



DO-IT-YOURSELF INSTALLATION TIPS FOR HEAT PUMP WATER HEATERS

BEFORE YOU BEGIN

Be sure to familiarize yourself with all elements of installing a standard electric water heater before you dive into installation recommendations specific to heat pump water heaters.

While helpful, these tips do not serve as a replacement for manufacturer instructions.

This guide is intended for installation in unheated spaces. If you are installing in a heated or semi-heated space, your installation may require ducting. Please contact a professional installer if your project requires ducting.

DO YOUR HOMEWORK

Review the manufacturer's installation manual and any supplementary resources, such as videos, that may be available.

If you do not feel comfortable installing a standard electric water heater, do not attempt to install a heat pump water heater.

Verify that your installation will be in compliance with all state code and permit requirements. Note that city and county codes may also apply.

- **Oregon:** cbs.state.or.us/bcd
- **Idaho:** dbs.idaho.gov
- **Washington:**
fortress.wa.gov/ga/apps/sbcc/page.aspx?nid=4
- **Montana:** bsd.dli.mt.gov/bc/bs_index.asp

Ensure that your installation meets your utility's incentive and/or tax credit requirements. Visit HotWaterSolutionsNW.org for more information.



TOOLS TO HAVE READY

- Pipe cutter or hacksaw
- Measuring tape
- Gloves
- Plumber's wrench
- Screwdrivers
- Drill
- Level
- Ladder
- Electrical current tester or voltmeter
- Socket wrench
- Garden hose

PARTS TO HAVE READY

- Electrical tape
 - Wire nuts
 - Teflon thread tape
 - Water supply pipes
 - Push-fit connectors do not require soldering; verify local code compliance
 - Pipe connector for temperature/pressure relief valve pipe
 - PVC pipe and accessories for condensate lines
 - PVC connectors — threaded for condensate outlet connection (both 45° and 90° elbows)
 - Pipe hangers
 - PVC glue
 - Pipe insulation
 - Earthquake straps
 - Wood or other spacing blocks
 - Shims
- OPTIONAL:**
- Condensate pump
 - Clear vinyl tubing, sized for condensate pump and sufficient length to reach drain
 - Tubing hangers
 - Drain pan to sit beneath unit
 - New unit may have a larger circumference than existing tank
 - Thermal expansion tank if required by local code



1. REMOVE EXISTING UNIT

Turn off power to the existing unit at the breaker box and disconnect electrical connections. Turn off water to the existing unit and disconnect water connections, leaving some pipe for new connections. Use a hacksaw or pipe cutter for this step.

Remove existing unit.



2. POSITION HEAT PUMP WATER HEATER

Heat pump water heaters are top heavy and much heavier than standard electric units. Use care when moving.

Place drain pan in desired installation location, ensuring proper space between unit and wall.

Unless ducted, most units require at least 1,000 cubic feet of airflow from which to draw air. This is equivalent to space dimensions of 10'x12'x8'.

Installation in an outdoor or unprotected area is not recommended.

Position the unit so the air filter, cover and front panels can be easily accessed for inspection and servicing.

Place the new unit inside the drain pan.

Attach earthquake straps that comply with manufacturer's clearance requirements and local code. If necessary, attach blocks to studs using appropriate anchors and maintain proper spacing from wall when straps are tightened. Blocks may help reduce vibration transferring from the straps to the wall.



3. VERIFY FILTER CLEARANCE

Ensure installation location allows access to air filter, which must be cleaned regularly. See the manufacturer's manual for cleaning schedule.

Some filters lift up, while other filters are accessed on the side of the unit.



4. LEVEL UNIT

Ensure the unit is level, using shims if necessary.

Like with a refrigerator, leveling ensures the unit operates properly.

Some local codes require the unit to sit on a stand. Check with the requirements for your city.



5. CONNECT PIPES

Connect water pipes in accordance with manufacturer's instructions. Flexible pipe connections may be allowed and require no soldering, clamps, unions or glue.

Use Teflon tape on all threaded connections.

Install temperature/pressure relief valve (TPV) per installation instructions and local codes.



6. INSULATE HOT WATER SUPPLY

Insulate hot water supply with flexible insulation to help maximize energy savings.



7. INSTALL ELECTRICAL CONNECTIONS

Install electrical connections in accordance with manufacturer installation instructions.

Verify proper voltage with electrical current tester or voltmeter.



8. ADDRESS CONDENSATE MANAGEMENT

Identify condensate drain port(s) and choose the most appropriate drainage method for your installation.

Attach PVC pipe to drain port and route in a downward slope to either a floor or sink drain. If there is not a drain nearby, a condensate pump is required (see below left).

If drainage pipe is directed outside, ensure pipe will not freeze.



Condensate pump installation tips

- Install condensate pump per manufacturer instructions.
- Most condensate pumps can be attached to a wall hanger and plugged into a standard 115W outlet.
- Ensure tubing is connected securely to pump output and drains to a suitable termination point.
- Tubing may need to be routed up and over surrounding rooms.
- To help pull tubing through insulation and/or areas with limited access, attach a long PVC pipe to tube and gently pull tube through.
- Tubing and pipe hangers can be installed on condensate lines to prevent slippage and achieve a cleaner look.



9. FILL TANK

Double-check connections to ensure there are no leaks.

Turn on a hot water faucet in the house to allow air to escape the new tank as it is filled.

Turn on cold water supply to the unit.

When the hot water faucet in the house has a steady stream, the tank is full.

10. START YOUR HEAT PUMP WATER HEATER

The heat pump water heater is ready to turn on. Turn on the power to the unit at the breaker.

Verify the condensation pump is working properly by filling it slowly with water until the pump engages.

Refer to manufacturer's installation manual and Hot Water Solution's Homeowner Quick Reference Guide for maintenance, operation guidelines and available mode settings.