

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

- › [Rinnai](#) /
- › [Rinnai REHP50 Electric Heat Pump Water Heater User Manual](#)

Rinnai REHP50

Rinnai REHP50 Electric Heat Pump Water Heater User Manual

Model: REHP50 | Capacity: 50 Gallons

1. PRODUCT OVERVIEW

The Rinnai REHP50 Electric Heat Pump Water Heater is a high-efficiency, eco-friendly solution designed to provide consistent hot water for residential use. This 50-gallon unit utilizes advanced heat pump technology to extract warmth from ambient air, significantly reducing energy consumption compared to traditional electric water heaters. It is engineered for performance and sustainability, offering substantial energy savings and a reliable hot water supply.





Figure 1: Front view of the Rinnai REHP50 Electric Heat Pump Water Heater.

Key Features:

- **Energy-Efficient Performance:** Energy Star Certified with a Uniform Energy Factor (UEF) of 3.75, extracting heat from ambient air for reduced energy costs and zero emissions.
- **High First-Hour Delivery:** Provides up to 73 gallons of hot water in the first hour, suitable for households of 3–4 people with high demand.
- **Demand-Response Enabled:** Features a CTA-2045 communication port to interact with local utility companies, optimizing energy usage during peak hours to save money.
- **Durable & Reliable Design:** Constructed with a glass-lined steel tank and certified by UL, AHRI, NSF, and NEEA.

- **Easy Installation & Compatibility:** Operates on 240V / 30A, with standard 3/4" MNPT inlet/outlet connections and R134a refrigerant. Designed for zero clearance on top, back, and sides for flexible installation.

2. INSTALLATION GUIDELINES

Proper installation is crucial for the safe and efficient operation of your Rinnai REHP50 Electric Heat Pump Water Heater. It is highly recommended that installation be performed by a qualified professional in accordance with all local and national plumbing and electrical codes.

2.1 Pre-Installation Considerations

- **Location:** Choose a location that allows for adequate air circulation around the unit. The REHP50 requires zero clearance on all sides (top, back, and sides) for flexible placement.
- **Electrical Requirements:** Ensure a dedicated 240V / 30A electrical circuit is available.
- **Water Connections:** The unit uses standard 3/4" MNPT inlet/outlet connections.
- **Condensate Drain:** A condensate drain line must be installed to manage moisture extracted from the air.
- **Leak Kit and Duct Accessory:** For indoor installations, consider using an optional leak kit and duct accessory for enhanced protection and performance.



Figure 2: Example installation in a laundry room.



Figure 3: Example installation in a garage.



Figure 4: Example installation in a storage room.

3. OPERATING INSTRUCTIONS

The Rinnai REHP50 features an intuitive control panel and multiple operating modes to optimize hot water delivery and energy efficiency.

3.1 Control Panel Overview

The interactive display on the front of the unit allows you to monitor status, adjust temperature settings, and select operating modes. Refer to the detailed diagrams in the printed manual for specific button functions and display indicators.

3.2 Operating Modes

The REHP50 offers 5 operating modes to suit various household needs and energy preferences. These modes typically include options for maximum efficiency, hybrid operation, and high demand. Consult your full manual for detailed descriptions of each mode and how to select them.

3.3 How the Heat Pump Works

The heat pump extracts thermal energy from the surrounding air and converts it to heat the water in the tank. This process is highly efficient, acting as an energy multiplier. For every 1kW of electrical power input, the unit can deliver up to 4kW of energy into water heating, achieving a performance efficiency of up to 400%.

Your browser does not support the video tag.

Video 1: An informational video demonstrating the Rinnai REHP Series Electric Heat Pump Water Heater's operation, energy efficiency, key features like the sliding filter, and flexible installation options.

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Rinnai REHP50 Electric Heat Pump Water Heater.

4.1 Air Filter Cleaning

The unit is equipped with a safe sliding filter located on the top, designed for easy access and cleaning. Regularly inspect and clean the air filter to maintain efficient heat pump operation. A clogged filter can reduce efficiency and impact performance.



Figure 5: Top view showing the air intake grille and filter access.

4.2 General Maintenance Tips

- **Annual Inspection:** Have a qualified technician inspect the unit annually.
- **Anode Rod Check:** Periodically check and replace the anode rod as needed to protect the tank from corrosion.
- **Drain Valve:** The bottom legs provide clearance from moisture, dirt, and cleaning products, but ensure the drain valve remains accessible.
- **Condensate Drain:** Ensure the condensate drain line is clear and free of obstructions.

5. TROUBLESHOOTING

If you encounter issues with your Rinnai REHP50, refer to the following common troubleshooting steps. For persistent problems, contact a qualified service technician.

