GEAppliances.com

Water Heaters

GeoSpring™ Hybrid Electric Residential

*ENERGY STAR® labeled product

As an ENERGY STAR® partner, GE has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Write the model and serial numbers here:

Model # _____

Serial # _____

You can find them on the rating label on the front side of your water heater.

Owner's Manual & Installation Instructions

GEH50DEED

Chauffe-eau

résidentiel hybride électrique

Manuel d'utilisation et d'installation

La section française commence à la page 24

Calentadores de agua

residenciales eléctricos híbridos

Manual del propietario e instalación

La sección en español empieza en la página 48

49-50292 04-13 GE

IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.

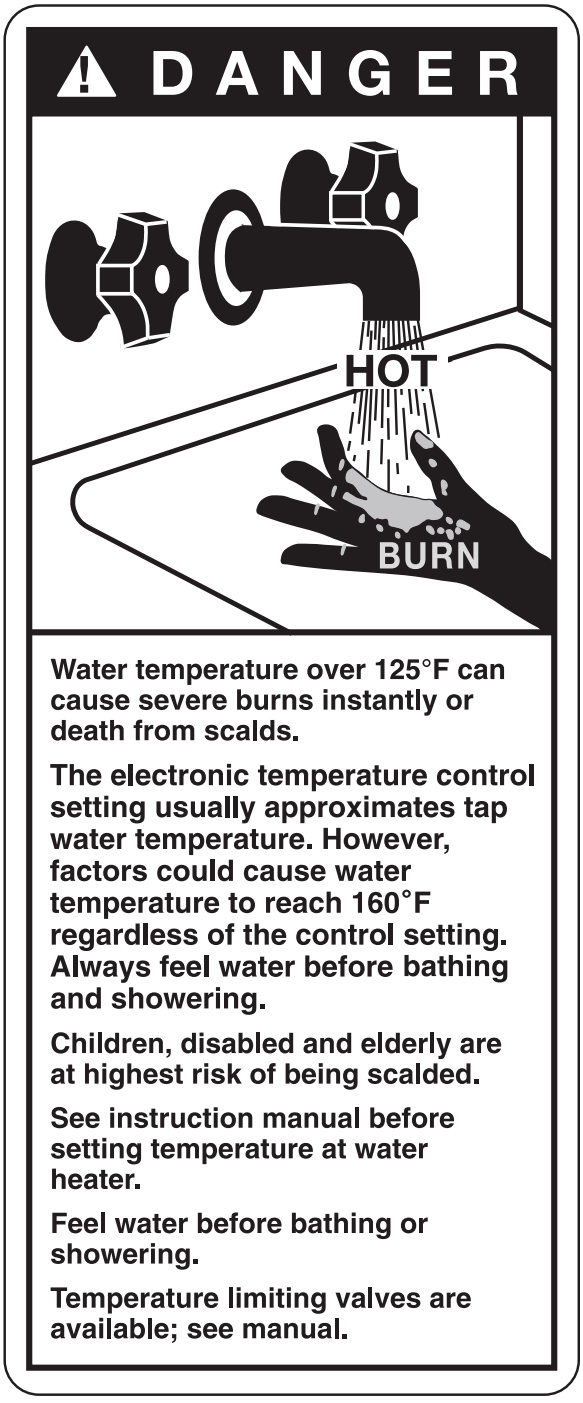
⚠ WARNING!

For your safety, the information in this manual must be followed to minimize the risk of fire or explosion, electric shock, or to prevent property damage, personal injury, or loss of life.

Be sure to read and understand the entire Owner's Manual before attempting to install or operate this water heater. It may save you time and cost. Pay particular attention to the Safety Instructions. Failure to follow these warnings could result in serious bodily injury or death. Should you have problems understanding the instructions in this manual, or have any questions, STOP and get help from a qualified service technician or the local electric utility.

WATER TEMPERATURE ADJUSTMENT

Safety and energy conservation are factors to be considered when selecting the water temperature setting via the water heater's user interface. Water temperatures above 125°F can cause severe burns or death from scalding. Be sure to read and follow the warnings outlined on the label pictured below. This label is also located on the water heater near the top of the tank.



Mixing valves for reducing point-of-use water temperature by mixing hot and cold water in branch water lines are available. Contact a licensed plumber or the local plumbing authority for further information.

Time/Temperature Relationship in Scalds

Temperature	Time to Produce a Serious Burn
120°F (49°C)	More than 5 minutes
125°F (52°C)	1-1/2 to 2 minutes
130°F (54°C)	About 30 seconds
135°F (57°C)	About 10 seconds
140°F (60°C)	Less than 5 seconds
145°F (63°C)	Less than 3 seconds
150°F (66°C)	About 1-1/2 seconds
155°F (68°C)	About 1 second

Table courtesy of Shriners Burn Institute

The chart shown above may be used as a guide in determining the proper water temperature for your home.

Thermostat has been set at the factory to 120°F (49°C) to reduce the risk of scald injury.

NOTE: Households with small children, disabled or elderly persons may require a 120°F (49°C) or lower thermostat setting to prevent contact with "HOT" water.

⚠ ***DANGER:*** *There is a Hot Water SCALD Potential if the control water temperature is set too high.*

SAVE THESE INSTRUCTIONS

⚠ *CAUTION!*

Risk of Fire - Hydrogen gas can be produced in a hot water system served by this water heater that has not been used for a long period of time (generally two weeks or more). HYDROGEN GAS IS EXTREMELY FLAMMABLE!! To dissipate such gas and to reduce risk of injury, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen is present, there will be an unusual sound such as air escaping through the pipe as the water begins to flow. Do not smoke or use an open flame near the faucet at the time it is open.

⚠ *WARNING!*

Risk of Fire - DO NOT store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. Keep rags and other combustibles away.

⚠ *FOR INSTALLATIONS IN THE STATE OF CALIFORNIA*

California Law requires that residential water heaters must be braced, anchored or strapped to resist falling or horizontal displacement due to earthquake motions. For residential water heaters up to 52 gallon (236.4 L) capacity, a brochure with generic earthquake bracing instructions can be obtained from: Office of the State Architect, 400 P Street, Sacramento, CA 95814 or you may call 916.324.5315 or ask a water heater dealer.

Applicable local codes shall always govern installation. For residential water heaters of a capacity greater than 52 gallons (236.4 L) consult the local building jurisdiction for acceptable bracing procedures.

California Proposition 65 Warning: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.

⚠ WARNING:

If the water heater has been subjected to flood, fire, or physical damage, turn off power and water to the water heater.

Do not operate the water heater again until it has been thoroughly checked by qualified service personnel.

Safety Precautions

A. Do turn off power to water heater if it has been subjected to overheating, fire, flood or physical damage.

B. Do Not turn on water heater unless it is filled with water.

C. Do Not turn on water heater if cold water supply shut-off valve is closed.

NOTE: Flammable vapors may be drawn by air currents from surrounding areas to the water heater.

D. If there is any difficulty in understanding or following the Operating Instructions or the Care and Cleaning section, it is recommended that a qualified person or serviceman perform the work.

Safety Controls

The water heater is equipped with a temperature-limiting control (TCO) that is located above the heating element in contact with the tank surface. If for any reason the water temperature becomes excessively high, the temperature-limiting control (TCO) breaks the power circuit to the heating element. Once the control opens, it must be reset manually. Resetting of the temperature limiting controls should be done by a qualified service technician.

⚠ CAUTION:

The cause of the high temperature condition must be investigated by a qualified service technician and corrective action must be taken before placing the water heater in service again.

To reset the temperature-limiting control:

