



## On-off solenoid control battery operated flush valve **Mod. XLC 350/450-P**

The CSA Model XLC 350/450-P is a globe pattern hydraulically operated automatic control valve, normally closed, that opens in response to the signals supplied by a battery operated programmer, regardless of upstream pressure variations. The main function is to flush pipelines and/or to create water circulation by using up to three programs per day.

Normally equipped with visual position indicator and entirely made in ductile cast iron with FBT (fluid bed technology) epoxy coating and stainless steel, the valve is designed to reduce head loss, throttling noise and cavitation damage.

### Applications

- In derivation from main supply lines to create water circulation through specific programs where power supply is not available.
- Installed in water distribution networks to flush and clean dead ends and segments with water in stagnant conditions.

### Accessories

- Pressure measurement kit.
- Self-flushing and high capacity filter.
- Box container for submerged application.
- CSFL mechanical flow regulator.

### Note to the engineer

- Inlet pressure, outlet pressure, flow rate and application are required for the proper sizing and cavitation analysis.
- Recommended flow rate and operating conditions on the XLC series engineering.
- Oversizing the valve may generate excessive pressure drop during opening, likely to prevent the valve from closing.

### Additional features

- XLC 350/450-P-FR on-off solenoid control valve with battery operated programmer and back-flow prevention system.
- XLC 350/450-P-R on-off solenoid control valve with battery operated programmer and surge prevention system.

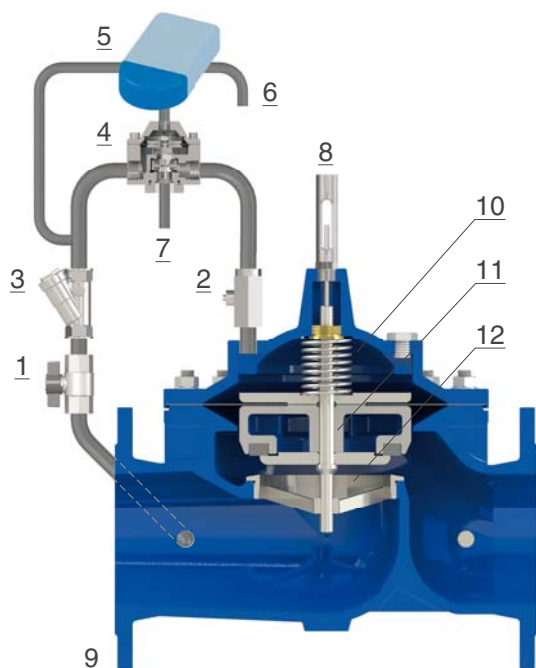
### Working conditions

- Fluid: treated water.
- Minimum operating pressure: 0,7 bar.
- Maximum operating pressure: 16 bar. Higher on request.
- Maximum temperature: 70°C.

### Battery operated programmer

- Make reference to the operating and installation manual provided with the valve.

## Operating principle (for DN 150-600)



CSA model XLC 350/450-P is controlled by a battery programmer sending impulses to the solenoid (5), to open the valve accordingly up to three programs per day. When the solenoid is activated by the programmer water is taken out of the main chamber (10) directly or through the accelerator (4), thus pushing the obturator (11) upwards and generating the full flow through the main valve (9). The hydraulic accelerator (4) is present for DN 150 mm and above. When another impulse is triggered by the programmer, at the end of the water supply cycle, pressure is diverted back towards the chamber (10) interrupting the flow.

Pressure in and out of the main chamber (10) is controlled by the CSA needle valve (2) needed for the valve's response avoiding possible surges and rapid pressure fluctuations. A filter (3) will protect the solenoid and the rest of components to prevent dirt from entering the mechanical assemblies.

## Installation layout

The picture shows the recommended layout of the CSA XLC 350/450-P, battery operated solenoid control valve used to flush pipelines, discharging directly into atmosphere or to the drainage system. Sectioning devices (1, 2) are important for maintenance operations as well as a filter (3) to prevent dirt from entering the valve. Anti-surge combination air valves FOX 3F AS (4) are recommended upstream to release air pockets in working conditions, and discharge large volumes of air during pipe filling and commissioning.

