

Ranein RC25G-W

Ranein 2025 Gen II 2.5-Gallon Mini Tank Electric Water Heater

Model: RC25G-W | Brand: Ranein

1. INTRODUCTION

This manual provides essential instructions for the safe installation, operation, and maintenance of your Ranein 2.5-Gallon Mini Tank Electric Water Heater. Please read this manual thoroughly before installation and retain it for future reference. Proper installation and adherence to these guidelines will ensure optimal performance and longevity of your water heater.



Image: The Ranein 2.5-Gallon Mini Tank Electric Water Heater, a compact unit designed for point-of-use hot water.

2. SAFETY INFORMATION

Your safety and the safety of others are paramount. This water heater is equipped with multiple safety features. Always follow basic safety precautions to reduce the risk of fire, electric shock, and injury.

- **Professional Installation Recommended:** Installation should be performed by a qualified plumber or electrician in accordance with all local codes and regulations.
- **Electrical Safety:** Ensure the unit is properly grounded. Do not operate if the power cord is damaged.
- **Water Pressure:** Do not exceed the maximum rated water pressure of 150 PSI. A pressure relief valve is included and must be installed.
- **Temperature Settings:** Be aware that water temperatures above 125°F (52°C) can cause severe burns or scalding. Adjust the thermostat carefully.
- **Dry-Burn Protection:** The unit includes dry-burn protection, which automatically shuts off heating if the tank is empty.

- **IPX4 Waterproof Rating:** Provides protection against splashing water.
- **Leakage Detection:** The system is designed with rapid leak detection for enhanced safety.

Multiple Protection



High Temperature
Resistance



Corrosion
Resistance



High Pressure
Resistance



Dry Burning
Resistance



IPX4
Waterproof



Leakage
Resistance

Image: Diagram illustrating the multiple protection features of the Ranein water heater, including high temperature, corrosion, high pressure, dry burning, IPX4 waterproof, and leakage resistance.

3. PRODUCT FEATURES

The Ranein 2.5-Gallon Mini Tank Electric Water Heater is designed for efficient and convenient hot water supply at the point of use. Key features include:

- **Instant Hot Water:** 1440W, 120V mini tank heater provides immediate hot water, eliminating waiting times for kitchen sinks, utility basins, bathrooms, RVs, and cabins.
- **Adjustable Temperature:** Customize water temperature from 68°F to 149°F (20°C to 65°C).
- **Durable Construction:** Features a premium 304 stainless steel inner tank for corrosion resistance, scale buildup prevention, and high-pressure wear, outlasting standard enamel glass-lined tanks. Includes a reinforced welded structure and magnesium anode rod.
- **Triple-Layer Heat Retention:** Advanced insulation system with enamel coating, high-density foam, and reinforced steel housing reduces standby heat loss by up to 30%, ensuring 99% heating efficiency.

- **6-Level Safety Protection:** Incorporates an adjustable thermostat, over-temperature safeguard (up to 185°F/85°C), high-pressure resistance (up to 150 PSI), dry-burn protection, IPX4 waterproof rating, and rapid leak detection.
- **Versatile Installation:** Compact design allows for wall, floor, or under-sink mounting with standard 1/2" NPT connections. Plugs into a standard 120V outlet.

