



A FEW HOT WATER SYSTEM SAFETY REMINDERS

Persons using these hot water system diagrams are expected to have sufficient experience to recognize the safety considerations. Manufacturer's instruction manuals include additional safety related instructions and review is important.

For your convenience, we are including some additional safety considerations here.

TEMPERATURE AND PRESSURE RELIEF VALVE

The pressure relief valve is essential to prevent destructive pressures which can cause property damage, personal injury, or even death. Select a valve rated at a pressure setting equal to or lower than the working pressure of the water heater.

The temperature relief valve is necessary to prevent the generation of explosive steam pressures which can cause property damage, personal injury or even death. Select a valve whose relief BTUH rating (must comply with the latest edition of ANSI Z21.22) meets or exceeds the BTUH input rating of the water heater.

You should direct the discharge from relief valves to a location in which scalding hot water will not strike people. Also, provision must be made to accommodate full discharge of the tank without risk of property damage due to hot water.

CLOSED WATER SYSTEM

Water expands considerably when heated. For example, 40 gallons of water at 40°F (4°C) expands to 41 gallons at 160°F (71°C). Water is practically incompressible, so if a way is not provided to release or control this increase in volume, rupture of the water system can occur. A properly sized expansion tank should be a part of every system. Failures of water heaters or other components, due to thermal expansion, are NOT covered by warranty.

SCALDS

Careless or unanticipated use of hot water at ordinary water heater temperatures can result in scalds or scald related injuries. The temperature at which injury occurs varies with the person's age and the time of exposure. The slower response of children, aged or disabled persons increases the hazards to them.

<u>Temperature Setting</u>	<u>Time to Produce 2nd & 3rd Degree Burns on Adult Skin</u>
160°F	About 1/2 second
150°F	about 1-1/2 seconds
140°F	Less than 5 seconds
130°F	About 30 seconds
120°F	More than 5 minutes

The water heater thermostat should not be set above 120°F (49°C) without advising the owner and buyer of the risks stated above. Parts of the system furnishing general use hot water such as to lavatories, sinks and bathing facilities should be maintained below scalding temperatures and should incorporate anti-scald devices.

WATER DAMAGE

Experience in the plumbing field indicates that eventual leakage or loss of water from the system is likely. Make sure that the installation of the water heater is located near adequate floor drains or that piping to the outside is available to avoid property damage. When this is not provided, be sure to make the owner and buyer aware that such a risk is present regardless of which system is chosen, and that the installation is contrary to A. O. Smith's written instructions.