1. Turn off the power to the water heater.

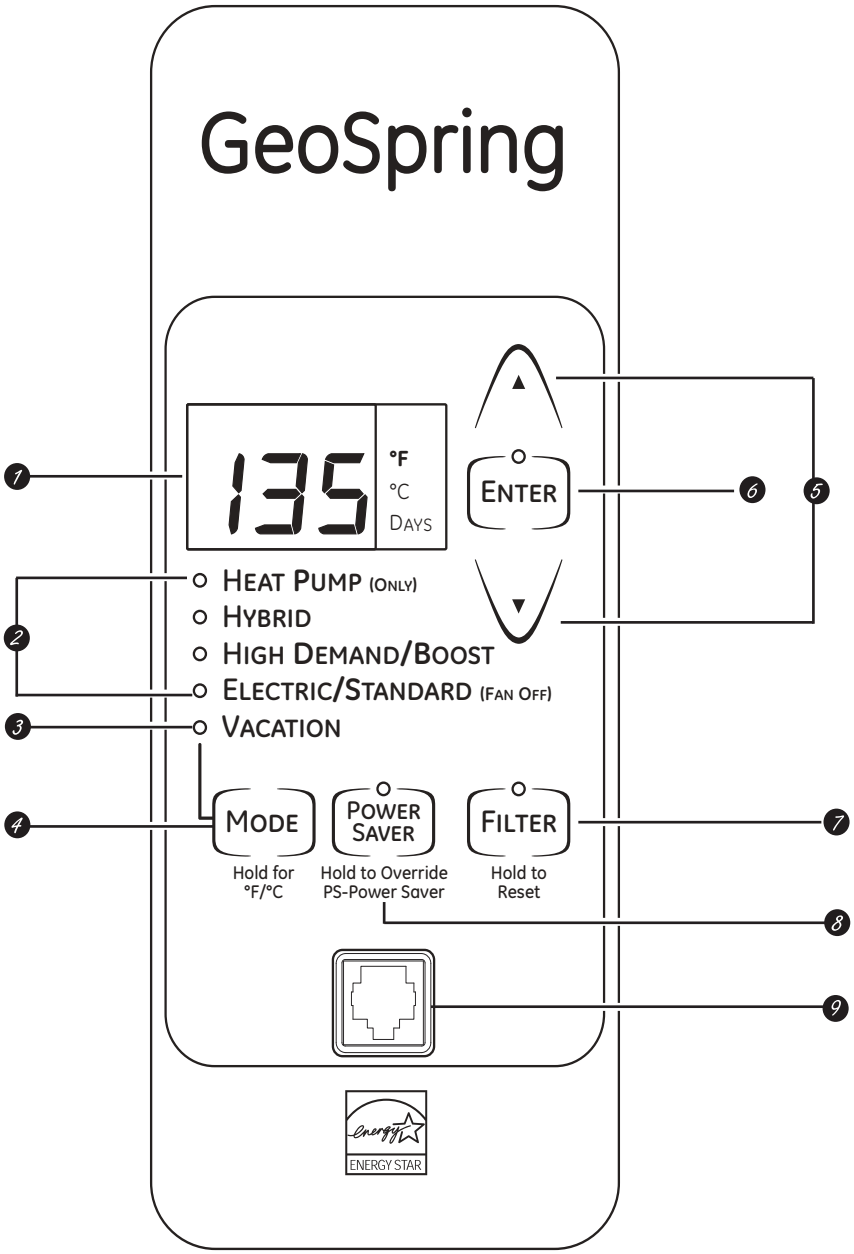
2 Remove the jacket access panel(s) and insulation. The thermostat protective cover should not be removed.

3 Press the red RESET button.

4. Replace the insulation and jacket access panel(s) before turning on the power to the water heater.

SAVE THESE INSTRUCTIONS

About the control panel.



Control Features

1 ***Display***

2 ***Operating Modes***
(See page 8 for description)

3 ***Vacation***
(See page 8 for description)

4 ***Mode Selector***
Use this button to alternate between available modes.

5 ***Arrow Pads***
Use these buttons to adjust the temperature setting.

6 ***Enter Key***

7 ***Filter Reset***
The filter is dirty and requires cleaning when the Red light is illuminated. Filter is located on top of the water heater. Press button and hold for 5 seconds to reset filter alarm.

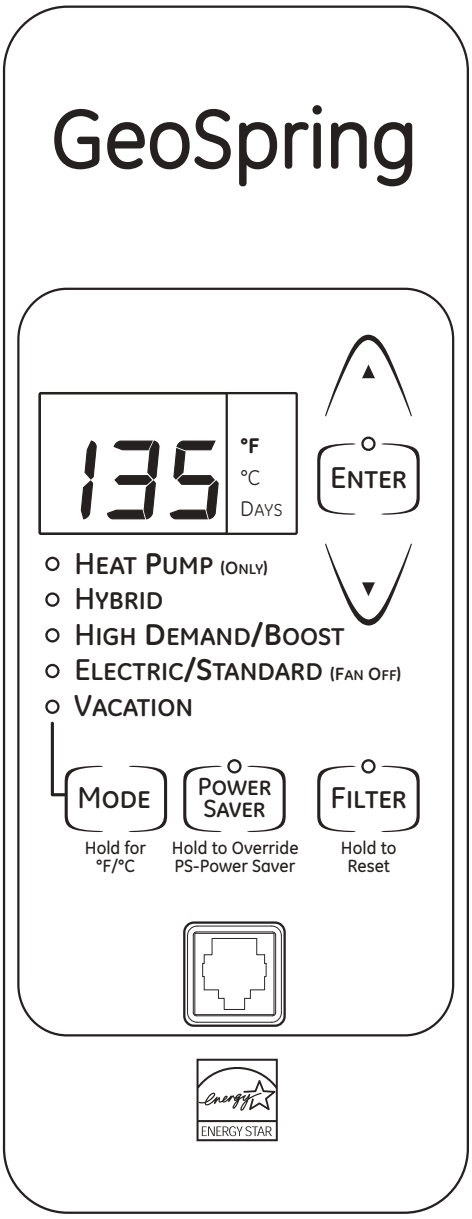
8 ***Power Saver Override***
For use with ACM module. Press and hold to bring unit out of Power Saver mode. Once pressed and Power Saver mode is cancelled, unit will remain out of Power Saver for the next 18 hours.

9 ***Appliance Communication Module Port***
For use with optional ACM module (see page 10 for details).

Turning on the water heater.

There is no power button for this unit. Once the water heater is wired and power is supplied, it will be on. The display will show the current water temperature setting. Current operating mode for the water heater is illuminated.

To comply with safety regulations, the controls are factory preset to 120°F (49°C) and Hybrid Mode. It is recommended that the unit be set to Heat Pump (only) mode to maximize energy savings. Operating in Hybrid mode provides a balance of energy savings and hot water use convenience. Reported energy consumption is based on operating the unit in Hybrid mode at a temperature setting of 135°F (57°C), and operation at lower temperature settings or in Heat Pump (only) mode will provide even greater energy savings.



Temperature setpoint:

Safety, energy conservation and hot water capacity are factors to be considered when selecting the water temperature setting of the water heater. To comply with safety regulations, the water temperature setpoint is factory set at 120°F (49°C). This is the recommended starting temperature setting.

NOTE: According to US Dept of Energy, the average residential water heater in the US is set at 135°F (57°C). GE GeoSpring™ Hybrid Water Heater's energy savings claims are based on a 135°F (57°C) temperature setting. The water temperature setpoint can be raised from the factory setting of 120°F to 135°F (49°C to 57°C) without sacrificing the claimed energy savings. If a lower temperature setting than 135°F (57°C) is used, greater savings in energy and operating costs may be achieved.

See "To Adjust the Temperature" section to change the water heater's temperature.

Hot water capacity:

If more hot water capacity is desired, increasing the temperature from 120°F to 135°F (49°C to 57°C) will enable the same tank of hot water to last about 25% longer because more cold water is mixed in at the shower or faucet.

Time/Temperature Relationship in Scalds

Temperature	Time to Produce a Serious Burn
120°F (49°C)	More than 5 minutes
125°F (52°C)	1-1/2 to 2 minutes
130°F (44°C)	About 30 seconds
135°F (57°C)	About 10 seconds
140°F (60°C)	Less than 5 seconds
145°F (63°C)	Less than 3 seconds
150°F (66°C)	About 1-1/2 seconds
155°F (68°C)	About 1 second

Table courtesy of Shriners Burn Institute

Risk of Scalding Reminder:

Water temperatures above 125°F (52°C) can cause severe burns or death from scalding. Be sure to read and follow the warnings outlined in this manual and on the label on the water heater. This label is located on the water heater near the upper element access panel.

See "Time/Temperature Relationship in Scalds" below as a guide in determining the proper water temperature for your home.

Mixing-valves:

Mixing valves for reducing point-of-use water temperature by mixing hot and cold water in branch water lines are available. Contact a licensed plumber or the local plumbing authority for further information.

⚠DANGER: ***There is a hot water scald potential if the water temperature is set too high. Households with small children, disabled, or elderly persons may require a 120°F (49°C) or lower thermostat setting to prevent contact with HOT water.***

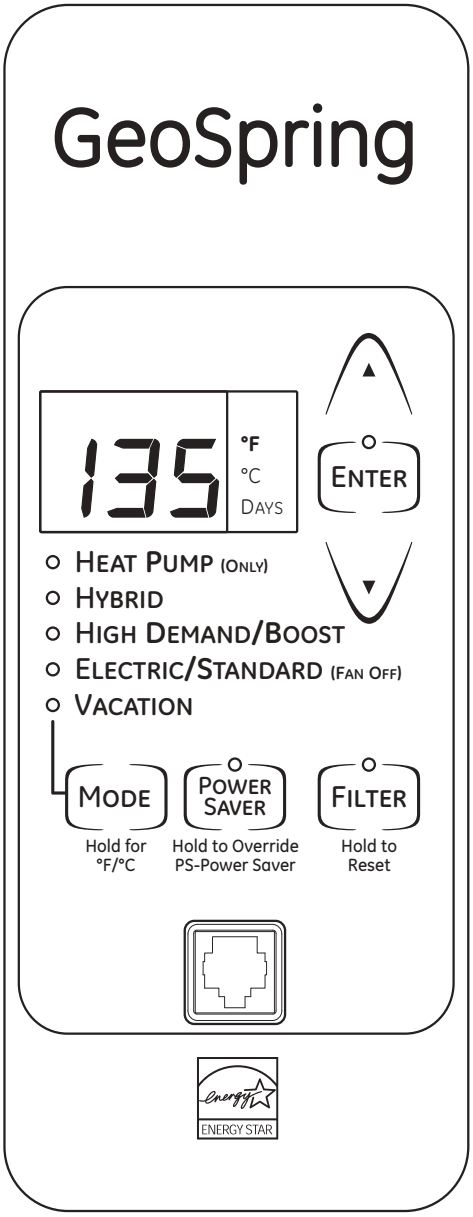
To Adjust the Temperature

Follow these steps:

1. Press the UP or DOWN arrow on the control panel key pad to desired temperature.
2. Press ENTER to accept the new setting.

