

A Comprehensive Array Of Models

DELIVERING AN ENDLESS SUPPLY OF HOT WATER.



COMPREHENSIVE WATER HEATING



Rinnai®



Why Rinnai?

A TRADITION OF TRUE RELIABILITY.

For nearly 100 years, we at Rinnai have been fiercely committed to delivering nothing less than our absolute best. Through **TEAMWORK, TECHNOLOGY AND INNOVATION**, we've become one of the world's largest gas appliance manufacturers, specializing in high-efficiency residential and commercial **TANKLESS WATER HEATERS** and **HOME HEATING SOLUTIONS**. With headquarters in Japan and a network of 20 subsidiaries and 86 sales offices in 13 countries, Rinnai's presence and influence have a global impact.

With a pioneering history of creating value-added products in step with the demands of a changing world, Rinnai employs more than 600 research and development engineers. Their talent and vision is supported by an uncompromised focus on quality in design and manufacturing. Advanced automation and precision assembly processes make Rinnai's manufacturing facilities an industry model for efficiency, and extensive inspection and testing protocols dictate that every product undergo a series of live fire testing before being shipped.

Throughout the world, our standards for quality remain unsurpassed. All Rinnai factories are ISO 9001 and/or ISO 14001 certified.

Established in 1974, our U.S. and Canadian operations continue to expand with employees engaged in sales, marketing, customer service, application engineering, technical support and more. In 2001, we opened our Peachtree City, Georgia office. Today this facility is a state-of-the-art assembly, distribution, research and training center. What's more, Rinnai America is one of the few tankless water heater manufacturers with its own state-of-the-art CSA Certified Testing Laboratory, including CSA accredited lab technicians. All our products have been approved by the Canada Standards Association (CSA) and adhere to the strict standards of the American National Standards Institute (ANSI).

For Rinnai, reliability is a commitment to excellence that's built into every product we make. The result is nothing less than the world's most efficient, longest-lasting tankless water heaters and home heating solutions.



A Track Record of Performance



From the beginning, Rinnai America has continued a tradition of creating solutions that enhance the way people live. That tradition has grown even stronger today.

Thanks to superior design and engineering, Rinnai residential and commercial water heating and home heating solutions continually raise the standard in comfort, convenience and reliability. In fact, our commitment to building in quality at every level has made Rinnai Tankless Water Heaters the #1 selling tankless water heating brand in the U.S. and Canada.

Beyond manufacturing the highest quality tankless water heaters and home heating products, our people stand behind all that we make, before, during and long after installation. From 24/7/365 technical support for professionals, to our national network of independent installers, to on-staff engineers who can assist with choosing the right products and sizes—we're inspiring confidence right along with the comfort our solutions provide.



Our RH180 Hybrid Tank-Tankless Water Heater utilizes the same on-demand tankless technology with an efficient storage tank to deliver more hot water with less recovery time than a traditional tank water heater— all in a quick and easy installation.

That same dedication to creating solutions that enhance the way people live is reflected in our heating products. From the efficiency of our Condensing Boilers to the big comfort, small-space warmth of our Vent-Free Fan Convectors and Energy-Saver® Direct Vent Wall Furnaces, cost-effective heat is here. Whether seeking whole-house comfort, a supplemental heating solution for nearly any room, or a single, energy-efficient source for home and water heating, we've developed the innovative products that open up a world of pleasant possibilities.



ENHANCING YOUR COMFORT EVERYWHERE

Rinnai water heating and heating products are dedicated to a smarter kind of comfort.

With our precisely engineered tankless water heaters, you can count on Rinnai to deliver an endless supply of hot water whenever you need it – even for multiple tasks at the same time. Plus, they feature space-saving design and ultra-efficient performance for energy savings.

Efficiency and versatility have made Rinnai Tankless Water Heaters a hit with commercial applications, giving restaurants, hotels, schools, multifamily residences and others the reliable performance they need to meet demands and reduce operating costs.

ENDURING QUALITY, LASTING PEACE OF MIND

No one can predict the future, but the past is a good gauge of things to come. Rinnai's 100 years of superior engineering, innovation and quality inspire peace of mind that our products will stand the test of time.

Enhancing the **COMFORTS OF HOME.**

With either Rinnai Tankless Water Heaters or the RH180 Hybrid Tank-Tankless Water Heater, homeowners can now have more hot water than they ever thought possible.

The innovation behind our high-efficiency water heaters provides an endless supply of hot water wherever and whenever it's needed – even for multiple tasks at the same time. Showers and baths? Laundry and dishes? On-demand heating means hot water is always available, so prioritizing activities and scheduling water use is no longer necessary.

Because they operate on an as-needed basis, Rinnai Tankless Water Heaters can use up to 40 percent* less energy than traditional systems, which helps reduce utility costs. This efficient operation can also contribute to a favorable HERS rating and optimize LEED certification.

On top of efficiency, our tankless water heaters feature a copper heat exchanger for unparalleled quality, durability and safety. And their compact design offers substantial space savings in the home.

The RH180 Hybrid Tank-Tankless Water Heater harnesses the same on-demand tankless technology coupled with an efficient storage tank to deliver more hot water with less recovery time than a traditional tank. And professionals enjoy time and labor savings with quick and easy installation using standard tank connections.

The flexibility and convenience of endless hot water. The reliability of proven engineering. It's everything homeowners need to feel comfortable.

*As based on the average cost to run an electric tank water heater per the DOE Average Energy Costs (doe.gov).

Only from Rinnai.





Commercial Solutions – where the demands are greatest, **RINNAI DELIVERS.**

Leveraging decades of global commercial water heating experience, Rinnai Tankless Water Heaters and Hybrid Systems deliver performance and reliability. Precision engineering and commercial-grade features allow Rinnai Tankless Water Heaters to produce an endless supply of hot water to suit even the most demanding applications—from restaurants to hotels to multifamily residences to schools and more—conserving energy that can save thousands of dollars in capital, operational and life cycle costs, while providing redundancy and saving space. But it's not just performance that sets us apart. Our commitment to safety, quality and support has made us the #1 selling tankless brand in the U.S. and Canada.

