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> Rinnai RSC199eN Smart-Circ Condensing Gas Tankless Water Heater User Manual

## Rinnai RSC199eN

# Rinnai RSC199eN Smart-Circ Condensing Gas Tankless Water Heater User Manual

Model: RSC199eN

[Installation](#)   [Operation](#)   [Maintenance](#)   [Overview](#)   [Safety Information](#)   [Troubleshooting](#)   [Setup & Specifications](#)   [Warranty & Support](#)

## 1. PRODUCT OVERVIEW

The Rinnai RSC199eN Smart-Circ Condensing Gas Tankless Water Heater is designed to provide continuous hot water for residential applications. This outdoor-installed unit features advanced Smart-Circ technology for efficient water recirculation and is engineered for high performance and energy efficiency.

# Rinnai®

## RSC Model Series



Featuring  
Smart-Circ



Natural Gas



Supports up to 7 Appliances



Residential Warranty



Outdoor Use Only  
(Professional installation  
recommended)



Approved by South Coast Air  
Quality Management District

Smart-Circ Recirculation Technology learns your water use habits to provide hot water on your schedule.

Image 1.1: The Rinnai RSC199eN tankless water heater, highlighting key features such as natural gas compatibility, support for up to 7 appliances, residential warranty, outdoor use only, and SCAQMD approval. It also notes the Smart-Circ Recirculation Technology.

Key features include:

- **Smart-Circ Intelligent Recirculation:** Learns water usage patterns to optimize hot water delivery and energy consumption.
- **High Capacity:** Provides up to 11 GPM (gallons per minute), capable of supplying hot water to approximately 7 fixtures simultaneously.
- **Outdoor Installation:** Specifically designed for outdoor placement, eliminating the need for indoor venting.
- **Energy Efficiency:** ENERGY STAR qualified with a Uniform Energy Factor (UEF) of 0.93.
- **Compact Design:** Space-saving unit suitable for various outdoor spaces.

## 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.**

- This appliance must be installed by a qualified professional in accordance with all local codes and regulations.
- Do not attempt to install or repair this unit yourself. Contact a Rinnai PRO for service.
- Ensure proper gas supply and connections are made by a licensed technician.
- This unit is for outdoor installation only. Do not install indoors.
- Keep flammable materials away from the water heater.
- Regular maintenance is crucial for safe and efficient operation.

### 3. SETUP AND INSTALLATION

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Installation of the Rinnai RSC199eN water heater requires specialized knowledge and tools. It is strongly recommended that installation be performed by a qualified and licensed professional.

**Professional Installation:**

Rinnai recommends visiting their official website to locate a qualified Rinnai PRO technician in your area. Professional installation ensures compliance with safety standards and optimal performance.

**Outdoor Placement:**

This model is designed exclusively for outdoor installation. Select a location that provides adequate clearance for maintenance and is protected from potential damage.

