Up to 500 l/hr

Construction:

Body: PVDF

Diaphragm: EPDM with PTFE liner on fluid side

Seats and Seals: EPDM or FPM

End Connections: Union fusion sockets

Features: Ideal for oscillating pumps. Adjustable at any time, even during use. Vibration and flutter free during operation. Diaphragm controlled, insensitive to back-pressure. Installation is independent of flow direction.

Ideal for
Oscillating
Pumps



Setting Range - 0.5 to 10 bar

MM Union Fusion Sockets

EPDM Seals	Size	Code	Price
	12	1472 20	161.46

MM Union Fusion Sockets

FPM Seals	Size	Code	Price
	12	1472 21	170.09