



## Constant level automatic control valve XLC 360/460 - Rotoway-P

The CSA Model XLC 360/460-Rotoway-P is a globe pattern hydraulically operated automatic control valve that regulates the constant level of a tank, by means of a two ways proportional 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.

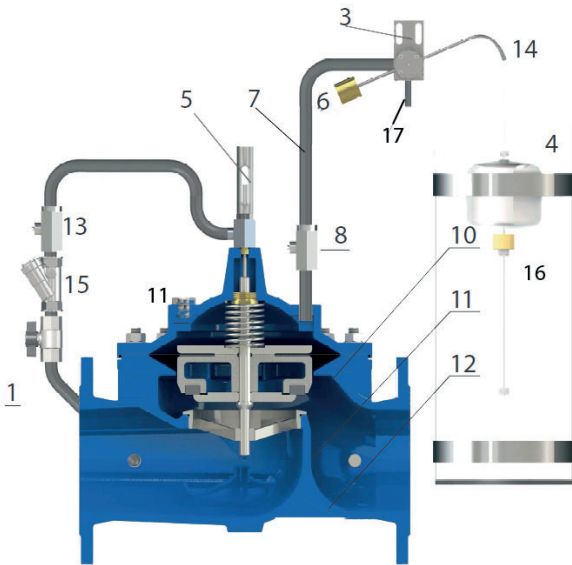
### Working conditions

- Fluid: treated water.
- Minimum operating pressure: 0,5 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

- Adjustable through mechanical, stops from 200 mm up to 4 meters.

## Operating principle (for DN 150-600)



CSA model XLC 360/460-Rotoway-P has the upstream pressure filtered by a stainer (15)a, then a needle (13) is used to control the overall circuit. Water enter the position indicator (5) to go through the hydraulic synchronizer and come out of the chamber (10) directed toward the Rotoway-P pilot. Another needle valve (8) is used in the regulation. The valve is operated by a two ways pilot Rotoway-P connected to the main valve by one pipe (7) Ø9mm not supplied. The pilot assembly, entirely made in stainless steel, is composed of a body (3), a float (4) sensing the water level. Two mechanical blocks located on the wire indicate the minimum and maximum regulation of the tank. Should the level reach the upper limit the lever (14) will rotate allowing the upstream water reaching the chamber (10) this closing the valve. As soon as the water move down and pushes the lower stops and the pilots opens gradually taking pressure out of the chamber (10) proportionally in order for the valve to follow the consumption. The needle valve (8) will control pressure and flow in and out the chamber to prevent surges during closures.

## Installation layout

In the installation layout the XLC 360/460 Rotoway - P 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.