From products to services and everything in-between, our dedication to delivering our absolute best never wavers.

For complete details on Commercial Water Heating Solutions, Maintenance Services, and a free sizing consultation by Rinnai Application Engineers, call 866-383-0707 or email commercialservices@rinnai.us.



Rinnai Tankless Solutions Give You



Tankless Wi-Fi ready technology that saves you time.

Never think about your hot water needs again: Innovative technology provides an endless supply of hot water whenever and wherever it's needed – even for simultaneous uses at multiple fixtures. Showers and baths? Absolutely. Laundry and dishes? No problem. Prioritizing activities and scheduling hot water use is a thing of the past. And with the introduction of Wi-Fi connectivity, new and existing Rinnai Residential and Commercial Tankless Water Heaters can now be remotely monitored and controlled via smart devices, providing never-before-available options for water heating management, control and maintenance.

Save money, splurge on performance.

Designed for efficiency: Rinnai's tankless technology features copper heat exchangers to provide maximum efficiency and uses up to 40 percent less energy* than a traditional tank.

Save energy: By operating only when hot water is needed, and no storage tank to heat and reheat water, our tankless technology helps save on energy and utility costs. The use of an electronic ignition means no standing pilot light that constantly uses energy.

A smart investment: Increase your home's value with premium technology, increased energy efficiency, an improved Home Energy Rating System (HERS) Index Score and optimized LEED certification. Available energy efficiency rebates and tax credits offer the opportunity to help make your purchases more affordable.

Multiple sizes: Rinnai gives you options to right-size your installation and customize your efficiency.

Replace parts, not systems: Every part of a Rinnai Tankless Water Heater is replaceable. Components can be easily exchanged, if needed, versus replacing the entire system.

Save space with a compact design.

Maximum output, minimum space: About the size of a small suitcase at 18.5" x 26" x 10" or smaller, these wall-mounted models can be installed on interior or exterior walls and in compact spaces to free up valuable space.

Flexible installation: Small size allows for installation in non-traditional spaces such as crawl spaces and attics, making it perfect for use in any size home, including manufactured and modular homes.

Stay green with a sustainable choice.

Earth-friendly efficiency: Our tankless technology achieves maximum energy efficiency, helping to conserve natural resources.

Less waste: Compact heat exchanger design, longer product lifespan up to twice as long as a traditional tank** and recyclable parts means less waste in landfills.

High standards for low emissions: Lower CO₂ emissions contribute to cleaner air and a healthier environment.

* As based on the average cost to run an electric tank water heater per the DOE Average Energy Costs (doe.gov).

** Based on DOE ENERGY STAR® lifecycle estimates.

THE POWER TO LIVE BETTER.



CONDENSING TECHNOLOGY

Ultra Series

THE ULTIMATE IN EFFICIENCY.

Delivering our most energy-efficient performance, the Ultra Series features a condensing design with two heat exchangers to maximize heating value to enhance reliability and durability and reduce maintenance.

UNIQUE FEATURES OF ULTRA SERIES

- Energy Factor of up to .96
- ENERGY STAR® qualified
- Available in five sizes: 130,000, 152,000, 160,000, 180,000 and 199,000 BTU
- Allows for either Concentric Polypropylene or dual-pipe PVC/CPVC venting, providing the most venting flexibility in a single application of any manufacturer
- Faster hot water provided by integrated recirculation pump and internal bypass line (RUR models) with or without a dedicated return line
- Easy maintenance is achieved with included isolation valves
- Wi-Fi Ready

NON-CONDENSING TECHNOLOGY

Luxury Series

AWARD-WINNING PERFORMANCE.

The Luxury Series offers the highest output of our non-condensing line of tankless models with a sleek, modern design and a range of standard features and benefits to fully satisfy the demands of larger homes and light commercial applications.

UNIQUE FEATURES OF LUXURY SERIES

- Energy Factor of up to .82
- Available in three sizes: 180,000, 192,000 and 199,000 BTU
- Recirculation: Circ-Logic provides optimal operation of an external recirculation pump utilizing a dedicated recirculation line
- Easy maintenance is achieved with included isolation valves
- Wi-Fi Ready

Value Series

CONFIDENCE MEETS AFFORDABILITY.

The Value Series is the perfect combination of comfort and value. These easy-to-install, compact models combine all the reliability you'd expect from Rinnai with performance that's ideal for medium- to smaller-sized new homes or remodels.

UNIQUE FEATURES OF VALUE SERIES

- Energy Factor of up to .82
- Available in five sizes: 120,000, 150,000, 180,000, 192,000, and 199,000 BTU
- A practical alternative water heating choice for homes with smaller demands
- Wi-Fi Ready

Wi-Fi CONNECTIVITY by Rinnai



SMART JUST GOT EVEN SMARTER

Since the beginning, Rinnai has continued a tradition of creating innovative solutions that enhance the way people live. And with the introduction of Rinnai's wireless module and app for gas tankless water heaters, we're taking control and flexibility to a whole new level.

By adding Wi-Fi connectivity, new and existing Rinnai Residential and Commercial Tankless Water Heaters can now be remotely monitored and controlled via smart devices, providing a never-before-available option for management, control and maintenance of Rinnai Tankless Water Heaters.

