



Cross Connection Control

32. SPS 382.20(1) - 7/28/03

When is registration or plan review needed for Cross Connection Control Assemblies?

1. Plan review for testable CCC devices is required when the installation is in health care or related facility. For all other installations, registration with IS of testable CCC devices is required.
2. When replacing an existing assembly with the exact same model number and size? No, but a note should be sent with the next test report stating it has been changed.
3. When replacing an existing assembly with the same ASSE number, but a smaller size? No, not when dealing with non-potable water. A note should still be sent. When dealing with potable water, it is a decision of an IS plumbing plan reviewer through a phone conversation with the submitting party.
4. When replacing an existing assembly with the same ASSE number, but a larger size? No, not when dealing with either potable or non-potable water.
5. When moving an existing assembly vertically, but on the same floor? No.
6. When moving an existing assembly to a different floor? Yes.
7. When moving an existing assembly horizontally? A good rule of thumb is to consider a 10-foot diameter area. If the assembly is to be moved ten feet from its original location, then yes. If not, then no. This can be discussed with an IS plumbing plan reviewer.

40. SPS 382.21(2)(a) - 5/10/07

May a cross connection control assembly remain in service if it is not code compliant now, but was code compliant when it was installed? A cross connection control device may remain if it was code compliant at the time of installation unless the cross connection device is failing or is being replaced. See PDF file about dates of when cross connection control devices of various types were code compliant.

124. SPS 382.41 - 5/10/07

What backflow protection is needed for pressure washers (without break tanks including air gaps)?

Pressure washers may be hard piped or connected with a garden hose to the water supply system. ALL pressure washers installed permanently must be connected to the water distribution system with approved water distribution materials (see SPS 384.30).

Minimum acceptable backflow protection:

- Portable Pressure Washer: Hose connection vacuum breaker or backflow preventer (ASSE 1011 or 1052) connected to hose bibb serving washer. (Non-continuous use, not permanently connected to the water supply.)
- Permanently installed pressure washer: RP (ASSE 1013) installed in water supply.

125. SPS 382.41 5/10/07

What backflow protection is needed for booster pumps? Booster pumps are generally hard piped to the water supply and then use a hose at the outlet end of the pump. ALL booster pumps installed permanently must be connected to the water distribution system with approved water distribution materials (see SPS 384.30). Booster pumps must be provided with an automatic low pressure cut-off switch to protect the booster pump in the case of loss of supply pressure when the booster pump is serving plumbing fixtures, appliances or pieces of equipment. All booster pump installations must take into account the pump's affect on the plumbing water distribution system.

Backflow protection options for booster pump installations:

Inlet side of booster pump (continuous use): RP (ASSE 1013) installed in water supply.
Outlet side of booster pump: Greater than 150 to 350 psig. RP (ASSE 1013) installed in the water distribution system downstream of the pump. In this case the pump materials in contact with the water must be water distribution approved materials.
- Greater than 350 psig: There are no backflow preventers manufactured to withstand these pressures.

126. **SPS 382.41 - 11/19/09**

Are there requirements for installing the "Strahman" steam/water mixing valves? Yes, see PDF file.

126a. **382.41(3) 3/28/2018 Cross Connection Control for Handheld Showers/Sprays on Faucets**

(Certification) I have a faucet that includes a handheld shower or pull out spray. This faucet has a certificate from a Nationally Recognized Listing Agencies Acceptable to the Department verifying compliance with ASME standard A112.18.1. Would this verify the faucet has been tested to meet the requirements of cross connection control, therefore approved for installation in Wisconsin?

A. Yes, this would meet the Wisconsin requirements for cross connection control. If compliance certificate is issued from a Nationally Recognized Listing Agencies Acceptable to the Department for a certain faucet model number, this faucet and any attachments sold with it have been tested and approved for backflow protection. This means the model number has been tested to the backflow requirements set forth in ASME standard A112.18.1. If the handheld shower or side spray is sold separately from a faucet; additional, approved backflow protection would be required.

Note: Compliance certificates may be found on the Nationally Recognized Listing Agencies Acceptable to the Department's websites.

Reference: SPS 382.41(2), 382.41(3), and 384.11

127. **SPS 382.41(3) - 4/1/08**

What are the cross connection control requirements for an emergency eye wash located on a hose? If the emergency eye wash can be submerged in a sink, a low-hazard cross connection control device would be required to serve the eye wash. If the emergency eye wash is located where it is not likely to be submerged in wastewater, then no cross connection control device is required.