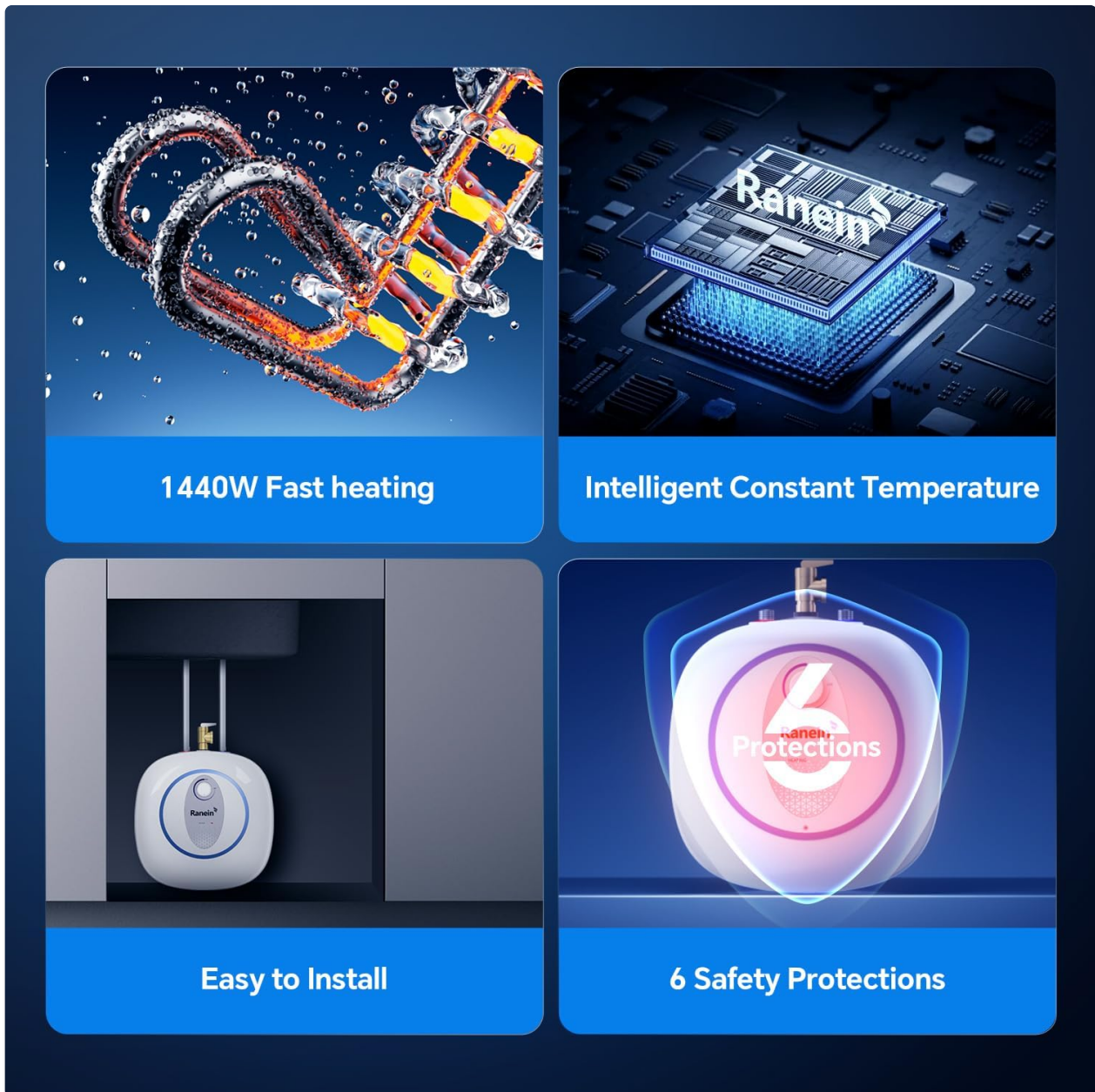


Image: Visual representation of key features including 1440W fast heating, intelligent constant temperature, easy installation, and 6 safety protections.

