Profile

WATER HEATERS

GeoSpring™ Hybrid Heat Pump Residential

OWNER'S MANUAL & INSTALLATION INSTRUCTIONS

PF40S10FP*
PH40S10BP*
PF50S10FP*
PH50S10BN*
PH50S10BP*
PH65S10BN*
PF65S10FP*
PH65S10BP*
PH80S10BN*
PF80S10FP*
PH80S10BP*

FRANÇAIS

Pour une version français de ce manuel d'utilisation, veuillez visiter notre site web à l'adresse GEAppliances.com.

ESPAÑOL

Para consultar una version en español de este manual de instrucciones, visite nuestro sitio de internet GEAppliances.com.

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.

NSF

Certified to NSF/ANSI/CAN 372

See http://info.nsf.org/Certified/Lead_Content/ for specific model listing

49-6000330 Rev 1 06-25

THANK YOU FOR MAKING GE APPLIANCES A PART OF YOUR HOME.

Whether you grew up with GE Appliances, or this is your first, we're happy to have you in the family.

We take pride in the craftsmanship, innovation and design that goes into every GE Appliances product, and we think you will too. Among other things, registration of your appliance ensures that we can deliver important product information and warranty details when you need them.

Register your GE appliance now online. Helpful websites and phone numbers are available in the Consumer Support section of this Owner's Manual. You may also mail in the pre-printed registration card included in the packing material.

GE APPLIANCES

49-6000330 Rev. 1

IMPORTANT SAFETY INFORMATION
READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

⚠WARNING

When using electrical appliances, basic safety precautions to reduce the risk of fire, explosion, electric shock, property damage, personal injury or loss of life should be followed, including:

1. **READ ALL INSTRUCTIONS BEFORE USING THIS WATER HEATER.**
2. **This water heater must be grounded.** Connect only to a properly grounded outlet. See “GROUNDING INSTRUCTIONS” found on page 26.
3. **Install or locate this water heater only in accordance with the provided installation instructions.**
4. **Use this water heater only for its intended use as described in this manual.**
5. **Do not use an extension cord set with this water heater.** If no receptacle is available adjacent to the water heater, contact a qualified electrician to have one properly installed.
6. **As with any appliance, close supervision is necessary when used by children.**
7. **Do not operate this water heater if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.**
8. **This water heater should be serviced only by qualified service personnel.** Contact the nearest authorized service facility for examination, repair, or adjustment.
9. **Do not use surge protectors or multi-outlet adaptors with this water heater.**

⚠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.

⚠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.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

⚠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.

READ AND SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INFORMATION
READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

⚠ 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. At a minimum, any water heater shall be secured in accordance with the California Plumbing Code, or modifications made thereto by a city, county, or city and county pursuant to Section 17958.5. For the latest Installation guidelines contact: (**https://www.dgs.ca.gov/DSA**); Division of the State Architect, Headquarters Office, 1102 Q Street, Suite 5100, Sacramento, CA 95811; (916) 445-8100 or call your local water heater dealer.

Applicable local codes shall always govern installation. Consult the local building jurisdiction for acceptable bracing procedures.

Water temperature over 125°F (51.7°C) can cause severe burns instantly or death from scalds.

Temperature control settings usually approximate tap water temperature. However, factors could cause water temperature to reach 160°F (71°C) regardless of the control settings.

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; see manual.

WATER TEMPERATURE ADJUSTMENT

Safety, energy conservation, and hot water capacity are factors to be considered when selecting the water temperature setting of the water heater. 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 to the left. This label is also located on the water heater near the top of the tank.

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

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

⚠DANGER There is a Hot Water SCALD Potential if the water temperature thermostat 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.

⚠WARNING Hot water can produce 3rd degree burns in less than 6 seconds at 140˚F (60˚C) and 30 seconds at 130˚F (54˚C). Water delivery temperature on mixing valve models is set at a 120˚F (49˚C) default temperature. Contact qualified service personnel for adjustments, if assistance is required.

Control has been set at the factory to 120°F (49°C) to reduce the risk of scald injury. This is the recommended starting temperature setting, but it can be adjusted to any temperature between 100°F and 150°F (38°C and 66°C).

To Adjust the Temperature

Follow these steps:

1. Press the + or - buttons 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.

READ AND SAVE THESE INSTRUCTIONS

49-6000330 Rev. 1

IMPORTANT SAFETY INFORMATION
READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

SAFETY CONTROLS

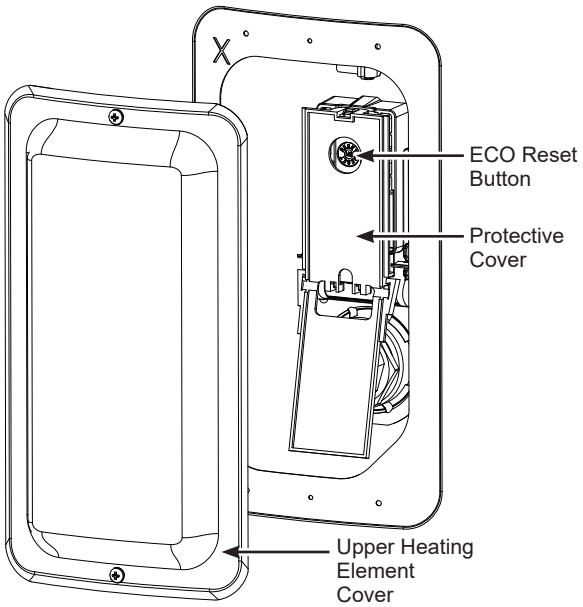
The water heater is equipped with a combination temperature sensor and high limit Energy-Cut-Off control (ECO) that is located above the upper heating element in contact with the tank surface. If for any reason the water temperature becomes excessively high, the high limit control (ECO) breaks the power circuit to the heating element. Once the control opens, it must be reset manually. Resetting of the high limit control 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.

⚠CAUTION Ensure power is completely removed from appliance before servicing, as utility switching devices may falsely indicate that power has been removed.

To reset the temperature-limiting control:

1. Turn off the power to the water heater.
2. Remove the upper heating element cover and insulation.
   The thermostat protective cover should not be removed.
3. Press the red RESET button.
4. Replace the insulation and element cover before turning on the power to the water heater.
5. Ensure water heater is operating properly after resetting the ECO.



READ AND SAVE THESE INSTRUCTIONS

Operating Instructions

Water Heater Capacity and Increasing Temperature Setpoint (For Water Heaters without an Integrated Mixing Valve):

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 is performed according to Department of Energy (DOE) requirements specified at the date of manufacture.
- Safety regulations require a factory setting no greater than 125°F (52°C) for all new water heaters. Therefore, if your old water heater was set to a hotter temperature than your new water heater with a factory set setpoint of 120°F (49°C), the new water heater may seem to provide lower capacity than your old water heater. This can be corrected by increasing the temperature setpoint.
- 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 less hot water is mixed in at the shower or faucet.
- Increasing the water temperature setpoint may improve the cleaning performance of dishwashers and washing machines.
- The user can adjust the temperature setting to meet their needs. Always read and understand the safety instructions contained in the owner's manual before adjusting the temperature setpoint.

Mixing Valves

- For models with an integrated electronic mixing valve, hot water capacity can be increased by changing capacity selection from control, while maintaining outlet water temperature. See page 9 for instructions to increase hot water capacity.
- If your model does not include an integrated Electronic mixing valve: a supplemental mixing valve for reducing point-of-use water temperature by mixing hot and cold water in branch water lines are commercially available. Contact a licensed plumber or the local plumbing authority for further information.

Extended Shutdown Periods

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 and the water heater drained 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. Unplug 120V water heater at power cord outlet connection.

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 Safety section (see page 3).

About the Control Panel

Displaying Temperature Setpoint

The control will display the temperature setpoint anytime a button on the control is pressed. After 30 seconds of inactivity, the display will go blank. Note that the Mode and Capacity selection (if equipped) will remain illuminated in sleep mode. To wake the control at any time to see the temperature setpoint, press any button on the control.

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.

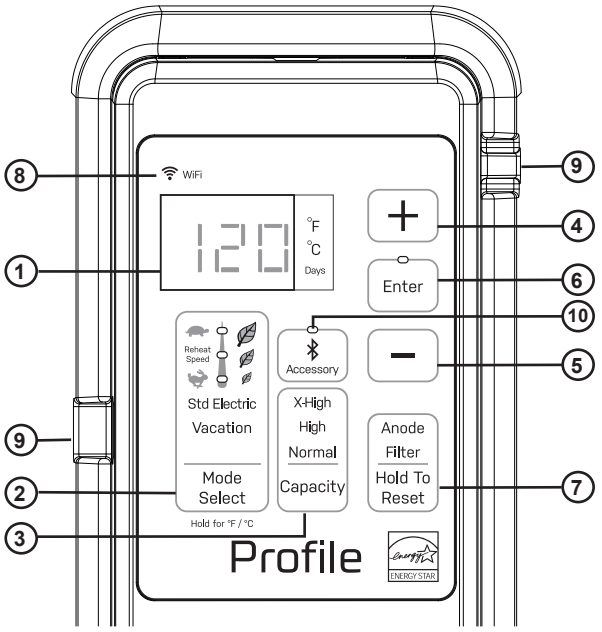
To comply with safety regulations, the controls are factory preset to 120°F (49°C).

To Adjust the Temperature

Follow these steps:

1. Press the + or - button 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 the Mode Select button.



Appearance may vary according to specific model.

