



Electric Quick Guide To Hot Water

Read and follow the printed Installation Instructions that came with your water heater for model-specific information, important warnings and safety notices. Follow all local codes. If you lack the necessary skills to troubleshoot and repair your water heater, get help from a qualified person.

1



You'll need common plumbing tools and pipe joint compound (or Teflon[®] tape) approved for potable water. You'll also need a circuit tester or voltmeter. Most codes require the water heater to be installed in a metal drain pan. See the Installation Instructions for information about sizing the drain pan and other installation details.



If your house has copper pipes, consider an Installation Kit with compression fittings that do not require soldering. If your pipes are plastic, you'll need connectors/fittings for the specific type of plastic pipes used in your home. Read the instructions for the new connectors before cutting the existing water pipes.



Locate the circuit breaker marked "water heater" and turn it OFF. Some homes use fuses which should be removed. Your water heater may also have a disconnect switch which should also be turned OFF.

2



Because circuit breakers can be mismarked, always check the incoming power wires with a voltmeter or circuit tester to make sure the circuit you are working on is OFF.



Open a hot water faucet and let the hot water run until it's cool. Then, shut off the cold water supply to the water heater. Leaving the hot water faucet open will help the tank drain.



Connect a garden hose to the drain valve. Place the other end of the hose in a drain or outside (you could also use buckets). Open the water heater's drain valve. While the water heater is draining, read the Installation Instructions that came with your water heater. Disconnect the water and power lines and remove the old water heater.

3



Almost all homes have check valves in the plumbing system and now need a thermal expansion tank installed near the water heater. The expansion tank is attached to the cold water inlet line. To operate properly, the expansion tank must be pressurized with air. Refer to the expansion tank's instructions for details.



The Temperature and Pressure Relief Valve (T&P) is an important safety device. It opens to relieve pressure if the water temperature or pressure is too high. Use the new T&P that came with your new water heater. Don't reuse the old T&P valve.



The Temperature and Pressure Relief Valve (T&P) discharge pipe should be terminated near a floor drain with an air gap of no more than 6 inches between the end of the discharge pipe and the drain. Some localities require terminating the T&P discharge pipe outside. In cold climates, we recommend using a floor drain. In all cases, follow the codes for your location. **Warning: Do not plug or cap the T&P discharge pipe.**

4



Install the hot and cold water lines. The water heater's inlet and outlet connections contain non-metallic parts. Don't solder pipe directly to these connections. Instead, solder threaded adapters to short pieces of pipe so that soldering is done a foot or so from the water heater connections. Open the cold water supply valve and fill the tank.



Open a nearby hot water faucet. At first, you'll just get air from the faucet, then sputtering, and finally, a full flow. Then, let the "hot" water run full for three minutes to ensure the tank is completely full. The tank must be completely full of water before connecting electric power or you will burn out (dry fire) the upper heating element.



If the tank is not completely full of water when electric power is turned on, the upper element will burn out. If this happens, you'll have no hot water until the upper heating element has been replaced.

5



Check the water connections for leaks. Most leaks are due to problems with the inlet or outlet water connections (not a tank leak).



Consult the Installation Instructions and the wiring diagram and labels on the water heater. Make sure your home's wiring and circuit breakers are in good condition and are correct for the model you are installing. Connect the power wires and the green or copper ground wire. The ground wire must be connected to the water heater's green ground screw.



The Installation Instructions have a handy Check List. Review each item on the Check List and make corrections or repairs as necessary. It's important that every step has been successfully completed before turning electrical power on.

6



The upper and lower thermostats are both set at the recommended temperature setting of 120° Fahrenheit at the factory. Higher temperatures increase the risk of scalding. See the Installation Instructions and the water heater's labels for detailed instructions and important safety information about scalding.



Replace the insulation, plastic protectors, and the upper and lower access panels. Replace the cover on the electrical junction box (on the top of the water heater).



Turn the circuit breaker (or fuses) back on (and the disconnect if you have one). Because the tank is full of cold water, it may take several hours to reach normal operating temperature.

7



If you have some hot water, but not as much as you're used to, use a voltmeter and check the incoming voltage. See the wiring diagram and the water heater's label for power (voltage) requirements. Also, check the temperature setting on both thermostats—see Step 6.



If you have no hot water (not even warm) after a few hours, check to make sure the water heater is getting power. If you have power but no hot water, the upper element may have been "dry fired" and will need to be replaced. Replacement elements are inexpensive and widely available.



Drips from the Temperature and Pressure (T&P) Relief Valve discharge pipe usually mean you need a thermal expansion tank or your home's water pressure is too high (see Step 3). **Warning: Do not plug or cap the T&P discharge pipe.**

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TROUBLESHOOTING

Need help? Visit us on the web at www.hotwater101.com for more installation and troubleshooting help. You can also call us toll-free (the number is in the Installation Manual and on the water heater's label). Carefully review the Check List found in the Installation Instructions and make sure each step was followed correctly.

The most common installation problem with electric water heaters is no hot water due to lack of electric power (or the wrong voltage). You may need a qualified electrician to locate and fix the problem. If your water heater is getting the correct voltage, and you still have no hot water (after about two hours), the upper heating element may have burned out because the tank was not completely full when the electricity was turned on. In that case, the upper heating element will have to be replaced.

Most leaks are from the inlet and outlet water connections (not from a tank leak).

Drips from the Temperature and Pressure (T&P) relief valve discharge pipe usually mean you need a thermal expansion tank or your home's water pressure is too high (see Step 3). **Warning: Do not plug or cap the T&P discharge pipe.**

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