



Installation of Backflow Prevention Device

BUILDING DIVISION

Clearances. CSA B64 10-11 requires the minimum clearances:

Centerline Height above Floor: Between 750mm (30") to 1500mm (60")

Above the Device: 300mm (12") **In Front of Device:** 750mm (30") **Behind the Device:** 20mm (7/8")

Lead Free Requirements. All devices installed must be lead free and meet CSA B64.0-11 & CSACSA B125.3-12 for lead free via the NSF/ANSI 372 states that devices used for conveying or dispensing water to be used for human consumption through drinking or cooking shall not contain a weighted average lead content in excess of 0.25%.

Support 7.3.4. All backflow devices and piping are required to be supported from lateral movement, this must not obstruct the shutoffs, test cocks, or most importantly obstruct the relief valve on an RP

Installation. Backflow devices are required to be installed horizontally. Pre-approval is required if the device is to be installed in a vertical position as documentation is required to prove that the device can be installed vertically.

Bypasses. No bypasses around the premise protection device is permitted.

Connections. All plumbing connections must be downstream of the premise protection device, or a device will need to be installed on the connection.

Accessibility. Backflow preventer and vacuum breaker shall be installed in readily accessible areas to facilitate inspection, field testing, and maintenance.

RP relief port drain. Equal in size to the drain connection fitting (2" RP needs a 2" drain line), be rigid pipe, slope downward from the backflow preventer, require an air gap 2 times the pipe diameter or minimum 1" whichever is larger (2" RP requires an 4" air gap) ***A drain shall be provided unless a drain is unreasonable to install, a letter from the owner indicating that they are aware that the drain will not be installed is required. The City of Orillia shall not be held responsible for property damage due to relief port activation.**

RPs. must not be installed in a below grade pit or vault. DCVA's can be installed below grade if the pit can be maintained in a dry condition, all test cocks must be plugged using a means that is waterproof.

Thermal Expansion 7.6.1.16. Premise protection creates a closed loop and to protect against thermal expansion, a suitably sized diaphragm type expansion tank or an auxiliary thermal expansion relieve valve must be installed. See diagrams.

Labeling. Pipe work before the backflow device must be labeled, "no connection permitted".

Test Tag & Reporting. Once the water is turned back on:

- A valid test tag must be attached to or near the backflow device; and
- All Test Reports and Cross Connection Inspection Reports must be submitted through the City of Orillia's Swift Comply Testers Portal.

Annual Testing In accordance with the City of Orillia [Backflow Prevention Program](#), premise owners are required to have their premise protection device tested annually by a qualified contractor.

Thermal Expansion Relieve Valve

7.6.1.16.(1) Thermal Expansion. Protection against thermal expansion shall be required when a *check valve* is required by Article 7.6.1.10., a *backflow preventer* is required by Article 7.6.2.2., or a pressure reducing valve is required by Article 7.6.3.3.

A-7.6.1.16.(1) Thermal Expansion. Closed water systems with no expansion to public water systems need to accommodate thermal expansion using one of the following:

- (i) an expansion tank designed for use on the cold or hot potable water system

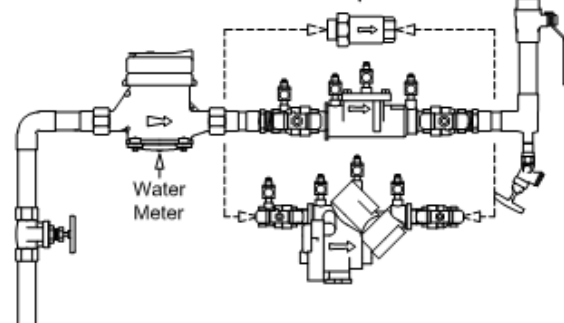
INFORMATION ONLY

The installation of a Backflow Preventer on the Water Distribution Piping entering the building creates a closed system in turn creating a situation where the hot water tank can increase pressure within the system through thermal expansion.

Combination Thermal Expansion Relief/Ball Valves are specifically designed to provide both a cold water supply shut-off to the hot water tank while also providing protection against any increase in water pressure caused by thermal expansion.

