



**MECKLENBURG COUNTY**  
Land Use and Environmental Services Agency  
Code Enforcement

**CODE  
INTERPRETATION**

**Mechanical/Plumbing**

**Code Volume Reference:** C Plumbing Code (2009)

**Code Chapter Reference:** 607.3

**Subject:** Thermal Expansion Control

**Effective Date:** July 1, 1996

**Prepared/Revision Date:** April 2009

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**CODE:**

**607.3 Thermal expansion control.** A means of controlling increased pressure caused by thermal expansion shall be provided where required in accordance with Sections 607.3.1 and 607.3.2.

**607.3.1 Pressure-reducing valve.** For water service system sizes up to and including 2 inches (51 mm), a device for controlling pressure shall be installed where, because of thermal expansion, the pressure on the downstream side of a pressure-reducing valve exceeds the pressure-reducing valve setting.

**607.3.2 Backflow prevention device or check valve.** Where a backflow prevention device, check valve or other device is installed on a water supply system utilizing storage water heating equipment such that thermal expansion causes an increase in pressure, a device for controlling pressure shall be installed.

**INTERPRETATION:**

Thermal expansion devices (tanks or valves) shall be installed at each water heater whenever the building service is protected by a backflow device. The owner or his agent (contractor) may elect to provide a single tank for each structure by having an engineer registered in the **State of North Carolina** calculate the total thermal expansion load (*total accumulated amount of water displaced*) of all the water heating devices and ***provide a sealed letter of certification***. Drain allowances (*for waste water discharged from the expansion device*) shall be provided for thermal expansion valves. Thermal expansion tanks must be rated for 80 psi or higher.

**T & P VALVES ARE NOT APPROVED FOR THERMAL EXPANSION CONTROL.**

Prepared by: **Consistency Team**

Approved by: \_\_\_\_\_

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