Note: To change between °F and °C, press and hold MODE.

⚠DANGER: ***There is a Hot Water scald Potential if the water temperature is set too high. 120°F (49°C) is the recommended starting point for water temperature setting, but it can be adjusted to any temperature between 100°F and 140°F (38°C and 60°C).***



Operational Modes.

This water heater defaults to the Hybrid operating mode. Available modes are listed below and can be selected using the MODE button.

***Heat Pump (only) Mode**—RECOMMENDED FOR MAXIMUM SAVINGS*

Heat Pump (only) is the most energy-efficient mode for this water heater. It takes heat from the surrounding air to heat the water. The time it takes to heat the water is longer in this mode, so it may not be sufficient if you have a high-demand situation such as a large household or company.

Hybrid Mode

Hybrid mode combines the energy efficiency of Heat Pump (only) with the recovery speed and power of the Electric (Fan off)/Standard (Fan off) mode in most water usage situations. Hybrid mode will allow the unit to perform like a standard electric water heater while providing significant energy savings.

NOTE: Reported unit performance, energy consumption and savings are based on Hybrid Mode operation at a temperature setting of 135°F (57°C).

High Demand/Boost

This mode may be necessary if your household has a higher-than-average water usage or the unit is undersized for the household water demands. In this mode, the unit will use the electric heating elements only when the water demand rate is high. When using the heating elements, the water temperature will recover at a faster rate but it will use more energy to heat it. Unlike Electric/Standard (Fan off) mode, it will use the heating elements only when needed, and use the heat pump when water demand rates are lower.

NOTE: The difference between Hybrid mode and High Demand/Boost mode is that in High Demand/Boost mode the heating resistive elements are activated sooner than in the Hybrid mode.

Electric (Fan off)/Standard (Fan off) Mode

This mode uses only the upper and lower heating resistance elements to heat the water. The time it takes to heat the water is less in this mode, but it is the LEAST energy-efficient mode.

NOTE: In this mode the green LED light will flash after 48 hours as an indication that the unti is not operating in the most energy efficient mode. The unit will continue to operate in this mode and does not indicate an operating issue.

Vacation

This feature is used when you will be away from the home for an extended period of time and hot water is not needed. In this mode, the unit will drop the water temperature down to 50°F (10°C) and will use the most efficient heating mode to conserve energy while the heater is sitting idle. The unit will automatically resume heating one day before your return, so that hot water will be available.

For example if you will be gone 14 days, follow these steps:

1. Select VACATION by using the Mode button
2. Input total days you will be gone (in this example, 14) by pressing the UP arrow button (the default is 7 days)
3. Press ENTER.

The unit will drop the water temperature down to 50°F (10°C) for one day less than you will be gone (in this example, for 13 days). At the end of the day before you return (in this example, the 13th day), it will automatically return to the previous operating mode and heat the water to the original temperature setting so hot water is available upon your return.

To access any of these modes:

1. Press the MODE button on the control to the desired operating mode.
2. The green light will be illuminated on the chosen mode.

Filter:

Q: Why is there a filter?

A: In Hybrid and Heat Pump (only) the unit moves air through the system. The filter protects the unit from dirt. A clean air filter improves efficiency.

Q: How to clean the filter?

A: Leave power on and remove filter from top of unit. Filter can be vacuumed clean or rinsed with warm water. A dirty filter will reduce water heater efficiency!

Modes:

Q: What is Heat Pump (only)?

A: Heat Pump (only) is the most-efficient mode. It takes heat from the air to heat water, thereby cooling the surrounding air. Slower recovery but most-efficient mode.

Q: What is Hybrid?

A: The Hybrid mode combines benefits of Heat Pump (only) with the speed and power of Standard Electric. This provides great performance with less energy.

Q: What is High Demand/Boost?

A: High Demand/Boost can be used when hot water usage is higher than normal. The unit will be less efficient but will heat water faster in response to long water draws. For all normal draws, the unit will still use the efficient Heat Pump the majority of the time.

Q: What is Vacation mode?

A: If you are gone for an extended period, this mode lowers the water temperature to reduce energy used. Unit will switch to the previous mode one day before you get back.

Q: What is Electric/Standard (Fan off) ?

A: Electric/Standard (Fan off) mode uses only the resistance heaters to heat the water. This gives faster hot water recovery than Hybrid mode, but uses more energy. This mode operates without the fan, stopping the cool air normally discharged during heat pump operation.

Q: Why does the Electric/Standard (Fan off) green LED flash ?

A: In this mode the green LED light will flash after 48 hours as an indication that the unit is not operating in the most energy efficient mode.

Operation:

Q: Why can I hear the unit run?

A: In the most energy-efficient modes, Heat Pump (only), Hybrid, and High Demand/Boost, the method used to heat the water uses a fan that can be heard while running.

Q: The heat pump is not running its normal length of time. What causes this?

A: Under some conditions, the GeoSpring™ Hybrid Water Heater will operate using the electric elements instead of the heat pump to protect your unit and ensure hot water is available to you. These conditions include extreme cold ambient temperature (<45°F), extreme hot ambient temperatures (>120°F), or very low voltage conditions. The unit will return to normal operation when conditions permit.

Appliance Communication Module (where installed)

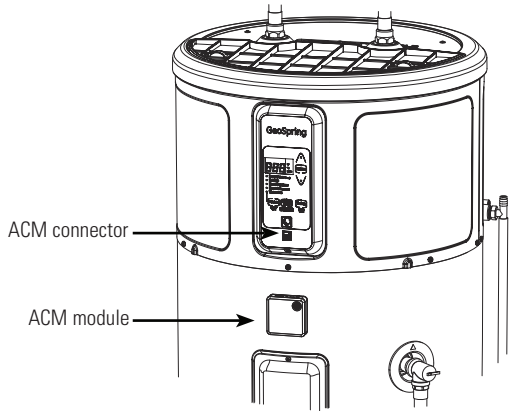
The Hybrid Electric heat pump water heater is compatible with the ***GE Smart Appliance communication module (ACM)*** which can be purchased separately. Contact your local utility or visit www.GEAppliances.com/***Smart-Appliance*** to see if your area is using ***ACM*** technology. Applying the ACM allows the unit to respond to utility signals or to join a home network.

The following demand response features may be available as part of a pilot test program with the local utility company to help consumers reduce peak electricity usage in the home.

INSTALLATION

The ACM module is equipped with magnets in the base of the module that will enable it to be attached to the painted metal exterior of the heat pump water heater.

Details on how to connect the cables to the module are in the instructions that come with the module.



Once the cable from the ACM module is plugged into the water heater's connection, follow the power-up directions included with the ACM module. As soon as the ACM module is operating, the heat pump water heater is ready to receive the ACM signals.

QUICK GUIDE

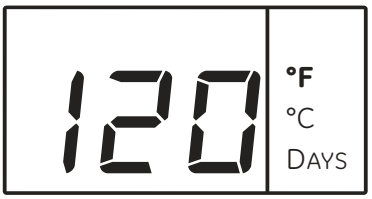
If your local utility company is utilizing ACM technology, the ACM module will receive the signals sent from your utility company. One of four signals will be sent:

- "Low" (represents lowest energy cost rate is available)
- "Medium" (represents increased energy cost rate)
- "High" (represents increased energy cost rate)
- "Critical"(represents "peak rate" energy cost rate)

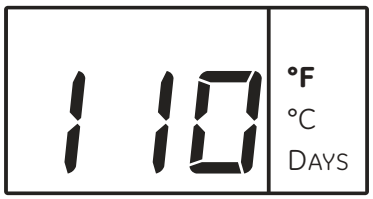
A heat pump water heater equipped with a ACM module will automatically recognize what energy cost rate is available and adjust its mode and temperature setting to use less energy when rates are medium, high and critical. When the heat pump water heater responds to these signals, the LED light above the Power Saver button will be on, indicating energy pricing periods are in effect, and the letters PS will be displayed on the LED if the user attempts to change the temperature without first pressing the Power Saver override button.

