

**4714.0603 CROSS-CONNECTION CONTROL.**

Subpart 1. **Section 603.2.** UPC section 603.2 is amended to read as follows:

**603.2 Approval of Devices or Assemblies.** Before a device or an assembly is installed for the prevention of backflow, it shall have first been approved. Devices or assemblies shall be tested in accordance with recognized standards or other approved standards. Backflow prevention devices and assemblies shall comply with Table 603.2, except for specific applications and provisions as stated in sections 603.5.1 through 603.5.23.

Devices or assemblies installed in a potable water supply system for protection against backflow shall be maintained in good working condition by the person or persons having control of such devices or assemblies. The devices or assemblies shall be tested at the time of installation, repair, or relocation and not less than on an annual schedule thereafter, or more often where required by the Authority Having Jurisdiction. Where found to be defective or inoperative, the device or assembly shall be repaired or replaced. No device or assembly shall be removed from use or relocated, or other device or assembly substituted, without the approval of the Authority Having Jurisdiction.

Testing shall be performed by a certified backflow assembly tester in accordance with ASSE Series 5000.

UPC Table 603.2 is not amended.

Subp. 2. **Section 603.5.4.** UPC section 603.5.4 is amended to read as follows:

**603.5.4 Heat Exchangers.** Heat exchangers used for heat transfer, heat recovery, or solar heating shall protect the potable water system from being contaminated by the heat-transfer medium.

**603.5.4.1 Single-Wall Heat Exchanger.** Installation of a single-wall heat exchanger shall meet all of the following requirements:

(1) Connected to:

- (a) a low-pressure hot water boiler limited to a maximum of 30 pounds-force per square inch gauge (psig) (207 kPa) by an approved safety or relief valve; or
- (b) a steam system limited to a maximum of 15 psig (103 kPa).

(2) The heat-transfer medium is either potable water or contains fluids having a toxicity rating or Class of 1.

(3) Bear a label with the word "Caution," followed by the following statements:

- (a) The heat-transfer medium shall be water or other nontoxic fluid having a toxicity rating or Class of 1 as listed in Clinical Toxicology of Commercial Products, 5th edition.
- (b) The pressure of the heat-transfer medium shall be limited to a maximum of 30 psig (207 kPa) by an approved safety or relief valve.

The word "Caution" and the statements in letters shall have an uppercase height of not less than 0.120 inch (3.048 mm). The vertical spacing between lines of type shall be not less than 0.046 inch (1.168 mm). Lowercase letters shall be compatible with the uppercase letter size specifications.

**603.5.4.2 Double-Wall Heat Exchanger.** Double-wall heat exchangers shall separate the potable water from the heat-transfer medium by providing a space between the two walls that are vented to the atmosphere.

Subp. 3. **Section 603.5.12.** UPC section 603.5.12 is amended to read as follows:

**603.5.12 Beverage Dispensers.** Potable water supply to beverage dispensers, carbonated beverage dispensers, or coffee machines shall be protected by an air gap or a vented backflow preventer in accordance with ASSE 1022. For carbonated beverage dispensers, piping materials installed downstream of the backflow preventer shall not be made of copper and not be affected by carbon dioxide gas.

Subp. 4. **Section 603.5.17.** UPC section 603.5.17 is amended to read as follows:

**603.5.17 Potable Water Outlets and Valves.** Potable water outlets, freeze-proof yard hydrants, combination stop-and-waste valves, or other fixtures that incorporate a stop-and-waste feature that drains into the ground shall not be installed underground except for a freeze-proof yard hydrant that is located at least two feet above the water table and at least ten feet from any sewer or similar source of contamination.

Subp. 5. **Section 603.5.** UPC section 603.5 is amended by adding the following subsections:

**603.5.22 Barometric Loop.** A barometric loop is an acceptable method of protection of water connections where an actual or potential backsiphonage hazard exists that is not subject to backpressure.

**603.5.23 Installation of Testable Backflow Prevention Assembly.** Testable backflow prevention assemblies meeting ASSE Standard 1013, 1015, 1020, 1047, 1048, or 1056 shall be installed, tested, maintained, and removed in accordance with sections 603.5.23.1 through 603.5.23.4.

**603.5.23.1 Notification of Installation.** The administrative authority shall be notified before installation of a testable backflow prevention assembly. The public water supplier shall be notified of the installed testable backflow preventer assembly within 30 days following installation on a community public water system.

**603.5.23.2 Testing and Maintenance.** The installation of a testable backflow prevention assembly is permitted only when a periodic testing and inspection program conducted by qualified personnel is provided by an agency acceptable to the administrative authority. Inspection intervals shall not exceed one year. The administrative authority may require more frequent testing if deemed necessary to ensure protection of the potable water. A testable backflow prevention assembly shall be inspected after initial installation to ensure

that it has been properly installed and that debris resulting from the piping installation has not interfered with the functioning of the assembly.

**603.5.23.3 Inspection and Records.** A test and inspection tag shall be affixed to the testable backflow prevention assembly. The tester shall date and sign the tag and include the tester's backflow prevention tester certification number. Written records of testing and maintenance shall be maintained and submitted to the administrative authority, and to the public water supplier, within 30 days of testing if installed on a community public water system.

**603.5.23.4 Notification of Removal.** The Authority Having Jurisdiction, in addition to the public water supplier, shall be notified within 30 days following removal of a testable backflow prevention assembly from a community public water system.

**Statutory Authority:** *MS s 326B.43; 326B.435*

**History:** *40 SR 71; 45 SR 1007*

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