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Ranein RE8K (8kW)

Ranein 8kW Tankless Electric Water Heater User Manual

Model: RE8K (8kW) | Brand: Ranein

1. INTRODUCTION

Thank you for choosing the Ranein 8kW Tankless Electric Water Heater. This compact and efficient unit provides instant, endless hot water for your bathroom and kitchen sink needs. Designed for 240V electrical systems, it features an intuitive LED temperature display and advanced safety mechanisms. This manual provides essential information for the proper installation, operation, and maintenance of your new water heater.



Figure 1: Ranein 8kW Tankless Electric Water Heater

This image shows the front view of the Ranein 8kW Tankless Electric Water Heater, highlighting its sleek gray design and the prominent LED display panel. The display shows inlet temperature, power (kW), flow rate (GPM), approximate usage, set temperature, and overflow status. Red and blue water connections are visible at the bottom.

2. IMPORTANT SAFETY INFORMATION

Please read all safety warnings and instructions carefully before installing or using this appliance. Failure to follow these instructions may result in electric shock, fire, property damage, or personal injury.

- Electrical Requirements:** This unit requires 240 volts and a 1 x 40 amp circuit breaker. Ensure proper electrical setup by a qualified electrician.
- Water and Electricity Separation:** The heating elements are separated from water to prevent scale buildup and reduce leakage hazards.
- Multiple Protection Features:** Includes leakage protection, overheat protection, and automatic shutdown for enhanced safety during use.
- Professional Installation Recommended:** For electrical and plumbing connections, professional installation is advised.



Figure 2: Multiple Protection Features

This image illustrates the various safety features of the Ranein water heater, including dry combustion protection, overheat protection, lightning resistance, control component safety, leakage protection, IPX4 waterproof rating, anti-scale design, and a safe heating chamber. These features are designed to ensure user safety and product longevity.

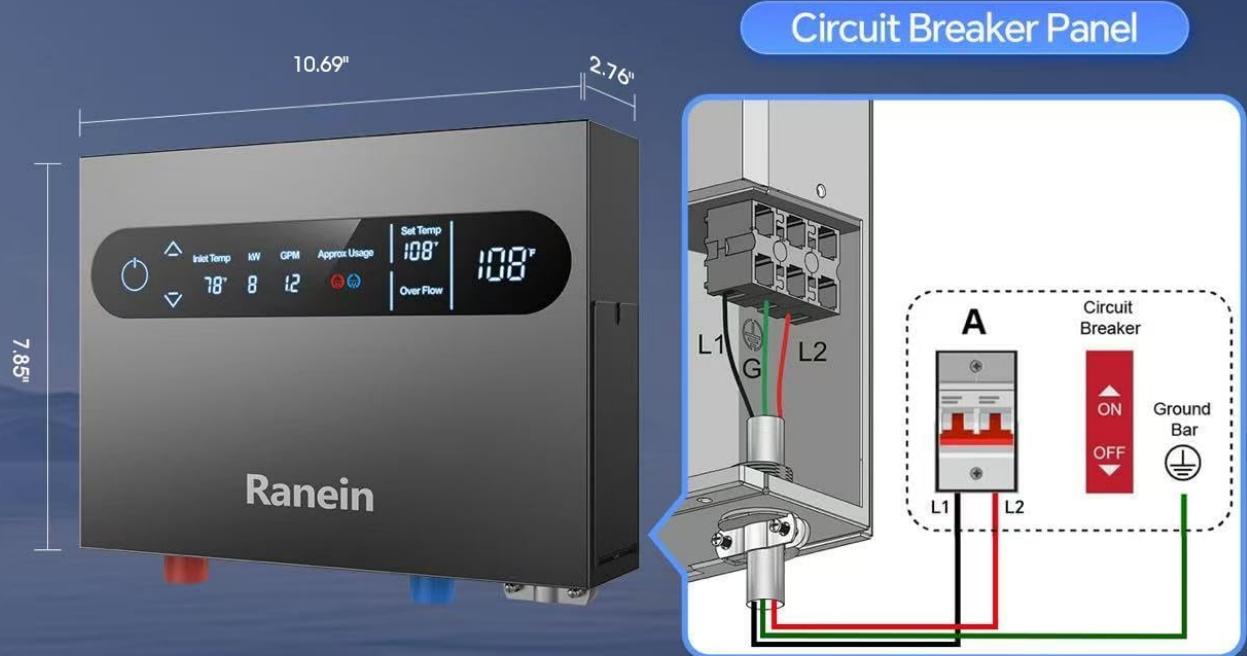
3. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your tankless water heater. Refer to the detailed [Installation Manual \(PDF\)](#) for complete instructions. Below are key considerations:

3.1 Electrical Requirements

- **Voltage:** 240 Volts (AC)
- **Circuit Breaker:** 1 x 40 Amps required.
- **Cable Gauge:** Refer to the table below for appropriate cable thickness based on power output. For the 8kW model, 8AWG is typically required.
- **Wiring:** No need to disassemble the housing for wiring.

Installation Diagram



Requirements:

Mode	KW	Voltage	Maximum Amp	Breaker	Cable Required	Pipe Fitting	Weight
RE8K	8kW	240V/40A	33.33 A	1x40 AMP	10 AWG	1/2" NPT	6.6 lbs

Figure 3: Cable Gauge & Power Requirements

This chart provides essential information on the required cable gauge and breaker size for different power outputs of Ranein tankless water heaters. It visually compares 8AWG and 6AWG thickness to two quarters for easy understanding. For the 8kW model, 8AWG cable and a 40A breaker are specified.

3.2 Plumbing Requirements

- **Water Connection:** 1/2" NPT.
- Ensure all connections are secure and leak-free.

3.3 Mounting

- The unit can be wall-mounted using the provided brackets.
- Its compact size (10.7" x 7.9" x 2.8") allows for installation in small spaces, such as under a sink cabinet, in a shed, or garage.

Cable Gauge & Power Requirements

8AWG Thickness
(Roughly equivalent to two quarters)



6AWG Thickness
(Thicker than two quarters)



Power (Output)	Cable Required	Breaker
4.5kW / 120V	8AWG	40A
8kW / 240V	8AWG	40A
13kW / 240V	6AWG	60A
18kW / 240V	2x8AWG	40A*2
27kW / 240V	3x8AWG	40A*3

Figure 4: Installation Diagram

This diagram illustrates the installation process, showing the unit's dimensions and how it connects to a circuit breaker panel. It emphasizes the recommendation for professional installation and notes that the machine casing does not need to be removed for wiring. Key specifications like mode, kW, voltage, maximum amp, breaker, cable required, pipe fitting, and weight are listed in a table below the diagram.

Your browser does not support the video tag.

Video 1: Ranein 8kW or 13kW Tankless Electric Water Heater Overview

This video provides an overview of the Ranein 8kW or 13kW Tankless Electric Water Heater, demonstrating its compact size and suitability for various installations, including small spaces like under a bathroom sink. It highlights the ease of installation and the benefits of instant hot water without a tank.

4. OPERATING INSTRUCTIONS

The Ranein tankless water heater is designed for simple and intuitive operation.

4.1 LED Display and Controls

- The unit features a clear LED display that shows real-time information including inlet temperature, power (kW), flow rate (GPM), approximate usage, set temperature, and overflow status.
- Use the knob controls to adjust the temperature. The adjustment range is from 86°F to 131°F in 1°F increments.
- Simply set your desired temperature, and the unit will provide stable and ample hot water instantly, without preheating.



Figure 5: Multi-data Display

This close-up image highlights the multi-data LED display of the Ranein water heater. It clearly labels the various indicators such as ON/OFF, Increase/Decrease temperature buttons, Inlet Temp, kW, GPM, Approx Usage, Set Temp, and Outlet Temperature Display. The display shows an example set temperature of 108°F.

4.2 Hot Water Delivery

- The 8kW model offers a flow rate of up to 1.9 GPM, suitable for 1-2 usage points simultaneously.
- Enjoy continuous hot water without the limitations of a tank.

5. MAINTENANCE

The Ranein tankless electric water heater is designed for minimal maintenance due to its innovative features.

- **Anti-Scale Design:** The heating elements are separated from the water, which significantly prevents scale buildup. This design eliminates the need for frequent descaling common in traditional tank-type heaters.
- **No Special Maintenance:** Unlike tank water heaters that require periodic flushing to remove sediment and mineral scale, this tankless unit generally requires no special maintenance.
- Regularly inspect the unit for any visible signs of wear or damage, and ensure connections remain secure.

