01/07/2026
VPPCV21SPD611

Booster Pump E3113-06 / E4113-06

The E3113-06/E4113-06 valve is a globe pattern hydraulically operated automatic control valve, active check valve, that isolates the pump from the system during pump starting and stopping to prevent and avoid surges and water hammer events.

The valve opens and closes in response to signals applied to the solenoid on the circuit where a needle valve will adjust the response time for an accurate and smooth regulation.

Equipped with a limit switch activated by the position indicator's movement, made in ductile cast iron and stainless steel, the valve is designed to reduced head loss, throttling noise and cavitation damage.

Flange drilling according to EN 1092/2, different on request.

Certification and testing according to EN 1074.

		PN 10		PN 16	
Version	**DN (mm)**	**Mass (kg)**	**References**	**Mass (kg)**	**References**
E3113-06	80	25.00	E33A8016P06	25.00	E33A8016P06
E3113-06	100	32.00	E33B1016P06	32.00	E33B1016P06
E3113-06	125	47.00	E33B1216P06	47.00	E33B1216P06
E3113-06	150	54.00	E33B1516P06	54.00	E33B1516P06
E3113-06	200	97.00	E33B2010P06	97.00	E33B2016P06
E3113-06	250	172.00	E33B2510P06	172.00	E33B2516P06
E3113-06	300	287.00	E33B3010P06	287.00	E33B3016P06
E3113-06	400	496.00	E33B4010P06	496.00	E33B4016P06
E3113-06	500	862.00	E33B5010P06	862.00	E33B5016P06
E3113-06	600	1002.00	E33B6010P06	1002.00	E33B6016P06

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		PN 10		PN 16	
Version	DN (mm)	Mass (kg)	References	Mass (kg)	References
E4113-06	40/50	19.00	E43A5016P06	19.00	E43A5016P06
E4113-06	65	20.00	E43A6516P06	20.00	E43A6516P06
E4113-06	80	25.00	E43A8016P06	25.00	E43A8016P06
E4113-06	100	39.00	E43B1016P06	39.00	E43B1016P06
E4113-06	150	84.00	E43B1516P06	84.00	E43B1516P06
E4113-06	200	138.00	E43B2010P06	138.00	E43B2016P06
E4113-06	250	248.00	E43B2510P06	248.00	E43B2516P06
E4113-06	300	420.00	E43B3010P06	420.00	E43B3016P06
E4113-06	400	784.00	E43B4010P06	784.00	E43B4016P06
E4113-06	600	2250.00	E43B6010P06	2250.00	E43B6016P06

Applications

- At the pumps to enable start and stop cycles avoiding surges and water hammer.
- To prevent water hammer during pump switching in batteries and parallel operation.
- To ensure an accurate and surge free check prevention system.

Accessories

- Manometers.
- Self-cleaning high capacity filter.

Directions for use

- Anti-cavitation low flow stability plugs are recommended to provide an accurate regulation in case of low flow conditions.
- Recommended flow rate and operating conditions on the series engineering.
- The duration of impulses sent to the solenoid is important and changes with valve size and operating pressure.

Optional configurations

- Pressure reducing valve for booster pumps.
- Pressure sustaining valve for booster pumps.
- Flow control valve for booster pumps.

Operating conditions

- Fluid: treated water.
- Minimum pressure: 0,7 bar.

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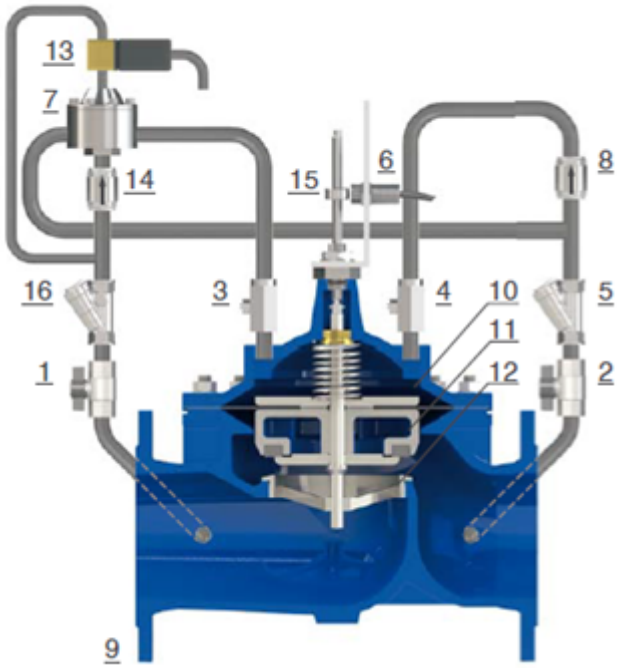
- Maximum pressure: 16 bar.
- Recommended working pressure: 6 bar. Higher on request.
- Maximum temperature: 70 °C.

