



Maricopa County

Environmental Services Department

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Backflow Prevention Assemblies for Carbonated Post-Mix Machines

If an establishment installs post-mix carbonated beverage machines, an approved backflow preventer must be installed. There are two methods that are approved by this Department for these systems.

1. Reduced Pressure Principle Zone Assembly (RPZ)

These units are designed to give maximum protection against backflow caused by either backpressure or backsiphonage in health hazard installations. These assemblies shall be properly installed between the water supply line and the carbonator. A funnel drain must be installed under the relief port and drained to an approved receptacle, such as a floor sink. RPZ's are designed with test cocks and are required by code to be tested annually to ensure they are operating correctly. These assemblies are the recommended method of backflow prevention because of the high level of protection and the ease of maintenance.

The following reduced pressure zone backflow preventers are approved by the Department at this time for health hazard installations:

WATTS® series 009QT
CONBRACO® series 40-200
WILKINS® model 975XL

These units shall be properly installed and a certified tester shall test the device for proper operation before the Department will issue final approval to the establishment. All backflow preventer certification paperwork shall be kept on file by the owner/operator. Cast bronze backflow preventers are acceptable by this Department, although certain municipalities require the installation of stainless steel backflow preventers. The backflow preventer shall be installed with sufficient side and top clearance to provide adequate space for testing and maintenance of the unit. The backflow preventer should be installed at least 12" above a floor sink.

2. ASSE 1022 Double Check Valves

Any double check valve that meets ASSE 1022 standards are approved for these systems. These devices are typically installed directly to the carbonator at the water inlet connection. These devices also have a relief port and a drain line must be routed from these ports to an approved receptacle, such as a floor sink. These units are not testable, so if these devices are used, the business operator must have the device(s) inspected annually and provide an inspection report from a commercial beverage system installer, licensed plumber, or certified backflow tester, stating the backflow preventer is operable or that it is not malfunctioning OR replace the double check valve(s) annually. Records of service maintenance must also be kept onsite for verification by this Department.

Here is the complete list of ASSE 1022 approved devices.

- Anderson Brass Company (McCann) – ABF-1, ABF-1SS, or ABF-1F
- Apollo Valves (Conbraco) – CBBP
- Watts Regulator Company – SD-3
- Wilkins Regulator - 740

Notes:

- * All plumbing must meet 2006 International Plumbing Code requirements.
- * Downstream plumbing shall be approved plastic or stainless steel – The piping and fittings between the backflow preventer and the carbonator shall be approved plastic (approved plastic flex line) or stainless steel. Do not use copper, brass or copper alloys on the downstream side. Unnecessary downstream shut-off or check valves that place additional continuous pressure should not be placed on the downstream side of the backflow preventer.
- * Install water filters on the upstream (water supply side) of the backflow preventer.