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Rinnai RU180iN

Rinnai RU180iN Condensing Tankless Hot Water Heater User Manual

Model: RU180iN | Brand: Rinnai

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Rinnai RU180iN Condensing Tankless Hot Water Heater. This unit is designed for indoor installation and utilizes natural gas to provide an endless supply of hot water with high energy efficiency.





Figure 1: Rinnai RU180iN Condensing Tankless Hot Water Heater

The Rinnai RU180iN is a super high-efficiency plus tankless water heater, offering advanced features and a durable design. It provides continuous hot water flow at up to 10 gallons per minute (GPM), making it suitable for households requiring hot water for multiple appliances simultaneously. Its compact, space-saving design heats water only when needed, contributing to optimal energy efficiency. The unit also features Circ-Logic technology, enabling recirculation patterns to reduce hot water wait times when paired with an external pump.

Product Overview Video

Video 1: An overview of Rinnai tankless water heater features and benefits.

2. IMPORTANT SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

- **Professional Installation:** Installation of this water heater requires specialized knowledge and skills. It is strongly recommended that installation be performed by a qualified, licensed professional.
- **Gas Supply:** Ensure the unit is connected to the correct natural gas supply as specified on the product label. Incorrect gas type can cause severe hazards.
- **Ventilation:** Proper venting is crucial for safe operation. Ensure all venting is installed according to local codes

and manufacturer instructions to prevent carbon monoxide accumulation.

- **Hot Water Safety:** Water temperatures above 120°F (49°C) can cause severe burns instantly or death from scalding. Exercise caution when setting water temperature.
- **Clearances:** Maintain specified clearances from combustible materials as indicated in the installation manual.
- **Maintenance:** Regular maintenance, including annual flushing, is essential for safe and efficient operation.

3. PRODUCT OVERVIEW AND KEY FEATURES

The Rinnai RU180iN is engineered for superior performance and longevity. Key features include:

- **Endless Hot Water:** Provides a continuous supply of hot water, eliminating cold showers.
- **Energy and Space Efficient:** Compact design saves space and heats water only on demand, reducing energy waste.
- **High Flow Rate:** Delivers up to 10 GPM, capable of supporting multiple hot water demands simultaneously.
- **Circ-Logic Recirculation Technology:** Allows for scheduled or on-demand hot water recirculation when paired with an external pump, reducing wait times.
- **Durable Construction:** Features a robust heat exchanger designed for long-term reliability.
- **Natural Gas Powered:** Optimized for natural gas, offering efficient heating.