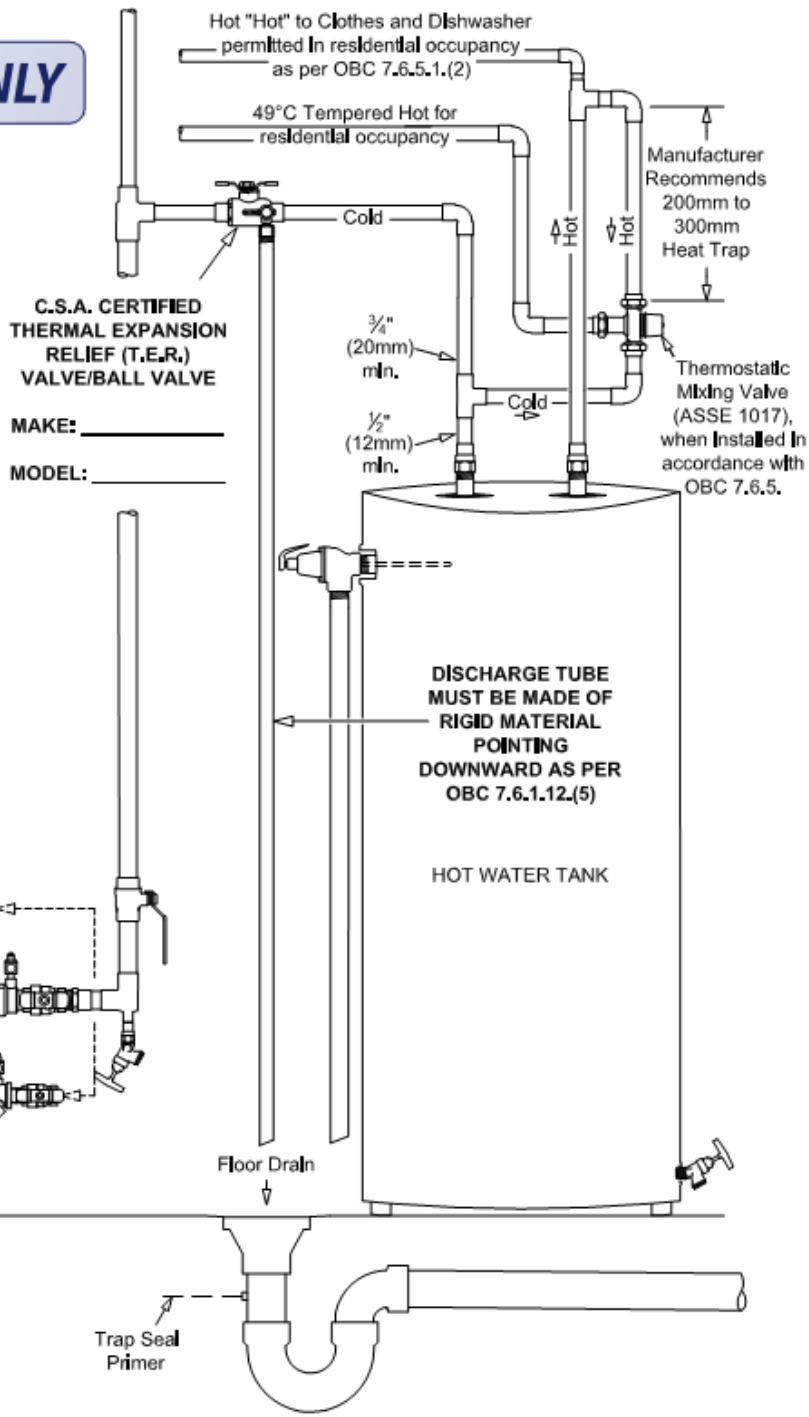
TYPE OF BACKFLOW PREVENTER

- D.U.C.
- D.C.V.A.
- R.P.



SIZE OF WATER SERVICE

- 1" (25mm)
- ¾" (20mm)
- ½" (12mm)



Thermal Expansion Tank (Suspended)

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Thermal Expansion Tank absorbs any increase in water pressure caused by thermal expansion prolonging T&P Relief Valves. Tank is pre-charged below incoming supply pressure.

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- D.C.V.A.
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