

EVERLAST[®]

Stainless Steel Electric Water Heater

HEAT TRANSFER PRODUCTS, INC.

INSTALLATION AND INSTRUCTION MANUAL FOR DUAL ELEMENT AND POINT OF USE ELECTRIC WATER HEATERS



INSTALLATION

Heaters must be installed in accordance with local codes. When possible, locate the heater near a floor drain for convenient flushing and draining. PROVISIONS SHOULD BE MADE SO THAT, IN THE EVENT THE WATER HEATER OR ITS FITTINGS WERE TO LEAK, THE RESULTING FLOW OF WATER WILL NOT CAUSE DAMAGE TO THE SURROUNDINGS OR OTHER CRITICAL AREAS OF THE BUILDING. The heater and water lines should be protected from freezing temperatures. Refer to "Standard Installation" on page 6.

TO CONNECT HEATER:

Use unions on the hot and cold water connections and the relief valve discharge line, so that the heater may be easily disconnected for servicing, when necessary.

WARNING

NEVER USE DIELECTRIC UNIONS OR GALVANIZED STEEL FITTINGS ON ANY DOMESTIC WATER CONNECTIONS. USE ONLY COPPER OR BRASS FITTINGS, TEFLON THREAD SEALANT MUST BE USED ON ALL CONNECTIONS.

1. Connect the cold water supply line to 3/4" pipe connection marked "COLD" near bottom of heater. Refer to "Standard Installation" on page 6.
2. Install a shut-off valve and a drain valve, not supplied, in the cold water line near heater.
3. Connect hot water line to 3/4" pipe connection to outlet marked "HOT" on side near the top of heater.
4. An opening is provided near the top of the heater for the installation of a Temperature and Pressure Relief Valve.

CAUTION

For protection against excessive pressures and temperatures in this water heater, install temperature and pressure protective equipment required by local codes, but not less than a combination temperature and pressure relief valve certified as meeting the requirements for Relief Valves and Automatic Gas Shut-off Devices for Hot Water Supply System, ANSI, by a nationally recognized testing laboratory that maintains periodic inspection of production of Listed equipment or materials. Install the valve into an opening provided and marked for the purpose in the water heater so that discharge water from the valve will not come in contact with any live electrical parts. The discharge opening must not be blocked or reduced in size under any circumstances. Pipe the discharge outlet of the relief valve to a suitable open drain, using a pipe full size of the relief valve outlet. The end of the discharge line should not be concealed or threaded and should be protected from freezing.

TO FILL HEATER:

Make certain that the field installed drain valve is completely closed. Open the shut-off valve in the cold water supply line. Open the hot water faucets to allow air vent from the heater and piping. Allow sufficient time for the heater to completely fill with water, as indicated by a steady flow of water from the hot water faucets.

WIRING INSTRUCTIONS:

The heaters are completely factory wired to junction box inside of the jacket in front of the heater. A 1/2" E.M.T. connector located on top of the unit is provided for field wiring connection. These heaters are equipped and wired for 120 volt A.C. for point of use heaters and 240 volt A.C. for dual elements heaters, as a standard. The voltage requirement and wattage load for the heater is specified on the heater identification plate or serial number label. Consult your local power company to determine if your electrical service is adequate for the additional load of the heater. Refer to the wiring diagrams on page 6, for field connections. To make service connections to 120 volt model, the white wire must be connected to the neutral leg. 270V electrical installation should be done by a qualified licensed electrician or by your local electric company. All wiring must conform to local code or the National Electric Code. Equipment grounding can be accomplished by using approved conduit and fittings or other approved conductive material. A grounding wire is provided on the junction bracket, and must be used.

WARNING

Tank must be full of water before power is turned on! Heating elements will be damaged if energized for even a short time while tank is dry!

