

## Important Considerations Regarding Use of Check Valves with Mazzei Injectors

Depending on the particular application and type of installation, an effective, properly functioning check valve must be connected to the suction port of the injector to prevent backflow of liquid through the suction port of the Mazzei injector. This could occur in situations in which there is not sufficient differential pressure between the inlet and outlet of the injector (therefore not creating negative pressure at the suction port) and during times of no motive flow condition (i.e., shut down) in a pressurized line.

Depending on the intended application, Mazzei's plastic injectors are sold with a check valve consisting of a ball, spring, gasket and cap. In situations in which water starts to flow backwards into the suction port, the ball creates a seal against the gasket closing off the flow of water at the suction port.

See diagram below:

If there is a risk that the main water flow may include impurities, debris or particles, it is also strongly recommended that the tubing/piping from the suction port include a normally closed Solenoid Valve or other shut-off type valve. This additional backflow prevention device may be necessary since particles or debris may get trapped in the suction port section of the injector preventing the ball from properly seating against the gasket and completely shutting off the flow of water. Use of full-close valving is recommended for applications requiring fail-safe backflow protection.

In addition, good general installation practices should be followed at all times, including the use of properly sized clamps to firmly secure all hoses to any and all barbed connections of the injector (inlet, outlet and/or suction port).

Removal or replacement of the Mazzei supplied check valve should only be performed by thoroughly knowledgeable and trained technical service people.

Additional information regarding the use of check valves is detailed in Mazzei's Technical Bulletin No. 8 found on the Mazzei website.