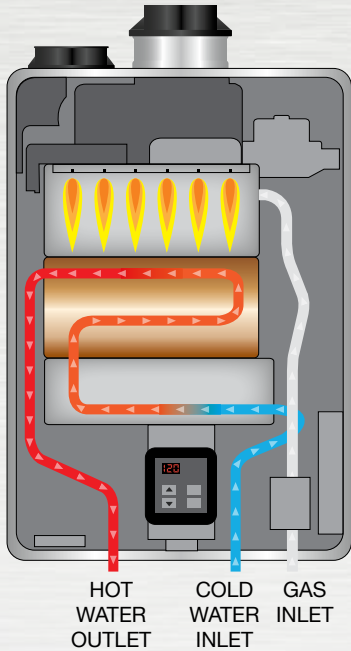
The Wi-Fi module and app also allow Rinnai independent dealers to quickly and efficiently assist customers via remote diagnostics for managing system performance, ensuring maximum comfort and convenience.

- **Control and Monitoring:** Control your tankless water heater from a smartphone or tablet to turn the system on/off, change the water temperature, monitor status, and activate the recirculation system.
- **Remote Diagnostics and Maintenance:** Give technicians detailed system information via automatic alerts and remote diagnostic tools before ever leaving their place of business, leading to shorter maintenance and repair times.
- **Accessibility and Convenience:** Get instant access to technical bulletins, warranty claims, product registration, manuals, step-by-step repair guides and more!



RINNAI TANKLESS WATER HEATER OPERATION

How a Rinnai Tankless Water Heater Works



When the need for hot water arises by turning on a shower, washing machine, dishwasher or faucet, cold water enters the Rinnai Tankless Water Heater from the inlet pipe at the bottom of the model. The PC board is then signaled to activate the flame igniter or ignition.

A combustion fan turns on to allow oxygen into the burner to ignite the flame as the gas control valve opens at a low frequency. Once an adequate flame is present the igniter stops sparking — beginning the next sequence of operation in a matter of seconds.

Water is heated as it passes through the coils of the copper heat exchanger, and exits from the hot water outlet pipe to travel through the pipes of the home or business to the water fixture where hot water is needed. For Condensing models, the water is preheated as it passes through a secondary stainless steel (latent) heat exchanger, capturing any

extra heat (or latent heat) before it escapes into the vent system.

The gas valve and blower automatically adjust the incoming gas and oxygen to meet the water heating demands. If the demand is small, the Rinnai Tankless Water Heater can use a smaller flame and less gas. If the demand is greater, the flame can expand across the width of the entire burner to heat more water. The tankless water heater adjusts as needed to ensure the temperature set point is maintained. A digital controller allows the user to choose the desired temperature.

As the hot water fixture shuts off, cold water stops entering the tankless water heater and the flame diminishes. The combustion fan continues to operate at a low speed for a short period of time. This allows the exhaust of any leftover combustion gases in the system.

Tank vs. Tankless Annual Operating Costs*

| Water Heater Technology | Fuel Type/ Energy Source | EF (Energy Factor) | Annual Operating Costs* |
|------------------------------------------|-----------------------------|-----------------------|----------------------------|
| Standard 50-Gallon Gas Storage Tank | Natural Gas | 0.60 | \$273 |
| Standard 50-Gallon Gas Storage Tank | Propane | 0.60 | \$646 |
| Standard 50-Gallon Electric Storage Tank | Electricity | 0.95 | \$557 |
| Mid-Efficiency Non-Condensing Tankless | Natural Gas | 0.82 | \$200 |
| Mid-Efficiency Non-Condensing Tankless | Propane | 0.82 | \$473 |
| High Efficiency Condensing Tankless | Natural Gas | 0.96 | \$171 |
| High Efficiency Condensing Tankless | Propane | 0.96 | \$404 |

*Based on national averages per Department of Energy, U.S. Energy Information Administration.

CONDENSING TANKLESS

RINNAI ULTRA SERIES - RUR MODEL

Imagine turning on a shower and getting hot water almost immediately. Considering the average family loses precious time and numerous gallons a day waiting for water to heat up, that would be an invaluable change in routine. If you're tired of standing idly by while time and water go down the drain, Rinnai has five words that are sure to inspire you: Faster Hot Water Is Here!

Bringing Faster Hot Water Home.

Our focus on enhancing homeowners' lives by changing the way water is heated has created an exciting breakthrough in recirculation that puts faster hot water a turn of the knob away.

Rinnai's Ultra Series Tankless Water Heater RUR Models use thermal bypass technology that includes an integrated recirculation pump, an internal bypass line inside the model and a thermal bypass valve, and MC-195T 24-Hour Digital Controller provided inside the box to send unlimited hot water wherever and whenever it's needed, all in one comprehensive solution. By keeping a steady supply of heated water in the supply line during active circulation periods, the RUR makes hot water rapidly available in showers, sinks and appliances such as washing machines and dishwashers.

Wait Less, Waste Less.