CAUTION

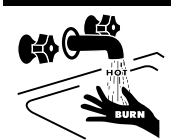
Be sure to ground the water heater! The preferred way to ground is with rigid metal conduit, between the main panel and the water heater junction box, with approved end fittings (check codes on the use of flexible conduit). If making a separate ground wiring connection, a green ground wire is provided in the water heater junction box. Replace the junction box cover and insulation after you have made the wiring connections.

OPERATION:

After water and electrical connections have been made and tank has been filled with water, turn on power to heater. The heater is now in operation.

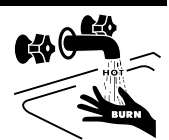
DANGER

DANGER



Water temperature over 125 degrees F. can cause severe burns instantly, or death from scalds. Children, disabled, and elderly are at highest risk of being scalded. See instruction manual before setting temperature at water heater. Feel water before bathing or showering! Temperature limiting valves are available.

DANGER



THERMOSTAT ADJUSTMENT:

There are two thermostats on dual element heaters and one for point of use units. They are set to 110 deg. F. to 120 deg. F. or less, to reduce the risk of scald injury. This temperature is satisfactory for average household use. If adjustment is necessary. **TURN OFF POWER TO HEATER**, remove black access cover and insulation. The thermostat protective cover should **NOT** be removed. Set temperature indicator to desired temperature, replace insulation and the black access cover. Turn on power to heater. See page 5, Thermostat/ECO Adjustment.

COMBINATION "THERMOSTAT AND HIGH LIMIT CONTROL (ECO)":

This heater is equipped with a combination. "Thermostat-High Limit Control (ECO)" which is located above the heating element, above the upper element on dual element heaters. If for any reason the water temperature becomes excessively high, the "High Limit Control (ECO)" breaks the circuit to the heating element. Once the switch opens, it must be reset manually. However, **THE CAUSE OF THE OVER TEMPERATURE CONDITION MUST BE CORRECTED FIRST**. To reset "High Limit Control (ECO)", **TURN OFF POWER TO HEATER**, remove black access cover (upper panel on dual element heaters) and insulation. The thermostat protective cover should **NOT** be removed. Press red "RESET" button toward tank. Replace insulation and black access cover before turning on power to heater.

SERVICE MAINTENANCE:

It is recommended that a few quarts of water be drained from the heater every few weeks. This will flush sediment deposits from the bottom of the heater and lengthen the heater's service life. Turn off power to heater during flushing operation, so the element(s) will not be damaged. To flush heater's tank, attach a hose to field installed drain valve, in the cold water supply line; close supply line shut-off valve, open drain line valve and hot water faucet(s) to vent heater while draining. Direct the flow of water to a drain where it will not cause damage. After flushing, operation is complete; make certain that heater is completely full of water before restoring power to heater.

WARNING

T&P RELIEF VALVE INSTRUCTIONS

WARNING: Following installation of the T & P Relief Valve, the valve lever **MUST** be operated **AT LEAST ONCE A YEAR** by the water heater owner to ensure that waterways are clear. Certain naturally occurring mineral deposits may adhere to the valve, blocking waterways, rendering it inoperative. When the lever is operated, hot water will discharge if the waterways are clear. **PRECAUTIONS MUST BE TAKEN TO AVOID PERSONAL INJURY FROM CONTACT WITH HOT WATER AND TO AVOID PROPERTY DAMAGE. BEFORE** operating lever, check to see that a discharge line is connected to the valve, directing the flow of hot water from the valve to a proper place of disposal. If no water flows when the lever is operated, replacement of the valve is required. **TURN THE WATER HEATER "OFF" AND CALL A PLUMBER IMMEDIATELY.**

This device is designed for emergency safety relief and shall not be used as an operating control. A relief valve functions, in an emergency, by discharging water. Therefore, it is essential that a discharge line be piped from the valve in order to carry the overflow to a safe place of disposal. The discharge line must be same size as the valve outlet must pitch downward from the valve and terminate at least 6" above a drain where any discharge will be clearly visible.