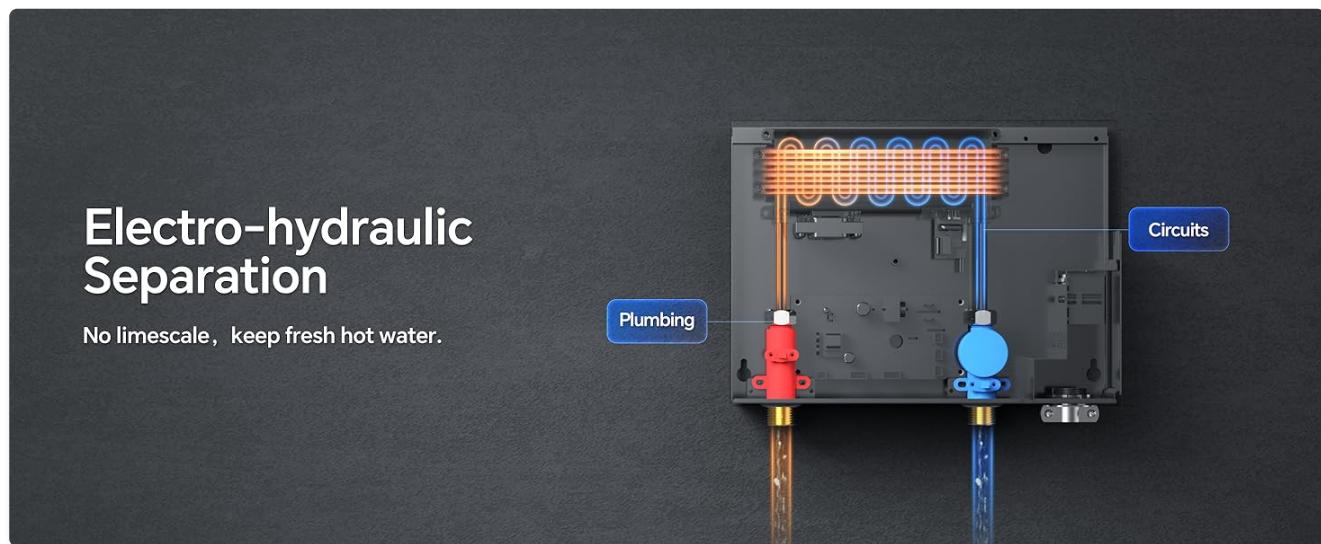


Figure 6: Electro-hydraulic Separation

This image illustrates the electro-hydraulic separation design of the Ranein water heater, showing how plumbing and electrical circuits are kept separate. This design prevents limescale buildup and helps maintain fresh hot water, contributing to the unit's low maintenance requirements.

6. SPECIFICATIONS

Feature	Detail
Brand	Ranein
Model Number	RE8K (8kW)
Power Source	AC Electric
Voltage	240 Volts (AC)
Maximum Temperature	131 Degrees Fahrenheit
Efficiency	99%
Product Dimensions	10.69"W x 7.85"H x 2.8"D

Feature	Detail
Item Weight	7.68 pounds
Mounting Type	Wall
Water Connection	1/2" NPT
Included Components	Water heater

7. TROUBLESHOOTING

If you encounter issues with your Ranein tankless water heater, consider the following common checks:

- **No Hot Water:** Verify that the unit is receiving power and the circuit breaker is not tripped. Ensure water flow is sufficient to activate the heating element.
- **Insufficient Hot Water:** Check the set temperature on the LED display. Ensure the flow rate is within the unit's capacity for the number of usage points.
- **Leakage:** Immediately turn off water supply and power to the unit. Inspect all plumbing connections for tightness. If leakage persists, contact a qualified plumber.
- **Error Codes:** If the LED display shows an error code, refer to the detailed [Installation Manual \(PDF\)](#) for specific code interpretations and solutions.

For issues not resolved by these steps, please contact Ranein customer support.

8. WARRANTY AND SUPPORT

For warranty information and customer support, please refer to the documentation included with your product or visit the official Ranein website. You can also find additional support and detailed installation guides via the [Installation Manual \(PDF\)](#) provided.