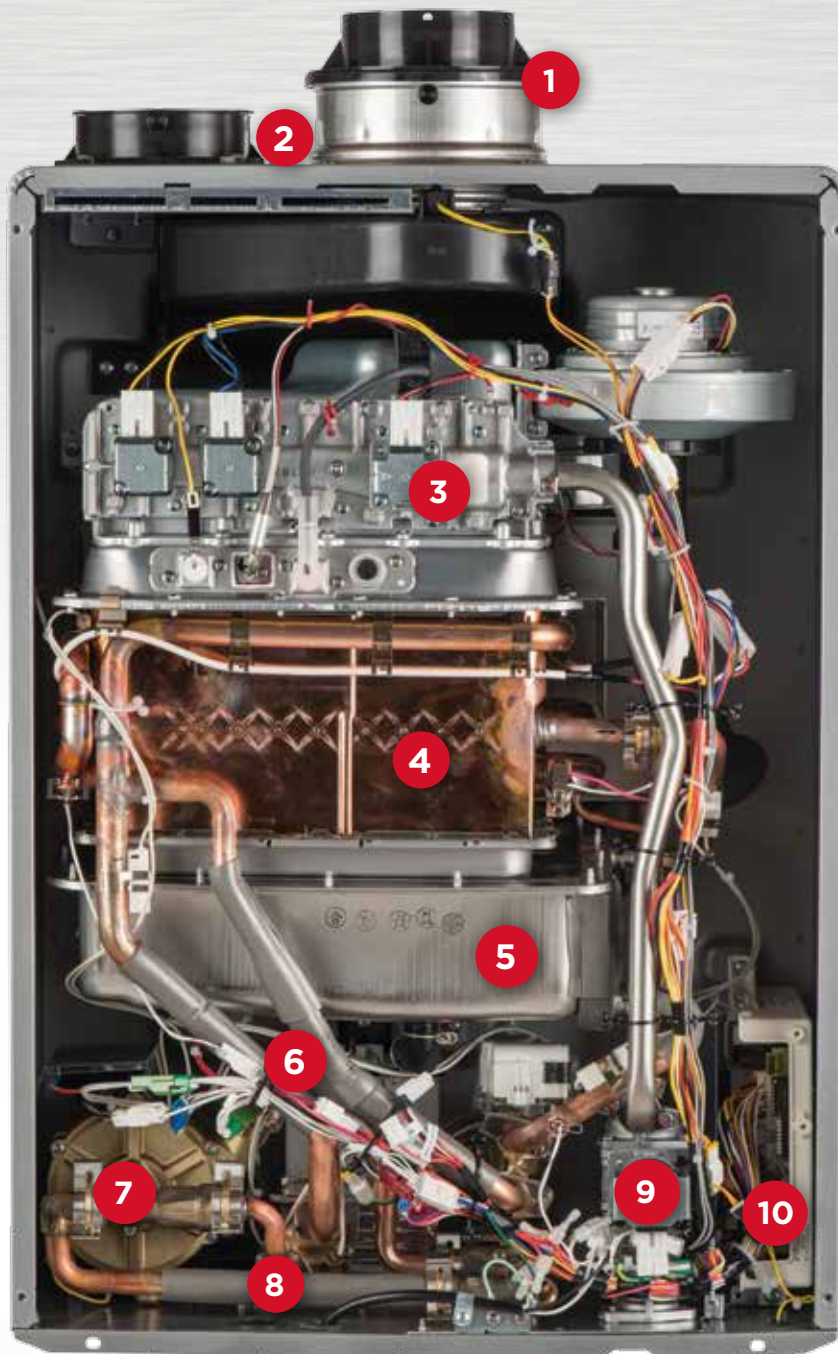
Getting hot water faster creates significant benefits above and beyond the convenience of saving time. Recirculation means less water and money down the drain, saving on natural resources and the utility costs related to gas and water usage. And you can save even more energy by programming the 24-hour digital controller that's included in the box. It enables the scheduling of multiple recirculation events throughout the day to align with usage patterns and ensure hot water is available at the fixtures during peak demand times such as early morning before work and school. And with our new Wi-Fi module and app, you can turn your recirculation on and off remotely.

With the typical U.S. home wasting potentially thousands of gallons of water annually waiting for hot water, the RUR's fast-track delivery system pays off at the faucet and in the budget. And the convenience and comfort of hot water recirculation is an attractive feature that adds resale value to a home.

Adaptable to plumbing systems with or without a dedicated recirculation line, the Ultra Series Tankless Water Heater RUR Models are the only tankless water heaters to feature both Concentric and PVC/CPVC venting options on the same model, offering the ultimate flexibility.

The pleasure of faster hot water is truly at hand. And big water and gas savings are on tap, too. Thanks to Rinnai's smart recirculation technology, there is less waiting and less waste.

TECHNOLOGY



Rinnai introduces the first and only tankless water heater in the industry to offer both concentric and PVC/CPVC venting and integrated recirculation on the same model.

- 1 **Concentric Vent Stack**
- 2 **Dual Pipe Vent Option**
- 3 **Burner & Gas Manifold**
- 4 **Primary Heat Exchanger**
- 5 **Secondary Heat Exchanger**
- 6 **Integrated Condensation Trap**
- 7 **Built-In Circulation Pump**
- 8 **Internal Bypass Line**
- 9 **Modulating Gas Valve**
- 10 **Built-In Surge Protector & PC Board**

Rinnai Tankless Water Heaters deliver trusted quality and proven reliability you can count on. From efficient, durable products to experienced support, there is simply no better choice than Rinnai.

- Wide range of quality product offerings
- Easy, safe ventilation options
- 24/7 technical support for professionals
- Engineering application support for commercial customers
- Industry-leading recirculation capabilities
- More venting solutions on the same model

The Rinnai Ultra Series Tankless Water Heater

SAVING TIME, WATER AND

Recirculation in action...