Control Features

1. **Display**
2. **Mode Select Button and Mode Indicator**

   Use this button to Select Operation Modes. Enter key must be depressed to confirm selection.
   - **Heat Pump:** Compressor ONLY (Turtle – Most Efficient)
   - **Hybrid:** Heat Pump with resistive element for moderate reheat speed (between Turtle and Rabbit mode)
   - **High Demand:** Heat Pump with resistive elements for faster reheat speed (Rabbit – Less Efficient)
   - **Standard Electric:** Uses Electric Heating Elements ONLY (Least Efficient)
   - **Vacation:** Reduces tank temperature for select no. of days
   - Press and Hold to switch between **°F** or **°C**
3. **Tank Capacity Selection Button and Indicator Status (on some models)**

   Use this button to alternate between Normal, High and X-High tank capacities. Enter key must be depressed to confirm selection.
4. **+ Select Button**

   Use this button to increase the temperature setting or vacation days.
5. **- Select Button**

   Use this button to decrease the temperature setting or vacation days.
6. **Enter Key**

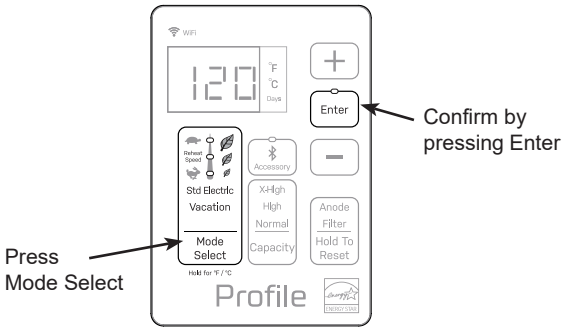
   Use this button to confirm temperature setting following adjustment.
7. **Dirty Filter Indicator & Reset and Anode Indicator & Reset (if equipped)**
   - When the Filter text is illuminated, the (3) air filters (one top and two on sides) of upper shroud require cleaning. Press button once to silence alarm and press and hold for 5 seconds to reset, after cleaning.
   - When the Anode text is illuminated and F70 fault is displayed, the system has indicated that the anode rod is approaching end of life and it is recommended to replace it. Press button once to silence alarm. Press and hold for 5 seconds to reset the anode alarm after replacing. Call the Installer to replace the anode rod. Contact GE Appliances customer support at GEAppliances.com/waterheater. Failure to replace the anode rod will void warranty coverage and may result in a tank leak. (See page 15 for instructions to change the anode rod.)
8. **WiFi Indicator Light**

   Lit when connected, flashing during configuration set up mode.
9. **Appliance Communication Module Ports (2)**

   For use with Service and optional accessory modules. Visit **GEAppliances.com/waterheater** for more information.
10. **Bluetooth® Indicator for connecting Accessories**

    Flashes when pairing, solid when connecting.

Operation Modes



This water heater defaults to the Hybrid operating mode.

To select available modes listed below:

- Press the **MODE** button until the LED next to the desired Operating Mode is illuminated.
- For Hybrid and Heat Pump (Turtle) mode, Press “Enter” to activate selected mode.
- For High Demand Mode (Rabbit), Std Electric and Vacation Mode, Input the total days to remain in Mode by pressing + or - and then Press “Enter” to activate selected mode and operating days.

Note limitation of operating days in each mode as follows:

- High Demand (Rabbit): Default is 3, with a max. of 99 days.
- Std Electric: Default is 3, with a max. of 99 days.
- Vacation: Default is 7, up to 199.

In Heat Pump (Turtle), Hybrid or High Demand (Rabbit) Mode, the corresponding Mode LED will flash anytime the heating elements are active, such as during the initial recovery from a large draw. This is normal and does not indicate an operating issue. The Display will toggle between the days remaining and the temperature set point in High Demand (Rabbit), Std Electric and Vacation Modes.

Cold Climate Efficiency

This heat pump water heater is compliant with the Northwest Energy Efficiency Alliance Advanced Water Heater Specification (latest 8.1 version , active at time of product listing), and may qualify for rebates in some regions. Check with your local utility for available rebates and requirements.

A ducting kit is available for use with your heat pump water heater if desired. [See **GEAppliances.com** for ducting kit details].

Ducting kits may be installed to achieve directed flow of inlet and outlet air for heat pump operation, or to allow water heater installation in rooms less than 700cu. ft.(19.8 cu.m.) or without louvered doors, as specified in the installation instructions.

Heat Pump Mode (Turtle LED) — *RECOMMENDED FOR MAXIMUM SAVINGS*

Heat Pump 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 (LED between Turtle and Rabbit)

Hybrid mode combines the energy efficiency of Heat Pump with the recovery speed and power of the Electric/ Standard 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: Energy Guide unit performance, energy consumption and savings are based on non-ducted installations in Hybrid mode at required Department of Energy (DOE) test conditions. Operating in Heat Pump mode may provide a greater savings in energy and operating costs than the claimed savings.

High Demand Mode (Rabbit LED)

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 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 mode is that in High Demand mode the heating resistive elements are activated sooner than in Hybrid mode. At the end of the selected time period, the unit will switch back to the previously selected more energy-efficient mode.

Standard Electric Mode

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

At the end of the selected time period, the unit will switch back to the previously selected more energy-efficient mode.

Operation Modes

Vacation Mode

This feature is recommended 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 reduce the water temperature setting to 50ºF (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, set Vacation mode for 14 days using the steps above. The temperature setting will automatically reduce to 50°F (10°C) for 13 days. At the end of the 13th day, the previous operating mode and temperature setting will reset to ensure hot water is available upon your return.

Extended Shutdown Periods

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 and the water heater drained 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.

If the water heater has an anode depletion sensing feature (some models) and the water heater cannot be drained, it is recommended to leave the power turned on with the water heater in vacation mode to ensure that the feature will continue to operate properly while still conserving energy.

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 Safety section (see page 3).

Hot Water Flexible Capacity Selection (on some models)

When activated this feature stores water at higher temperatures. As hot stored water leaves the tank, cold water is mixed in to maintain the desired set point. This mixing allows more usable hot water to be available. The water heater defaults to Normal hot water Capacity setting, which is used to calculate annual operating cost, (and a 125F outlet water setting).

To change tank Capacity setting:.

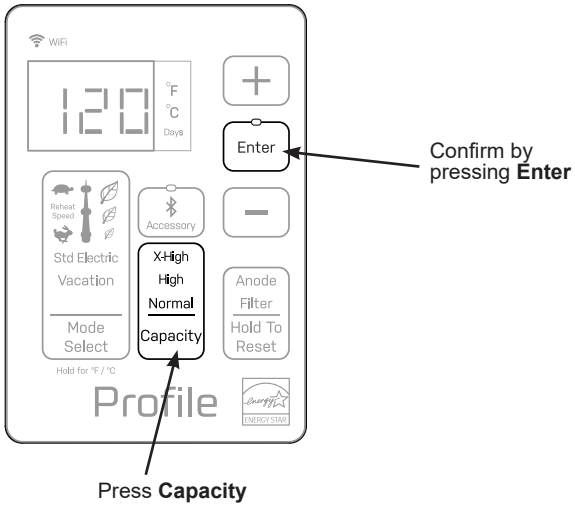
1. Press the "Capacity" button until High, X-High or Normal text is illuminated.
2. Confirm selection by pressing "Enter" key.

Capacity Options (based on 120°F default outlet water temperature setting and 58°F inlet water temperature):

Normal: No increase of hot water capacity from outlet water setting

High: Increases hot water capacity up to 40%

X-High: Increases hot water capacity up to 60%

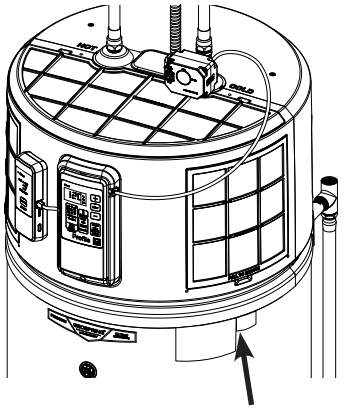


Appliance Communication

GE Appliances WiFi Connect

GE Appliances WiFi Connect Enabled* If your water heater has a Connected Appliance Information label located to the right of rating plate as shown, your model is **GE Appliances WiFi Connect Enabled**. A WiFi communication card is built into the product allowing it to communicate with your smart phone for remote monitoring, control and notifications. Please visit **GEAppliances.com/connect** to learn more about connected appliance features, and to learn what connected appliance apps will work with your smart phone.

*Select models only



Connected Appliance Information
Informations sur l'électroménager connecté

Contains/Contient **FCCID: ZKJ-WCATA008**

Contains/Contient **IC: 10229A-WCTA008**

Scan for App
Rechercher Appli

UPD ID: XX-XX-XX-XX-XX

MAC ID: XX-XX-XX-XXXXXXXX

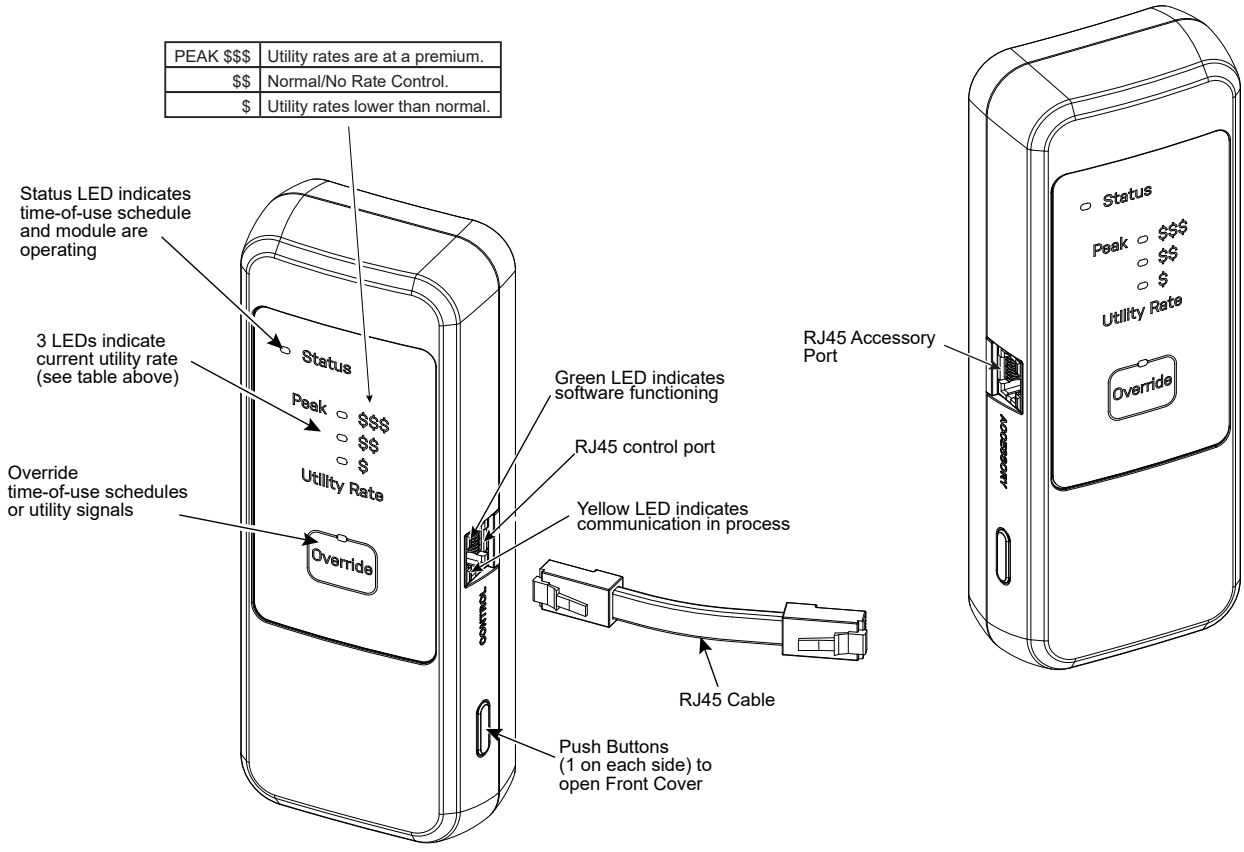
Meets ANSI/CTA-2045 standard when equipped with GEA module
Conforme à la norme ANSI/CTA-2045 lorsqu'il est équipé d'un module GEA

184D2604P002

CTA-2045 Module

The CTA-2045 is connected to a compatible GE Water Heater's Control Panel, and a module (provided by the local utility company) can be plugged into the bottom of the CTA-2045, enabling direct utility signals through 5G, Wi-Fi, or other communication pathways. Once connected and set up, the CTA-2045:

- indicates the local utility's current rate tier;
- initiates the water heating cycle at times agreed by the consumer and utility company, enabling the water heater to run at the most convenient and least costly times; and
- allows the consumer to temporarily override time-of-use schedules or utility signals.