When the signal is low or when no ACM module is connected, the unit runs as normal. The following steps show how the unit reacts to Medium, High and Critical signal levels.

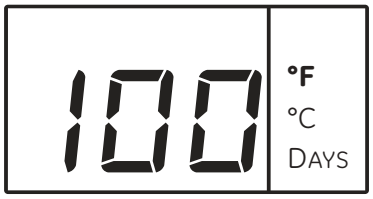
When the ACM signal is ***Medium***, the control will operate in Heat Pump (only) Mode and the water temperature will remain at the current user setting. If the current user temperature setting is 120°F the screen will display:



When the ACM signal is ***High***, the control will operate in Heat Pump (only) mode, with a water temperature setting of 110°F, and the screen will display:



When the ACM signal is ***Critical***, the control will operate in Heat Pump (only) mode, with a water temperature setting of 100°F, and the screen will display:



Notice: Appliance ACM connection carries voltage not compatible to computers or accessories. Do NOT plug laptops, modems, routers, etc into the Appliance RJ45 ACM connector. Use only with designated GE Appliance Accessories. Connection to computers and accessories may result in product damage.

When unit is operating in medium, high or critical, the LCD above the Power Saver button will be lit. If at any time you want to change the temperature setpoint while the unit is in Power Saver mode, press and hold the Power Saver button to override the Power Saver mode, then use the arrow buttons to change to the desired setting. Override will be in place for 18 hours. If you try to change the temperature without overriding the powersaver function, the letters PS will show on the display, indicating it is still in Powersaver mode.

Routine Preventive Maintenance

⚠ DANGER: *Risk of Scald - Before manually operating the relief valve, make certain no one will be exposed to the danger of coming in contact with the hot water released by the valve. The water may be hot enough to create a scald hazard. The water should be released into a suitable drain to prevent injury or property damage.*

NOTE: If the temperature and pressure-relief valve on the hot water heater discharges periodically, this may be due to thermal expansion in a closed water system. Contact the water supplier or your plumbing contractor on how to correct this. Do not plug the relief valve outlet.

Properly maintained, your water heater will provide years of dependable trouble-free service.

It is suggested that a routine preventive maintenance program be established and followed by the user.

Temperature and Pressure-Relief Valve:

At least once a year, lift and release the lever handle on the temperature and pressure-relief valve, located on the front-right side of the water heater, to make certain the valve operates freely. Allow several gallons to flush through the discharge line to an open drain.

Periodic Inspection (once a year)*:*

It is further recommended that a periodic inspection of the operating controls, heating elements and wiring should be made by service personnel qualified in electric appliance repair.

Most electrical appliances, even when new, make some sound when in operation. If the hissing or singing sound level increases excessively, the electric heating element may require cleaning. Contact a qualified installer or plumber for inspection.

Flushing Tank:

A water heater's tank can act as a settling basin for solids suspended in the water. It is therefore not uncommon for hard water deposits to accumulate in the bottom of the tank. To clean the tank of these deposits, follow these steps:

1. Attach a garden hose to the drain valve located at the bottom of the unit and direct that hose to a drain.
2. Open the drain valve with a flat screwdriver.
3. Once a few quarts of water have been drained, close the drain valve.

This should be done with the cold water supply open such that water removed through drain valve is replaced, and water supply flow helps to remove sediment.

Draining the Water Heater

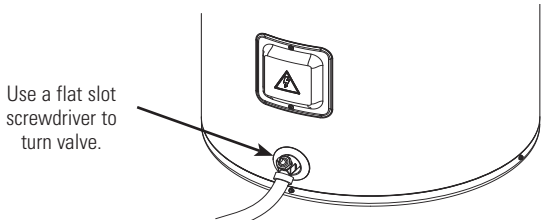
⚠ CAUTION: *Risk of Shock - Shut off power to the water heater before draining water.*

⚠ DANGER: *Risk of Scald - Before manually operating the relief valve, make certain no one will be exposed to the hot water released by the valve. The water drained from the tank may be hot enough to present a scald hazard and should be directed to a suitable drain to prevent injury or damage.*

To drain the water heater, follow these steps:

1. Attach a garden hose to the drain valve located at the bottom of the unit and direct that hose to a drain.
2. Turn off the cold water supply.
3. Admit air to the tank by opening a hot water faucet or lifting the handle on the relief valve
4. Open the drain valve with a flat screwdriver.

Note: See page 15 for product schematic.



Extended Shutdown Periods or Vacations Exceeding Vacation Mode Options

If the water heater is to remain idle for an extended period of time, the power and water to the appliance should be turned off to conserve energy and prevent a buildup of dangerous hydrogen gas. This unit has no power button, power can only be shut off at the circuit breaker or disconnect switch.

The water heater and piping should be drained if they might be subjected to freezing temperatures.

After a long shutdown period, the water heater's operation and controls should be checked by qualified service personnel. Make certain the water heater is completely filled again before placing it in operation.

NOTE: Refer to the Hydrogen Gas Caution in the Operating Instructions (see page 3).

Care and cleaning of the water heater.

Cleaning the Filter

In the Hybrid, Heat Pump (only) and High Demand/Boost modes, the heater moves air through the system and out the back of the unit. The filter is in place to protect the evaporator from dirt and dust.

A clean air filter is important to get the highest efficiency. Occasionally this filter will need to be cleaned (minimum once per year). When the filter requires cleaning, the Red light above the Filter button will be illuminated and an audible beep will sound.

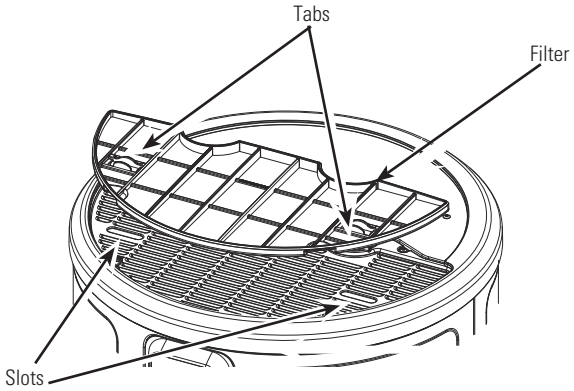
NOTE: If the filter gets too dirty, the unit will automatically switch to Electric (Fan off)/Standard (Fan off) mode and energy savings will be lost.

Leave the power on. Remove the filter from the top of the unit. Squeeze two tabs and lift to remove the air filter. Once it has been removed, the filter can be vacuumed or wiped clean with a damp cloth or rinsed with warm water.

Once the filter has been cleaned and dried, it can be replaced by aligning it into the slots in the top of the unit and pushing it down into place.

After the clean filter has been reinstalled, press and hold the ***FILTER*** button. If a heating cycle is on when the filter fault is reset, it will continue in electric mode to finish the cycle. After that, it will automatically revert to the mode it was in prior to being switched.

IMPORTANT: Filter must be cleaned when the alarm is displayed. A dirty filter will make the system work harder and result in a reduction of efficiency and possible damage to the system. In order to get the best energy efficiency available, make sure your filter is clean.

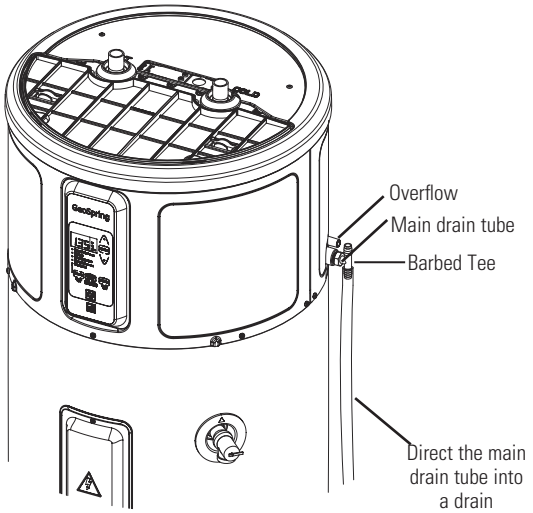


Clearing the Condensation Drain Tube

The main drain is intended to carry all condensate away. If it is clogged, the condensate will exit the overflow drain tube and onto the floor. This is intended as a notification to the user that the primary drain is clogged. Remove the barbed tee and drain tube, clear any debris and reattach.

Periodically inspect the drain lines and clear any debris that may have collected in the lines.

See Installation Instructions for more information.



Exterior Surfaces

Hand wash with warm water only.

Anode Rod

The anode rod should be removed from the water heater's tank and inspected after a maximum of 3 years service, then annually thereafter, and replaced when more than 6" (15.2 cm) of core wire is exposed at either end of the rod.

NOTE: Artificially softened water requires that the anode rod be inspected annually.

Due to shock hazard and to prevent accidental water leaks, this inspection should be done by a qualified servicer or plumber, and requires that the electric power and cold water supply be turned off before servicing the anode rod.

NOTICE: Do not remove the anode rod from the water heater's tank except for inspection and/or replacement, as operation with the anode rod removed will shorten the life of the glass-lined tank and will void warranty coverage.