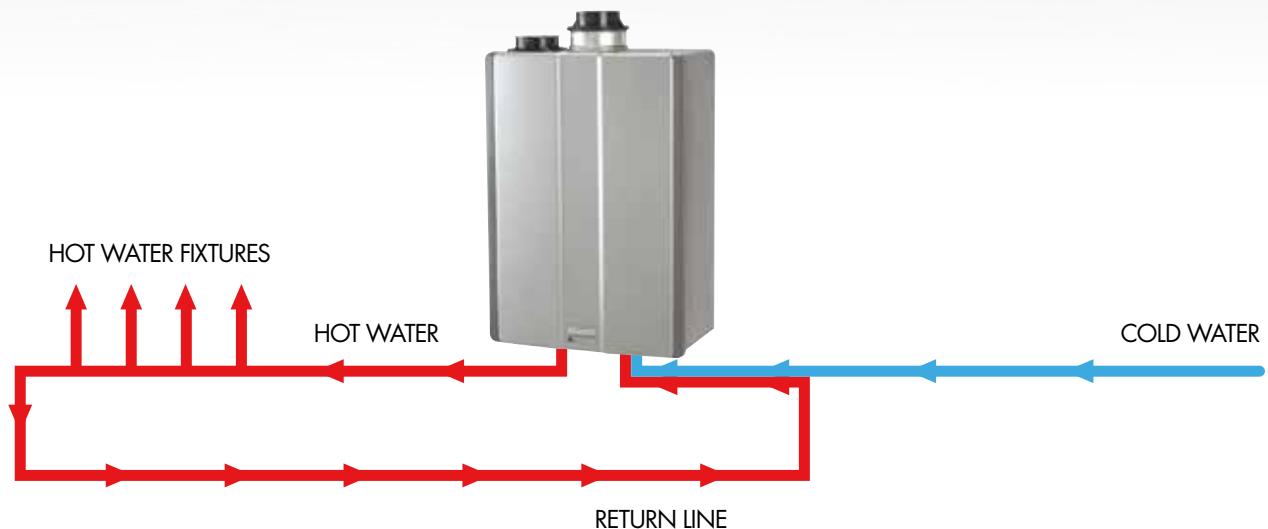
Dedicated Return Line

Rinnai is the only manufacturer to offer a tankless model, the RUR, which is easily adaptable to plumbing systems with or without a dedicated recirculation return line right out of the box.

In the Dedicated Recirculation Line mode, the integrated pump circulates water from the tankless water heater through the hot water supply line and back to the tankless water heater via the dedicated return line. A temperature thermistor installed in the RUR's inlet pipe is utilized to control the on/off sequence of the integrated pump.

In homes with a dedicated return line, the RUR also provides for additional control of the integrated pump through Rinnai's time and temperature-based Comfort or Economy mode. In the Comfort mode, the pump on/off intervals can vary from 9 to 31 minutes depending on the temperature setting. When the return water reaches the temperature called for at the tankless water heater, the pump will turn off. In the Economy mode, the pump on/off intervals are less frequent and vary from 18 to 62 minutes depending on the temperature setting, providing additional energy and cost savings.

DEDICATED MODE



MC-195T 24-Hour Digital Controller

Both indoor and outdoor RUR models include a MC-195T 24-Hour Digital Controller, allowing you to adjust the timing and duration of the circulation system operation for maximum energy savings. Rinnai Circ-Logic technology built into the water heater operates the pump during active circulation periods.

HOW THE RUR WORKS.

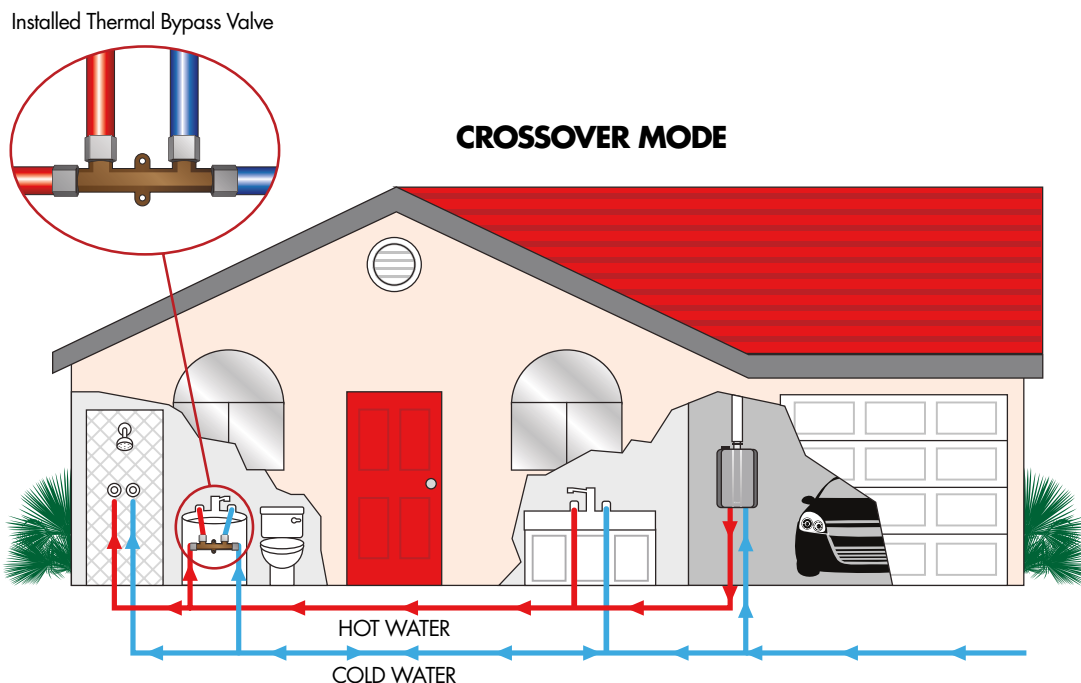
Crossover Valve

In applications where a dedicated recirculation line is not available or difficult to install, the RUR Tankless Water Heater utilizes the Crossover mode of hot water recirculation. The RUR's integrated recirculation pump, internal bypass line and thermal bypass valve, which is included as standard with every RUR model, make the Crossover mode of recirculation possible. The valve is installed between the hot and cold supply lines on the furthest fixture in the plumbing line from the tankless water heater. The cold water line is then used temporarily as the return portion of the circulation loop.

In the Crossover mode, the integrated pump circulates water from the tankless water heater through the hot water supply line, through the thermal bypass valve, and back to the tankless water heater via the cold water line. When hot water is detected at the valve, the water flow through the thermal bypass valve reduces down to barely a trickle, continuing to sense water temperature in the line. The pump will continue to operate and recirculate inside the water heater only until the end of the time interval and will restart at the beginning of the next interval. Installation of the bypass filter that's included in the box is used in the Crossover mode to allow the internal circulation of water through the water heater after the thermal bypass valve has closed.

In Crossover mode, the RUR again provides for additional control of the integrated pump through time-only based Comfort or Economy mode settings. In Comfort mode, the typical pump on/off intervals will vary depending on the length of recirculation loop used. For a short loop, the pump will be on for 8 minutes, off for 4; long loop, on for 16 minutes off for 4. In Economy mode, again the typical pump on/off intervals will vary depending on the length of recirculation loop used. For a short loop, the pump will be on for 8 minutes, off for 10; long loop, on for 16 minutes, off for 10, providing additional energy and cost savings.