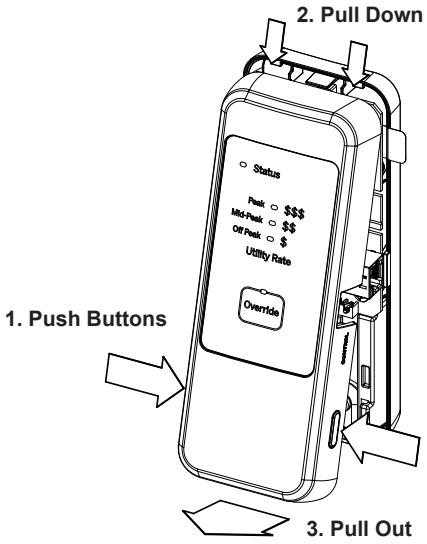


Appliance Communication

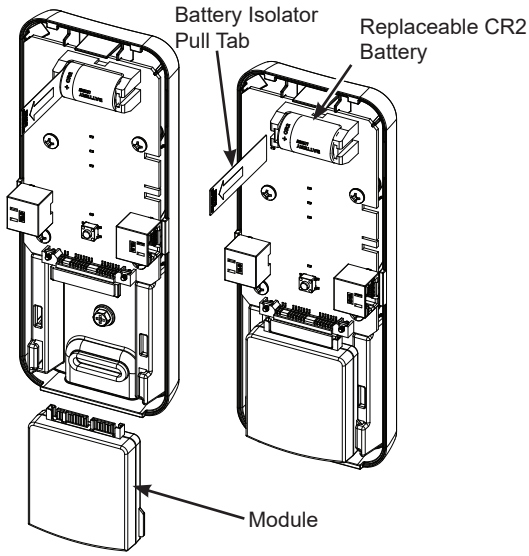
CTA-2045 Module (Cont.)

Initial Setup

1. Ensure that the water heater is fully installed, filled with water and functioning.
2. Confirm that the RJ45 cable is securely connected to both the CTA-2045 and Water Heater Control.
3. Download the SmartHQ™ App on your smartphone.
4. Follow SmartHQ™ App instructions to connect your Water Heater.
5. Follow instructions in the SmartHQ™ App for setting up optional time-of-use schedules.
6. Remove the Front Cover.

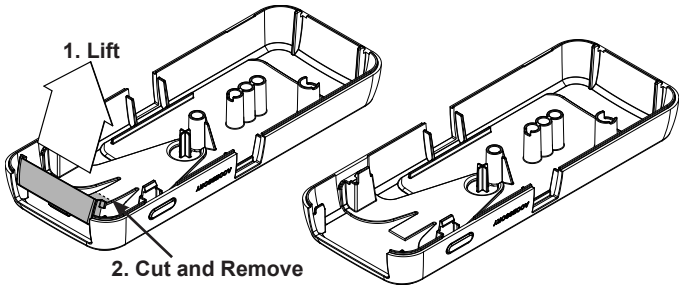


7. Plug in the module (provided by 3rd party) at the bottom of the CTA-2045. **NOTE:** If installing without module, skip to next step.



8. Remove the Battery Isolator Pull Tab to activate the battery and initiate clock function (see previous illustration).

NOTE: Some Utility Modules may require modification of the bottom of the CTA-2045 Front Cover.



9. Reattach the Front Cover of the CTA-2045.
10. Follow the 3rd party module instructions to ensure functionality and connectivity.
11. Conform that the status LED on the CTA-2045 is illuminated, as well as one of the three utility Rate LEDs. Both the Status LED and one Utility Rate LED will be illuminated when the CTA-2045 is functioning normally.

Override Button

To override time-of-use schedules or utility signals, press the Override Button. The Override LED will blink continuously to indicate that the function is active. The Override function will remain active for 24 hours or until the Override Button is pressed again.

Power Outage

During a power outage, the CTA-2045 will transition to battery power, ensuring that the clock and time-of-use schedules are preserved.

NOTE: If the Override function was active at the time of the power outage, it will reactivate when power is restored

Care and Cleaning

Exterior Surfaces

Hand wash with damp cloth, using only warm water. Wipe dry using a dry, clean cloth.

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 the following annual preventive maintenance program be established.

1. Inspect Temperature & Pressure Relief Valve.
2. Inspect heating elements, ECO, and wiring to each.
3. Drain and Flush the water heater tank.
4. Anode rod must be removed and inspected.

Temperature and Pressure-Relief Valve:

Once a year, it is recommended to 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.

Heating Elements and ECO:

Once a year, it is recommended to inspect the heating elements, high limit Energy-Cut-Off (ECO) control, and wiring to each. Inspection should be completed by service personnel qualified in electrical 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.

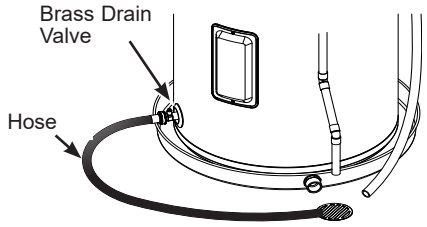
Draining and Flushing the Water Heater

⚠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.

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, it is recommended to drain and flush the water heater tank once a year. To drain the water heater, follow these steps:

1. Turn off power to the unit. The electric heating elements will become damaged if operated without water.
2. Attach a garden hose to the drain valve located at the bottom of the unit and direct that hose to a drain.
3. Turn off the cold water supply.
4. Admit air to the tank by opening a hot water faucet or lifting the handle on the relief valve.
5. Open the drain valve. Use a flat blade screwdriver to turn stem of drain valve.



Flushing the Tank:

1. Follow steps above to drain the water heater.
2. Once the water heater is empty, with the drain valve open and garden hose attached to the drain valve, turn on the cold water supply.
3. Allow several gallons to flush through the drain valve and hose to an open drain.
4. Turn off the water supply and allow any water remaining in the tank to drain.
5. Repeat steps 3 and 4 until water runs clear.
6. Close the drain valve and fill the tank before returning power to the unit. The tank is full when water runs out of a nearby open hot water faucet.

Flushing should be done with an empty tank to promote additional removal of sediment.

Care and Cleaning

Cleaning the Filters

In the Hybrid, Heat Pump, and High Demand modes, the water heater pulls air through the 3 filters and out the back of the unit. The filters are in place to protect the evaporator from dirt and dust.

Clean air filters are important to get the highest efficiency. Occasionally these filters will need to be cleaned. When the filters require cleaning, the Filter LED will illuminate and an alarm will sound.

NOTE: If the filters gets too dirty, the unit will automatically switch to Standard Electric mode and energy savings will be lost.

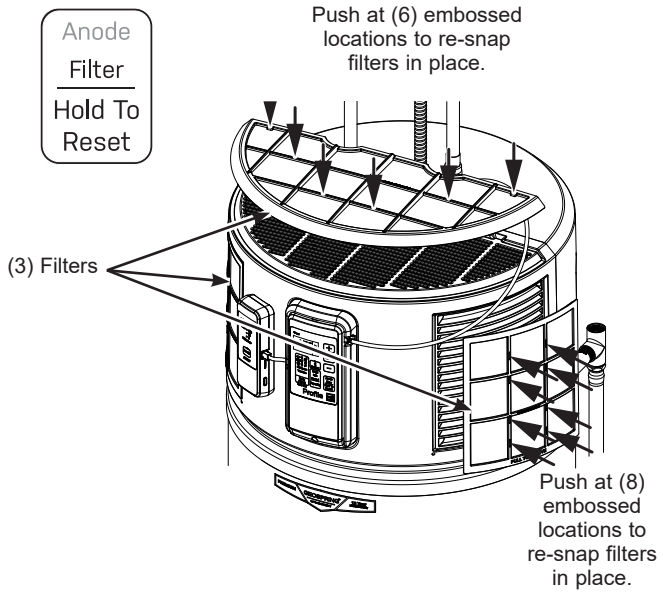
Leave the power on. Remove the filter from the top of the unit and the (2) filters from the side of the unit. Once they have been removed, the filters can be vacuumed or wiped clean with a damp cloth or rinsed with warm water.

Once the filters have been cleaned and dried, they can be replaced by aligning with the shroud and snapping in place by pushing at embossed locations on filters as shown in illustration.

After the clean filters have been reinstalled, press and hold the Reset button (below the FIlter LED), until the Filter LED turns OFF. The unit will automatically revert to the previously selected operating mode. If a heating cycle is active when the filter alarm is reset, it will continue in Electric/Standard mode to finish the cycle, then automatically revert to the previously selected mode.

IMPORTANT: Filters 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 filters are clean.

NOTE: If the dirty filter alarm returns within a few days after cleaning and resetting, it may be an indication of a refrigerant leak. Further diagnosis by a service technician is necessary.