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## Condensing Interior

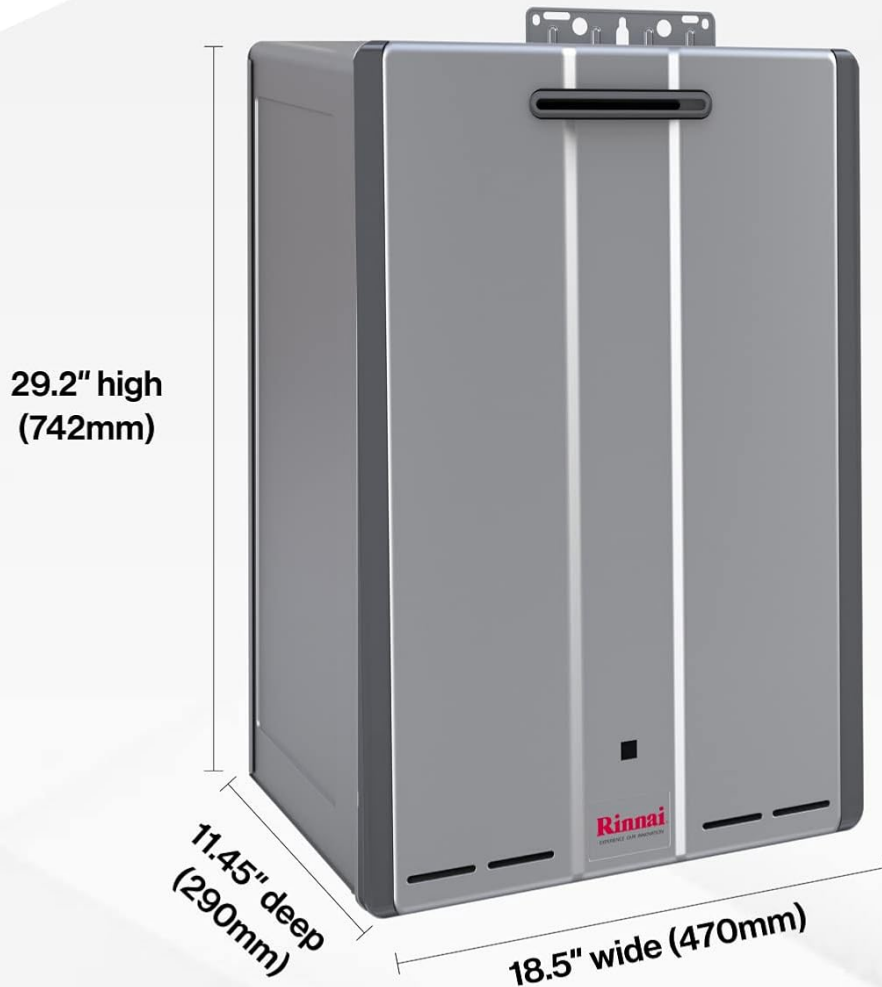


Image 3.1: Detailed dimensions of the Rinnai RSC199eN water heater, showing a height of 29.2 inches (742mm), depth of 11.45 inches (290mm), and width of 18.5 inches (470mm).

### Dimensions and Weight:

- Height: 29.2 inches (742 mm)
- Width: 18.5 inches (470 mm)
- Depth: 11.45 inches (290 mm)
- Weight: Approximately 68 pounds









 <p><b>BEFORE</b></p> <p><b>RUR199eN</b></p>	<p><b>AFTER</b></p> <p><b>RSC199eN</b></p> 
Outdoor Installation Only	 Outdoor Installation Only
Max Input (KBTU) = 199	 Max Input (KBTU) = 199
Length x Width x Height = 12.0 x 18.5 x 27.9(inches)	 Length x Width x Height = 18.5 x 18.5 x 29.2(inches)
UEF = 0.93	 UEF = 0.93
Weight = 73 pounds	 Weight = 68 pounds
Natural Gas	 Natural Gas

Image 3.2: A comparison table illustrating key specifications between the Rinnai RUR199eN and RSC199eN models, including installation type (Outdoor Only), Max Input (199 KBTU), dimensions, UEF (0.93), weight (73 lbs vs 68 lbs), and fuel type (Natural Gas).

Ensure the installation site can accommodate these dimensions and support the unit's weight.

## 4. OPERATING INSTRUCTIONS

The Rinnai RSC199eN tankless water heater provides hot water on demand, meaning it heats water only when needed, rather than storing it in a tank.

### Basic Operation:

To obtain hot water, simply open any hot water faucet in your home. The unit will detect the water flow and begin heating water to your set temperature. Close the faucet to stop the heating process.

### Smart-Circ Intelligent Recirculation:

This feature learns your household's hot water usage patterns over time. Based on these patterns, it intelligently schedules pump and recirculation cycles to ensure hot water is readily available when you typically need it, without continuous operation, thereby saving energy.

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**Smart Wi-Fi technology** responds to voice commands for remote access and control

Image 4.1: An illustration depicting a home with a Rinnai water heater and a smartphone displaying "Hot Water On" and a temperature setting of 120°F, indicating remote control capabilities via Smart Wi-Fi technology.

### **Optional Smart Wi-Fi Control:**

For enhanced control, the unit can be integrated with a Rinnai Controlr module (sold separately). This module enables remote access and control of your water heater via a smartphone application, allowing you to adjust settings and monitor performance from anywhere.

## **5. MAINTENANCE**

Regular maintenance is essential to ensure the longevity, efficiency, and safe operation of your Rinnai tankless water heater. It is recommended that maintenance be performed by a qualified Rinnai PRO technician.

### **Annual Inspection and Flushing:**

- Have the unit inspected annually by a professional.
- A professional will perform a descaling flush to remove mineral buildup, which can affect efficiency and performance, especially in areas with hard water.
- Check and clean the inlet water filter.

### Exterior Cleaning:

- Keep the exterior of the unit clean and free from obstructions.
- Ensure that the air intake and exhaust vents are clear of debris, leaves, or snow.

