

Ranein RE14K

Ranein Electric Tankless Water Heater, 14kW 240V, Model RE14K - Instruction Manual

Model: RE14K | Brand: Ranein

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Ranein RE14K Electric Tankless Water Heater. Please read this manual thoroughly before installation and use, and retain it for future reference.

The Ranein RE14K is a 14 kW, 240V on-demand instant water heater designed for residential whole-house shower applications. It features an LED temperature display and a compact, space-saving design. Key features include:

- **Energy Efficiency:** Up to 99% thermal efficiency, saving up to 60% on heating costs compared to tank-type heaters. No preheating required.
- **Powerful Performance:** Provides endless hot water with a flow rate up to 3.6 GPM, suitable for 2-3 usage points simultaneously.
- **Simple Operation:** Features knob controls and an LED display for easy temperature adjustment from 86°F to 131°F in 1°F increments.
- **Safety Features:** Incorporates leakage protection, overheat protection, and automatic shutdown. Heating elements are separated from water to prevent scale buildup.

2. SAFETY INFORMATION

Important: Installation must be performed by a qualified electrician and plumber in accordance with all local and national electrical and plumbing codes. Failure to do so may result in property damage, serious injury, or death.

- Ensure the water heater is sized correctly for your hot water needs.
- Verify your electrical infrastructure can accommodate the power supply requirements (14 kW, 240V, 1 x 60 Amp circuit breaker).
- Do not install the unit outdoors or in areas exposed to weather.
- Keep the unit out of reach of children.
- A mandatory grounding wire must be connected for safety.
- Heating elements are separated from water to prevent scale buildup and ensure longevity.

- The unit includes leakage protection, overheat protection, and automatic shutdown features.

3. SETUP AND INSTALLATION

3.1 Pre-installation Checks

Before beginning installation, confirm the following requirements:

- **Power:** 14 kW, 240 Volts.
- **Circuit Breaker:** 1 x 60 Amp double-pole breaker required.
- **Wire Gauge:** 6 AWG (American Wire Gauge) cable required.
- **Water Connection:** 1/2" NPT.
- **Unit Dimensions:** Approximately 10.7" x 14.25" x 3.22".

Ensure your home's electrical panel has sufficient space and capacity for the required breaker.

