

Hydrovalve for constant level control with P sustain E3110-13 / E4110-13



The E3110-13/E4110-13 automatic valve supports the upstream pressure above a value adjustable minimum and regulates the constant level of a tank regardless of the variations in the flow rate. The needle valve, positioned on the chamber, allows the adjustment of the time of valve response, so as to avoid phenomena of water hammer in the closing phase.

Made with stainless steel and coated ductile iron with epoxy paint using FBT (fluid bed) technique technology), the valve has been designed to reduce pressure drops, vibrations and damages related to cavitation phenomenon.

Version	DN (mm)	PN 10		PN 16	
		Mass (kg)	References	Mass (kg)	References
E3110-13	80	27.00	E30A8016P13	27.00	E30A8016P13
E3110-13	100	33.00	E30B1016P13	33.00	E30B1016P13
E3110-13	125	49.00	E30B1216P13	49.00	E30B1216P13
E3110-13	150	56.00	E30B1516P13	56.00	E30B1516P13
E3110-13	200	98.00	E30B2010P13	98.00	E30B2016P13
E3110-13	250	173.00	E30B2510P13	173.00	E30B2516P13
E3110-13	300	289.00	E30B3010P13	289.00	E30B3016P13
E3110-13	400	497.00	E30B4010P13	497.00	E30B4016P13
E3110-13	500	863.00	E30B5010P13	863.00	E30B5016P13
E3110-13	600	1003.00	E30B6010P13	1003.00	E30B6016P13

		PN 10		PN 16	
Version	DN (mm)	Mass (kg)	References	Mass (kg)	References
E4110-13	40/50	21.00	E40A5016P13	21.00	E40A5016P13
E4110-13	65	22.00	E40A6516P13	22.00	E40A6516P13
E4110-13	80	27.00	E40A8016P13	27.00	E40A8016P13
E4110-13	100	41.00	E40B1016P13	41.00	E40B1016P13
E4110-13	150	85.00	E40B1516P13	85.00	E40B1516P13
E4110-13	200	139.00	E40B2010P13	139.00	E40B2016P13
E4110-13	250	249.00	E40B2510P13	249.00	E40B2516P13
E4110-13	300	422.00	E40B3010P13	422.00	E40B3016P13
E4110-13	400	785.00	E40B4010P13	785.00	E40B4016P13
E4110-13	600	2250.00	E40B6010P13	2250.00	E40B6016P13

Applications

- In break-section tanks and in pipelines gravity when control is necessary proportional level, within the limits of pilot adjustment.
- Where it is necessary to ensure the level with continuous modulation and maintain the at the same time a minimum pressure.

Accessories

- Open-close indicator.
- Manometers.
- Self-cleaning high-capacity filter.
- Modulation systems for accurate regulation with low flow rates and high-pressure differentials.
- Manual opening limiter.

Notes for the designer

- Avoid high points in the pipes connecting the valve to the pilot in order to prevent the formation of air pockets.
- For correct operation, a minimum pressure of 1 bar is required on the level pilot; lower values could cause malfunctions.

Optional configurations

- Pressure support valve and constant level regulation with system anti-backflow.
- Pressure support valve and constant level regulation with pilot quick touch.

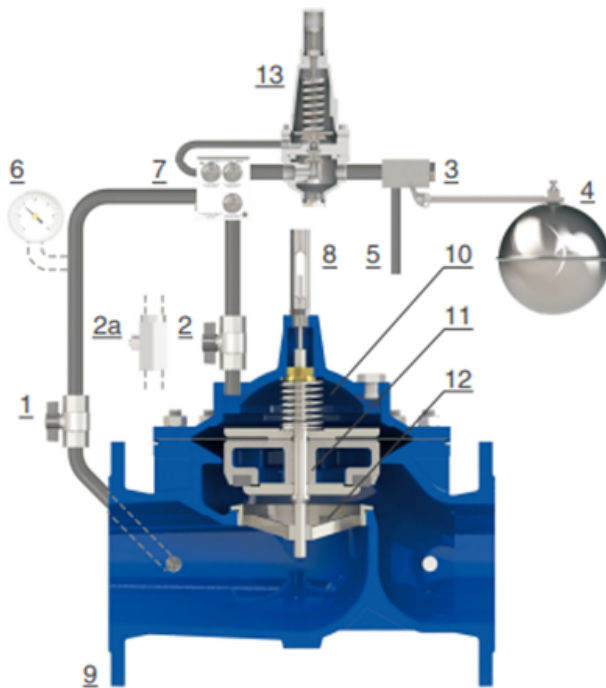
Operating conditions

- Fluid: treated water.
- Minimum pressure: 1 bar on the level pilot.
- Maximum pressure: 16 bar.
- Recommended operating pressure: 6 bar.
- Superior on request.
- Maximum temperature: 70 °C.

Constant level pilot adjustment

- Standard stroke 85 mm; different on request.

Operation (for DN 150-600)



The E3110-13/E4110-13 is operated by two pilots, one pilot pressure support (13) followed by a pilot of proportional level control (3).

The first one opens when the upstream pressure is greater than the value on which it is set and closes by diverting the flow of the circuit to chamber (10) of the main valve when the pressure drops below this threshold.

If the tank level drops, the level pilot proportional (3) opens, releasing the pressure of the main chamber (10) through tube 5.

This causes the shutter (11) to open with respect to at seat (12) and a flow through the valve proportional to the withdrawal.

If the tank level goes back up, the pilot (3) modulates, reducing the flow of the discharge 5 until the valve is closed, if necessary main.

The pressure at the inlet and outlet of the master bedroom (10) is controlled by the exclusive regulation unit (7), equipped with filter and three adjustable needle valves, necessary for ensure stability and make opening speeds and valve closing independent of each other.

Installation diagram



In the installation diagram of the E3110-13/E4110-13, connected to the level pilot (2) by means of a single pipe, sectioning devices (1) are recommended to allow maintenance and a filter (3), upstream, to prevent the entry of impurities into the main valve. The pilot must be placed in a position protected from turbulence caused by the flow feeding the tank. In case of static pressure higher than 6 bar, the AC anti-cavitation system and a pressure reducer are recommended.

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