128. **SPS 382.41(3) - 11/24/04**

When does cross connection control need to be modified to be code compliant when remodeling or repairing a plumbing system? If the piping system is being cut to remove or repair the backflow prevention device or assembly, the cross connection control must be made code compliant to the code in effect at the time of the repair. If a union is installed that would allow removal of the device or assembly without cutting the piping system, the existing device or assembly may be returned to service.

129. **SPS 382.41(3) - 3/2/99**

How is cross connection control installed on a carbonator? See [PDF file](#) illustration.

130. **SPS 382.41(3) - 5/2/00**

Can a chiller water supply also serve fire protection? Yes. However, backflow protection must be installed to serve the degree of hazard that is caused by the installation.

131. **SPS 382.41(3) - 8/1/00**

Can a whirlpool and a pool be served by a single rp valve? No, each pool, wading pool or whirlpool must be served by separate reduced pressure backflow prevention valves or air gaps. A pool may be filled by a hydrant that has a hose connection backflow preventer attached.

132. **SPS 382.41(3) - 8/06/03**

What backflow protection is required on a dental mold grinder? The dental mold grinder requires either an internal air gap in the device or a device that provides protection in accordance with SPS Tables 382.41-1 and 382.41.2.

133. **SPS 382.41(3) - 5/15/01**

Do all fixtures in a mortuary need separate cross connection control? Yes. The Wisconsin Department of Safety and Professional Services requires that all fixtures be installed in mortuaries with individual cross connection control. Examples are embalming machines and aspirators.

134. **SPS 382.41(3) - 10/19/0**

Can a city adopt an ordinance that requires containment in buildings other than those described in SPS 382.41(3)(c), for example, sewerage treatment facilities or marinas, wharves and docks? No. There are no provisions in the code or statutes that would permit local ordinances that supercede the uniform plumbing code requirements for containment. Statute 145.02(2) states that "The department shall have general supervision of all such plumbing and shall after public hearing prescribe, publish and enforce reasonable standards therefore which shall be uniform and of statewide concern so far as practicable." In several cases the plumbing code has specific allowances for cities to adopt ordinances or enforce requirements in excess of the plumbing code. SPS 382.41(3) has no such permission.

135. **SPS 382.41(3) - 5/2/00**

Have there been special specific circumstances permitted monitoring of a water supply in lieu of cross connection control? Yes, see conditions noted on letter, [PDF file](#).

136. **SPS 382.41(3) - 8/8/01**

Can a fire truck fill be located in a fire protection system? Yes. A fire truck-fill in a fire department may be part of a fire protection system. The backflow protection assigned to the sprinkler system will be considered adequate for the fire truck fill.

137. **SPS 382.41(3) - 1/2/03**

Is a non-reservoir type hydrant permitted? Yes, it is permitted for existing installations. Hydrants will

not be required to be removed if the water supply to the hydrant is protected with a cross connection control device such as an ASSE 1012 and a hose connection vacuum breaker. New installations require the installation of a reservoir type hydrant.

138. **SPS 382.41(3) - 1/2/03**

Does a pipe that travels through a fountain require a cross connection control device? A water supply that travels through a contaminated area is not automatically required to have a cross connection control device installed to serve that distribution line, if the termination of the water supply is above the flood level rim of the fountain and if the water distribution material is resistant to corrosion. See SPS 384.30(4).

138a.Q: 145.06(1) 02/28/18 Is a plumbing credential required to line a pipe that is considered by definition, plumbing?

A: No, a plumbing credential is not required to line a plumbing pipe. Wisconsin Statute 145.06 is titled; "License or registration required; exemptions." Paragraph (4)(d) provides, in part, an exception to the license requirement for making minor repairs to pipes. The terms "repair" and "minor repair" are not defined in Chapter 145. State Statute 990.01(1) requires utilizing the common usage of words and phrases other than technical words and phrases and others having a particular meaning in the law. The terms "repair" and "minor repair" should not be considered technical words or phrases and the definitions were not found during an extensive search of the statutes. The act of lining a pipe is to be performed on existing piping, therefore can not be considered installation of pipe, it is a rehabilitation process per the titles of recognized standards of the industry. Also, this task is minor in nature when consideration is taken for the more complex process of pipe replacement. However, any reconnections of piping required upon completion of the pipe rehabilitation would require the appropriate credential due to the fact it should be considered an installation of pipe.

References:

State Statute 145.01 Definitions.

(10) PLUMBING. (a) "Plumbing" means:

1. All piping, fixtures, appliances, equipment, devices, and appurtenances in connection with water supply systems, water distribution systems, wastewater drainage systems, reclaimed water systems, and storm water use systems, including hot water storage tanks, water treatment devices, and water heaters connected with these systems and also includes the installation thereof.
2. The construction, connection, installation, service, or repair of any drain or wastewater piping system that connects to the mains or other terminal within the bounds of, or beneath an area subject to easement for highway purposes, including private on-site wastewater treatment systems and storm water treatment and dispersal systems, and the alteration of any such systems, drains or wastewater piping.

