



## Constant level automatic control valve Mod. XLC 360/460-MCP

The CSA Model XLC 360/460-MCP is a globe pattern hydraulically operated automatic control valve that regulates the constant level of a tank, regardless of upstream pressure variations, by means of a stainless steel proportional flow modulating pilot. Thanks to a needle valve on the chamber 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 and when a proportional level control is needed within the pilot's range.
- For level control on gravity fed pipelines.
- For small tank and in need of maintaining a constant level with a continuous modulating.

### Accessories

- On-off position transmitter Mod. CSA CSPO.
- Pressure measurement kit.
- Self-flushing and high capacity filter.
- CSA anti-cavitation low flow stability plugs are recommended to provide an accurate regulation in case of low flow conditions.
- CSFL mechanical flow regulator.

### Note to the engineer

- Avoid bends and high points on the piping to connect the main valve to 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-MCP-FR constant level control valve with back-flow prevention.
- XLC 360/460-MCP-R constant level control valve with surge prevention pilot.

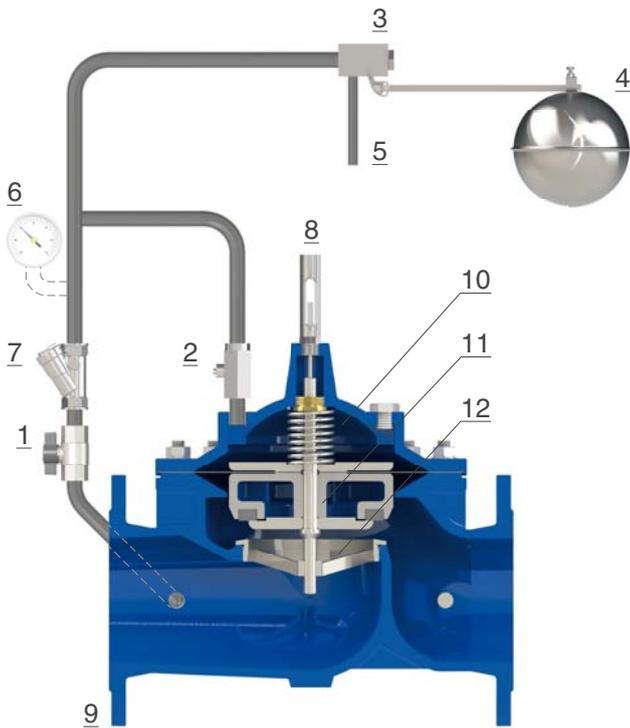
### Working conditions

- 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

- 85 mm as a standard, different on request.

## Operating principle



The CSA model XLC 360/460-MCP is operated by a 2 ways flow modulating proportional pilot (3) entirely made in stainless steel and connected to the valve by means of a pipe, not supplied. Should the level inside the tank drop due to consumption the pilot (3) will open through the drain (5) discharging the main chamber (10), and generating a passage through the seat (12) in proportion to the demand, lifting the obturator (11) upwards accordingly. Should the tank level rise due to the refilling the pilot (3) will modulate, throttling the flow through the drain (5) and, if required, closing the valve by putting the upstream pressure in communication with the main chamber (10). A fixed orifice is present on the filter (7) for the proper functioning, while a needle valve on the chamber (2) will control pressure and flow in and out to prevent surges during closure.

## Installation layout

The XLC 360/460-MCP is linked to the pilot (2) through a single pipe. Sectioning devices (1) are recommended for maintenance and a filter (3) is needed upstream, to prevent dirt from entering the main valve, affecting the performance. 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.