The anode rod consumption and replacement are not covered by warranty.

⚠ CAUTION - IMPORTANT SAFETY NOTICE

This information is intended to use by individuals possessing adequate background of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

Tools needed:

- T20 Torx Screwdriver
- Slot Screwdriver
- Tape
- Socket Wrench
- Socket Extention 12" long
- 1 1/16" Socket
- Softset Sealant
- Anode Rod, if needed

* See page 72 for part ordering instructions

To service the Anode Rod:

1. Disconnect power, shut off the water supply, and partially drain one or two gallons from the water heater through the lower drain valve.
2. Remove the filter, trim ring, and front top cover as show in **Illustration A.**

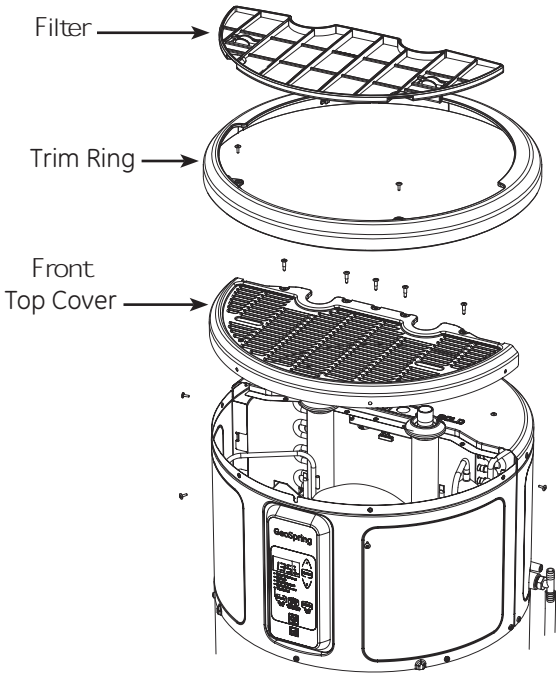


Illustration A

3. Reinstall the trim ring, place a protective layer of tape on sheet metal edges, and remove the anode rod cover as show in **Illustration B**.

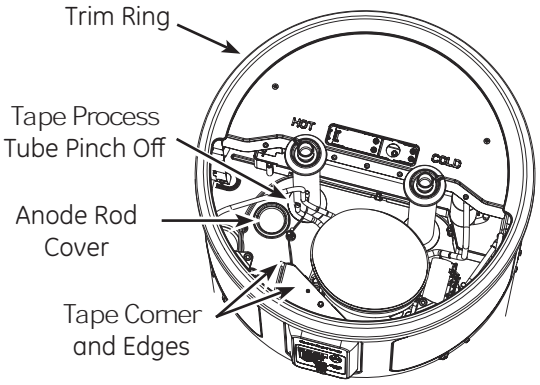


Illustration B

4. Using a slot screwdriver and ensuring to avoid damage to exposed wires, remove foam to uncover the anode rod as show in **Illustration C**.

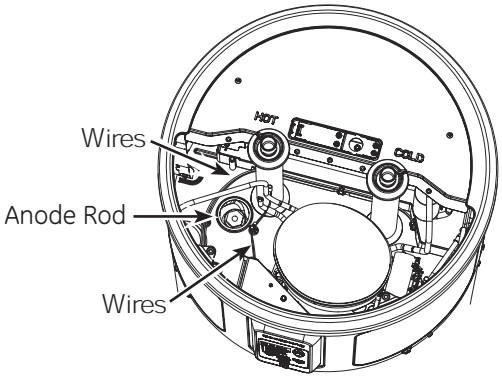


Illustration C

5. Using a 1 1/16" socket and extension, unscrew the anode rod, then lift out to inspect as show in **Illustration D**.

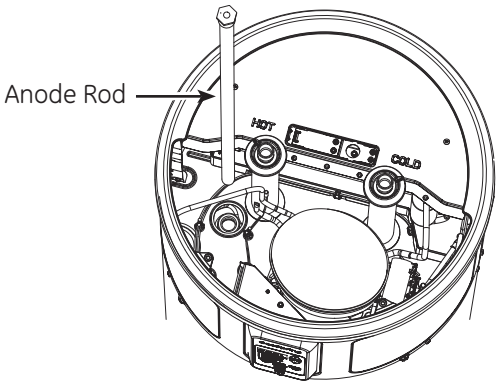


Illustration D

6. To install the anode rod, seal the threads with soft set sealant, thread into the port and using the torque wrench tighten to 50 ± 5 ft-lbs of torque. Reinstall the anode rod cover.
7. Turn water supply on, open a tap to remove any air in plumbing system, inspect for leaks, then turn the power on and reassemble the unit in reverse order as show in **Illustration A**.

The location chosen for the water heater must take into consideration the following:

LOCAL INSTALLATION REGULATIONS

This water heater must be installed in accordance with these instructions, local codes, utility codes, utility company requirements or, in the absence of local codes, the latest edition of the National Electrical Code. It is available from some local libraries or can be purchased from the National Fire Prevention Association, Batterymarch park, Quincy, MA 02169 as booklet ANSI/ NFPA 70.

POWER REQUIREMENTS

Check the markings on the rating plate of the water heater to be certain the power supply corresponds to the water heater requirements. **NOTE:** 208V installations may experience lower performance.

LOCATION

Locate the water heater in a clean dry area as near as practical to the area of greatest heated water demand. Long uninsulated hot water lines can waste energy and water. Unit must be installed in a level location.

NOTE: This unit is designed for any common indoor installation including: garage, utility room, attic, closet, etc. With the installation of a louvered door, it can be installed in rooms smaller than 10' x 10' x 7' (700 cu.ft.). Louvers should be 240 square inches (0.15 m^2) or greater. If two louvers are used one should be near the top of the door.

Place the water heater in such a manner that the air filter, cover, trim ring and front panels can be removed to permit inspection and servicing, such as removal of elements or cleaning of the filter.

The water heater and water lines should be protected from freezing temperatures and *high-corrosive atmospheres*. Do not install the water heater in outdoor, unprotected areas.

⚠ CAUTION: ***Risk of Property Damage -***
The water heater should not be located in an area where leakage of the tank or connections will result in damage to the area adjacent to it or to lower floors of the structure. Where such areas cannot be avoided, it is recommended that a suitable catch pan, adequately drained, be installed under the water heater. Attic installations require adequate flooring and access stairs.

NOTE: The heat pump operating range is 45°F to 120°F (7°C to 49°C). If the ambient temperature is outside of this range, the heat pump will turn off and the electric elements will be used until the ambient temperature returns to within the operating range.

LOCATION (CONT.)

WATER HEATER SIZING INFORMATION - READ BEFORE INSTALLING:

For existing home replacements:

- **Replacing an existing tank water heater?** If your current water heater has provided adequate hot water, and no other plumbing changes and/or renovations that would require additional hot water demand are in process or planned, then:
  - The GeoSpring™ Hybrid Water Heater can replace an equivalent size or smaller standard electric water heater.
  - If switching from gas to electric, the GeoSpring™ Hybrid Water Heater may replace the next size smaller gas tank type water heater.

For new construction installation:

Residental Water Heater Sizing Guide			
Family Size	Demand *	Gallon Capacity Recommended	
		Electric or GeoSpring ™	Gas
5+	High	100 (378.5 L)	75 (283.9 L)
	Avg or Low	80 (302.8 L)	50 (189.3 L)
3 to 4	High	80 (302.8 L)	50-75 (189.3-283.9 L)
	Avg or Low	50 (189.3 L)	40 (151.4 L)
2 to 3	High	50 (189.3 L)	40-50 (151.4-189.3 L)
	Avg or Low	40 (151.4 L)	40 (181.8 L)
1 to 2	High	40-50 (151.4-189.3 L)	40-50 (151.4-189.3 L)
	Avg or Low	30 (113.6 L)	30 (113.6 L)

*Assumptions for Avg or Low Demand household:
- Use of standard or low flow shower heads (2.5 gpm/11.4 L per minute or less)
- No showers with multiple shower heads and/or body jets.
- Standard bathtub (no oversized/jetted tubs)

Water Heater Temperature Setpoint:

The water heater temperature setting strongly impacts the amount of usable hot water available for showers and baths.

