



Hot Water Piping Insulation

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

12.3.1.4. Hot Water Piping Insulation

(1) Hot water pipes that are vertically connected to a hot water storage tank shall have heat traps on both inlet and outlet piping as close as practical to the tank, except where the tank

- (a) has an integral heat trap, or
- (b) serves a recirculating system

(2) The first 2.5 m of hot water outlet piping of a hot water storage tank serving a non-recirculating system shall be insulated to provide a thermal resistance of not less than RSI 0.62.

(3) The inlet pipe of a hot water storage tank between the heat trap and the tank serving a non-recirculating system shall be insulated to provide a thermal resistance of not less than RSI 0.62.

OBJECTIVE

Article 12.3.1.4. of the Building Code applies to the energy efficiency of a building or part of a building of residential occupancy within the scope of Part 9 and is intended for occupancy on a continuing basis during the winter months. Article 1.4.1.2 of Division A of the Building Code defines residential occupancy (Group C) as: means an occupancy in which sleeping accommodation is provided to residents who are not harboured for the purpose of receiving special care or treatment and are not involuntary detained and includes an occupancy in which sleeping accommodation is provided to residents of a retirement home.

The new insulation requirement requires waterlines (hot water only), within 2.5 m (8 ft) downstream from the hot water tank to be insulated to a minimum level of RSI 0.62. The requirement to insulate the hot water lines at the hot water storage tank will have an impact on plumbing design. Hot water supplies that are taken-off the main hot water supply are required to be insulated where the line(s) are within the 2.5 m (8 ft) distance.



The Building Code does not specifically state the minimum size of a heat trap that must be installed to satisfy requirements. Unless the hot water tank has an integral heat trap, a heat trap will need to be installed. Most hot water storage tanks in the marketplace have been including an integral heat trap for some time. This can usually be identified on the hot water tank or in the manufacturer's literature.

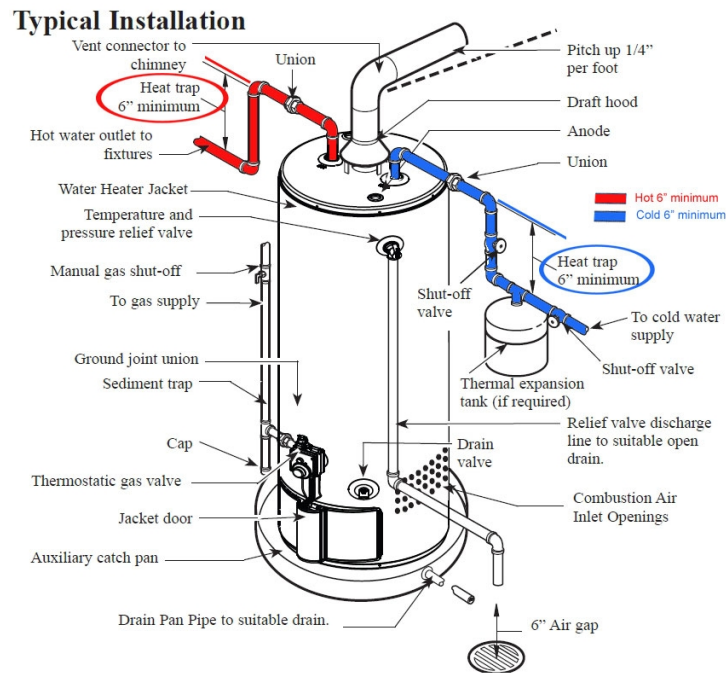


Diagram Source: <http://waterheatertimer.org/Low-hot-water-pressure.html>