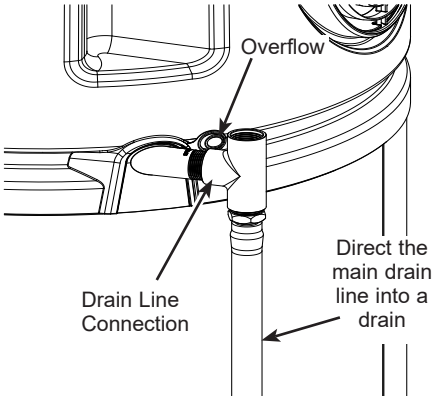


Clearing the Condensation Drain Tube

The main drain is intended to carry all condensate away. If it is clogged, the heat pump will stop operating, the display will show F73, and an alarm will sound. Press any button to silence the alarm, then clear the condensate drain by removing any drain lines and connections, and clearing debris. Reattach drain lines and connections, then allow the water heater to run. The GeoSpring water heater will continue to produce hot water using the backup resistance heating elements until the condensate drain has been cleared, and is able to drain properly. Once the drain has been cleared, the unit will then be able to operate the heat pump again.

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

See Installation Instructions for more information.



Water Leak Notification & Reopening Shut-Off Valve

When the sensor detects a water leak (H20 is shown on display), an audible alert will sound, and a leak alert notification will be sent to your mobile device (when connected to the SmartHQ App). If a smart water shut-off valve is installed, it will stop any new water from being supplied to the water heater and display will toggle between “Off” and “H20”. To clear the leak alert, remove the sensor from the leak source and dry sensor. The display will stop showing “H20” and “Off” and the valve will open, restoring water flow to the water heater.

Anode Rod Maintenance and Service

Routine Preventative Maintenance

Anode Rod

Anode rods are designed and installed to protect and extend the life of residential water storage tanks.

The anode rod must be removed from the water heater's tank and inspected annually, and replaced when more than 6" (15.2 cm) of core wire is exposed at either end of the rod.* **NOTE:** Artificially softened water will cause the anode rod to consume more rapidly.

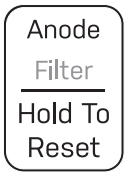
Due to shock hazard and to prevent accidental water leaks, this inspection should be done by a qualified servicer or plumber, and requires that the electric power and cold water supply be turned off before servicing the anode rod.

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.

Some areas have water conditions that may cause an odor to develop in the water heater. Special alloy replacement rods are available to address this condition.

***NOTE:** Failure to replace the anode rod when consumed voids the warranty for the tank. Warranty coverage for all other components remains intact, and is unaffected by this maintenance requirement. The replacement anode rod, and the inspection for consumption are not covered by warranty.

Additional information for models with an anode depletion sensing feature (Anode LED on the control, on equipped models):



When the depletion-sensing anode rod nears end of life, the ANODE text will illuminate and the control will beep and display F70. When this occurs, the anode rod must be inspected and replaced if the core wire at the top of the anode rod is exposed.* It is recommended to replace the anode rod as soon as possible to ensure that the tank will continue to be protected from corrosion. Call installer/servicer to order or to replace the anode rod. (See page 15 for instructions to change the anode rod.)

Press the Anode "Hold To Reset" button (below the Anode LED) once to silence the alarm. Once replaced, reset the alarm by pressing and holding the "Hold To Reset" button for 5 seconds until the control beeps and the Anode LED will turn off.

If special alloy anode rod is installed to address a water odor condition, the anode depletion sensing feature must be disabled. If disabled, annual inspections of the anode rod are required since the water heater will no longer be capable of alerting for a depleted anode rod.

To disable the feature:

1. Upon power-up following a special alloy anode rod installation, the control will sound an alarm and F41 will display. Press the Anode "Hold To Reset" button to quiet the alarm.
2. Press the Anode "Hold To Reset" button 3 times. "Off" or "On" will display confirming that the feature has been disabled/ enabled.

To enable the feature if a new anode depletion sensing anode rod is installed, follow Step 2 above.

NOTE: If the display is blank, press any button to wake the control before entering a button combination.

NOTE: If the water heater has been installed with a device that periodically cuts power to the water heater, the accuracy of the anode rod depletion sensing feature may become compromised and anode rod inspection every 2-3 years is required.

If the water heater will be inactive for a long period of time and the water heater cannot be drained, it is recommended to leave the power turned on with the water heater in vacation mode to ensure that the feature will continue to operate properly while still conserving energy.

NOTE: Refer to the Hydrogen Gas Caution in the Safety section (see page 3).

Anode Rod Maintenance and Service

⚠ 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.

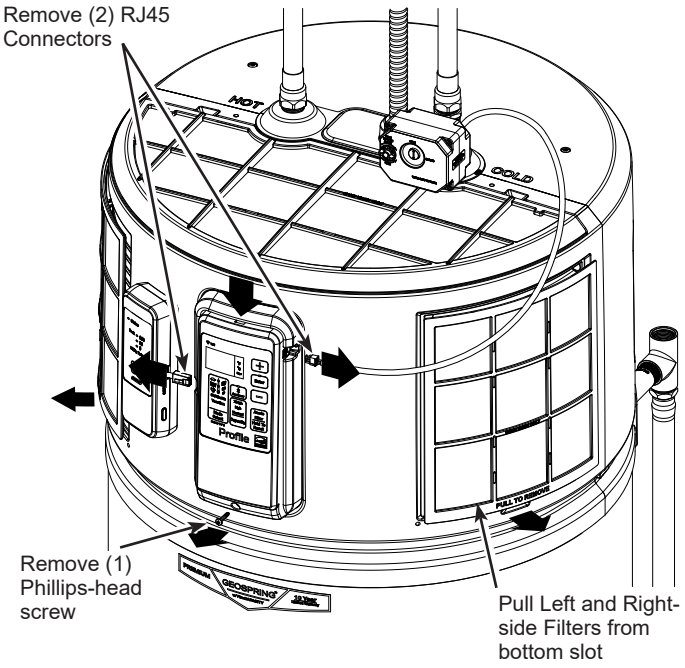
Tools needed:

- Phillips Screwdriver
- Socket Wrench
- Socket Extension(s) ~15" long
- 1 1/16" Socket
- Softset Sealant
- Anode Rod, if needed

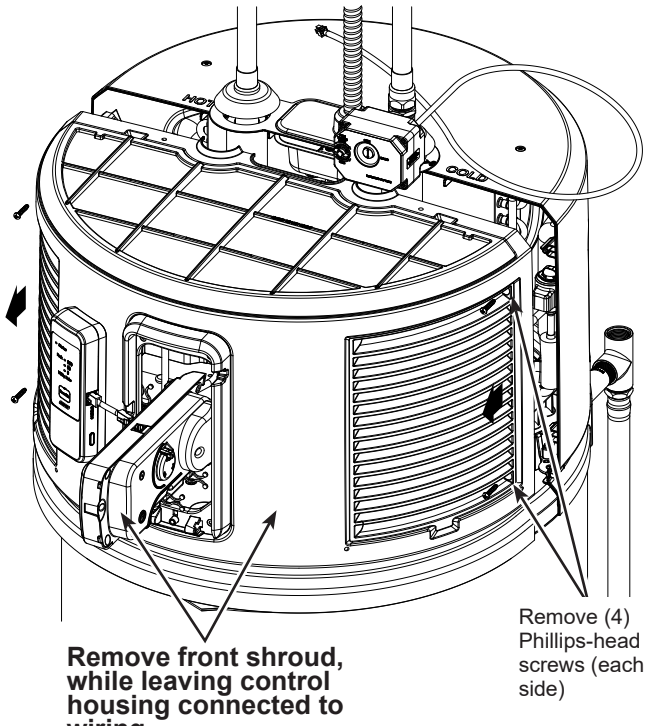
* See page 36 for part ordering instructions

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 (2) side filters from the front shroud and disconnect the (2) RJ45 connectors from the control housing.

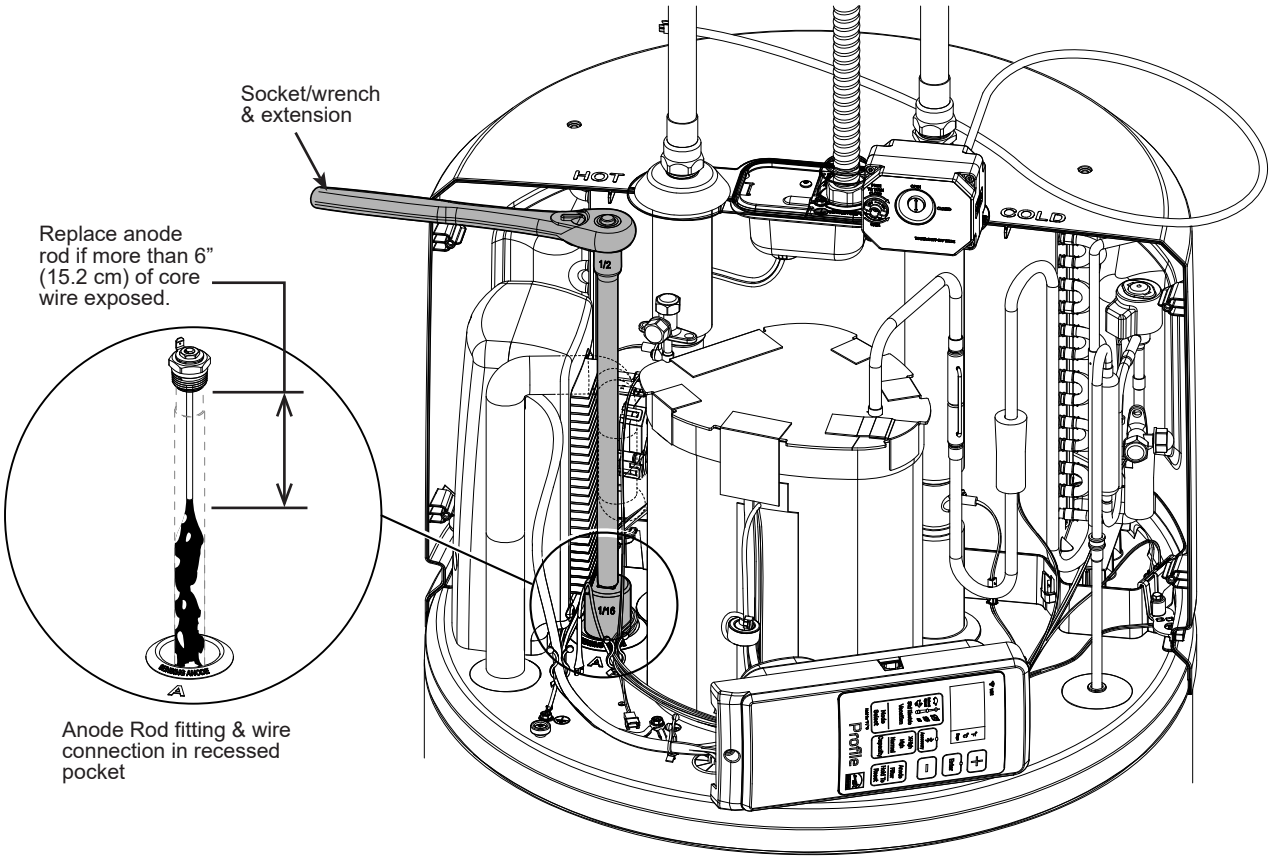


3. Remove the front shroud using following steps
   A. Remove Phillips-head screw under control housing.
   B. Pull the control housing assembly down and rotate outward at bottom to release from mounting frame.
   C. Remove the (4) Phillips-head screws beneath the left and right-side filter locations.
   D. Pull front shroud away from rear shroud, while sliding control housing through opening, without disturbing wire connections.
4. If present, remove insulation to uncover the anode rod as shown in illustration. Unplug anode wire (on some models).