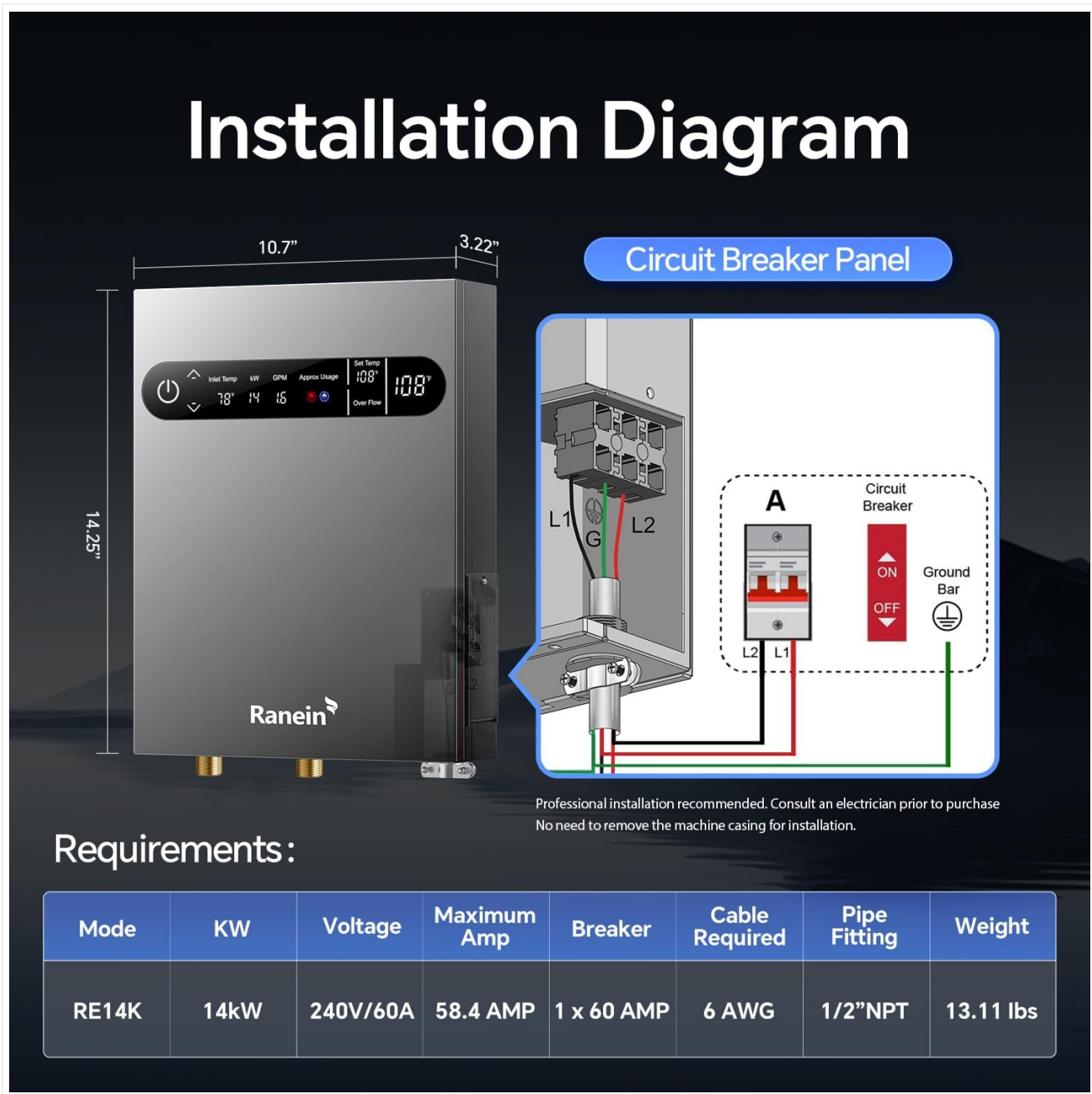


Figure 3.1: Installation diagram with dimensions and electrical specifications for the Ranein RE14K water heater. Note the 14kW, 240V, 1x60A breaker, and 6 AWG wire requirements.

Pay Attention To Specs And Electrical Infrastructure Is Very Important.

ATTENTION! PRODUCT REQUIRES

58	1 x 60 AMP
Ampamps Power	Breakers Required

Please Ensure You Can Accomodate The Power Supply And Have The Proper Spce For This Unit In Your Breaker Panel

Figure 3.2: Cable gauge and power requirements chart. For the 14kW/240V model, 6 AWG cable and a 60A breaker are specified.

Accurate Temperature Control

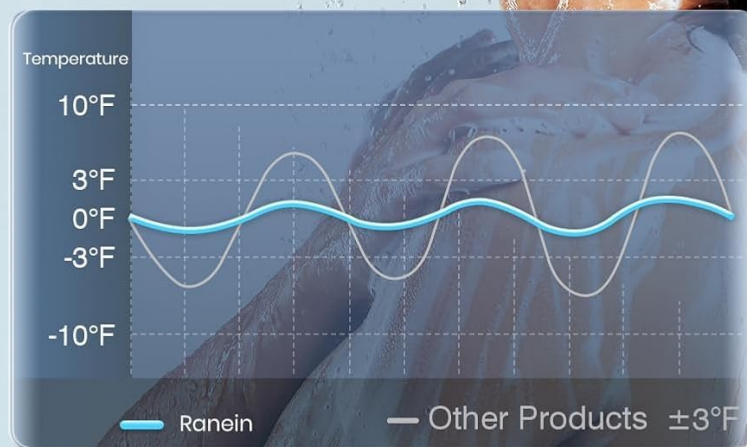


Figure 3.3: Important notice regarding power requirements: 58 Amps power and 1 x 60 Amp breakers are required. Confirm your breaker panel can accommodate this.

3.2 Mounting the Unit

The compact design allows for flexible installation. Ensure adequate clearance around the unit for safety and maintenance. Typically, 15 inches above and 12 inches to the side are recommended clearances.

Use the provided mounting brackets and hardware. A template may be included in the packaging to assist with drilling holes for precise placement.

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Video 3.1: This video demonstrates the installation process for a similar Thermomate water heater, including mounting the unit to a plywood board on the wall. It shows how to use a template for drilling and securing the unit.

3.3 Plumbing Connections

The unit has clearly marked inlet (blue) and outlet (red) ports for water connections. Use 1/2" NPT fittings. It is highly recommended to install isolation valves on both the hot and cold water lines for future servicing.

- Connect the cold water supply line to the blue "INLET" port.

- Connect the hot water output line to the red "OUTLET" port.
- Use Teflon tape on all threaded metal-to-metal connections to ensure a watertight seal.

