

H. Applications

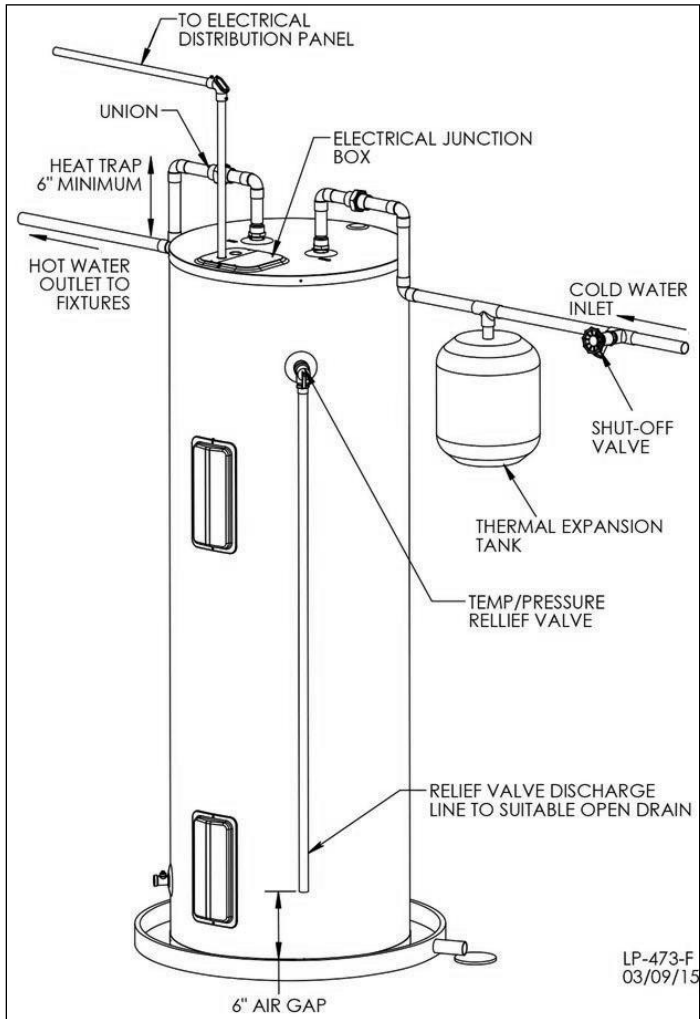


Figure 3 - Piping Detail - NOTE: Drawing is meant to demonstrate system piping concept. Heat traps are optional.

PIPING NOTES:

The following notes are applicable to all of the piping applications demonstrated on this page.

1. Minimum pipe size should match connection size. Upsize pipe accordingly if greater flow is required.
2. A thermal expansion tank suitable for potable water must be sized and installed within this piping system between the backflow preventer and the cold water inlet.
3. All circulators should have an integral flow check.
4. Drains and check valve between unit and storage tank will assist in purging air from system.
5. These drawings are meant to demonstrate system piping only. The qualified installer / service technician is responsible for all equipment and detailing required by local codes. In Massachusetts, you **MUST** install a vacuum relief valve per 248 CMR. Some installations (attic installations, for example) in other locales may also require a vacuum relief valve. Consult the AHJ and local codes to prevent vacuum related damage to the water heater. Vacuum related damages ARE NOT covered by product warranty.
6. Mixing valve application is optional, but recommended to help prevent scalding. See Part 3 for more information.

Part 4 - Wiring

A. Communication

NOTE: 80 gallon and larger water heaters are locked per Federal Regulations. The water heater is intended to be used for thermal energy storage by the utility. See Figure 8 for a detail of the lock. Contact the utility to unlock the box, enable the lower element, and adjust the lower thermostat.

This water heater is equipped with a disabled lower heating element. The utility must manually enable the lower element for it to operate.

B. Enabling the Lower Element

1. Remove the two (2) screws holding the lower access cover in place.
2. Use the key (included with the water heater) to flip the switch from OFF (right) to ON (left).
3. Remove the key.
4. Reinstall the lower access cover with the two screws removed in Step 1. See Figure 5 for details.

C. Field Wiring Details

CAUTION

Tank must be full of water before the power is turned on. Heating elements will be damaged if energized for even a short time while tank is dry. Failures due to "dry-firing" ARE NOT covered by warranty.

This unit is factory wired to a junction box on top of the water heater for field wiring connection. These heaters are equipped and wired for the maximum possible input allowable (see Table 3 for listing of inputs and amperage requirements). The voltage requirement and dedicated wattage load for the heater is specified on the rating label of the water heater. Consult your electrician or a qualified technician to determine if your electrical service is adequate for the additional load of the heater.

Refer to the wiring diagrams for field connections. All wiring must conform to all local, state, and the National Electric Code and regulations and should be done by a qualified licensed electrician. The water heater must be electrically grounded as part of the electrical connections.