Anode Rod Maintenance and Service (Cont.)

5. Using a 1 1/16" socket and extension (while avoiding contact with tubing and components), unscrew the anode rod, then lift out to inspect as shown in illustration. If more than 6" of core wire is exposed, the anode rod should be replaced. If the anode rod has not been depleted, reinstall it into the water heater following steps 6-7 below.



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. Plug in the wire for the anode rod (some models). If an Aluminum-Zinc or other non-sensing anode rod is installed, the anode depletion sensing feature must be disabled and the wire end taped (some models).
7. Turn water supply on, open a tap to remove any air in plumbing system, inspect for leaks, then reassemble the unit in reverse order, and turn the power on. Reset the ANODE button (some models) by pressing and holding for 10 seconds to indicate that a new anode depletion sensing anode rod is installed.

REQUIREMENTS FOR OPERATION

Requirements for Operation, Service and Installation of Appliances Using Flammable Refrigerants

⚠WARNING

- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.
- Do not pierce or burn.
- Be aware that refrigerants may not contain an odor.


Warning; Flammable Materials. A2L refrigerant per ISO 817


Owner's Manual; Operating Instructions


Read Owner's Manual


Service Indicator; Read Technical Manual

General

– Handling, installation, cleaning, servicing and disposal of refrigerant must comply with the local regulation and the instruction.

– Servicing shall be performed only as recommended by the manufacturer.

REQUIREMENTS FOR OPERATION

Requirements for Operation, Service and Installation of Appliances Using Flammable Refrigerants

Qualification of workers

Every working procedure that affects safety means shall only be carried out by competent persons.

Examples for such working procedures are:

- breaking into the refrigerating circuit.
- opening of sealed components.

The competent persons are trained by the national training organisations or manufacturers that are accredited to teach the relevant national competency standards that may be set in legislation. The achieved competence should be documented by a certificate.

Information on servicing

Prior to beginning work on systems containing **FLAMMABLE REFRIGERANTS**, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the REFRIGERATING SYSTEM, the below requirement shall be completed prior to conducting work on the system:

– Work shall be undertaken under a controlled procedure so as to minimise the risk of a flammable gas or vapour being present while the work is being performed.

– All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

– The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i. e. non-sparking, adequately sealed or intrinsically safe.

– If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO2 fire extinguisher adjacent to the charging area.

REQUIREMENTS FOR OPERATION

Requirements for Operation, Service and Installation of Appliances Using Flammable Refrigerants

Information on servicing (cont)

– No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.

– Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

– Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer’s maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer’s technical department for assistance.

– The following checks shall be applied to installations using **FLAMMABLE REFRIGERANTS**:

  • Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected.

– Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

– Initial safety checks shall include:

  • That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;

  • That no live electrical components and wiring are exposed while charging, recovering or purging the system;

  • That there is continuity of earth bonding.

Repairs to sealed components, intrinsically safe components

– Sealed electrical components shall be replaced.

– Intrinsically safe components must be replaced.

– Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

Cabling

Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

REQUIREMENTS FOR OPERATION

Requirements for Operation, Service and Installation of Appliances Using Flammable Refrigerants

Detection of flammable refrigerants

– Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

– The following leak detection methods are deemed acceptable for all refrigerant systems.

• Electronic leak detectors may be used to detect refrigerant leaks but, in the case of **FLAMMABLE REFRIGERANTS**, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.

• Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.

NOTE: Examples of leak detection fluids are:

- bubble method,
- fluorescent method agents.

– If a leak is suspected, all naked flames shall be removed/extinguished.

– If a leakage of refrigerant is found, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Removal of refrigerant shall be according to the manual.

Removal and evacuation

– When breaking into the refrigerant circuit to make repairs – or for any other purpose – conventional procedures shall be used. However, for **FLAMMABLE REFRIGERANTS** it is important that best practice be followed, since flammability is a consideration. The following procedure shall be adhered to:

a) safely remove refrigerant following local and national regulations;

b) purge the circuit with inert gas;

c) open the circuit by cutting.

– A non-sparking, adequately sealed or intrinsically safe vacuum pump shall be used.

– The outlet for the vacuum pump shall not be close to any potential ignition sources, and ventilation shall be available.

– The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. For appliances containing **FLAMMABLE REFRIGERANTS**, the system shall be purged with oxygen-free nitrogen to render the appliance safe for **FLAMMABLE REFRIGERANTS**. This process might need to be repeated several times.

– Compressed air or oxygen shall not be used for purging refrigerant systems.

Charging procedures

– In addition to conventional charging procedures, the following requirements shall be followed.

• Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.

• Cylinders shall be kept in an appropriate position according to the instructions.

• Ensure that the **REFRIGERATING SYSTEM** is earthed prior to charging the system with refrigerant.

• Label the system when charging is complete (if not already).

• Extreme care shall be taken not to overfill the **REFRIGERATING SYSTEM**.

– Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

REQUIREMENTS FOR OPERATION

Requirements for Operation, Service and Installation of Appliances Using Flammable Refrigerants

Decommissioning

– Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

a) Become familiar with the equipment and its operation.

b) Isolate system electrically.

c) Before attempting the procedure, ensure that:

- mechanical handling equipment is available, if required, for handling refrigerant cylinders;
- all personal protective equipment is available and being used correctly;
- the recovery process is supervised at all times by a competent person;
- recovery equipment and cylinders conform to the appropriate standards.

d) Pump down refrigerant system, if possible.

e) If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.

f) Make sure that cylinder is situated on the scales before recovery takes place.

g) Start the recovery machine and operate in accordance with instructions.

h) Do not overfill cylinders (no more than 80 % volume liquid charge).

i) Do not exceed the maximum working pressure of the cylinder, even temporarily.

j) When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.

k) Recovered refrigerant shall not be charged into another **REFRIGERATING SYSTEM** unless it has been cleaned and checked.

Labeling

– Equipment shall be labeled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing **FLAMMABLE REFRIGERANTS**, ensure that there are labels on the equipment stating the equipment contains **FLAMMABLE REFRIGERANT**.

REQUIREMENTS FOR OPERATION

Requirements for Operation, Service and Installation of Appliances Using Flammable Refrigerants

Recovery

– When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.

– When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i. e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.

– The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, **FLAMMABLE REFRIGERANTS**. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer if in doubt.

– The recovered refrigerant shall be processed according to local legislation in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.

– If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that **FLAMMABLE REFRIGERANT** does not remain within the lubricant. The compressor body shall not be heated by an open flame or other ignition sources to accelerate this process. When oil is drained from a system, it shall be carried out safely.

Installation Instructions

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.

LOCATION

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.

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 in a space with at least 700cu. ft. (19.8cu.m) (example 10’ x 10’ x 7’) including: garage, utility room, attic, closet, etc. It can be installed in rooms smaller than 700 cu.ft. (19.8cu.m) with the installation of a louvered door, or two louvered sections (one at the top and one at the bottom of the door or wall for airflow), or a GE Appliances ducting kit (see **GEAppliances.com** for details). Louvers should have 240 square inches (0.15m2) of open airflow area or greater.

Servicing the water heater requires proper installation such that the air filter, covers, trim ring, and front panels can be removed to permit inspection and servicing. Reference installation instructions found in this manual.

Attic installations require access stairs and solid flooring with no exposed floor joists up to the installation location. Moving the water heater or other appliances to provide service to the water heater is not covered under warranty.

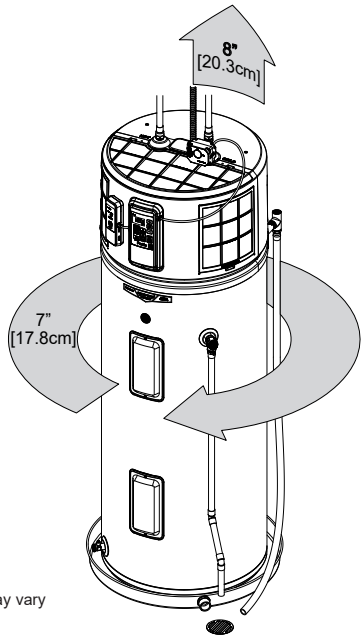
NOTE: The heat pump operating range is 35°F to 120°F (2°C to 49°C). If the ambient temperature is outside of this range, the heat pump will turn off and the electric elements will be used until the ambient temperature returns to within the operating range.

⚠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.**

Required clearances:

There must be a 7” (17.8 cm) clearance between any object and the rear and sides of the water heater in the event service is needed. A minimum 8“ (20.3cm) clearance above the water heater to remove the filter for cleaning and for service access, and clear access to the front of the water heater, is recommended. Installations that require 6” clearance on the sides or rear of the water heater for earthquake straps are also acceptable. **In these cases, additional clearance must be provided on the opposite side of the unit to allow for service access.** The hot and cold water plumbing and electrical connections must not interfere with the removal of the filters.

If a separate GE Appliances ducting kit is purchased, additional space is required above and to the rear of the water heater for installation. Consult the ducting kit manual for specific instructions. See **GEAppliances.com** for details.



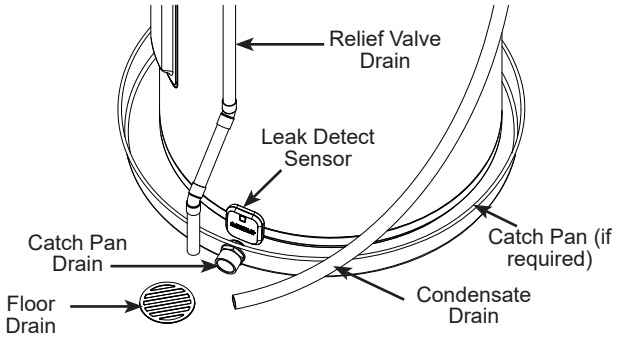
Model appearance may vary

Installation Instructions

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 or at **GEApplianceparts.com**. 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.