State Statute 145.06 License or registration required; exemptions.

(1) (a) No person may engage in or work at plumbing in the state unless licensed to do so by the department. A master plumber may work as a journeyman. No person may act as a plumbing apprentice or pipe layer unless registered with the department.

(4) This section shall not apply to:

(d) Making minor repairs to faucets, valves, pipes or appliances, repair or replacement of electrical or gas energy or other automatic valves or control devices or removing of stoppages in waste or drainage pipes.

State Statute 990.01 Construction of laws; words and phrases.

In the construction of Wisconsin laws the words and phrases which follow shall be construed as indicated unless such construction would produce a result inconsistent with the manifest intent of the legislature:

(1) GENERAL RULE. All words and phrases shall be construed according to common and approved usage; but technical words and phrases and others that have a peculiar meaning in the law shall be construed according to such meaning.

ASTM F2561 - 17

Standard Practice for Rehabilitation of a Sewer Service Lateral and Its Connection to the Main Using a One-Piece Main and Lateral Cured-in-Place Liner

ASTM F1216 - 16

Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

139. SPS 382.41(3)(c) - 2/25/04

Is it code-compliant for one cross connection control device or assembly to serve multiple humidifiers? No. However, an air gap within a humidifier may provide adequate backflow protection.

140. SPS 382.41(4)(a) - 6/1/06

May a small diameter tube from a chemical dispenser be inserted into a flush valve tube so as that the end of the small tube would be the highest point of injection or aspiration? No. The point of penetration into the flush valve tube is considered the point of aspiration.

141. SPS 382.41(4) - 7/22/05

At what level must a pipe applied atmospheric vacuum breaker be installed when an aspiration device is located downstream of the vacuum breaker? The pipe applied atmospheric vacuum breaker must be installed so that the critical level indicator is at least six inches above the connection of the aspiration or injection device.

142. SPS 382.41(4) - 10/23/98

Is an atmospheric vacuum breakers required above a urinal? An atmospheric vacuum breaker is required to be installed on water distribution serving urinals. The minimum height of the atmospheric vacuum

breaker is six inches above the flood level rim of the urinal bowl (for wall mount) and the floor level (for stall type). Where chemicals are being aspirated into the urinal fixture supply, the vacuum breaker must be located at least six inches above the point of aspiration.

143. **SPS 382.41(5)(h) - 2/25/04**

What kind of "wild head" is permitted downstream of an atmospheric vacuum breaker serving a turf sprinkler system? The wild head must be sold as a turf sprinkler or a hole may be drilled in a pipe to serve as a wild head when the orifice is as large as a turf sprinkler orifice. The sprinkler may not include an automatic shut off.

153. **SPS 384.11 7/2/07**

Are all chemical dispensing systems required to be listed by an acceptable listing agency as meeting ASSE Standard 1055 or receive a written product approval from Dept. of Commerce? No. There are currently four ways to determine if a specific chemical dispensing system can be installed in Wisconsin.

1) It meets ASSE Standard 1055(1)

2) It has received written alternate product approval from the department, or

3) It has received written alternate system approval from the department.

Note (1) ASSE Standard 1055 only applies to those devices classified as chemical dispensing systems having self-contained means of backflow protection.

4) The chemical dispensing system is located downstream of approved backflow protection.

Since there are many chemical dispensing systems that do not have a self-contained means of backflow protection, IS decided to require that type of chemical dispensing system to receive an alternate plumbing product approval in accordance with Comm. 84.11 and Comm. Table 82.41-2.

IS has issued an Alternate Plumbing System Approval regarding chemical dispensing systems that are not covered by ASSE Standard 1055.

Stipulation #1 – Chemical dispensing systems that are not in compliance with ASSE Standard 1055, may be installed when the installation includes an acceptable cross connection method or assembly in accordance with Comm. 82.41 (3) Table 82.41-1 of the Wisconsin Administrative Code.

Stipulation #2 - The installation of the cross connection method or assembly must comply with s. Comm. 82.41 (5) of the Wisconsin Administrative Code.

155. **SPS 384.30(4) - 6/6/00**

Is piping in a marina water distribution or service? The materials downstream of a reduced pressure backflow prevention valve are water service materials. The velocity would not be required to be maintained at eight feet per second. Where the installation is downstream of a building control valve, the code requires water distribution materials.