Natural Gas



Built-in Recirculation technology



Residential warranty



**Indoor use only
(professional
installation
recommended)**



**Approved by South
Coast Air Quality
Management
District**



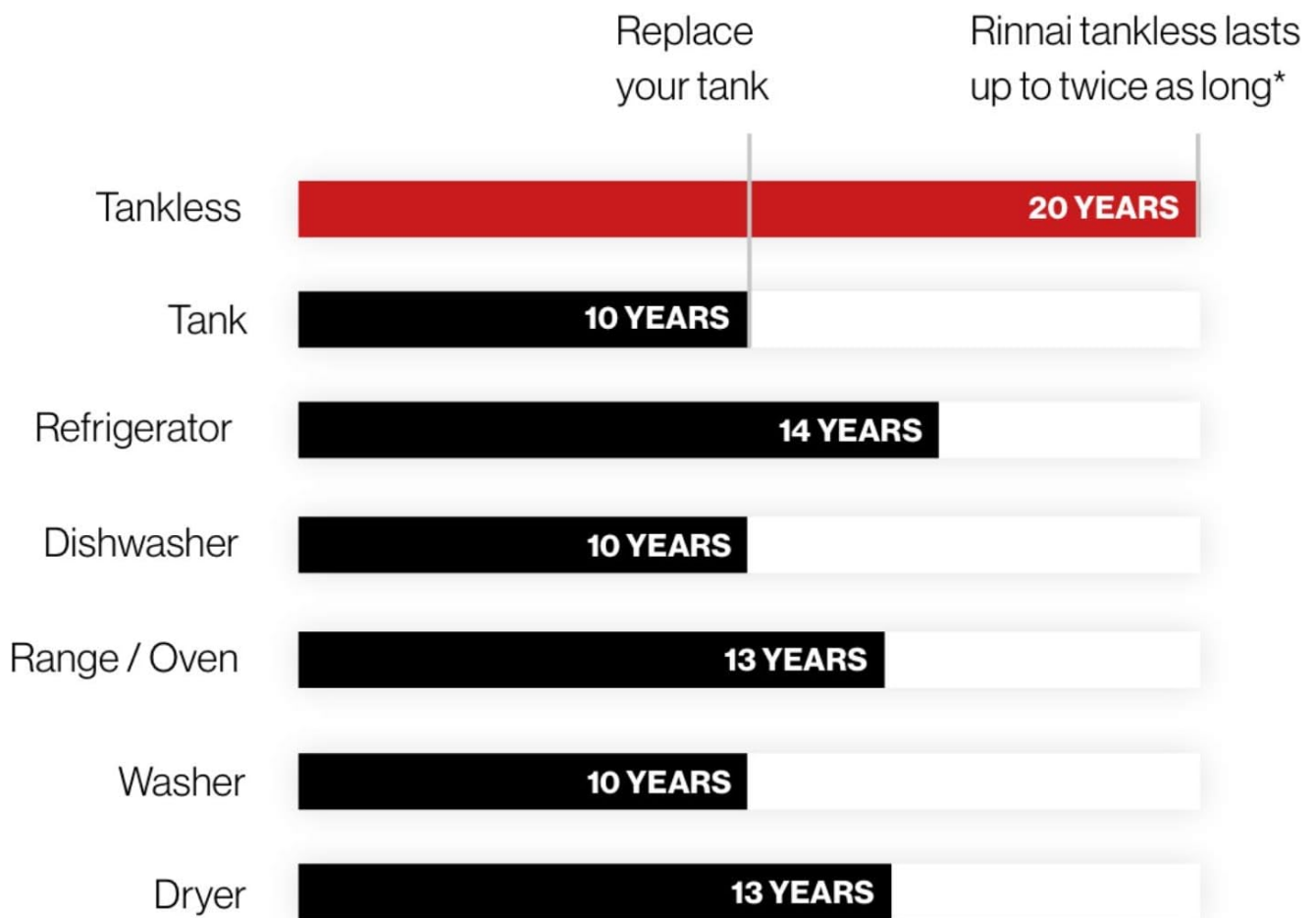
**Supports up to
5 appliances**

Figure 2: Key features of the Rinnai RU180iN tankless water heater.

Benefits of Tankless Water Heaters

Tankless water heaters offer several advantages over traditional tank models:

- **Longer Lifespan:** Tankless units typically last up to twice as long as conventional tank heaters.
- **Reduced Risk of Leaks:** Without a large storage tank, the risk of catastrophic leaks and associated water damage is significantly reduced.
- **Consistent Performance:** Provides hot water on demand, ensuring you never run out.



Rinnai tankless water heaters last up to twice as long as standard tanks

Figure 3: Lifespan comparison between tankless and traditional tank water heaters.

Optional Wi-Fi Control

For added convenience, the Rinnai RU180iN can be monitored and controlled remotely with the optional Controlr module (not included). This allows you to adjust settings and manage your hot water from anywhere.



Optional Control Smart **Wi-Fi** technology responds to voice commands for remote access

Figure 4: Optional Wi-Fi control with the Controlr module.

4. SETUP AND INSTALLATION

Professional Installation Recommended: Due to the complex plumbing, gas, and electrical requirements, professional installation by a qualified and licensed technician is strongly recommended. Refer to the full installation manual for detailed instructions and diagrams.

Key Installation Considerations:

- **Location:** This model is designed for indoor installation. Ensure adequate space and ventilation as per local codes and manufacturer guidelines.
- **Gas Type:** The RU180iN operates on natural gas. Verify your home's gas supply matches this requirement.
- **Water Connections:** Proper hot and cold water line connections are essential. The unit includes a pressure relief valve and isolation valves for easier maintenance.

- **Venting:** Correct venting is critical for safety and performance. Follow all instructions for direct vent installation.
- **Electrical:** The unit requires a 120 Volt electrical connection.

Also includes



Pressure Relief
Valve



Isolation
Valves

Exclusive Rinnai package offers included valves, which makes preventative maintenance, annual flushing, and serviceability easier

Figure 5: Included pressure relief and isolation valves for installation and maintenance.

5. OPERATING INSTRUCTIONS

The Rinnai RU180iN features a user-friendly control panel for adjusting settings.

Temperature Control:

- The digital display shows the approximate water temperature.
- Use the up and down arrows on the control panel to adjust the desired hot water temperature.
- A green 'In Use' light indicates when hot water is being drawn and the unit is actively heating.

Circ-Logic Technology:

This feature allows for customized hot water recirculation. When paired with an external pump, you can set

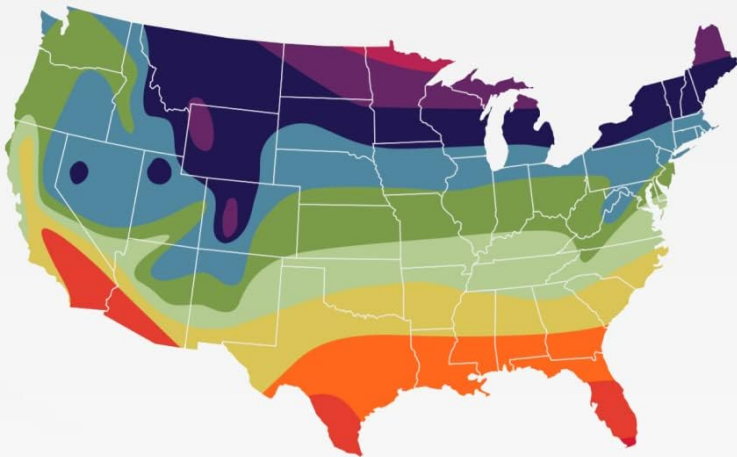
recirculation patterns to align with your household's hot water usage habits, minimizing wait times for hot water at the tap.