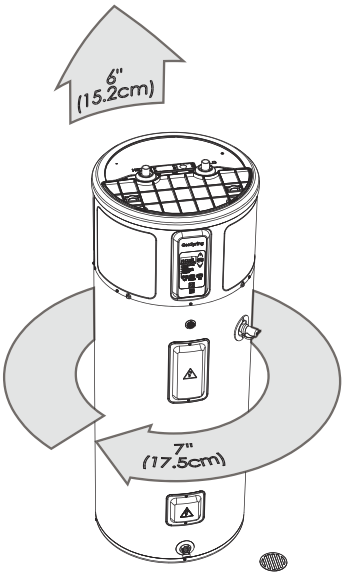
- Energy consumption/savings and efficiency testing of water heaters, including the GeoSpring™, is performed at a 135°F (57°C) setting, the average water heater setting according to the Department of Energy. All savings for GeoSpring™ are based on hybrid mode operation at 135°F (57°C).
- Safety regulations require a factory setting of 120°F to 125°F (49°C to 52°C) max for all new water heaters. Therefore, if your water heater is currently set at 130°F (54°C) or above and your new water heater is installed with a factory set setpoint of 120°F (49°C), the new water heater may seem to provide lower capacity than your existing water heater.
- The user can adjust the temperature setting to meet their needs. Always read and understand the safety instructions contained in the users manual before adjusting the temperature setpoint.

LOCATION (CONT.)

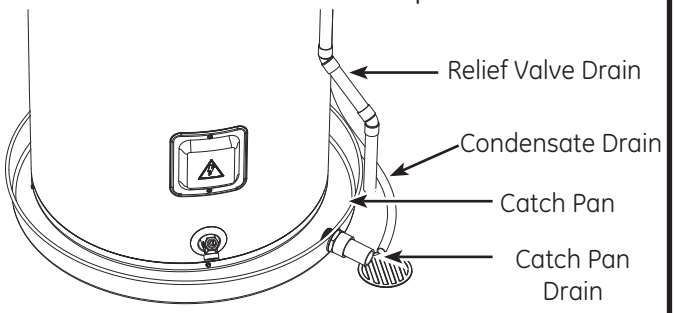
Required clearances:

There must be a 7" (17.5 cm) clearance between any object and the Front and Rear covers in the event service is needed. A minimum of 7" (17.5 cm) clearance with the sides of the water heater is also recommended for service access.

A 6"(152.4cm) minimum clearance is required to remove the filter for cleaning. The hot and cold water plumbing and electrical connections must not interfere with the removal of the filter.



Catch Pan Installation (If required)

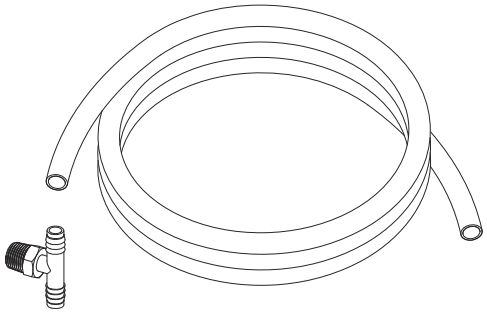


NOTE: Auxiliary catch pan MUST conform to local codes. Catch Pan Kits are available from the store where the water heater was purchased, a builder store or any water heater distributor. The catch pan should be 2" (5.1 cm) minimum larger than the Water Heater base diameter. To prevent corrosion and improve Drain Valve access it is recommended that the water heater be placed on spacers inside the catch pan.

Condensation drain

The unit has a condensate drain; therefore a drain must be available in close proximity to the unit. The drain must be no higher than 36" (91.4 cm) above the floor (drain must meet state and local codes). If no drain is available, then a common condensate pump with a capacity no less than 1 gallon (3.8 L)/ day must be purchased from a local builder supply store and installed.

NONSTANDARD PARTS NEEDED:



1 - 3/8" x 6' Flexible Tubing
1 - 3/8" x 3/8" x 1/2" NPT Male Barbed Tee
(supplied on some models)

THERMAL EXPANSION

Determine if a check valve exists in the inlet water line. It may have been installed in the cold water line as a separate backflow preventer, or it may be part of a pressure-reducing valve, water meter or water softener. A check valve located in the cold water inlet line can cause what is referred to as a "**closed water system**." A cold water inlet line with no check valve or backflow prevention device is referred to as an "open" water system.

As water is heated, it expands in volume and creates an increase in the pressure within the water system. This action is referred to as "**thermal expansion**." In an "open" water system, expanding water which exceeds the capacity of the water heater flows back into the city main where the pressure is easily dissipated.

A "**closed water system**," however, prevents the expanding water from flowing back into the main supply line, and the result of "**thermal expansion**" can create a rapid and dangerous pressure increase in the water heater and system piping. This rapid pressure increase can quickly reach the safety setting of the relief valve, causing it to operate during each heating cycle. Thermal expansion, and the resulting rapid and repeated expansion and contraction of components in the water heater and piping system, can cause premature failure of the relief valve, and possibly the heater itself. Replacing the relief valve **will not** correct the problem!

The suggested method of controlling thermal expansion is to install an expansion tank in the cold water line between the water heater and the check valve (refer to the illustration on page 15). The expansion tank is designed with an air cushion built in that compresses as the system pressure increases, thereby relieving the over-pressure condition and eliminating the repeated operation of the relief valve. Other methods of controlling thermal expansion are also available. Contact your installing contractor, water supplier or plumbing inspector for additional information regarding this subject.

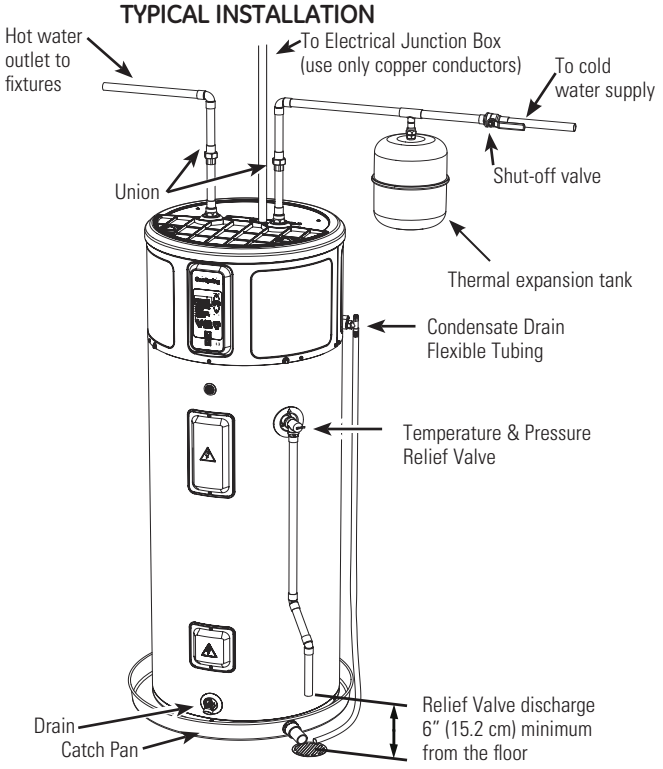
WATER SUPPLY CONNECTIONS

Refer to the illustration below for suggested typical installation. The HOT and COLD water connections are clearly marked and are ¾" NPT on all models. When connecting to the inlet/outlet ports, the use of ¾"female NPT tapered thread fittings with use of thread sealant is recommended. The installation of unions is recommended on the hot and cold water connections so that the water heater may be easily disconnected for servicing if necessary.

NOTE: Install a shut-off valve in the cold water line near the water heater. This will enable easier service or maintenance of the unit later.

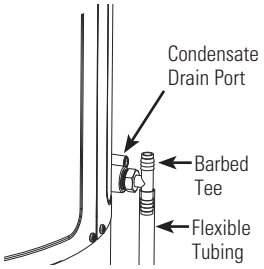
IMPORTANT: Do not apply heat to the HOT or COLD water connections. If sweat connections are used, sweat tubing to adapter before fitting the adapter to the cold water connections on heater. Any heat applied to the hot or cold water connection will permanently damage the internal plastic lining in these ports.

TYPICAL INSTALLATION



CONDENSATION DRAIN CONNECTION

This unit has a condensation tray. The water collected in the tray drains out of the side of the unit. It is important to install a barbed tee and drain hose to the primary drain port coming off the side of the unit. Direct the other end to the lower drain port on the side of the unit. Plumb the other end to a drain in the floor or no higher than 3' (0.9 m) above the floor. If such drain is unavailable, a condensate drain pump (not provided) must be purchased and installed. The drain tube should be routed so that the discharge water cannot contact live electrical parts to eliminate potential water damage.



RELIEF VALVE

⚠ WARNING: ***Risk of Unit Damage*** **- The pressure rating of the relief valve must not exceed 150 PSI (1.03 kPa), the maximum working pressure of the water heater as marked on the rating plate**.

A new combination temperature and pressure-relief valve, complying with the Standard for Relief Valves and Automatic Gas Shut-Off Devices for Hot Water Supply Systems, ANSI Z21.22, is supplied and must remain installed in the opening provided and marked for the purpose on the water heater. No valve of any type should be installed between the relief valve and the tank. Local codes shall govern the installation of relief valves.

The BTUH rating of the relief valve must not be less than the input rating of the water heater as indicated on the rating label located on the front of the heater (1 watt=3.412 BTUH).

Connect the outlet of the relief valve to a suitable open drain so that the discharge water cannot contact live electrical parts or persons and to eliminate potential water damage.

