$GeoSpring^{^{\mathrm{m}}}$ Hybrid Electric Water Heater

DIMENSIONS AND INSTALLATION INFORMATION (IN INCHES)

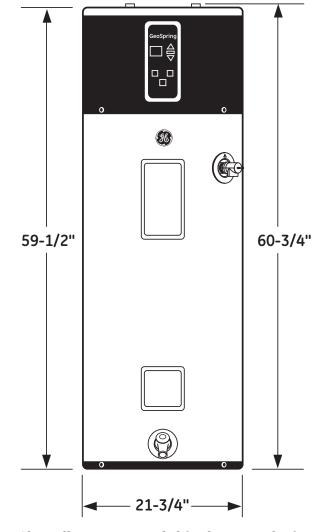
LOCAL INSTALLATION REGULATIONS: This water heater must be installed in accordance with these instructions, local codes, utility codes, utility company requirements or, in the absence of local codes, the latest edition of the National Electrical Code. It is available from some local libraries or can be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

INSTALLATION INFORMATION: For complete information, see installation instructions packed with your water heater.

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: 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.

NOTE: Because this unit draws in air from the room to heat the water, the room must be at least 10° x 10° x 7° (700 cubic feet) or larger. If the room is smaller, there must be a louvered door. Louvers should be 240 square inches (0.15m2) or greater. If two louvers are used, one should be near the top of the door. Place the water heater in such a manner that the air filter, cover and front panels can be removed to permit inspection and servicing, such as removal of elements or cleaning of the filter. The water heater and water lines should be protected from freezing temperatures and high-corrosive atmospheres. Do not install the water heater in outdoor, unprotected areas.



Above illustration intended for dimensional reference only. Refer to photograph for actual product appearance.

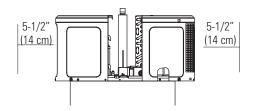


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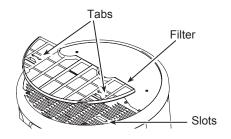
FRONT & BACK CLEARANCE

REQUIREMENTS: A 7" clearance is recommended with a minimum of 5-1/2" air space between any object and the front and back of the water heater and 7" on each side. Clearance is needed to allow for removal of the front and back covers in the event service is needed.



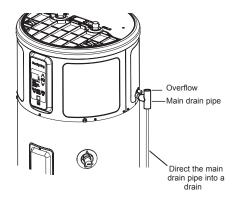
TOP FILTER REMOVAL CLEARANCE REQUIREMENTS:

A minimum 6" clearance is required at the top of the water heater to pull the filter up and remove it for cleaning. It is critical that the hot and cold water plumbing and the electrical connections do not interfere with the removal of the filter.



CONDENSATE DRAIN REQUIRED:

A primary drain pipe must be installed at the top right side of the water heater. The primary drain is intended to carry all condensate away.

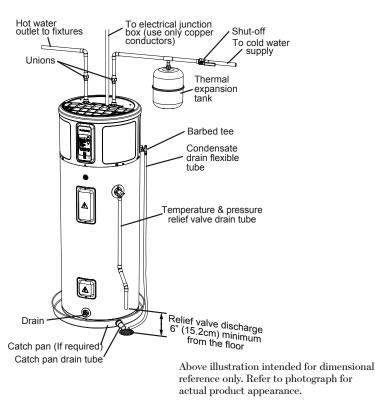




WATER SUPPLY CONNECTIONS: Refer to the illustration below for suggested typical installation. The installation of unions or flexible copper connectors is recommended on the hot and cold water connections so that the water heater may be easily disconnected for servicing if necessary. The HOT and COLD water connections are clearly marked and are 3/4" NPT on all models.

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 dip tube.



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VERIFICATION CHECKLIST:

1	TANK LOCATION:				
	- Is room size less than 10x10x7 (700 cu. ft.)? If yes, Louvered door or similar ventilation is needed.				
	- Back of unit away from wall by 7 inches.				
	- Front of unit is free and clear.				
	- Is the water heater level? If no, add shims under the base of the unit.				
□ 2 PLUMBING CONNECTIONS:					
	- Do not prevent air filter removal.				
	- No leaks after filling the tank with water, either when water is flowing or not.				
3 CONDENSATE LINES ARE IN PLACE:					
	- Longer PVC pipe on lower drain nozzle and directed into a floor drain or a condensate pump.				
4	T & P VALVE is working and drain line completed per local code.				
5	ELECTRICAL CONNECTION does not prevent air filter removal.				
6	Verify CONTROL PANEL displays 120°F (49°C) Hybrid Mode.				
7	Verify FILTER is in place.				

NORMAL STARTUP—WHAT TO EXPECT AFTER PRESSING THE POWER BUTTON

ELAPSED TIME	HYBRID WATER HEATER ACTIONS	COMMENTS	
:00 to 2:00 minutes	Unit will go through self-check	This 2 minute off-time prevents compressor from being "short cycled" (improved reliability).	
2:00 to 10:00 minutes	Compressor and fan turn on and run for 8 minutes	This 8 minute period is used to ensure tank is full of water (dry fire prevention algorithm).	
10:00 to 30:00 minutes	Compressor and fan turn off, heating elements turn on for approximately 20 minutes.	Quickly provides initial amount of hot water for user (~25 gallons).	
30 minutes and beyond	Upper element turns off, and compressor turns back on.	Uses efficient heat pump for majority of heating.	

NOTE: Heat pump operating range is 45° F to 120° F.



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FEATURES AND BENEFITS

62% more efficient than a standard electric 50-gallon water heater

Saves the average household \$365 every year* in water heating expenses - that's \$3,650 savings over a 10-year period

Provides the same amount of hot water as a traditional 50-gallon standard electric water heater with 65 gallons first-hour delivery

Installs like a standard electric water heater with the same top water and electrical connections, making replacing your old standard water heater quick and easy

Electronic controls with 4 operating modes plus a vacation setting make it simple to select the temperature and optimal energy savings performance

Utilizes heat pump technology to absorb the heat in ambient air and transfers it into water, making GeoSpring an efficient and environmentally friendly water heater

Qualifies for state and local utility rebates and tax credits

Designed for common indoor installation in areas such as: basement, garage, closet, utility room, attic, etc.

Limited 10 year warranty provides peace of mind and dependability

GEH50DEEDSR - Red

*Based on DOE test procedures and comparison of 50-gallon standard electric tank water heaters using 4879 kWh per year vs. the GeoSpring hybrid water heater using 1830 kWh per year and national average electricity rate of 12 cents per kWh

