



Constant level automatic control valve XLC 360/460 - Rotoway

The CSA Model XLC 360/460-Rotoway is a globe pattern hydraulically operated automatic control valve that regulates the constant level of a tank, by means of a three ways pilot in stainless steel, regardless of upstream pressure variations. Thanks to a CSA needle valve the response time can be adjusted, to prevent water hammer effects during the closing phase. Normally equipped with visual position indicator, and entirely made in ductile cast iron with FBT epoxy coating and stainless steel, the valve is designed to reduce head loss, throttling noise and cavitation damage.

Applications

- For break pressure tanks, when a constant level control is needed and a stainless steel pilot is required.
- For level control on gravity fed pipelines.
- For small tank in need of maintaining a constant level with on/off regulation.

Accessories

- On-off position transmitter Mod. CSA CSPO.
- Pressure measurement kit.
- Self-flushing and high capacity filter.
- AC anti-cavitation trim to provide a higher resistance to cavitation and accurate regulation in case of low flow.
- CSFL mechanical flow regulator.

Note to the engineer

- Avoid bends and high points on the piping to connect the main valve with the level control pilot to prevent the formation of air pockets.
- For the proper functioning a minimum of 0,6 bar on the pilot is needed, failing in doing so would create delays and malfunctioning. Consider the use of a sustaining pilot for low pressure conditions and/or the CSA CSFL mechanical flow regulator.

Additional features

- XLC 360/460-Rotoway-FR constant level control valve with back-flow prevention.
- XLC 360/460-Rotoway-R constant level control valve with surge prevention pilot.

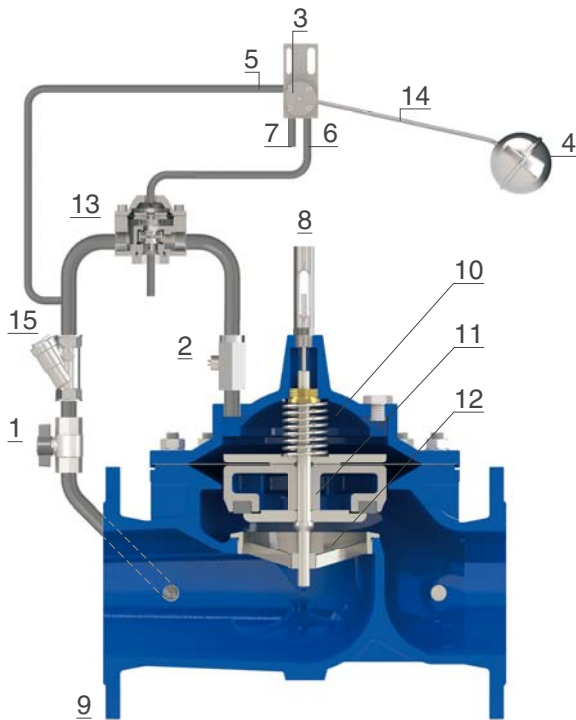
Working conditions

- Fluid: treated water.
- Minimum operating pressure: 0,6 bar on the pilot.
- Maximum operating pressure: 16 bar.
- Recommended working pressure: 6 bar. Higher on request.
- Maximum temperature: 70°C.

Constant level pilot adjustment range

- 360 mm as standard, different on request by changing the lever.

Operating principle (for DN 150-600)



CSA model XLC 360/460-Rotaway is operated by a 3 ways pilot connected to the valve by means of two pipes, not supplied. The pilot assembly, entirely made in stainless steel, is composed of a body (3), float (4) sensing the water level variation and a lever (14) which can be adapted according to the project requirements. Should the water level reach the maximum threshold the float (4) moves upwards, rotating the lever (14) thus allowing the closing of the valve by putting the upstream pressure in communication with the chamber (10) of the valve or the hydraulic accelerator (13) (available from DN 150 and above). The valve remains closed until the level drops to the lowest set point (16), which enables the rotation of the lever (14) putting the chamber (10) in communication with the atmosphere, thus raising the obturator (11) to generate flow through the seat (12). The exclusive CSA needle valve on the chamber (2) will control pressure and flow in and out to prevent surges during closure.

Installation layout

In the installation layout the XLC 360/460 Rotaway is linked to the pilot (2) through two pipes. The filter (3) is needed upstream to prevent dirt and sectioning devices (1) are mandatory to perform maintenance operations. The constant level control pilot (2) should always be located in a position away from the water surface turbulence created by the inlet supply pipe to the tank. In case of static values higher than 6 bar the AC (anti-cavitation) system and a CSA pressure reducer VRCD are advised.