Piping used should be of a type approved for hot water distribution. The discharge line must be no smaller than the outlet of the valve and must pitch downward from the valve to allow complete drainage (by gravity) of the relief valve and discharge line. The end of the discharge line should not be threaded or concealed and should be protected from freezing. No valve of any type, restriction or reducer coupling should be installed in the discharge line.

⚠ CAUTION:

To reduce the risk of excessive pressures and temperatures in this water heater, install temperature and pressure protective equipment required by local codes and no less than a combination temperature and pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22. This valve must be marked with a maximum set pressure not to exceed the marked maximum working pressure of the water heater. Install the valve into an opening provided and marked for this purpose in the water heater, and orient it or provide tubing so that any discharge from the valve exits only within 6 inches above, or at any distance below, the structural floor, and does not contact any live electrical part. The discharge opening must not be blocked or reduced in size under any circumstances.

TO FILL THE WATER HEATER

⚠WARNING: ***Risk of Unit Damage*** **- The tank must be full of water before heater is turned on. The water heater warranty does not cover damage or failure resulting from operation with an empty or partially empty tank.**

Make certain the drain valve is completely closed.

Open the shut-off valve in the cold water supply line.

Open each hot water faucet slowly to allow the air to vent from the water heater and piping.

A steady flow of water from the hot water faucet(s) indicates a full water heater.

F11" fault code during installation: If the unit is powered on without a full tank, the error code "F11" will show in the display. Turn off the power, fill the tank with water (see above), then turn the power back on.

NOTICE:

Do not mis-wire electrical connections. 240V AC or 208AC must be applied across L1 and L2 wires as shown in 'Water heater junction box' illustration. Failure to do so will VOID the warranty, and can result in 120V applied to water heater, which may damage the compressor or other electrical components.

If 4-conductor wire is supplied to the water heater, cap the neutral, and connect the remaining wires as illustrated.

NOTE REGARDING UTILITY POWER-MANAGEMENT DEVICES (Sometimes called Peak Load Reduction Switches):

Some power-management switching devices or even some basic timer switches exist that REDUCE voltage from 240V to 120V during high-electricity-demand periods. These devices must be removed from the circuit providing power to the water heater because of the potential unit damage noted above.

However, switching devices which cut power from 240V to 0V on a periodic basis are acceptable.

"bAd linE" fault code during installation: If "bAd linE" is shown on the display, the unit is not receiving the correct voltage as a result of incorrect wiring. To correct this fault, turn the power off to the unit, correct the wiring issue, then turn the power back on.

ELECTRICAL CONNECTIONS

A separate branch circuit with copper conductors, overcurrent protective device and suitable disconnecting means must be provided by a qualified electrician.

All wiring must conform to local codes or latest edition of National Electrical Code ANSI/NFPA 70.

The water heater is completely wired to the junction box at the top of the water heater. An opening for 1/2" electrical fitting is provided for field wiring connections.

The voltage requirements and wattage load for the water heater are specified on the rating label on the front of the water heater.

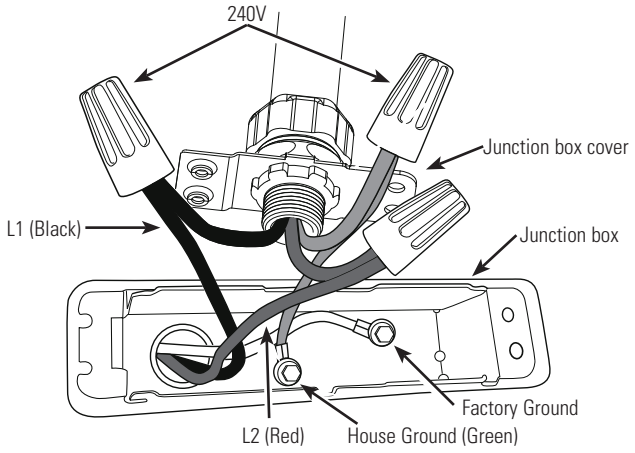
The branch circuit wiring should include either:

1. Metallic conduit or metallic sheathed cable approved for use as a grounding conductor and installed with fittings approved for the purpose.
2. Nonmetallic sheathed cable, metallic conduit or metallic sheathed cable not approved for use as a ground conductor shall include a separate conductor for grounding. It should be attached to the ground terminals of the water heater and the electrical distribution box.

To connect power to the water heater:

1. Turn the power off.
2. Remove the screw/screws holding the junction box top cover.
3. Install L1 to L1, L2 to L2 and ground to the green ground wire connected to the bottom of the junction box.

NOTE: Install electric connections according to local codes or latest edition of National Electrical Code ANSI/NFPA 70.



⚠WARNING: Proper ground connection is essential. The presence of water in the piping and water heater does not provide sufficient conduction for a ground. Nonmetallic piping, dielectric unions, flexible connectors, etc., can cause the water heater to be electrically isolated. Do not disconnect factory ground.

The manufacturer's warranty does not cover any damage or defect caused by installation, attachment or use of any type of energy-saving or other unapproved devices (other than those authorized by the manufacturer) into, onto or in conjunction with the water heater. The use of unauthorized energy-saving devices may shorten the life of the water heater and may endanger life and property.

The manufacturer disclaims any responsibility for such loss or injury resulting from the use of such unauthorized devices.

If local codes require external application of insulation blanket kits, the manufacturer's instructions included with the kit must be carefully followed.

Application of any external insulation, blankets or water pipe insulation to this water heater will require careful attention to the following:

- Do not cover the temperature and pressure-relief valve.
- Do not cover access panels to the heating elements.
- Do not cover the electrical junction box of the water heater.
- Do not cover the operating or warning labels attached to the water heater or attempt to relocate them on the exterior of the insulation blanket.
- Do not block the air inlet/outlets in the top covers or rear of the unit.

NOTE: This guide recommends minimum branch circuit sizing based on the National Electric Code. Refer to wiring diagrams in this manual for field wiring connections.

BRANCH CIRCUIT SIZING GUIDE

Total Water Heater Wattage	Recommended Over-Current Protection (fuse or circuit breaker amperage rating)			
	208V	240V	277V	480V
3,000	20	20	15	15
4,000	25	25	20	15
4,500	**30**	**25**	**25**	**15**
5,000	30	30	25	15
5,500	35	30	25	15
6,000	40	35	30	20
8,000	50	45	40	25
9,000	–	50	45	25
10,000	–	–	50	30
11,000	–	–	50	30
12,000	–	–	–	35

Total Water Heater Wattage	Copper Wire Size AWG Based on N.E.C. Table 310-16 (167°F/75°C.)			
	208V	240V	277V	480V
3,000	12	12	14	14
4,000	10	10	12	14
4,500	**10**	**10**	**10**	**14**
5,000	10	10	10	14
5,500	8	10	10	14
6,000	8	8	10	12
8,000	8	8	8	10
9,000	–	8	8	10
10,000	–	–	8	10
11,000	–	–	8	10
12,000	–	–	–	8

INSTALLATION CHECKLIST

☐ **1**. **Tank location:**
- – Does room size require louvered door or similar ventilation? 10' x 10' x 7' (700 cu. ft.) or 240 square inches (0.15 m^2) air-flow area needed.
- – Back of unit **away from wall** by 7 inches (17.5 cm), and sides have at least 7 inches (17.5 cm) clearance.
- – **Front** of unit is free and clear.
- – Is the water heater **level**? If no, add shims under the base of the unit.

☐ **2.** Verify **Air Filter** is installed. (Located in packaging).

☐ **3. Plumbing connections:**
- – Does not prevent **air filter** removal.
- – No leaks after **filling** the tank with water, either when water is flowing or not.

☐ **4. Condensate lines are in place:**
- – Main Drain flexible tubing installed.

☐ **5**. **Temperature and pressure-relief valve** is working and drain line completed per local code.

☐ **6**. **Electrical** verify 208/240 VAC to L1 and L2 at tank.

☐ **7. Electrical** connection does not prevent air filter removal.

☐ **8.** Verify **control panel** displays 120°F (49°C) Hybrid mode. Assist user in how to adjust temperature and modes (see "About the Water Temperature Setting" section on page 7).

WHAT TO EXPECT FOR "NORMAL STARTUP" IN HYBRID MODE

After the unit has been installed, with all electrical and water connections secure and checked, then the unit should be filled with water (vent tank by opening a hot water faucet somewhere in home to allow tank to fully fill with water). Once tank is full and power is energized, you may experience the following:

Elapsed Time	HEWH Actions	Comments
0 to 2 minutes	Unit will go through self-check.	This 2-minute off-time prevents compressor damage.
2 to 10 minutes	Compressor and fan turn on	This 8-minute period is used to ensure the tank is full of water (Dry-fire prevention algorithm).
10 to 30 minutes	Compressor and fan turn off, heating elements turn on for about 20 minutes	To quickly provide initial amount of hot water for user (about 25 gallons/94.6 L)
30 minutes and beyond	Upper element turns off and compressor turns back on	Uses efficient heat pump for majority of heating

NOTE: The heat pump operating range is 45°F to 120°F (7°C to 49°C). If the ambient temperature is outside of this range, the heat pump will turn off and the electric elements will be used until the ambient temperature returns to within the operating range.

