

Upstream Pressure Relief Piston Hydrovalve PN40 - E5116-10 / E6116-10



The E5116-10 / E6116-10 automatic valve, installed on a main line branch, skims the upstream pressure when it exceeds an adjustable set value.

Made entirely from stainless steel and cast iron spheroid coated with epoxy paint using FBT (fluid bed technology), the valve designed to reduce pressure drop, vibration and damage related to cavitation phenomenon.

The extremely versatile E5116-10 / E6116-10 valve can be used for a wide range of applications.

		PN 40	
Version	DN (mm)	Mass (kg)	References
E5116-10	80	30.00	D61A8040
E5116-10	100	37.00	D61B1040
E5116-10	125	56.00	D61B1240
E5116-10	150	63.00	D61B1540
E5116-10	200	109.00	D61B2040

		PN 40	
Version	DN (mm)	Mass (kg)	References
E6116-10	40/50	24.00	E61A4040
E6116-10	65	26.00	E61A6540
E6116-10	80	31.00	E61A8040
E6116-10	100	46.00	E61B1040
E6116-10	150	96.00	E61B1540

Applications

- Downstream of pumps to protect the system from uncontrolled increases in pressure turning on or off.
- As protection of industrial and civil installations from uncontrolled pressure increases.
- Downstream of pressure reducing or modulating devices to avoid undesirable pressure fluctuations.

Accessories

- Pressure gauges
- High-capacity self-cleaning filter

Notes for engineer

- Inlet and outlet pressure, flow rate, and application are needed for sizing and cavitation analysis.
- Recommended flow rates and working conditions are given in the valve catalog.
- When the valve discharges into the atmosphere, anti-cavitation is recommended.

Optional configurations

- Upstream pressure relief valve with anti-backflow system.
- Pressure relief valve with solenoid control valve.

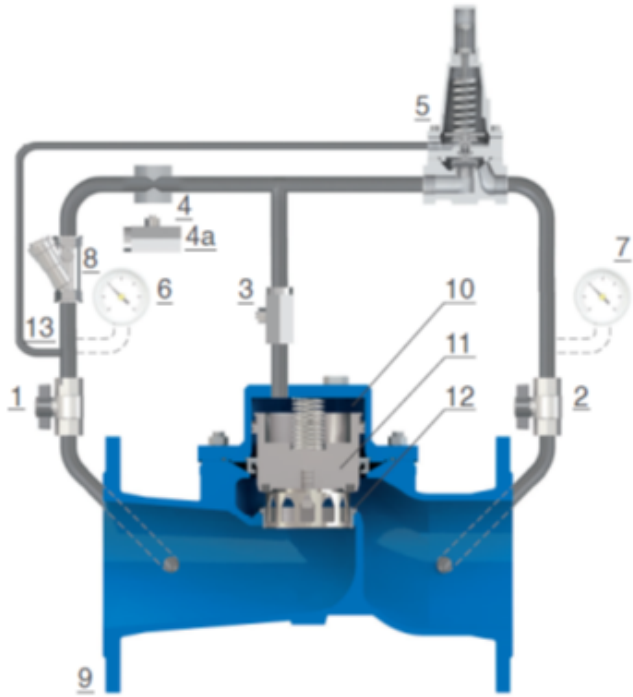
Operating conditions

- Fluid: treated water.
- Minimum pressure: 0,7 bar.
- Maximum pressure: 40 bar.
- Maximum temperature: 70°C.

Adjustment range of the support pilot

- Blue spring: 0.7 to 7 bar.
- Red spring: 1.5 to 15 bar.
- Larger values up to 25 bar on request.

Operation



The valve is controlled by a high-capacity two-way pilot (5) with adjustable calibration that receives upstream pressure through an unfiltered inlet (13).

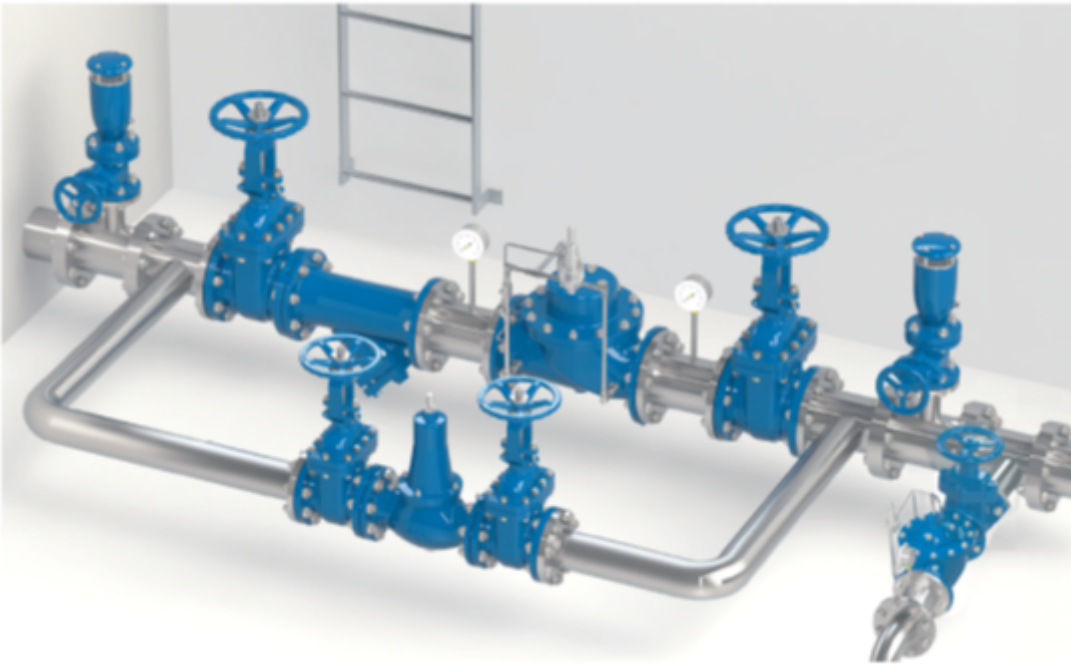
In case the latter exceeds the set value, the pilot opens, discharging pressure from the control chamber (10) resulting in the poppet (11) rising and flowing through the seat (12) to protect the system.

On the other hand, when the upstream pressure falls below the set threshold, the pilot modulates the flow in the circuit, then the pressure in the valve chamber rises, bringing the poppet toward the closed position, which stops the flow through the main valve.

The pressure in and out of the main chamber (10) is controlled by the high-precision needle valve (3), which is necessary to ensure stability and accuracy even with rapid changes in flow rate.

In addition, thanks to needle valve (3) and ball valves (1 and 2), maintenance of the circuit and its components can be carried out without interrupting the flow through the main valve.

Installation diagram



The recommended installation scheme of the valve at the branch to the main line, used for pressure relief, includes shutoff devices to allow for maintenance, and a strainer, which retains any impurities.

It is also recommended to include upstream and downstream FBA combined water hammer vents.

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