

# THERMAL EXPANSION TANK (SUSPENDED)

**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 , or
- (ii) a thermal relief valve piped to a drain forming an air break conforming to CSA B125, "Plumbing Fittings,".

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.

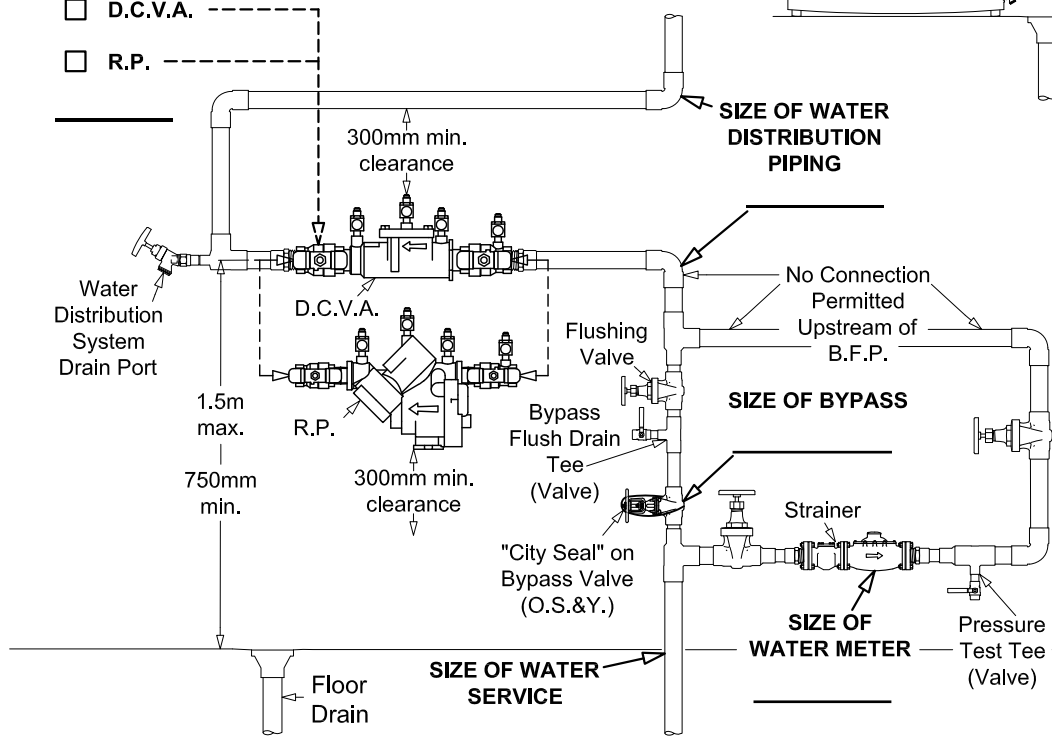
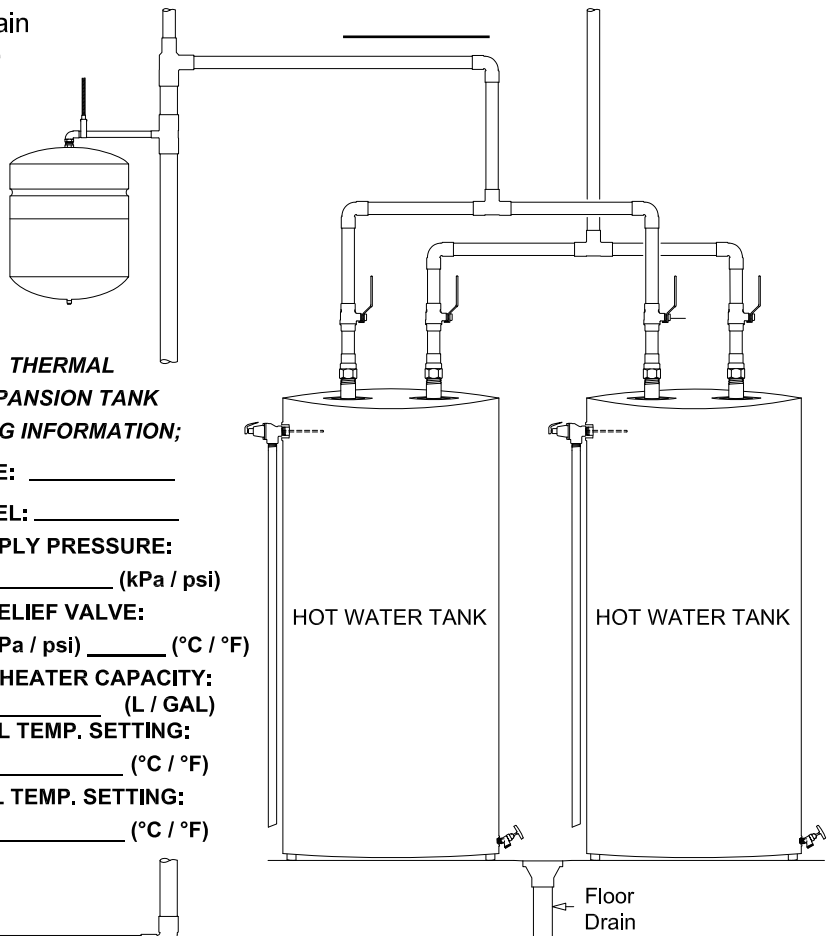
The Thermal Expansion Tank absorbs any increase in water pressure caused by thermal expansion prolonging T&P Relief Valves. Tank is pre-charged below incoming supply pressure.

**TYPE AND SIZE OF BACKFLOW PREVENTER**

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

**THERMAL EXPANSION TANK SIZING INFORMATION;**

**MAKE:** \_\_\_\_\_  
**MODEL:** \_\_\_\_\_  
**SUPPLY PRESSURE:** \_\_\_\_\_ (kPa / psi)  
**RELIEF VALVE:** \_\_\_\_\_ (kPa / psi) \_\_\_\_\_ (°C / °F)  
**WATER HEATER CAPACITY:** \_\_\_\_\_ (L / GAL)  
**INITIAL TEMP. SETTING:** \_\_\_\_\_ (°C / °F)  
**FINAL TEMP. SETTING:** \_\_\_\_\_ (°C / °F)



**Note: MINIMUM SIZE OF B.F.P.**

The premises isolation backflow preventer shall be sized according to the manufacturer's recommendations to avoid excessive pressure loss, and not less than the size of the water distribution pipe connected to the water meter.

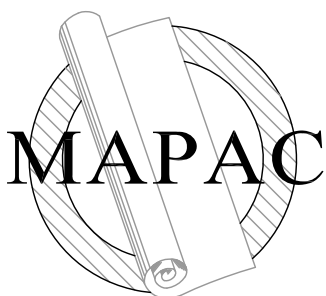
**Note:**

**Underground Incoming Service Pipe:**

Type K Copper, "High Density" PEX, "Blue904" PEX, Brass Epoxy Coated Welded Steel, Cement Lined Ductile Iron or C-900 PVC

**Connections:**

Copper - Compression, Victaulic or Solder Joint  
 PEX - Compression  
 Steel and Ductile - Flanged, "Uniflange", "EZ Flange" or Victaulic  
 PVC - "Uniflange" or "EZ Flange"



**METRO AREA PLUMBING ADVISORY COMMITTEE**  
*Subcommittee of the Toronto Area Chief Building Officials Committee*

TITLE	Premise Isolation and Thermal Expansion Piping Mounted, Suspended Tank.		
SCALE	NONE	DWN R. BLUNDEL	Jan. 10, 2010
DRAWING NUMBER	MAPAC-009-2010		