5.1 Common Issues and Solutions

- **No Hot Water:** Check power supply, circuit breaker, and ensure the unit is in an active operating mode. Verify temperature settings.
- **Insufficient Hot Water:** Adjust temperature settings, ensure the unit is not in a low-energy mode during high demand, and check for excessive hot water usage.
- **Unusual Noises:** Minor operational noises are normal. Excessive or new noises may indicate an issue with the fan or compressor. Contact support if noises are concerning.
- **Error Codes:** If an error code appears on the display, consult the full user manual for specific code meanings and recommended actions.

If troubleshooting steps do not resolve the issue, please contact Rinnai customer support or a certified service professional.

6. TECHNICAL SPECIFICATIONS

Specification	Detail
Brand	Rinnai
Model Number	REHP50
Capacity	50 Gallons
Product Dimensions	22"W x 66.81"H
Voltage	240 Volts
Amperage	30A
Efficiency (UEF)	3.75
First Hour Delivery	73 Gallons
Mounting Type	Floor (Vertical)
Item Weight	212 pounds

Specification	Detail
Color	Pearl White
UPC	766156017575

7. WARRANTY AND SUPPORT

Rinnai is committed to the quality and reliability of its products.

7.1 Warranty Information

- **Tank and Parts:** 10-year residential warranty.
- **Labor:** 1-year labor coverage.

Please retain your proof of purchase for warranty claims. For full warranty terms and conditions, refer to the documentation included with your product or visit the official Rinnai website.

7.2 Certifications

The Rinnai REHP50 is certified by:

- Energy Star
- UL (Underwriters Laboratories)
- AHRI (Air-Conditioning, Heating, and Refrigeration Institute)
- NSF (National Sanitation Foundation)
- NEEA (Northwest Energy Efficiency Alliance)


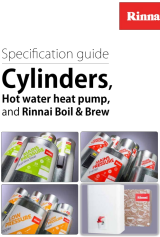



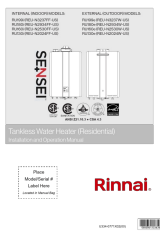
7.3 Federal Tax Credits

This product may be eligible for federal tax credits under IRA Section 45L when installed in qualifying energy-efficient homes. Consult with a tax professional or visit relevant government websites for eligibility requirements.

7.4 Customer Support

For technical assistance, service inquiries, or to locate a certified Rinnai technician, please visit the Rinnai website or contact customer support directly.

- **Rinnai Website:** www.rinnai.us
- **Customer Service:** Refer to your product documentation for the most current contact information.

 <p>Rinnai SENSEI RX SERIES Built for the PRO, by the PRO</p>	<p>Rinnai SENSEI RX Series: High-Efficiency Condensing Tankless Water Heaters</p> <p>Explore the Rinnai SENSEI RX Series, engineered for professionals. This brochure details features like Smart-Circ™ Intelligent Recirculation, superior components, advanced technology, and convenient setup for efficient, unlimited hot water. Includes specifications, accessories, and comparisons.</p>
 <p>Rinnai</p> <p>Specification guide Cylinders, Hot water heat pump, and Rinnai Boil & Brew</p>	<p>Rinnai Hot Water Cylinders, Heat Pumps, and Boil & Brew Specification Guide</p> <p>Comprehensive specification guide detailing Rinnai's extensive range of hot water cylinders, including mains pressure, low pressure, and smart models, alongside hot water heat pumps and Boil & Brew units. Features product specifications, ordering information, and technical details for residential and commercial applications.</p>
 <p>Rinnai</p> <p>endless comfort and performance</p>	<p>Rinnai Tankless Water Heaters: Endless Hot Water, Energy Savings, and Smart Control</p> <p>Explore Rinnai's advanced tankless water heaters, offering a continuous supply of hot water, significant energy savings up to 40%, compact and space-saving designs, and smart home integration. Learn about their eco-friendly technology, innovative features like ThermoCirc360™ recirculation, and the Control-R™ Wi-Fi module for remote management.</p>
 <p>Rinnai</p> <p>EHPWH Element Heater REPLACEMENT INSTRUCTIONS</p>	<p>Rinnai EHPWH Element Heater Replacement Instructions</p> <p>Step-by-step guide for replacing the element heater in Rinnai EHPWH heat pump water heaters, including safety precautions, required tools, and reassembly instructions.</p>
 <p>Rinnai</p> <p>New Parts in R75LS and R94LS</p>	<p>Rinnai R75LS and R94LS New Parts Technical Bulletin</p> <p>Technical bulletin detailing new and updated parts for Rinnai R75LS and R94LS series models, including part numbers, descriptions, and compatibility information for various configurations.</p>
 <p>Rinnai</p> <p>SENSEI</p>	<p>Rinnai Tankless Water Heater Installation and Operation Manual</p> <p>Comprehensive guide for installing, operating, and maintaining Rinnai residential tankless water heaters. Covers safety precautions, specifications, troubleshooting, and warranty information. Visit www.rinnai.us for more details.</p>