Regardless of the hot water recirculation method used, the end result is the same: During active circulation periods, hot water is always available as it circulates from the hot water line back to the Rinnai RUR Tankless Water Heater.



Recirculation **SOLUTIONS**

Rinnai recirculation solutions build on the already endless supply of hot water Rinnai Tankless Water Heaters provide—adding the convenience of faster hot water.

Rinnai Circ-Logic technology comes standard on most Ultra and Luxury models, and can be used in combination with the following accessories to allow homeowners to set recirculation patterns that coincide with their hot water usage patterns. Hot water is available when needed, without the expense of circulating it during times of inactivity.

SOLUTION 1: GTK15 PUMP AND TIMER KIT

Allows homeowners to schedule multiple recirculation events throughout the day to align with usage patterns, such as getting ready in the morning.

SOLUTION 2: MC-195T 24-HOUR DIGITAL CONTROLLER AND PUMP

A stylish, wall-mountable digital control panel works seamlessly with Rinnai Circ-Logic technology and any properly sized pump. Multiple unique recirculation events can be programmed as well as an override function for homeowners to start recirculation outside of scheduled events.

SOLUTION 3: RINNAI CIRC-LOGIC AND PUMP

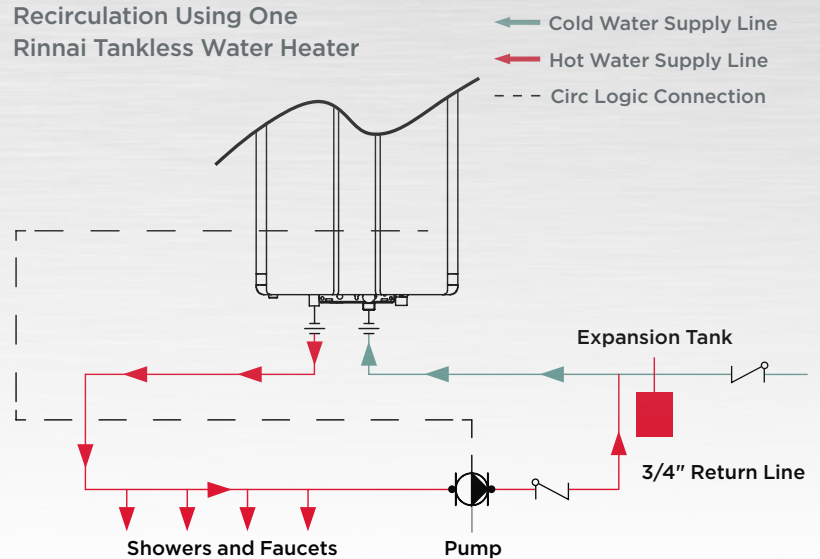
For recirculation without scheduled events, simply pair a Circ-Logic equipped tankless model with a properly sized pump. Recirculation intervals can be set to Comfort mode (shorter time intervals) or Economy mode (longer time intervals). Recirculation deactivates once the water has reached set temperature.





| Feature | Pump and Timer Kit (GTK15) | 24-Hour Digital Timer Controller (MC-195T) & Pump | Pump Only with Circ-Logic Control |
|---------------------------------|----------------------------|---------------------------------------------------|-----------------------------------|
| System Override Capacity | No | Yes | No |
| Changes WH Temp | No | Yes | No |
| Displays WH Codes | No | Yes | No |
| Dedicated Return | Yes | Yes | Yes |
| 24-Hour Clock | Yes | Yes | No |
| Timed Events | Yes | Yes | No |
| # Timed Events | Multiple | Multiple | N/A |

Recirculation Using One Rinnai Tankless Water Heater



The Rinnai RH180 Hybrid Tank-Tankless Water

Enjoy hot water at the pace of your life.

With a busy life, you need every advantage you can get. Because the Rinnai RH180 Hybrid Tank-Tankless Water Heater replenishes its hot water supply much more quickly than a traditional tank water heater, it puts time on your side. Imagine your entire family taking back-to-back showers and never running out of hot water!

Simplify your life.









The Rinnai RH180 Hybrid Tank-Tankless Water Heater makes life simpler by giving you more hot water to meet your daily hot water needs. Without even realizing it, many of us fall into a routine of planning our lives around hot water. Baths, showers, laundry and running the dishwasher become scheduled events based on hot water availability, instead of when we really want it.

Makes for a convenient way to get a fast upgrade.

It's not complicated to get the comfort you want. In fact, the Rinnai RH180 Hybrid Tank-Tankless Water Heater installs like a traditional tank-style water heater using a 1/2" gas line, standard water connections and 4" B-Vent, or can be common vented with a furnace.

In other words, it's an ideal upgrade opportunity that lets you enjoy increased hot water capacity without reconfiguring your setup. As a simple job your installer can do, it's perfect for both home remodeling and emergency replacement situations.

Water Heating Solutions - Clear Differences

| |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| | Fixtures/Appliances In Use | Available Hot Water | Replenish Entire Hot Water Supply | Ease of Installation |
|  ELECTRIC TANK WATER HEATER | 1 | 21 MIN | 88 MIN | STANDARD CONNECTION |
|  GAS TANK WATER HEATER | 1 | 18 MIN | 36 MIN | STANDARD CONNECTION |
|  RINNAI RH180 HYBRID TANK-TANKLESS WATER HEATER | 1 | CONTINUOUS | 16 MIN | STANDARD CONNECTION |
|  RINNAI TANKLESS WATER HEATER | NUMEROUS | CONTINUOUS | INSTANT | SOME RETROFIT |

Based on 50° F inlet supply water temperature, 40-gallon standard tank, single shower use (assumed to be 2.5 gpm mixed flow rate). Mixed temperature at showerheads to be 105° F. Appliance set point to be 120° F. Available hot water and replenished hot water supply based on industry calculation methods and Rinnai lab testing. Based on internal Rinnai testing, results may vary based on application.