Troubleshooting…

Before you call for service....
Save time and money! Review the chart below first and you may not need to call for service.

Problem	Possible Causes	What To Do
Water heater makes sounds	**A fan is used to move air through the system.**	• Some amount of fan sound is normal. If you hear an abnormal sound or the sound level seems unusually loud, then contact service.
Water heater is making the room cooler	**Room is not vented properly or is too small.**	• If the room is smaller than 10' x 10' x 7' (3m x 3m x 2.1m), then it must have a louvered door or other means to allow air exchange with surrounding rooms.
	Heat is removed from the air to heat the water	• This is normal
Water dripping down the outside of the heater.	**Condensate drain is clogged.**	• Clear out any debris in the drain port on the unit.
	Hot/Cold water connections are not tightened.	• Tighten the inlet and outlet pipe connections.
Not enough or no hot water	**Water temperature may be set too low.**	• See *About the Water Temperature Setting* section.
	Hot water usage pattern exceeds the capability of the water heater in current mode	• Change to different mode
	Water usage may have exceeded the capacity of the water heater.	• Wait for the water heater to recover after an abnormal demand
	Ambient temperature is too low	• For the water heater to work properly, its location needs to have a temperature of 32° to 150°F for Standard Electric mode and 45° to 120°F for all other modes.
	Cold water inlet temperature may be colder during the winter months.	• This is normal. The colder inlet water takes longer to heat.
	Leaking or open hot water faucets.	• Make sure all faucets are closed.
	Long runs of exposed pipe, or hot water piping on outside wall.	• Insulate piping.
	Not enough clearance to allow air to circulate for the heater pump.	• Make sure unit is 7" away from the wall.
	Room size is not appropriate for water heater.	• If room size is less than 10' x 10' x 7' (700 cu. ft.), install louvered door or similar ventilation.
	A fuse is blown or a circuit breaker tripped.	• Replace fuse or reset circuit breaker.
	Electric service to your home may be interrupted.	• Contact the local electric utility.
	Improper wiring.	• See the *Installation Instructions* section.
	Manual reset limit (TCO).	• See the *Safety Control* section, see page 4.
	Water connections to unit reversed.	• Correct piping connections.
	Electric supply may be off.	• Make sure electric supply to water heater is correct disconnect switch, if used, are in the ON position.

Problem	Possible Causes	What To Do
Water is too hot	**Water temperature is set too high.**	• See *About the Water Temperature Setting* section.
	⚠ **CAUTION:** For your safety, DO NOT attempt repair of electrical wiring, controls, heating elements or other safety devices. Refer repairs to qualified service personnel.	
	Electronic control has failed.	• Call for service.
Rumbling noise	**Water conditions in your home caused a buildup of scale or mineral deposits on the heating elements.**	• Remove and clean the heating elements. This should only be done by a qulified service personnel.
Relief valve producing popping sound or draining	**Pressure buildup caused by thermal expansion to a closed system.**	• This is an unacceptable condition and must be corrected. See Thermal Expansion Information on page 15 Do not plug the relief valve outlet. Contact a plumbing contractor to correct this.
The heater is beeping and the display says F11	**The water heater has not been filled with water before powering up. Powering up the heater without water will damage the electric heaters. The water heater warranty does not cover damage or failure resulting from operation with an empty or partially empty tank.**	• Fill the tank completely with water. Press ***ENTER*** to stop the alarm and then press ***POWER*** when the tank has been filled.
The filter light is on.	**The filter requires cleaning. A clean filter is necessary for effective operation.**	• Follow the instructions on how to remove and clean the filter on page 12.
The heater is beeping and the screen says "FA-F8"	**There is an issue with the heat pump system.**	• The unit will automatically switch to another available mode to ensure you continue to have hot water. Contact service immediately and give them the codes listed on the display screen.
The heater is beeping and the screen flashes an error code	**There is an issue with the water heater that requires immediate attention.**	• The heater may switch to another available heating mode. Contact service immediately. To stop the beeping noise (unless error code F2, F11 or bAd linE) press either the UP or down arrow button and the alarm will stop and the display will go back to normal (set temperature).
The water heater is beeping and the screen flashes, "bAd linE"	**Unit is not receiving 240VAC as intend.**	• Turn off power to water heater (generally at the breaker panel). Then read "Electrical Connections" section of Installation Instructions, see page 17. Then, contact the installer to verify electrical input to the water heater.
Hot Water has a rotten egg or sulfur smell	**Certain water supplies with high sulfate content will react with the anode rod that is present in all water heaters for corrosion protection of the tank.**	• The odor can be reduced or eliminated in most water heaters by replacing the anode rod with less-active material rod. In some cases, an added step of chlorinating the water heater and all hot water lines may be necessary, contact your local water professional or plumber for options and instructions. Call GE at 1.888.4GE.HEWH (1.888.443.4394) to learn how to purchase this replacement anode rod. A qualified servicer or plumber should do this replacement. Use of a non-GE approved anode rod, or operating the water heater without a GE approved anode rod will VOID the warranty.
Unit is not making normal sounds	**If unit is using electric resistance elements, it will not make fan or compressor sounds.**	• Check mode of unit.

Fault codes.

Fault Code Displayed	Condition	Action
F-A	T4 Not Rising	Call service
F-B	Discharge Temp Not Stable	Call service
F-C	Evaporator Not Frost Free	Call service
F-D	Superheat Too Low	Call service
F-E	Discharge Temperature Above Limit	Call service
F-F	Electronic Expansion Valve Out of Range	Call service
FG*	T5 Ambient Temperature Check	Technician service data
FH*	Compresor Load Test	Technician service data
FI*	Refrigerant Leak Test	Call service
F2	T2 Tank Temperature Sensor Failure	Call service
F3	Compressor Failure	Call service
F4	Fan Failure	Call service
F5	T3a Sensor (Evap inlet temperature) Failure	Call service
F6	T3b Sensor (Evap outlet temperature) Failure	Call service
F7	T4 Sensor (Compressor outlet) Failure	Call service
F8	T5 Sensor (ambient temperature) Failure	Call service
F9	Lower Heating Element Failure	Call service
F10	Upper Heating Element Failure	Call service
F11	Dry Tank Fault	See page 17
bAd linE (F12)	The voltage is too low at power-up	See page 17
F13	Stuck Key Fault	Call service
Dirty Filter (F14)	Filter is dirty	See page 12
F15	DataFlash Fault	Call service

* Some Models

GE Hybrid Water Heater Warranty.

GEAppliances.com

All warranty service provided by our Authorized Servicer Network. To schedule service, call 888.4GE.HEWH (888.443.4394). Please have serial number and model number available when calling for service.

Staple your receipt here. Proof of the original purchase date is needed to obtain service under the warranty.

For The Period Of:	*We Will Replace:*
One Year From the date of the original purchase	***Any part*** of the Hybrid Water Heater which fails due to a defect in materials or workmanship. During this ***limited one-year warranty,*** GE will also provide, ***free of charge,*** all labor and related service to replace the defective part.
Second through Tenth Year From the date of the original purchase	***Any part*** of the Hybrid Water Heater which fails due to a defect in materials or workmanship. During this ***limited ten-year parts warranty,*** labor and related service to replace the defective part are not included.

What Is Not Covered:

- **Service trips to your home to teach you how to use the product.**
- **Improper installation, delivery or maintenance.**
- **Failure of the product if it is abused, misused, altered, used commercially or used for other than the intended purpose.**
- **Use of this product where water is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system.**
- **Replacement of house fuses or resetting of circuit breakers.**
- **Damage to the product caused by accident, lightning, fire, flood or acts of God.**
- **Incidental or consequential damage caused by possible defects with this appliance, its installation or repair.**
- **Product not accessible to provide required service in a safe manner. Attic installation must have flooring and accessible stairs.**
- **If product removed from original installation location.**
- **Damages, malfunctions or failure caused by the use of repair service not approved by GE.**
- **Damages, malfunctions or failure caused by the use of unapproved parts or components.**
- **Damages, malfunctions or failure caused by operating the heat pump water heater with the anode rod removed.**
- **Anode Rod consumption and replacement.**
- **Damages, malfunctions or failure resulting from operating the heat pump with an empty or partially empty tank.**
- **Damages, malfunctions or failure caused by subjecting the tank to pressure greater than those shown on the rating label.**
- **Damages, malfunctions or failure caused by operating the heat pump water heater with electrical voltage outside the voltage range listed on the rating label.**
- **Water heater failure due to the water heater being operated in a corrosive atmosphere.**

EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.

For product purchased outside of the US, contact your dealer for Warranty and Service information.

Warrantor for Products Purchased in the United States: General Electric Company, Louisville, KY 40225.