WARNING: REINSPECTION OF T&P RELIEF VALVES: Temperature and Pressure Relief Valves should be inspected AT LEAST ONCE EVERY THREE YEARS, and replaced, if necessary, by a licensed plumbing contractor or qualified service technician, to ensure that the product has not been affected by corrosive water conditions and to ensure that the valve and discharge line have not been altered or tampered with illegally.

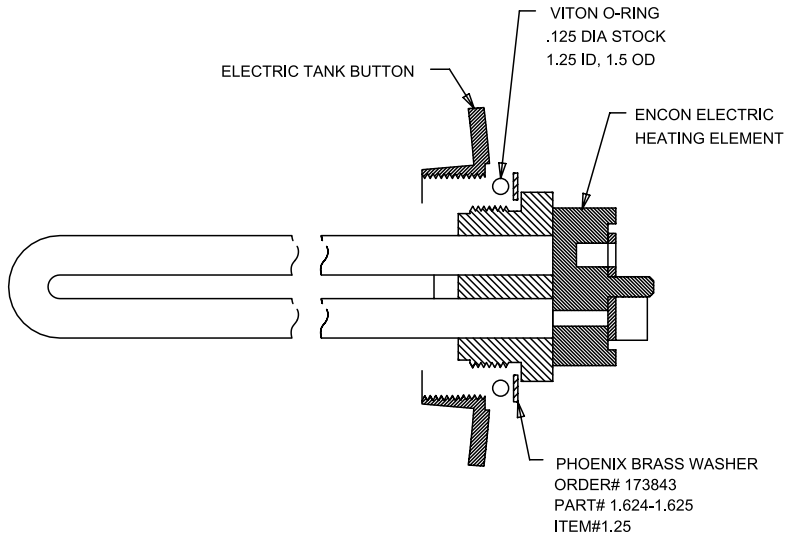
Certain naturally occurring conditions may corrode the valve and its components over time, rendering the valve inoperative. Such conditions can only be detected if the valve and its components are physically removed and inspected. **Do not attempt to conduct an inspection on your own.** Contact your plumbing contractor for a re-inspection to assure continuing safety.

WARNING: FAILURE TO REINSPECT THIS VALVE AS DIRECTED COULD RESULT IN UNSAFE TEMPERATURE OR PRESSURE BUILDUP WHICH CAN RESULT IN SERIOUS INJURY OR DEATH AND/OR SEVERE PROPERTY DAMAGE.

ASSEMBLED CROSS-SECTION VIEW OF ELEMENT CONNECTION

! WARNING

If the heating elements needs replacement, it is very important to use the same voltage, wattage, and construction. The element must be stainless steel and the hex plug must be made of brass.