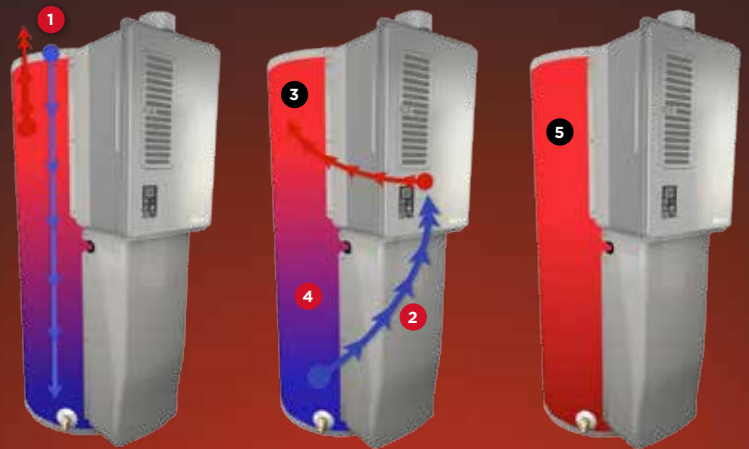
Heater DELIVERS MORE OF WHAT YOU WANT.



Standard Hookups Make Installation Quick and Easy.

- A** Gas: 1/2" (12.7 mm) MNPT*
- B** 4" (101.6 mm) B-Vent
- C** Hot Water: 3/4" (19.05 mm) MNPT
- D** PRV: 3/4" (19.05 mm) FNPT

*As with all gas appliance applications, installers should check and abide by local gas-pipe size and national fuel gas codes.



HOW IT WORKS.

The Rinnai RH180 Hybrid Tank-Tankless Water Heater is a unique combination blending the benefits of advanced technology and simple supply; it pairs an innovative, on-demand tankless system with an ample 40-gallon storage tank. By design, the system has a large capacity of hot water as well as technology to help maintain and quickly replenish the hot water supply.

Here are the basics:

1. When a hot water fixture (shower, faucet, etc.) is turned on, heated water exits the system from the top of the tank. While hot water exits the top of the tank, cold water enters the system and is directed toward the bottom of the tank.
2. Automatically sensing a change in temperature, the system activates a pump that draws cooler water located at the bottom of the tank up and through the heating components of the tankless model.
3. The heated water exits the tankless model and is then directed toward the top of the tank.
4. While the fixture is on and cold water continues to be directed to the bottom of the tank, the tankless technology continually replenishes the system with hot water.
5. When the hot water fixture is turned off, cold water stops entering the tank, but the tankless model continues replenishing hot water until the selected set temperature is satisfied.



CONDENSING TANKLESS WATER HEATERS

Ultra Series

RUR Models

RUC Models










| Model | RUR98i | RUR98e | RUC98i | RUC90i | RUC80i |
|----------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
| Dimensions - w, h, d Inches (mm) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) |
| Weight (lbs / kg) | 72.8 / 33 | 72.8 / 33 | 61.7 / 28.0 | 61.7 / 28.0 | 61.7 / 28.0 |
| Installation Type | Indoor | Outdoor | Indoor | Indoor | Indoor |
| Min./Max. BTU (natural gas) | 15,200/199,000 | 15,200/199,000 | 15,200/199,000 | 15,200/180,000 | 15,200/152,000 |
| Min./Max. BTU (propane) | 15,200/199,000 | 15,200/199,000 | 15,200/199,000 | 15,200/180,000 | 15,200/152,000 |
| Energy Factor | 0.95 | 0.95 | 0.95 | 0.96 | 0.96 |
| Temp. Range Residential | 98°–140° F / 37°–60° C | 98°–140° F / 37°–60° C | 98°–140° F / 37°–60° C | 98°–140° F / 37°–60° C | 98°–140° F / 37°–60° C |
| Temp. Range Commercial | 98°–140° F / 37°–60° C | 98°–140° F / 37°–60° C | 98°–185° F / 37°–85° C** | 98°–185° F / 37°–85° C** | 98°–185° F / 37°–85° C** |
| Min. Activation Rate | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) |
| Flow Rate (70° / 50° Temp. Rise) | 5.5 / 7.7 (20.8 / 29.2) | 5.5 / 7.7 (20.8 / 29.2) | 5.5 / 7.7 (20.8 / 29.2) | 5.0 / 7.0 (18.9 / 26.5) | 4.2 / 5.9 (15.9 / 22.3) |
| Hot Water Flow Rate Range | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–9.0 gpm (0.98–34.1 lpm) | 0.26–8.0 gpm (0.98–30.3 lpm) |
| Controller (standard) | MC-195T-US | MC-195T-US | Integrated | Integrated | Integrated |
| Controllers (optional) | MC-91-2US | MC-91-2US | MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US | MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US | MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US |
| Ultra Low NOx | yes | yes | yes | yes | yes |
| Warranty (Residential)* | Limited 12-year on heat exchanger, 5-year on parts, 1-year on labor (5-year optional on labor) | | | | |
| Warranty (Commercial)* | Limited 5-year on heat exchanger, 5-year on parts, 1-year on labor (2-year optional on labor) | | | | |
| Mobile Home Certified | yes | yes | yes | yes | yes |
| Valves Shipped in Box | yes | yes | yes | yes | yes |
| High Altitude Approved | Up to 10,200 ft. (3,109 m) | | Up to 10,200 ft. (3,109 m) | | |
| Certifications | AHRI, CSA, ENERGY STAR® | AHRI, CSA, ENERGY STAR® | AHRI, CSA, ENERGY STAR® | AHRI, CSA, ENERGY STAR® | AHRI, CSA, ENERGY STAR® |
| Venting Options | Concentric or PVC / CPVC | N/A | Concentric or PVC / CPVC | Concentric or PVC / CPVC | Concentric or PVC / CPVC |
| Tankless Rack System (TRS/TRW) Compatible | no | no | yes | no | no |
| ½" Gas Line Compatible*** | yes | yes | yes | yes | yes |
| Wi-Fi Ready | yes | yes | yes | yes | yes |

* For complete information and details regarding Rinnai's warranty, visit rinnai.us.