Understanding Flow Rate:

The actual hot water flow rate (GPM) can vary based on the incoming groundwater temperature. Colder incoming water will result in a lower maximum flow rate for a given temperature rise.

Rinnai®

Groundwater Temperature Map



Use your location on the map to correlate legend for average ground water temperature in the U.S.

- 75° F Hawaii & Puerto Rico
- 35°-42° F Alaska & Canada












Condensing Model: RU180i/e BTU: 180,000	Groundwater Temperature	Max Flow Rate (GPM)	Simultaneous Shower Use
	35° F	4.0	
	37° F	4.1	
	42° F	4.4	
	47° F	4.7	
	52° F	5.0	
	57° F	5.4	
	62° F	5.9	
	67° F	6.5	
	72° F	7.1	
	77° F	8.0	

Figure 6: Groundwater temperature impact on hot water flow rate and simultaneous shower use.

6. MAINTENANCE

Regular maintenance is crucial for the longevity and efficient operation of your Rinnai tankless water heater. It is recommended to have the unit serviced annually by a qualified professional.

Annual Flushing:

To prevent mineral buildup and maintain efficiency, an annual flushing of the heat exchanger is recommended. The included isolation valves facilitate this process. Consult your professional installer or the detailed installation manual for specific flushing procedures.

General Care:

- Keep the area around the water heater clear of obstructions.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Periodically inspect the unit for any visible signs of wear or damage.

7. TROUBLESHOOTING

If you experience issues with your Rinnai RU180iN, consult the following general troubleshooting tips. For specific error codes or persistent problems, contact a qualified service technician.

Common Issues:

- **No Hot Water:** Check if the unit is powered on and the gas supply is open. Ensure the temperature setting is appropriate.
- **Inconsistent Water Temperature:** This could be due to mineral buildup in the heat exchanger (requiring flushing) or issues with water pressure.
- **Low Hot Water Flow:** Verify that all water valves are fully open. Mineral buildup can also restrict flow.
- **Error Codes:** If an error code appears on the digital display, refer to the comprehensive owner's manual for specific code meanings and recommended actions.

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

8. SPECIFICATIONS

Feature	Specification
Brand	Rinnai
Model Number	RU180iN
Product Dimensions (W x H)	14.76" x 33.86"
Item Depth	11.45 in (290 mm)
Item Weight	64 pounds
Fuel Type	Natural Gas
Maximum Flow Rate	10 Gallons Per Minute (GPM)

Feature	Specification
Efficiency (UEF)	0.101
Voltage	120 Volts
Wattage	55260
Maximum Operating Pressure	120 Pound per Square Inch (PSI)
Mounting Type	Wall
Special Feature	Circ-Logic recirculation technology
Certification	Energy Star
UPC	766156009570

9. WARRANTY AND SUPPORT

Residential Factory Warranty:

- **Heat Exchanger:** 15 years
- **Labor:** 5 years
- **Parts:** 1 year




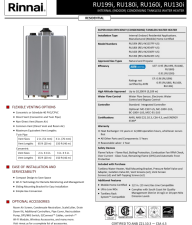


For warranty claims, technical support, or to locate a qualified Rinnai professional in your area, please visit the official Rinnai website or contact Rinnai customer service.

Additional Resources:

- For detailed installation and operation instructions, refer to the full manual provided with your unit.
- Consider registering your product online to ensure you receive important updates and support.

Rinnai Tankless Water Heater Information Video

Video 2: A video providing general information about Rinnai tankless water heaters.

 <p>Rinnai RUS65e (REU-KCM2025W-US) Condensing Tankless Water Heater - Specifications and Features</p> <p>Detailed specifications, features, and installation information for the Rinnai RUS65e (REU-KCM2025W-US) external condensing tankless water heater, designed for residential use.</p>	
 <p>Rinnai CXP199i & CXP160i Commercial Condensing Tankless Water Heater: Specs, Features, Accessories</p> <p>Explore the Rinnai CXP199i and CXP160i commercial condensing tankless water heaters. This document details their super-high efficiency, flexible venting options, ease of installation, technical specifications, performance curves, and a comprehensive list of optional accessories.</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 SENSEI™ RU199i, RU180i, RU160i, RU130i Condensing Tankless Water Heater Specifications</p> <p>Detailed technical specifications, features, dimensions, and installation guidelines for Rinnai SENSEI™ residential indoor condensing tankless water heaters (RU199i, RU180i, RU160i, RU130i). Includes venting options, warranty, and safety features.</p>	
 <p>Rinnai Residential Tankless Water Heater Installation and Operation Manual</p> <p>This manual provides comprehensive installation and operation instructions for Rinnai residential tankless water heaters. It covers safety precautions, model specifications, installation guidelines, maintenance, and troubleshooting for Rinnai's SENSEI series.</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>	