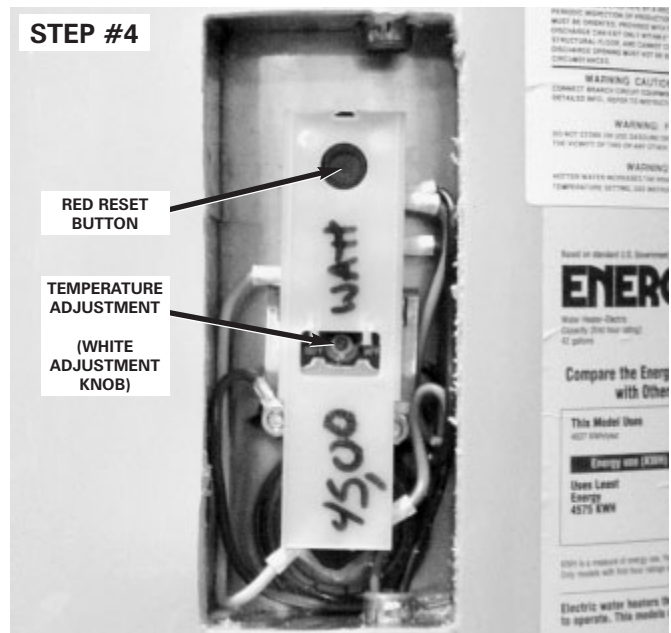


- STEP #1** TURN OFF POWER AND REMOVE WIRES FROM ELEMENT.
- STEP #2** REMOVE THE ELEMENT WITH A 1 1/2" SOCKET WRENCH.
- STEP #3** BE SURE THREAD AND OPENING ARE FREE OF DEBRIS.
- STEP #4** PUT A SMALL AMOUNT OF PIPE DOPE ON THE VITON O-RING. THIS HELPS SEAL THE ELEMENT.
- STEP #5** SCREW THE ELEMENT CLOCKWISE INTO TANK, AND TIGHTEN WITH A 1 1/2" SOCKET WRENCH. BE SURE O-RING IS SEATED PROPERLY.
- STEP #6** PRESSURE CHECK TANK FOR LEAKS AROUND ELEMENT, THEN RE-CONNECT WIRES TO THE ELEMENT.
- STEP #7** TURN POWER BACK ON TO THE WATER HEATER.

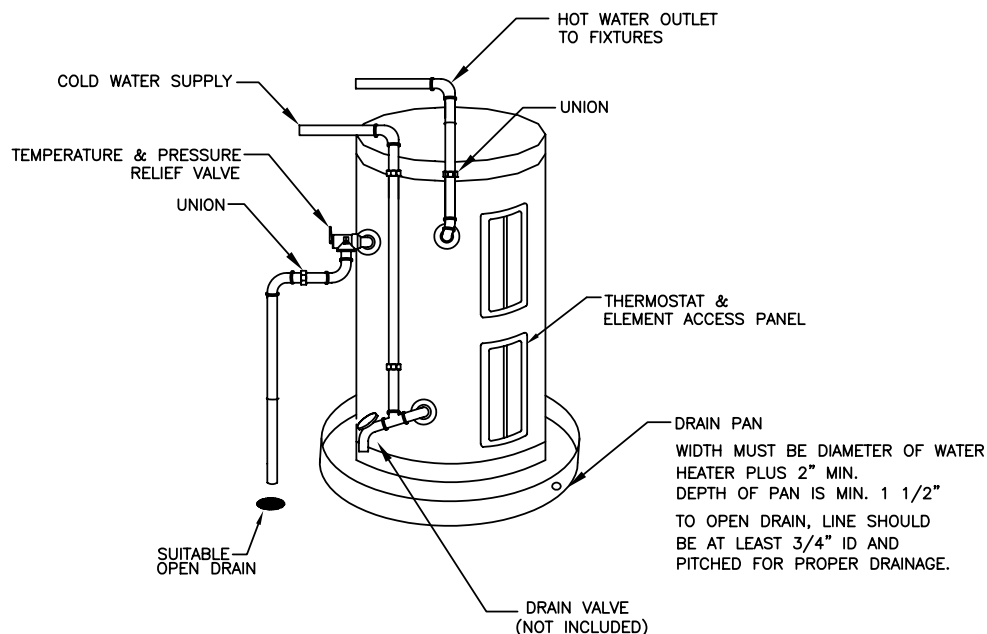
THERMOSTAT / ECO ADJUSTMENT

IF YOU NEED TO ADJUST THERMOSTAT(S) OR RESET THE E.C.O. (RED RESET BUTTON)