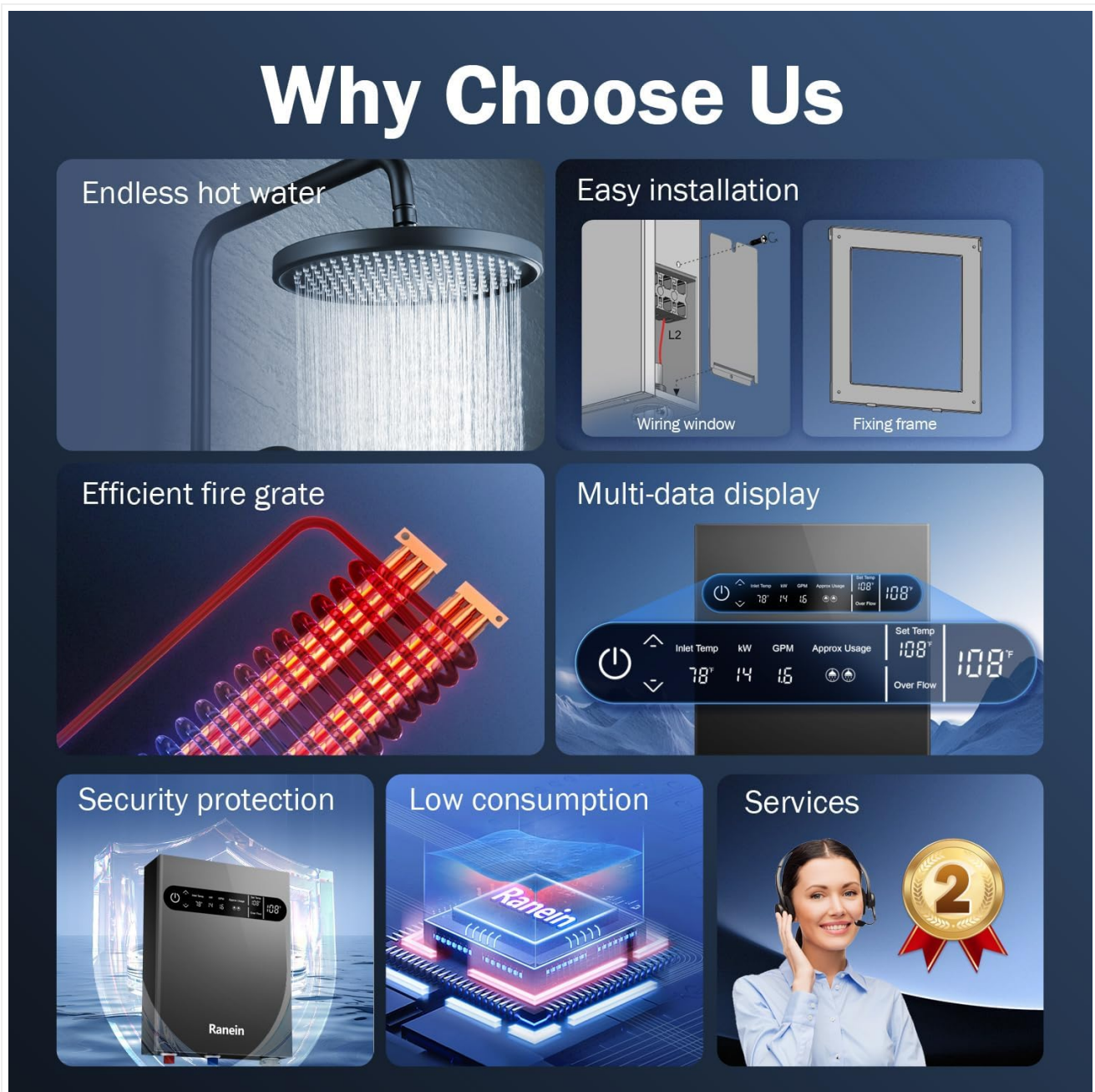


Figure 3.4: Close-up of the water heater's bottom, indicating the red (hot water outlet) and blue (cold water inlet) connections. Electrical wire clamps are also visible.

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Video 3.2: This video demonstrates the installation process for a similar Thermomate water heater, including connecting the plumbing lines to the water heater, and the use of isolation valves and proper sealing techniques for threaded connections.

3.4 Electrical Connections

Before making any electrical connections, ensure the main power supply to the circuit breaker panel is turned OFF. The Ranein RE14K requires a 240V, 60 Amp double-pole circuit breaker and 6 AWG wiring.

- Remove the front cover of the water heater to access the wiring terminals.
- Connect the 6 AWG wires from the 60 Amp double-pole breaker to the designated terminals inside the unit.
- Ensure a mandatory grounding wire is properly connected.
- Secure all connections firmly.

- Replace the front cover once wiring is complete.

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Video 3.3: This video illustrates the electrical wiring process for a similar Thermomate water heater, including connecting to the circuit breaker panel and securing wires within the water heater unit. It highlights the importance of correct wire gauge and breaker size.

3.5 Initial Startup and Flushing

Before turning on the electrical power, ensure all plumbing connections are secure and open the cold water supply valve. Run water through the hot water faucets for at least one minute to purge any air from the system. This prevents damage to the heating elements.

4. OPERATING INSTRUCTIONS

Once installed and flushed, your Ranein RE14K water heater is ready for operation.