LEAK DETECTION SENSOR & WATER SHUT VALVE (If equipped)

Follow installation instructions supplied with sensor (placing sensor vertically against water heater, when using a catch pan) or flat on floor, otherwise (toward direction water would naturally drain, such as a floor drain). For unpainted metal catch pans, make sure the sensor contacts do not touch the metal directly, as this can lead to a false water leak alert.

Pair Sensor to water heater by pressing senor button until sensor light begins blinking. Press the Accessory button on water heater control until light above button starts blinking. Once paired, both lights will blink quickly and then remain solid. After a short time, the light on the sensor will go off, to conserve its battery.

Install Water Shut-Off Valve following instructions packaged with valve.

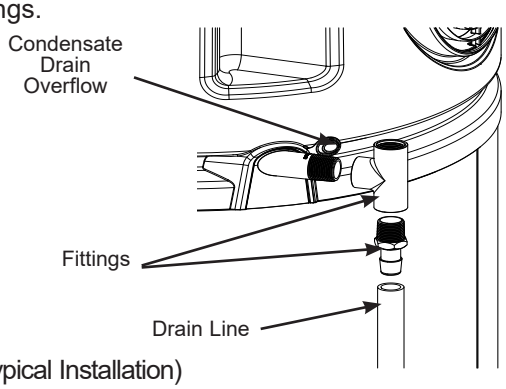
CONDENSATION DRAIN CONNECTION

This unit has a condensate drain; therefore a floor or other drain no higher than 36" (91.4cm) above the floor must be available in close proximity to the water heater to allow for the shortest possible drain line with minimal turns to be installed. Drain must meet state and local codes. It is important to install a 3/4" FNPT fitting suitable for either rigid or flexible drain line to the primary drain port coming off the side of the unit. Diameter reductions from a 3/4" drain line are discouraged.

Ensure that the rigid or flexible drain line maintains a downward slope to allow for proper gravity drainage of condensate to the drain and to allow for proper function of the condensate drain blockage sensor (see page 13). If no drain is available, then a common condensate pump with a capacity no less than 1 gallon (3.8L)/day must be purchased and installed. It is important to route the flexible or rigid drain line so that the discharge water cannot contact live electrical parts or cause water damage .

Additional parts needed:

1- Flexible 3/4" drain line and associated 3/4"-FNPT fittings.



(Typical Installation)

THERMAL EXPANSION

If a check valve is present on the inlet water line, it will create a "closed system." Heating water in a closed system creates an increase in pressure within the water system because the pressure is not able to dissipate in the main supply line. Referred to as "thermal expansion", the rapid pressure increase can cause the relief valve to operate (releasing water) during each heating cycle, potentially causing premature failure to the valve or even the water heater. 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 as shown in the following illustrations. Contact your installing contractor, water supplier, or plumbing inspector for additional information.

WATER SUPPLY CONNECTIONS

Appliance requires water supply pressure between 20 psi to 125 psi (138 kPa to 861 kPa).

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.

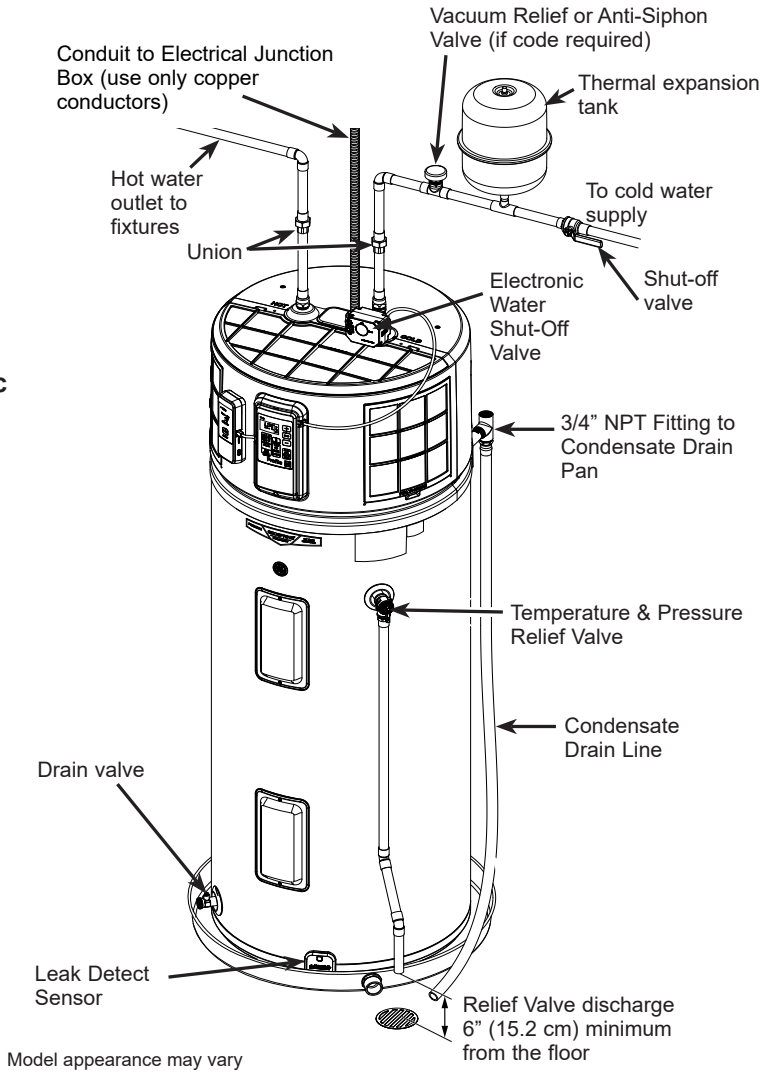
NOTE: Install a shut-off valve in the cold water line near the water heater. This will enable easier service or maintenance of the unit later.

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.

Install a vacuum relief valve and/or anti-siphon device when required by local jurisdictions.

TYPICAL INSTALLATION

IMPORTANT: Hot water recirculation loop systems are not recommended for use with this product. These systems can reduce efficiency and may lead to temperature control issues with mixing valve models. Integrated electronic mixing valve models should not be installed with pre-heated water from solar or other heated sources (higher than intended user set point).



Model appearance may vary

Installation Instructions

RELIEF VALVE

⚠WARNING Risk of Unit Damage - The pressure rating of the relief valve must not exceed 150 PSI (1034 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.

F75" fault code during installation: If the unit is powered on without a full tank, the error code "F75" will show in the display. Turn off the power, fill the tank with water (see above), then turn the power back on.

NOTE*:* The DRY TANK DETECTION feature on tank is for the aid of installer and should NOT be used as the primary control to prevent operation with an empty or partially filled tank. Power should NEVER be applied to the water heater until installer has verified tank is filled and all air has been purged from system.

⚠NOTICE For maximum heating performance, apply 240 VAC or 208 VAC across L1 and L2 wires as shown in "Water Heater Junction Box " illustration.

If a 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 type of device are allowable ONLY on 120V convertible models and NOT on 240V non-convertible models.

ELECTRICAL CONNECTIONS & GROUNDING INSTRUCTIONS

Dedicated Circuit Setup: Establish a separate branch circuit using copper conductors. Ensure this circuit includes an overcurrent protective device and suitable disconnecting means. When operating at 120V, the water heater can be on a share circuit but avoid connecting to a circuit that is already loaded with more than half of the breaker's amperage rating.

ELECTRICAL CONNECTIONS & GROUNDING INSTRUCTIONS (Cont.)

Code Compliance: Verify that all wiring conforms to local codes or the latest edition of the National Electrical Code (ANSI/NFPA 70).

Junction Box Connections: The water heater is pre-wired to the junction box at the top. Utilize the provided opening for a 1/2" electrical fitting to complete field wiring connections.

120VAC Models: These models are equipped with a power cord for direct connection to a standard 120V (60Hz) outlet.

⚠WARNING Ensure the power cord is plugged into a properly grounded receptacle. Replace any damaged power cord with one supplied by the manufacturer; do not attempt repairs. Do not use extension cords.

Conversion Option: To enhance performance, 120V models can be converted to a 240V or 208V power supply. Always disconnect power before servicing. Begin by using a Phillips-head screwdriver to remove the junction box cover to disconnect the power cord and internal wiring connections. Directly wire the appliance to the 240V or 208V supply per following instructions, ensuring all connections are secure.

240VAC Models: These models are designed to operate solely on 240V or 208V (60Hz) and cannot be converted to other voltages. Ensure proper connection to a 240V or 208V power supply as specified.

BRANCH CIRCUIT SIZING GUIDE		
Max. Overload Protection (fuse or circuit breaker amperage)	Min. Circuit Ampacity (MCA)	"Copper Wire Size AWG Based on N.E.C. Table 310-16 (167°F/75°C)"
15	0-15	14 AWG
20	15.1-20	12 AWG
25	20.1-25	10 AWG
30	25.1-30	10 AWG

Safety and Compliance Assurance: Ensure all electrical connections meet local codes or ANSI/NFPA 70 for grounding details and exceptions. If any uncertainties arise, reach out to a qualified electrician.

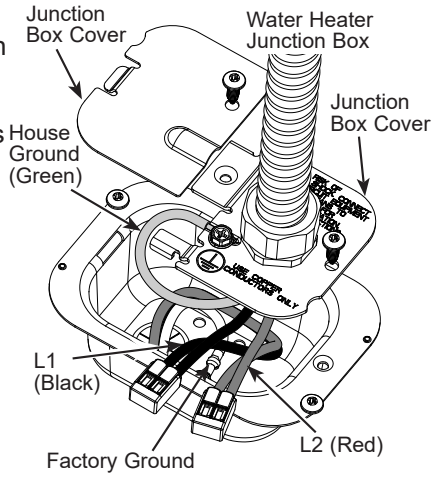
The branch circuit wiring should include either:

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.
4. Reinstall junction box cover with supplied screws, ensuring no wies are pinched or exposed.

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.

Installation Instructions

INSTALLATION CHECKLIST

☐ **1**. **Tank location:**
– Does room size require louvered door, ducting kit, or similar ventilation? 10’ x 10’ x 7’ (700 cu.ft./19.8 cu.m.) or 240 square inches (0.15 m^2) open 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. (6 inches (15.2 cm) clearance for earthquake strap installations, with additional clearance on the opposite side of the unit.)
– **Front** of unit is free and clear.
– Is the water heater **level**? If no, add shims under the base of the unit to ensure proper function of sensors.