### Freeze Protection:

The unit is equipped with freeze protection. However, in extremely cold climates or during power outages, additional precautions may be necessary. Consult your installer or the Rinnai PRO for specific recommendations for your region.

## 6. TROUBLESHOOTING

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If you experience issues with your Rinnai tankless water heater, refer to the following common troubleshooting steps. For complex problems or error codes, contact a qualified Rinnai PRO technician.

### No Hot Water or Lukewarm Water:

- **Check Gas Supply:** Ensure the gas valve to the unit is fully open and that there is an active gas supply to your home.
- **Check Power Supply:** Verify that the unit is receiving electrical power. Check circuit breakers.
- **Water Flow:** Ensure sufficient water flow. Tankless heaters require a minimum flow rate to activate. If multiple fixtures are open, try reducing the number.
- **Temperature Setting:** Confirm the temperature setting on the unit's control panel is appropriate.

### Low Hot Water Pressure:

- **Inlet Filter:** A clogged inlet water filter can restrict flow. This should be checked and cleaned by a professional.
- **Mineral Buildup:** Limescale buildup within the heat exchanger can reduce flow. A professional descaling flush is required.

### Error Codes:

If an error code appears on the unit's display, note the code and consult your installation manual or contact a Rinnai PRO for diagnosis and resolution.

## 7. TECHNICAL SPECIFICATIONS

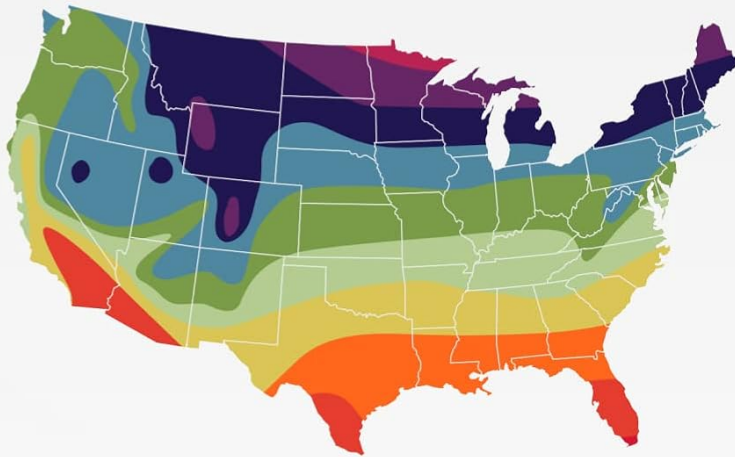
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Feature	Specification
Model	RSC199eN
Brand	Rinnai
Fuel Type	Natural Gas
Maximum BTU Input	199,000 BTU
Flow Rate	Up to 11 GPM (Gallons Per Minute)
Uniform Energy Factor (UEF)	0.93
Installation Type	Outdoor Only
Dimensions (H x W x D)	29.2" x 18.5" x 11.45" (742mm x 470mm x 290mm)
Weight	Approximately 68 lbs

Feature	Specification
Smart-Circ Technology	Intelligent Recirculation
ENERGY STAR Qualified	Yes

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## 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:RSC199i/e BTU:199,000	Groundwater Temperature	Max Flow Rate (GPM)	Simultaneous Shower Use
	35° F	4.5	3 showerheads
	37° F	4.6	3 showerheads
	42° F	4.8	3 showerheads
	47° F	5.2	3 showerheads
	52° F	5.6	3 showerheads
	57° F	6.0	3 showerheads
	62° F	6.5	4 showerheads
	67° F	7.1	4 showerheads
	72° F	7.9	5 showerheads
77° F	8.8	5 showerheads	

Image 7.1: A map illustrating average groundwater temperatures across the U.S. and a table showing the corresponding maximum flow rates (GPM) and simultaneous shower use for the Condensing Model RSC199i/e (199,000 BTU) based on groundwater temperature.

The performance (Max Flow Rate) of the water heater can vary based on the incoming groundwater temperature. Refer to the provided groundwater temperature map and table for estimated performance in your region.

## 8. WARRANTY AND SUPPORT

### Residential Warranty:

The Rinnai RSC199eN tankless water heater comes with a residential warranty:

- **Heat Exchanger:** 15-year limited warranty

- **Parts:** 5-year limited warranty
- **Labor:** 1-year limited warranty

Please refer to the official Rinnai warranty document for complete terms and conditions. Warranty coverage typically requires professional installation and adherence to maintenance schedules.