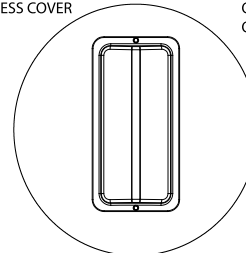
WARNING

HAZARDOUS VOLTAGE: Risk of electric shock. Can cause injury or death. This water heater must be electrically grounded as part of the electrical connection. Grounding must include at least one of the following:

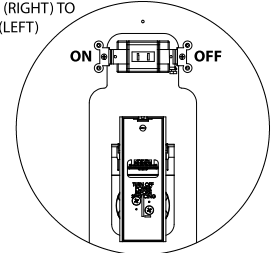
- A metallic conduit or metallic sheathed cable assembly suitable for this application with approved fittings
- A non metallic sheathed cable with a grounding conductor suitable for this application.

Electrical connections and materials must meet the requirements of all local, state, and the National Electric Code and regulations. Failure to follow these instructions could result in property damage, severe personal injury, or death.

REMOVE THE TWO (2)
SCREWS FROM THE LOWER
ACCESS COVER



USE KEY TO TOGGLE
SWITCH FROM
OFF (RIGHT) TO
ON (LEFT)



LP-608-F Rev. 1.10.19

Figure 4 - Enabling the Lower Element

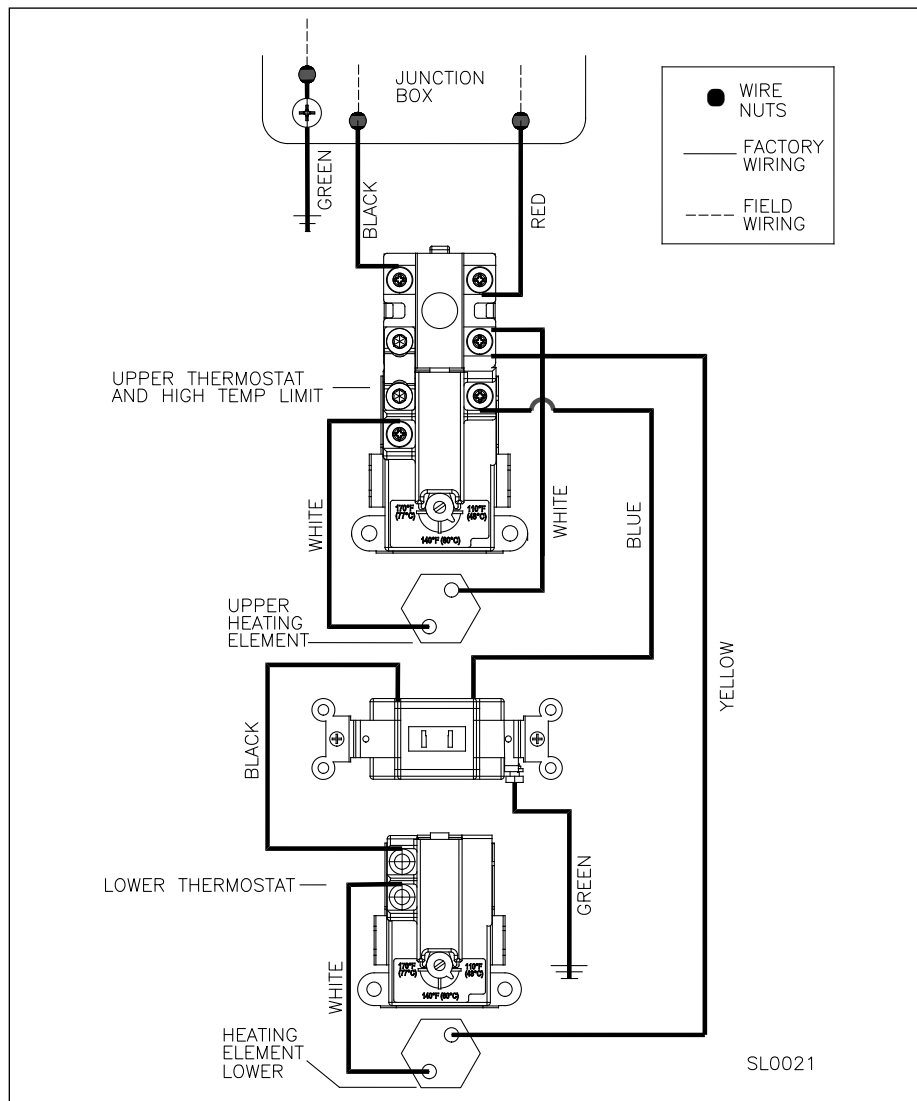


Figure 5 - Water Heater and Control Wiring

Part 5 - Installation Checklist

Water Heater Location	Yes	No
Close to area of heated water demand		
Indoors and protected from freezing temperatures		
Area free of flammable vapors		
Provisions made to protect area from water damage and control thermal expansion		
Sufficient room to service heater		
Relief Valve	Yes	No
Temperature and Pressure Relief Valve properly installed and discharge line run to open drain		
Discharge line protected from freezing		
Wiring	Yes	No
Power supply voltage agrees with water heater rating plate		
Branch circuit wire and fusing or circuit breaker of proper size		
Electrical connections tight and unit properly grounded		
Water Supply	Yes	No
Water heater completely filled with water BEFORE operating the unit		
Air purged from water heater and piping		
Water connections tight and free of leaks		

Table 4 - Installation Checklist