☐ **2.** Verify **Air Filters** are installed. (Installed on product.)

☐ **3. Plumbing connections:**
– Does not prevent **air filter** removal.
– No leaks after **filling** the tank with water, either when water is flowing or not.
– Install shut-off valve and leak detect sensor.

☐ **4. Condensate lines are in place:**
– Main flexible or rigid drain line installed and directed to a drain or condensate pump. Reducer fittings are not recommended.

☐ **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 or plugged into a standard, 120VAC outlet on 120V models.

☐ **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 “Water Temperature Adjustment” section on page 4).

☐ **9.** Download SmartHQ™ App and connect appliance and accessories to WiFi/Bluetooth®.

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 3 minutes	Unit will go through self-check. Fan will turn on after 1 minute.	This 3-minute off-time prevents compressor damage. A clicking noise may be heard during startup.
3 to 12 minutes	Compressor turns on. Fan continues to run.	This 9-minute period is used to ensure the tank is full of water (Dry-fire prevention algorithm). If no water is detected, a F75 Fault code will be displayed.
12 minutes and beyond	Compressor turns off (Fan will run for 30 minutes after any compressor operation). Normal heating operation resumes.	The water heater is operating in Hybrid mode. Quickly provides initial amount of hot water with heating elements, then switches to efficient heat pump for majority of heating.

NOTE: The heat pump operating range is 35°F to 120°F (2°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.

Frequently Asked Questions

Filter:

Q: Why are there Air Filters?

A: In Hybrid and Heat Pump the unit moves air through the system. Air Filters protects the unit from dirt. Clean Air Filters improves efficiency.

Q: How to clean the Air Filters?

A: Leave power on and remove Air Filters. Air Filters can be vacuumed clean or rinsed with warm water. Once cleaned, reset the alarm by pressing and holding the Filter button. A dirty filter will reduce water heater efficiency!

Modes:

Q: What is Heat Pump?

A: Heat Pump 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 with the speed and power of Standard Electric. This provides great performance with less energy.

Q: What is High Demand?

A: High Demand 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 Standard Electric?

A: Standard Electric 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.

Operation:

Q: Why can I hear the unit run?

A: In the most energy-efficient modes, Heat Pump, Hybrid, and High Demand, 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 (<35°F), extreme hot ambient temperatures (>120°F), or very low voltage conditions. The unit will return to normal operation when conditions permit.

Q: Why is one of the operating mode LEDs flashing?

A: In Hybrid Mode and High Demand Mode, the Standard Electric Mode LED will flash anytime the heating elements are active, such as during the initial recovery from a large draw. In Standard Electric Mode, the operating mode LED will flash after 48 hours as an indication that the unit is not operating in the most energy efficient mode. These are both normal conditions and do not indicate an operating issue.

Q: Why isn't the temperature setting always displayed on the control?

A: The display screen will go blank after a period of inactivity in order to conserve energy. Pressing any button will wake the control and display the temperature setpoint.

Anode Rod:

Q: What does an anode rod do?

A: The anode rod provides protection against corrosion of the water heater tank. The anode rod must be replaced before it is consumed and no longer offering protection against corrosion.

Q: How to change the anode rod?

A: Refer to page 15. Models equipped with an anode depletion sensing feature require a unique anode that can be ordered through GE Appliances Service.

Q: What can I do about a sulphur smell coming only from my hot water?

A: Some areas have water conditions that may cause an odor to develop in the water heater. Aluminum-Zinc alloy replacement rods are available to address the condition. See page 14 for details.

Troubleshooting

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

⚠CAUTION For your safety, **DO NOT** attempt repair of electrical wiring, controls, heating elements or other safety devices. Refer repairs to qualified service personnel.

Problem	Possible Causes	What To do
OPERATION AND PERFORMANCE		
Not enough or no hot water	**Water temperature may be set too low**	• See the Water Temperature Adjustment section (see page 4). If the product has an integrated mixing valve, turn capacity setting up to “High” or “X-High” to increase available hot water capacity.
	Hot water usage pattern exceeds the capability of the water heater in current mode	• Change to different mode. • Wait for the water heater to recover after an abnormal demand.
	Cold water inlet temperature may be colder during the winter months	• This is normal. The colder inlet water takes longer to heat. • Consider increasing the set temperature as described in the Water Temperature Adjustment section or increase capacity setting on models equipped with an electronic mixing valve.
	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 heat pump	• Make sure unit is 7” away from the wall and has 8” clearance above the air filter.
	Room is too small or too cool, slowing heating performance	• Smaller rooms can lead to cooler room temperatures due to the heat pump cooling the air. If the room is smaller than 700cu.ft. (10’x10’x7’), install louvred doors or similar ventilation. • Cooler room temperatures can cause the water heater to take longer to fully recover to the set temperature. Consider increasing the set temperature as described in the Water Temperature Adjustment section.
	A fuse is blown, circuit breaker tripped, or electric service to your home may be interrupted	• Replace fuse or reset circuit breaker. • Contact the local electric utility.
	Inadequate wiring	• See the Installation Instructions.
	Manual reset high limit (ECO)	• See the Safety Controls section, see page 5.
	Water Connections to unit reversed	• Correct piping connections.
	Dip tube damaged	• Contact your local installer, plumbing contractor, or previously agreed upon service agency.
	Recirculating System Interference (if installed)	• Hot water recirculation systems should not be installed on mixing valve models
Water is too hot	**Water temperature is set too high**	• See the Water Temperature Adjustment section.
	Electronic Control has failed	• Call for service.
Water heater is making the room cooler	**Room is not vented properly or is too small**	• If the room is smaller than 700cu.ft. (10’x10’x7’) then it must have a louvred door or other means to allow air exchange with surrounding rooms.
	Heat is removed from the air to heat the water	• This is normal.
CONTROL PANEL		
The heater is beeping and the display says F75	**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 cycle power when the tank has been filled. • If the unit has been confirmed to be filled with water, and an F75 code is experienced, it is possible that the code may be a false indicator due to certain unique environment conditions encountered during the start up. If the unit is full of water, turn the breaker off for about 10 minutes to allow the water temperature to stabilize, then turn the breaker back on. If the F75 code persists, schedule GE Appliances Service.
The heater is beeping, the anode light is on (on some models), and the display says F70	**The anode rod is approaching end of life and it is recommended to replace it in order to continue to offer protection from corrosion.**	• Call for service or follow the instructions on how to replace the anode rod on page 15. Ensure that the anode depletion sensing anode rod or other GE Appliances approved anode rod is installed. Installation of an unapproved anode rod will VOID the warranty.

Troubleshooting

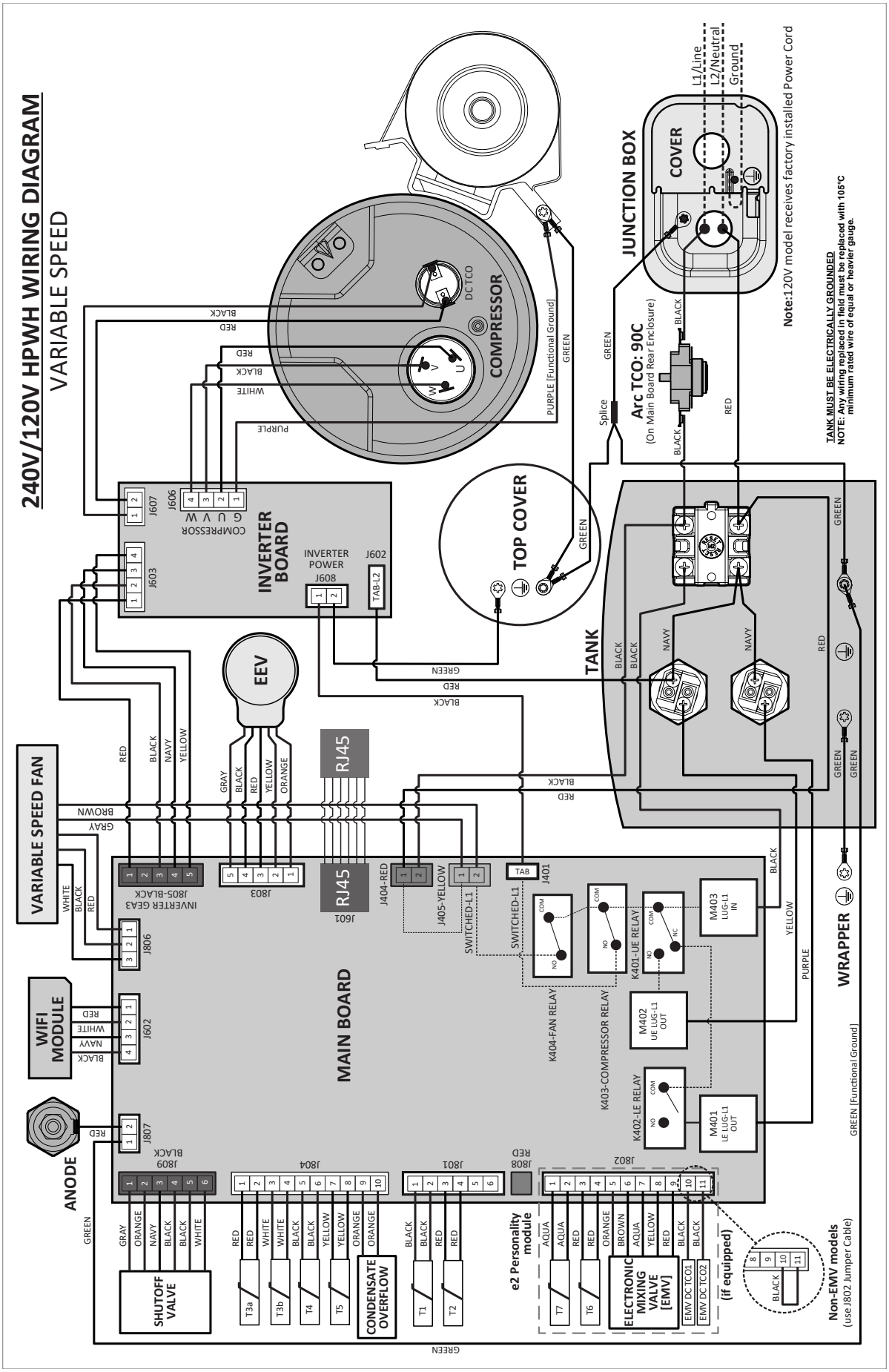
Problem	Possible Causes	What To do
CONTROL PANEL (Cont.)		
The heater is beeping and the display says F41	**The anode rod is not connected properly and the water heater may not be protected from corrosion.**	• Check that the tank is filled completely with water. • If the tank is full of water and the F41 code persists, contact GE Appliances service. • Press anode button to silence alarm.
The mode indicator light is flashing	**Normal operation**	• In Heat Pump (Turtle), Hybrid or High Demand (Rabbit) Mode, the corresponding LED light will flash whenever the Electric Resistive Elements are active. • These conditions are normal and do not indicate an operating issue.
The filter light or F74 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 13. • Repeated dirty filter alarms that do not resolve by cleaning the filter may be an indication of a sealed system failure. Contact service.
The heater is beeping and the screen flashes, F76.	**Unit is not receiving the correct rating plate voltage**	• Turn off power to water heater (generally at the breaker panel). Then read Electrical Connections section of the installation Instructions, see page 26, then contact the installer to verify electrical input to the water heater.
The heater is beeping and the screen displays an error code	**Heat pump system or control issues**	• The water heater may automatically switch to another available heating mode to ensure continued availability of hot water. Contact service immediately and give them the codes listed on the display screen. • To quiet the beeping, press either the + or - button.
OTHER		
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 (ex, louder than a window A/C), then contact service.
	The EEV valve makes clicking noises upon power up	• This is normal.
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.
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 qualified service person or plumbing contractor.
Squealing/Chirping sound when drawing hot water	**In certain usage conditions, noise may transmit through plumbing from the integrated mixing valve**	• Increasing user set point or lowering capacity setting may address this condition on integrated mixing valve models. Consult a plumbing professional to install a pressure limiting device, if due to high water pressure.
Intermittent EMV motor noise on integrated mixing valve models	**A soft motot noise may be heard during normal operation due to movement of control valve.**	• This noise is normal and does not indicate any issue with product.
Water dripping down the outside of the heater	**Hot/Cold water connections or other parts have loosened**	• Tighten the loose connections. This should only be done by a qualified service person or plumbing contractor.
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 section on page 23. Do not plug the relief valve outlet. Contact a plumbing contractor to correct this.
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. Go to **GEAppliances.com/waterheater** for information on purchasing this replacement anode rod. A qualified servicer or plumber should do this replacement. Use of a non-GE Appliances approved anode rod, or operating the water heater without a GE Appliances approved anode rod will VOID the warranty. • In certain cases, increasing the tank temperature to 140°F (60°C) can reduce this odor issue. Reference the Water Temperature Adjustment section of the Important Safety Information of this manual for procedure and dangers of scalding water. Installation of temperature limiting valves can be used to reduce risk of scalding.