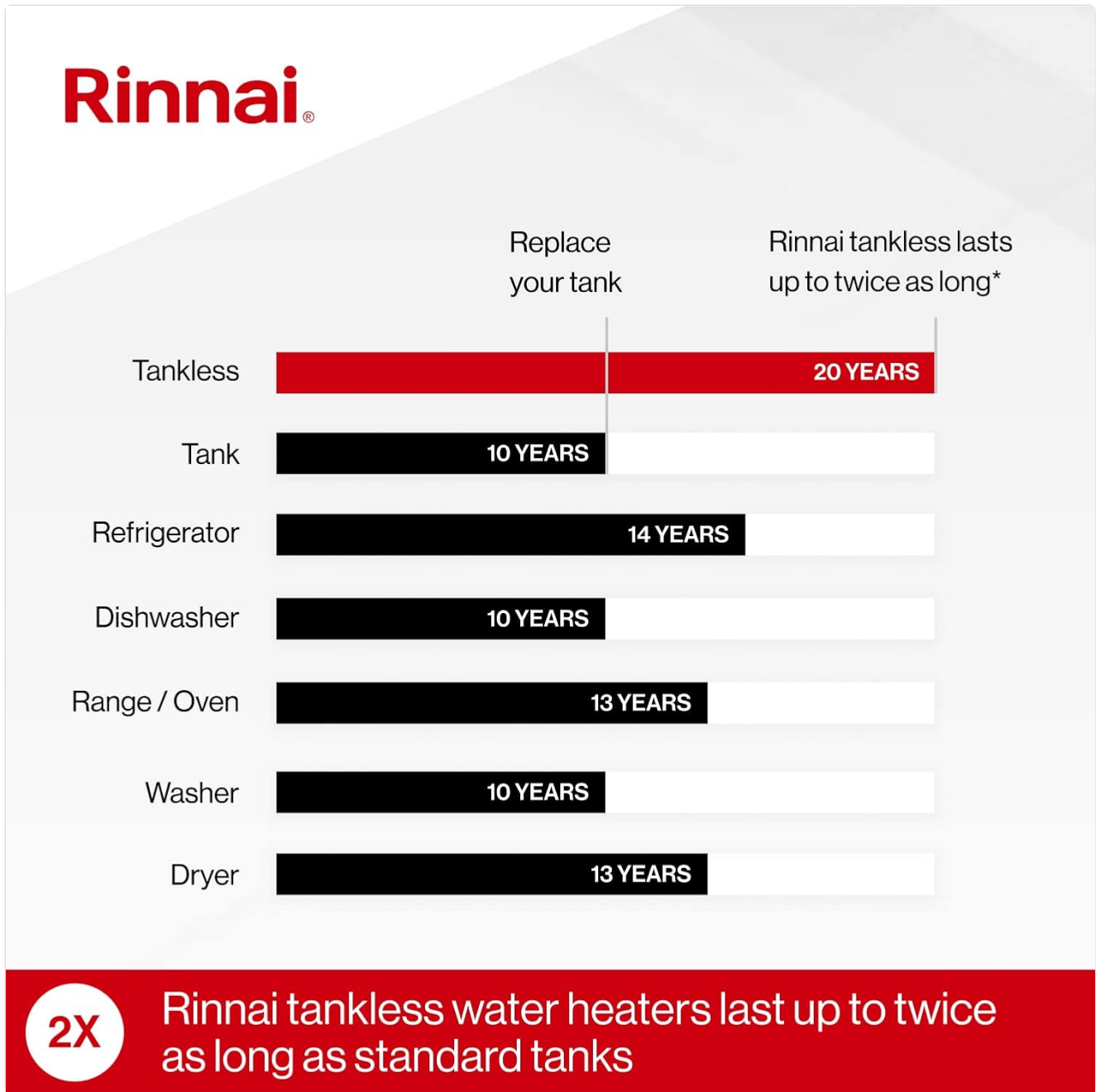


Image 8.1: A bar chart comparing the typical lifespan of various home appliances, highlighting that Rinnai tankless water heaters can last up to 20 years, which is generally longer than standard tank water heaters (10 years).

**Product Lifespan:**

Rinnai tankless water heaters are designed for durability, with an expected lifespan of up to 20 years, which is generally longer than traditional tank-style water heaters.

**Customer Support:**

For technical assistance, warranty claims, or to find a qualified service technician, please visit the "Find a Rinnai PRO" page on the official Rinnai website or contact Rinnai customer service directly.

**Online Resources:**

Additional product guides, manuals, energy guides, and videos may be available on the Rinnai website to assist with understanding and operating your water heater.



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