Solenoid valve data

- Voltage: 24 V DC, 24 V/50 Hz, 230 V/50 Hz. Other voltage on request.
- Consumption electrical: inrush AC (VA) 24, hold AC (VA) 17 (8 W), DC hot/ cold coil 8/9 W.

How it works



When pumps are turned off the valve (9) is closed and the solenoid (13) is de-energized.

When the pump starts, the solenoid (13) is energized and the control chamber (10) is put in communication with the downstream pressure thanks to the hydraulic accelerator (7), thus pushing the obturator (11) upwards to generate a gradual increase of the flow rate.

The needle valve (3) ensures the regulation of the opening and closing speed, to avoid sudden variations in pressure.

When shut down is required, the pump is kept running while the solenoid (13) is de-energized diverting, through the flow accelerator (7), the upstream pressure towards the control chamber (10) with gradual closing of the obturator (11) onto the seat (12).

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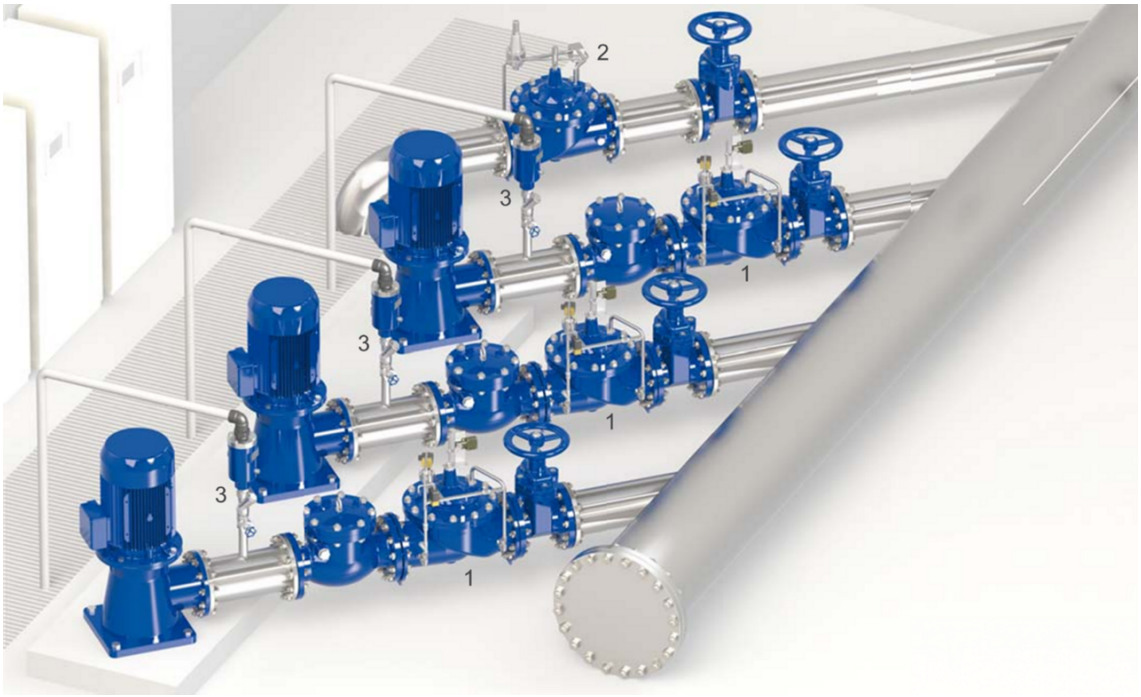
Once the indication rod (15) has reached a pre-determined position (adjustable, usually the 20% of the valve stroke), the limit switch (6) will send a signal for the pump to close. In case of power failure, the backflow through the main valve (9) is prevented thanks to the check valve (8) allowing the downstream pressure back to the control chamber (10) minimizing surges.

Installation diagram



The picture below shows the recommended installation layout of E3113-06 (1) as an effective surge prevention system and protection device for water pumping stations, in combination with pressure relief valves model E3116-10 (2) or surge anticipating E3116-52 valve.

Anti-slam combination air valves are recommended upstream (3) and downstream of the booster pump control as well as sectioning devices and bypass required for the proper maintenance.

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