

Downstream Pressure Reducing and Stabilizing Piston Hydrovalve PN40 - E5115-00 / E6115-00



Automatic valves with hydraulic operation E5115-00 / E6115-00 reduce and stabilize downstream pressure, regardless of changes in flow rate and upstream pressure.

Class PN40, and made of steel and spheroidal cast iron coated with epoxy paint using FBT (fluid bed technology), the models designed to reduce pressure drop, vibration, and cavitation-related damage. The valves are normally equipped with the V-PORT CESTLE, anti-cavitation and for low flow rates, or, upon request, the ANTICAVITATION CESTLE.

		PN 40	
Version	DN (mm)	Mass (kg)	References
E5115-00	80	30.00	D50A8040
E5115-00	100	37.00	D50B1040
E5115-00	125	56.00	D50B1240
E5115-00	150	63.00	D50B1540
E5115-00	200	109.00	D50B2040

		PN 40	
Version	DN (mm)	Mass (kg)	References
E6115-00	40/50	24.00	E50A4040
E6115-00	65	26.00	E50A6540
E6115-00	80	31.00	E50A8040
E6115-00	100	46.00	E50B1040

		PN 40	
Version	DN (mm)	Mass (kg)	References
E6115-00	150	96.00	E50B1540

Applications

- Downstream of pumps to reduce pressure in the main pipeline.
- The valve is installed on main pipeline branches to reduce pressure in secondary lines.
- As protection of industrial and civil installations from pressure surges.
- On the tank supply line high pressures to ensure that the pressure and flow values required for level control are maintained.

Accessories

- Pressure gauges

Notes for engineer

- The pressure-reducing ANTICAVITATION basket is recommended for increased cavitation resistance and control accuracy at low flow rates.
- It is recommended to leave a distance of 3 diameters downstream of the valve to ensure better operation.

Optional configurations

- Downstream pressure reducing and stabilizing valve with anti-backflow system.
- Downstream pressure reducing valve with high-sensitivity pilot.

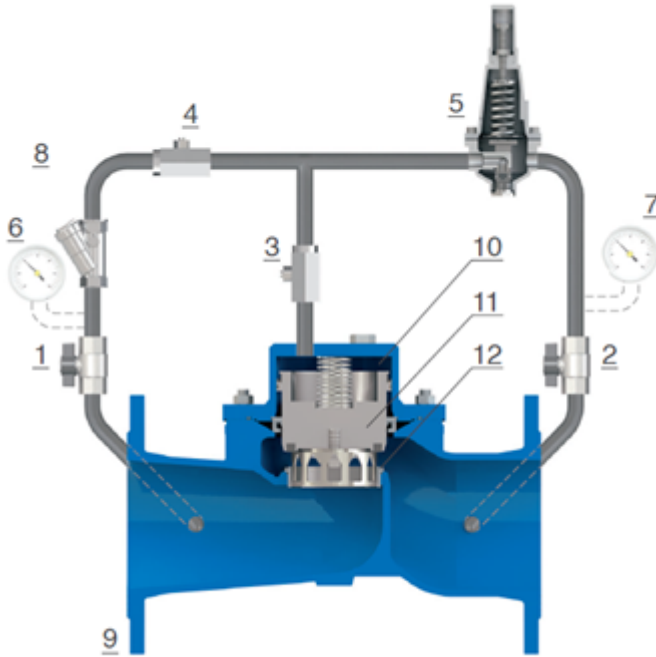
Operating conditions

- 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.
- Higher values up to 25 bar on request.
- Values below 0.7 bar available with high-sensitivity pilots.

Operation



The valve is controlled by an adjustable two-way pilot (5). When the downstream pressure rises above the value to which it is set, the pilot modulates the flow, increasing the pressure in the main chamber of the valve (10).

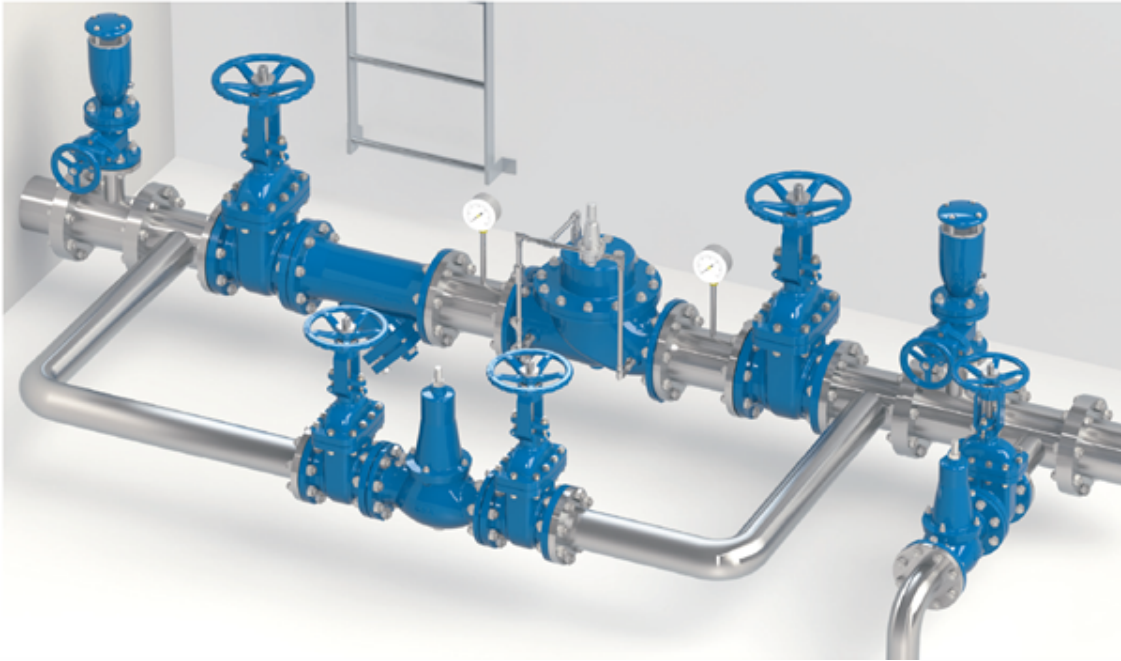
This the piston (11) to lower toward the seat (12), which generates the pressure drop necessary to reduce and stabilize the downstream pressure.

On the other hand, when downstream pressure falls below the set value of the pilot, the piston (11) rises, increasing the passage through the seat (12); the reduction in pressure drop is followed by an increase in downstream pressure.

The flow 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.

Moreover, thanks to the 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 includes shut-off and bypass organs to allow for maintenance, and a filter.

The direct-acting pressure reducer, which is reliable even after long periods of inactivity, is the best solution for the bypass, which is usually not in operation.

The inclusion of combined anti-waterhammer FBA vents, and an overflow valve installed in the bypass, downstream, to prevent pressure rises, is also recommended.

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