Fault Codes

Fault Code Displayed	Condition	Action
F10, F20	Lower Heating Element Failure	Call Service to replace respective heating element
F11, F21	Upper Heating Element Failure	
F14	Compressor Failure or Discharge temp. too high	Call service
F15	Fan Failure	Call service
F16*, F17	No Hot Water - Mixing Valve Outlet DC TCO Tripped on EMV models or missing jumper wire on non-EMV models	Call Service
F18*, F63*	Mixing Valve Failure	Call service
F19	Runaway Heat Source	Call Service
F30	Tank Temperature (T1) Failure open/short	Call Service to replace sensor
F31	Tank Temperature (T2) Failure open/short	Call Service to replace sensor
F32	Tank Temperature, (T1 or T2) Failure	Call Service to replace required sensor
F34	T3a Sensor (Evap inlet temperature) Failure	Call service
F35	T3b Sensor (Evap outlet temperature) Failure	Call service
F36	T4 Sensor (Compressor outlet) Failure	Call service
F37	T5 Sensor (ambient temperature) Failure	Call service
F38*	Mixing Valve Outlet Temperature (T6) Failure	Call Service to replace required sensor
F39*	Mixing Valve Cold Inlet Temperature (T7) Failure	Call Service to replace required sensor
F41#	Sensing Anode miswired or Empty Tank or Anode Rod Wired Incorrectly	Confirm wire is connected to sensing anode terminal. Call Service otherwise.
F43	Water leak detected (from Leak Detect Module)	Inspect for water leak and repair, as required
F42	Condensate Sensor Failure	Call Service to replace required sensor
F46, F53	Evaporator Not Frost Free. Probable refrigerant leak or Evaporator Not Defrosting	Call service
F47	Seal System Vapor Lock Fault	Call service
F48	T5 Ambient Temperature Check	Technician service data - Ambient beyond Heat Pump operating conditions
F49	Control Board - high temperature fault	Call service
F50	Inverter Fault	Call service
F51	Inverter Software Fault	Call service
F52	Compressor Discharge Temperature Low	Call service
F54	Superheat too low. Possible refrigerant leak.	Call service
F55	Electronic Expansion Valve Out of Range. Probable refrigerant leak.	Call service
F56	Electronic Expansion Valve Out of Range. Probable refrigerant leak; or Refrigerant Leak Test. Probable refrigerant leak.	Call service
F57	Concurrent Load High Current	Call service
F60	AC detection Failure	Call Service to confirm wiring is correct
F61	Tank water temperature is too hot	Should self correct
F62	Incoming water too hot	Reduce any preheat of inlet water or call for Service
F70#	Anode Depleted	Call Service to replace sensing anode (see anode replacement section in manual).
F73	Condensate Drain Pan Port Clogged	Clean condensate drain obstruction. See page 13
F74	Filter is dirty. If fault repeats after clearing, probable refrigerant leak.	Clean Filter. See page 13
F75	Dry Tank Fault	Confirm water in tank. See page 25.
F76	Voltage too low at power up.	Call Service for probable miswire. See page 26.
F77	Stuck Key Failure	Call Service to diagnose and repair
F78	Leak Sensor detected water	Determine source of water leak and correct. Reset shut-off valve, if equipped (see page 13). Call plumber to resolve, otherwise.
F81	Leak Sensor Battery is low	Replace Leak Sensor Battery
F90	E2 module unplugged or damaged	Call Service to diagnose and repair
F91 or F92	DataFlash Fault	Cycle Power to correct fault after service
F93	No Personality detected in control board	Call Service
F94	WiFi Board Failure (WiFi icon dark)	Call Service to diagnose and repair
F95	CTA Communication module software fault	Call Service
F96	CTA module disconnected or low battery	Reconnect CTA module or replace battery

* Applies to models with integrated mixing valve
# Applies to models with sensing anode

Wiring Diagram



Notes

GE Appliances Limited Warranty

All warranty service is provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service for your GE water heater call GE Water Heaters at 1-800-943-8186. Please have your serial number and your model number available when calling for service. Servicing your appliance may require the use of the onboard data port for diagnostics. This gives a GE Appliances factory service technician the ability to quickly diagnose any issues with your appliance and helps GE Appliances improve its products by providing GE Appliances with information on your appliance. If you do not want your appliance data to be sent to GE Appliances, please advise your technician not to submit the data to GE Appliances at the time of service

For The Period Of:	We Will Replace:
One Year From the date of the original purchase	***Any factory specified part*** of the water heater which fails due to a defect in materials or workmanship. During this ***limited one-year warranty,*** we will also provide, free of charge, all labor and related service to replace the defective part. Replaced water heater or parts will be warranted for the remaining period of the original product warranty.
Second through Tenth Year From the date of the original purchase	***Any part*** of the Water Heater which fails due to a defect in mater ials or workmanship. During this ***limited second through the end of the warranty period,*** labor and related service to replace the defective part are not included. Replaced water heater or parts will be warranted for the remaining period of the original product warranty. Accessories, such as leak detect sensor, supplied with this product will be warranted for 1 year from the date of purchase. *Warranty is based on the 6th and 7th digit of model number located on rating plate (e.g.: PF40S10FP* has a part warranty of 10 years).

What Is Not Covered:

- **Service trips to your home to teach you how to use the product.**
- **Improper installation, delivery or maintenance.**
- **Replacement parts shipping and handling and cost to remove defective part or tank after the first year limited warranty are NOT covered.**
- **Failure of the product if it is abused, misused, altered, 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.**
- **If product or other appliance must be moved for service access.**
- **Damage, malfunction or failure caused by the use of repair service not approved by GE Appliances.**
- **Damage, malfunction or failure caused by the use of unapproved parts or components.**
- **Damage, malfunction or failure caused by operating the water heater with the anode rod removed.**
- **Anode Rod inspection and replacement or operating the water heater without an anode rod. Changing from the original anode rod to an alternate material to address water quality issues.**
- **Damage, malfunction or failure resulting from operating the water heater with an empty or partially empty tank.**
- **Damage, malfunction or failure caused by subjecting the tank to pressure greater than those shown on the rating label.**
- **Damage, malfunction or failure caused by operating the 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 or any water quality condition that affects the proper functioning or appearance of the water heater.**
- **If this water heater is used for other than residential private family use, labor will not be covered under warranty, and the parts warranty is reduced to 1 year from the date of purchase.**
- **Accessory parts not covered beyond 1 year from date of purchase.**

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 limited 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 Appliances 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 Appliances Service location for service. In Alaska, the limited 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 limited 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:

GE Appliances, *a* **Haier** *company*

Louisville, KY 40225

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

Consumer Support

Register Your Appliance

Register your new appliance on-line at your convenience! Timely product registration will allow for enhanced communication and prompt service under the terms of your warranty, should the need arise.

- Scan QR Code on product registration card, or on product.

NOTE: This is just an example of what a QR code represents.

- Or go to **GEAppliances.com/register**
- Or mail in your pre-printed registration card included in the packing material

Consumer Service

If you have a question or need assistance with your new water heater on adjustments, repairs, or routine maintenance:

- Review the Troubleshooting Tips or Care and Cleaning sections of this Owner's Manual.
- Contact your local installer, plumbing contractor, or call GE Appliances Service and Support at 1-800-943-8186.

NOTE: Your installer phone number may be located on the product label.

If you still have issues, contact the GEA Customer Support at **GEAppliances.com/waterheater**

Parts and Accessories

Individuals qualified to service their own appliances can have parts or accessories sent directly to their homes. (VISA, MasterCard and Discover cards are accepted). Order on-line today 24 hours every day.

In the US, go to **GEApplianceparts.com**

Contact Us

If you are ultimately not satisfied with the service you receive, contact us on our Website with all the details including your phone number, or write to:

In the US: General Manager, Customer Relations |GE Appliances, Appliance Park |Louisville, KY 40225
GEAppliances.com/contact

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