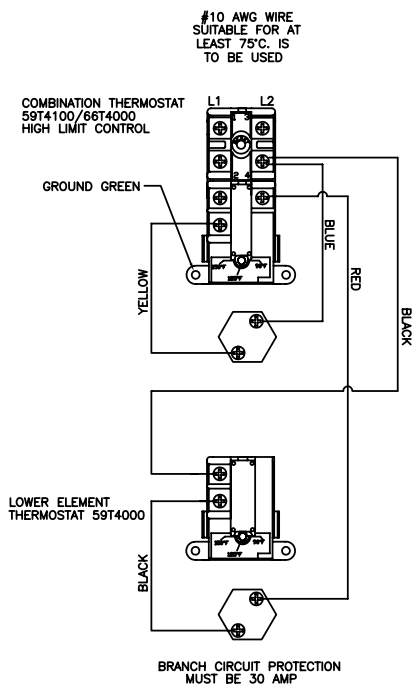
- STEP # 1** SHUT OFF POWER TO THE WATER HEATER BY REMOVING FUSE OR SHUTTING OFF THE CIRCUIT BREAKER.
- STEP # 2** REMOVE THE TWO SCREWS THAT HOLD ACCESS COVER IN PLACE AND REMOVE COVER.
- STEP # 3** OPEN FLAP OF INSULATION TO EXPOSE THE CONTROL.
- STEP # 4** RESET THE E.C.O. BY PUSHING IN THE RED BUTTON MARKED "RESET". ADJUST THE TEMPERATURE BY TURNING THE WHITE ADJUSTMENT KNOB.
- STEP # 5** REPLACE INSULATION.
- STEP # 6** REPLACE COVER HELD IN BY TWO SCREWS.
- STEP # 7** RESTORE POWER – REPLACE FUSE OR TURN ON CIRCUIT BREAKER.



STANDARD INSTALLATION

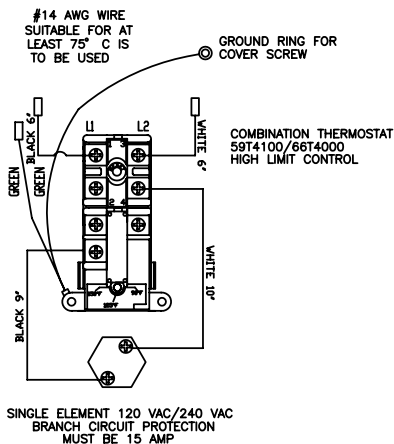


DOUBLE ELEMENT NON-SIMULTANEOUS OPERATION 240 VOLT AC - 4500 WATT ELEMENTS



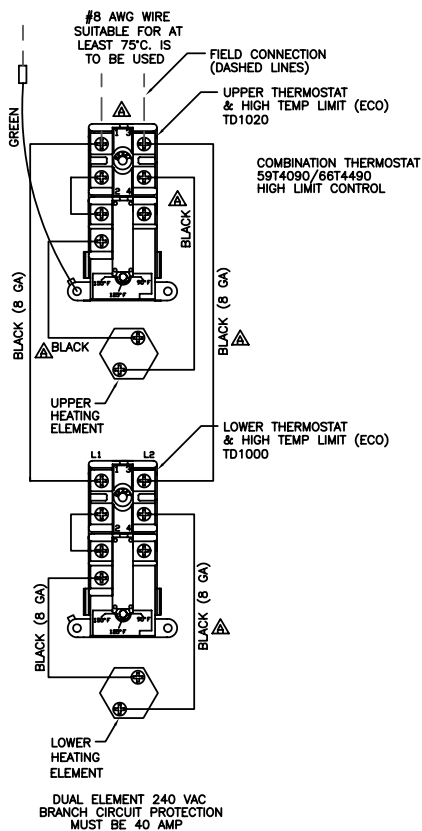
- * EV-30
- EV-30LB
- EV-45LB
- EV-50
- EV-80

POINT OF USE HEATERS SINGLE ELEMENT 120 VAC OR 240 VAC 120 VOLT AC - 1500 WATT ELEMENT



- * EV-6
- EV-12
- EV-20

DOUBLE ELEMENT SIMULTANEOUS OPERATION



- * EV-30S
- EV-30SLB
- EV-45SLB
- EV-50S
- EV-80S