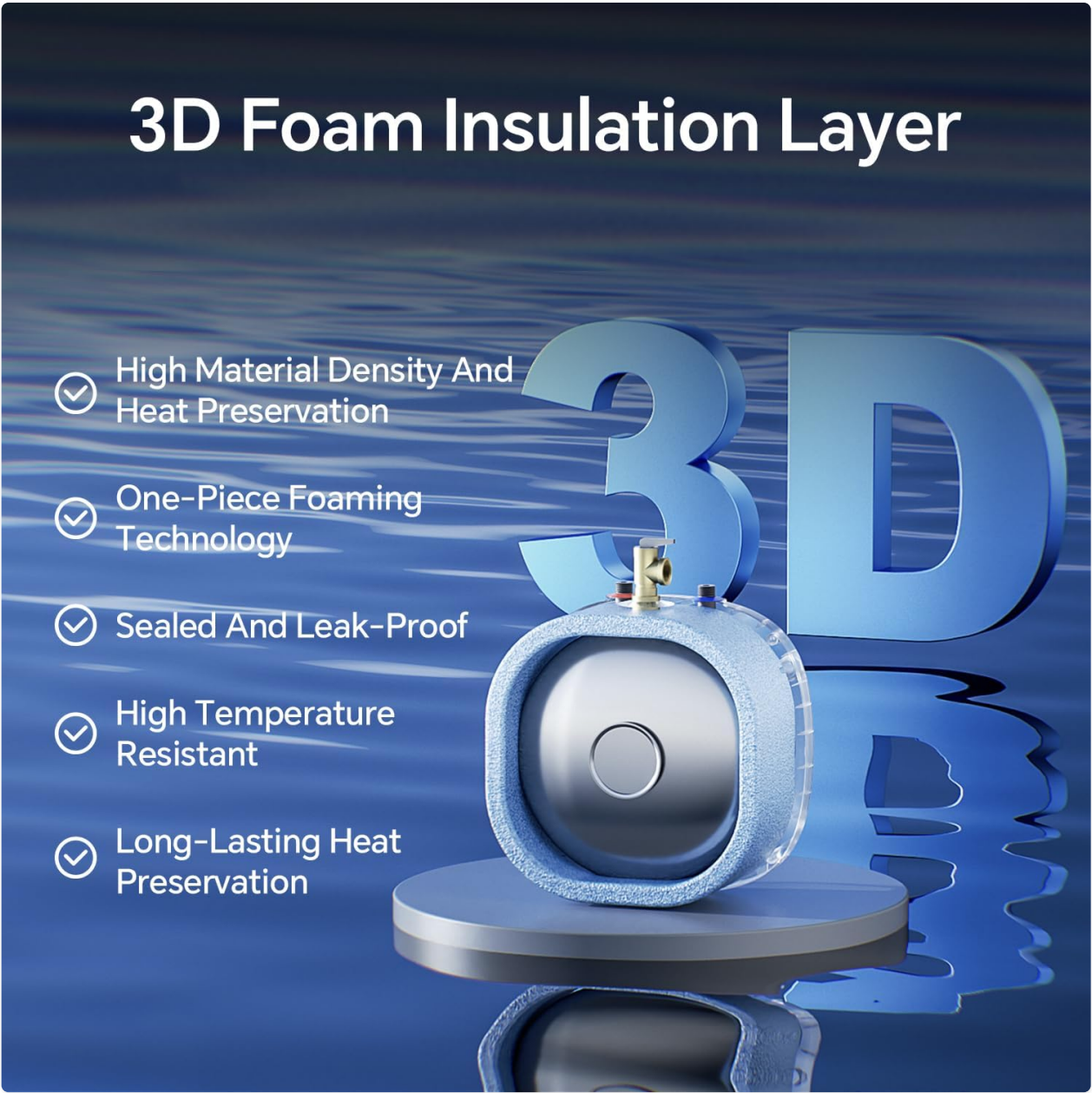


Image: Diagram highlighting the 3D foam insulation layer for high material density, one-piece foaming technology, sealed and leak-proof design, high temperature resistance, and long-lasting heat preservation.

4. PRODUCT SPECIFICATIONS

Specification	Value
Brand	Ranein
Model Number	RC25G-W
Capacity	2.5 Gallons
Wattage	1440 Watts
Voltage	120V
Product Dimensions (W x H)	13.39" x 13.39"

Specification	Value
Item Depth	11.42 inches
Item Weight	17.63 pounds
Max Water Pressure	150 PSI
Waterproof Grade	IPX4
Mounting Type	Floor, Under Sink, Wall
Color	White

Product Parameters



Capacity	Voltage	Power	Max Water Pressure	Weight	Amperage	Waterproof Grade
2.5g	120v/60Hz	1440w	150psi	17.63 lb	12 Amps	IPX4

Image: Detailed product parameters including capacity, voltage, power, max water pressure, weight, amperage, and waterproof grade.

5. PACKAGE CONTENTS

Verify that all components are present before beginning installation:

- Ranein 2.5-Gallon Mini Tank Electric Water Heater Unit
- Pressure Relief Valve (T/P Valve)
- Water Hoses (2)
- Mounting Bracket
- Mounting Screws and Anchors
- Drain Hose
- Teflon Tape

6. INSTALLATION

This section outlines the steps for installing your Ranein Mini Tank Electric Water Heater. For safety and proper function, it is highly recommended that installation be performed by a qualified professional.

6.1 General Installation Guidelines

- Choose a location that is protected from freezing temperatures and is close to the point of use to minimize heat loss.
- Ensure adequate clearance around the unit for maintenance and air circulation. Refer to the 'Please Confirm Your Under-sink Space' image for minimum clearances if installing under a sink.
- The unit can be mounted on a wall, placed on the floor, or on a shelf.

Please Confirm Your Under-sink Space



Image: Diagram showing minimum space requirements for under-sink installation, with 5 inches above and 2 inches on either side of the unit.

6.2 Water Connection

1. Turn off the main water supply.
2. Apply Teflon tape to the threads of the pressure relief valve (T/P valve) and install it into the hot water outlet (red marked port) on top of the water heater. Tighten with a wrench.
3. Connect the flexible water hoses to the hot water outlet (from T/P valve) and cold water inlet (blue marked port) on the water heater. Ensure connections are tight to prevent leaks.
4. Connect the other ends of the flexible hoses to your hot and cold water lines. The hot water line from the heater connects to the hot water faucet, and the cold water line from the main supply connects to the cold water inlet of the heater.
5. Attach the drain hose to the T/P valve's discharge port. Route the drain hose to an open drain or suitable discharge area.
6. Slowly turn on the main water supply and check for leaks. Open a hot water faucet to allow air to escape from the tank until water flows steadily.

Your browser does not support the video tag.

Video: A detailed installation guide for the Ranein Mini Tank Water Heater, demonstrating water connections and mounting.

6.3 Electrical Connection

- Ensure the water heater is filled with water before connecting to power.
- Plug the water heater's power cord into a standard 120V grounded electrical outlet.
- Do not use extension cords or adapters.