Figure 4.1: The front panel of the Ranein RE14K, featuring the LED temperature display and the rotary control knob.

4.1 Temperature Control

- **Power On/Off:** Click the control knob to turn the unit on or off.
- **Adjust Temperature:** Rotate the knob to adjust the desired water temperature. The temperature range is 86°F to 131°F (30°C to 55°C), adjustable in 1°F increments.

- **Switch Units:** To switch between Fahrenheit (°F) and Celsius (°C) display, press and hold the knob for 3 seconds.
- The LED display will show the set temperature and other operational data.

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Video 4.1: This video demonstrates the easy-to-use control knob and LED display for setting temperature and switching between Fahrenheit and Celsius. It highlights the compact size and multi-outlet capability.

4.2 Usage Points

With a flow rate of up to 3.6 GPM, the RE14K is suitable for providing hot water to 2-3 usage points simultaneously, such as a shower and a sink, or two sinks.



Figure 4.2: This diagram shows the Ranein water heater supporting multiple water outlets, including kitchen, bathroom, garage, and salon applications.

5. MAINTENANCE

The Ranein RE14K is designed for low maintenance. The heating elements are separated from the water flow,

which helps prevent scale buildup and corrosion, extending the unit's lifespan.

- Regularly inspect water connections for any signs of leakage.
- Ensure the area around the water heater remains clear of obstructions for proper ventilation.
- If the unit is to be left unused for an extended period in freezing temperatures, ensure proper winterization procedures are followed to prevent damage.



Figure 5.1: Electro-hydraulic separation design ensures no limescale buildup, contributing to fresh hot water and extended unit life.

6. TROUBLESHOOTING

For specific troubleshooting steps, please refer to the detailed troubleshooting section in the printed manual included with your product. Common issues may include:

- No hot water: Check power supply, circuit breaker, and water flow.
- Insufficient hot water: Verify correct temperature setting and ensure flow rate is within specifications for simultaneous usage.
- Error codes on LED display: Consult the manual for specific code meanings and resolutions.

7. SPECIFICATIONS

Feature	Specification
Brand	Ranein
Model Number	RE14K
Power Source	Corded Electric
Voltage	240 Volts
Wattage	14 KW
Circuit Breaker Required	1 x 60 Amp Double-Pole
Wire Gauge Required	6 AWG
Water Connection	1/2" NPT

Feature	Specification
Temperature Range	86°F - 131°F (30°C - 55°C)
Flow Rate (Max)	3.6 GPM
Thermal Efficiency	Up to 99%
Product Dimensions	34.2 x 34.2 x 52.5 cm (10.7" x 14.25" x 3.22")
Item Weight	5.44 kg (12 lbs)
Material	Iron
Installation Method	Wall-mounted
Special Features	Overheat Protection, Leakage Protection, Automatic Shutdown





8. WARRANTY AND SUPPORT

Specific warranty details for the Ranein RE14K Electric Tankless Water Heater are typically provided in the product packaging or on the manufacturer's official website. Please refer to the documentation included with your purchase for comprehensive warranty information and contact details for customer support.

For technical assistance or service inquiries, please contact Ranein customer support. Contact information can usually be found in your product manual or on the Ranein brand store page.

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Related Documents - RE14K

	Ranein Tankless Electric Water Heaters: Installation and Use Manual Comprehensive guide for Ranein RE18K and RE27K tankless electric water heaters, covering safety, installation, operation, maintenance, and troubleshooting.
	Ranein 12L Propane Tankless Water Heater Installation Manual Installation manual for the Ranein 12L propane gas tankless water heater, providing up to 3.18 GPM and 68,000 BTU for on-demand hot water.
	Ranein RA65L RV Tankless Water Heater: Installation, Operation, and Safety Manual Comprehensive guide for the Ranein RA65L RV Tankless Water Heater, covering installation, operation, safety precautions, maintenance, and troubleshooting. Essential information for RV owners.
	Ranein RV Tankless Water Heater Installation and Use Manual Comprehensive instructions for installing and using the Ranein RV Tankless Water Heater. Covers safety warnings, product features, installation steps, operation, winterizing, and troubleshooting for models RA65EH, RA65LH, RA65SH, and RA65ZH.



[Ranein RV Tankless Water Heater: Installation and Operation Guide](#)

Comprehensive guide for installing, operating, and maintaining the Ranein RA65L and RA65S series RV tankless water heaters, including safety guidelines, troubleshooting, and specifications.

[Ranein Residential Indoor Tankless Gas Water Heater Installation and Use Manual](#)

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Ranein Residential Indoor Tankless Gas Water Heater, models RH10K-NG and RH10K-LPG. It includes detailed safety warnings, operating procedures, troubleshooting tips, and warranty information to ensure safe and efficient use.