6.4 Mounting Options

The Ranein water heater offers flexible installation options:

- **Under-sink:** Place the unit directly on the floor or a sturdy shelf beneath the sink.
- **Wall-mounted:** Use the provided mounting bracket, screws, and anchors to securely attach the unit to a wall. Ensure the wall material can support the weight of the full water heater.

Multiple Installation Options

Support floor mount and wall mount installation



Undersink



On Wall

Image: Examples of under-sink and wall-mounted installations for the Ranein water heater.

7. OPERATION

7.1 Initial Startup

- After completing water and electrical connections, ensure the tank is full by opening a hot water faucet until water flows without sputtering.
- Turn the temperature knob to your desired setting. The unit will begin heating the water.

7.2 Temperature Adjustment

The temperature knob on the front of the unit allows you to set the desired water temperature between 68°F and 149°F (20°C and 65°C). Rotate the knob clockwise to increase the temperature and counter-clockwise to decrease it. The 'Heating' indicator light will illuminate when the unit is actively heating water.



Image: Close-up of the temperature adjustment knob, showing settings from 55°F to 145°F and suggested temperatures for various uses like washing dishes, vegetables, brushing teeth, and washing face.

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Video: A brief overview of the Ranein Mini Tank Water Heater, showcasing its compact design, high power heating, and ease of use in a kitchen setting.

8. MAINTENANCE

Regular maintenance helps ensure the efficiency and longevity of your water heater.

- **Drain and Flush:** Periodically drain and flush the tank to remove sediment buildup. This is especially important in areas with hard water. Refer to the installation section for draining procedures.
- **Inspect T/P Valve:** Annually check the pressure relief valve for proper operation. Lift and release the lever on the valve to ensure it opens and closes freely.
- **Anode Rod Inspection:** The magnesium anode rod helps protect the tank from corrosion. It should be inspected and replaced as needed, typically every 1-3 years depending on water quality. This procedure may require professional assistance.
- **Exterior Cleaning:** Clean the exterior of the unit with a soft, damp cloth. Do not use abrasive cleaners or solvents.

9. TROUBLESHOOTING

If you encounter issues with your water heater, refer to the following common troubleshooting steps. For complex problems, contact customer support.






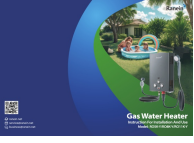
Problem	Possible Cause	Solution
No hot water	No power, thermostat set too low, dry-burn protection activated	Check power connection and outlet. Adjust thermostat. Ensure tank is full of water.
Water not hot enough	Thermostat set too low, excessive hot water demand, sediment buildup	Increase thermostat setting. Allow time for recovery. Drain and flush tank.
Water leaking	Loose connections, T/P valve discharge, tank damage	Tighten water connections. Check T/P valve for proper function. If tank damage is suspected, turn off water and power immediately and contact support.
Noisy operation	Sediment buildup, air in system	Drain and flush tank. Open hot water faucet to release air.

10. WARRANTY AND SUPPORT

Ranein is committed to providing reliable products and excellent customer service.

- **Warranty:** This product is backed by a 2-year tank warranty against manufacturing defects.
- **Customer Support:** For installation guidance, product consultation, or problem-solving services, please contact Ranein customer support.
- **Contact Information:**
Email: service@ranein.net
Phone (US): (424) 452-2630

Related Documents - RC25G-W

	<p>Ranein Mini Tank Water Heater Installation and Use Manual</p> <p>Comprehensive guide for installing and using Ranein Mini Tank Water Heaters, models RC25G-W, RC40G-W, and RC80G-W. Includes safety information, product details, installation instructions, troubleshooting, and maintenance.</p>
	<p>Ranein RV Tankless Water Heater: Installation and Operation Guide</p> <p>Comprehensive guide for installing, operating, and maintaining the Ranein RA65L and RA65S series RV tankless water heaters, including safety guidelines, troubleshooting, and specifications.</p>
	<p>Ranein RO4K-Y Portable Tankless Gas Water Heater: Installation and Use Manual</p> <p>Comprehensive guide for the Ranein RO4K-Y portable tankless gas water heater, covering installation, operation, safety precautions, troubleshooting, and warranty information. Learn how to safely and effectively use your Ranein water heater for outdoor and recreational purposes.</p>
	<p>Ranein RA65L RV Tankless Water Heater: Installation, Operation, and Safety Manual</p> <p>Comprehensive guide for the Ranein RA65L RV Tankless Water Heater, covering installation, operation, safety precautions, maintenance, and troubleshooting. Essential information for RV owners.</p>
	<p>Ranein Tankless Electric Water Heaters: Installation and Use Manual</p> <p>Comprehensive guide for Ranein RE18K and RE27K tankless electric water heaters, covering safety, installation, operation, maintenance, and troubleshooting.</p>
	<p>Ranein 12L Propane Tankless Water Heater Installation Manual</p> <p>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.</p>