** To achieve temperatures over 140° F (60° C), an MCC-91 commercial controller must be purchased separately.

MODEL CHART AND SPECIFICATIONS.

| RU Models | | | RUCS / RUS Models | | | |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |
| RU98e | RU90e | RU80e | RUCS75i | RUS75e | RUCS65i | RUS65e |
| 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) | 18.5 X 26 X 10 (469.9 X 660.4 X 254) |
| 61.7 / 28.0 | 61.7 / 28.0 | 61.7 / 28.0 | 57.3 / 26 | 57.3 / 26 | 57.3 / 26 | 57.3 / 26 |
| Outdoor | Outdoor | Outdoor | Indoor | Outdoor | Indoor | Outdoor |
| 15,200/199,000 | 15,200/180,000 | 15,200/152,000 | 10,300/160,000 | 10,300/160,000 | 10,300/130,000 | 10,300/130,000 |
| 15,200/199,000 | 15,200/180,000 | 15,200/152,000 | 10,300/160,000 | 10,300/160,000 | 10,300/130,000 | 10,300/130,000 |
| 0.95 | 0.96 | 0.96 | 0.93 | 0.93 | 0.93 | 0.93 |
| 98°-140° F / 37°-60° C | 98°-140° F / 37°-60° C | 98°-140° F / 37°-60° C | 120°-140° F / 49°-60° C | 120°-140° F / 49°-60° C | 120°-140° F / 49°-60° C | 120°-140° F / 49°-60° C |
| 98°-185° F / 37°-85° C** | 98°-185° F / 37°-85° C** | 98°-185° F / 37°-85° C** | Residential Only | Residential Only | Residential Only | Residential Only |
| 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) |
| 5.5 / 7.7 (20.8 / 29.2) | 5.0 / 7.0 (18.9 / 26.5) | 4.2 / 5.9 (15.9 / 22.3) | 4.2 / 5.9 (15.9 / 22.3) | 4.2 / 5.9 (15.9 / 22.3) | 3.4 / 4.8 (12.9 / 18.1) | 3.4 / 4.8 (12.9 / 18.1) |
| 0.26-9.8 gpm (0.98-37.1 lpm) | 0.26-9.0 gpm (0.98-34.1 lpm) | 0.26-8.0 gpm (0.98-30.3 lpm) | 0.26-7.5 gpm (0.98-28.4 lpm) | 0.26-7.5 gpm (0.98-28.4 lpm) | 0.26-6.5 gpm (0.98-24.6 lpm) | 0.26-6.5 gpm (0.98-24.6 lpm) |
| MC-91-2US | MC-91-2US | MC-91-2US | Status Monitor | Status Monitor | Status Monitor | Status Monitor |
| MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US | MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US | MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US |
| yes | yes | yes | yes | yes | yes | yes |
| Limited 12-year on heat exchanger, 5-year on parts, 1-year on labor (5-year optional on labor) | | | Limited 12-year on heat exchanger, 5-year on parts, 1-year on labor | | | |
| Limited 5-year on heat exchanger, 5-year on parts, 1-year on labor (2-year optional on labor) | | | Residential Only | Residential Only | Residential Only | Residential Only |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | no | no | no | no |
| Up to 10,200 ft. (3,109 m) | | | Up to 5,400 ft. (1,646 m) | | | |
| AHRI, CSA, ENERGY STAR® | AHRI, CSA, ENERGY STAR® | AHRI, CSA, ENERGY STAR® | AHRI, CSA ENERGY STAR® | AHRI, CSA ENERGY STAR® | AHRI, CSA ENERGY STAR® | AHRI, CSA, ENERGY STAR® |
| N/A | N/A | N/A | Concentric or PVC / CPVC | N/A | Concentric or PVC / CPVC | N/A |
| yes | no | no | no | no | no | no |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | yes |

*** For complete information on gas sizing for Rinnai Tankless Water Heaters, consult the Operation and Installation Manual.

NON-CONDENSING & RH180 HYBRID TANK - TANKLESS WATER

| | Luxury Series Non-Condensing Tankless Water Heaters | | | | | Value Series | |
|---------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| |  |  |  |  |  |  |  |
| Model | RL94i | RLX94i | RL94e | RL75i | RL75e | V94i | V94e |
| Dimensions - w, h, d Inches (mm) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) |
| Weight (lbs / kg) | 46.3 / 21.0 | 46.3 / 21.0 | 44.3 / 20.1 | 45.6 / 20.7 | 43.6 / 19.8 | 46.3 / 21.0 | 44.3 / 20.1 |
| Installation Type | Indoor | Indoor | Outdoor | Indoor | Outdoor | Indoor | Outdoor |
| Min./Max. BTU (natural gas) | 10,300/199,000 | 10,300/192,000 | 10,300/199,000 | 10,300/180,000 | 10,300/180,000 | 10,300/199,000 | 10,300/199,000 |
| Min./Max. BTU (propane) | 10,300/199,000 | N/A | 10,300/199,000 | 10,300/180,000 | 10,300/180,000 | 10,300/199,000 | 10,300/199,000 |
| Energy Factor | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| Temp. Range Residential | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) |
| Temp. Range Commercial | 98°–185° F (37°–85° C)** | 98°–185° F (37°–85° C)** | 98°–185° F (37°–85° C)** | 98°–160° F (37°–71° C)** | 98°–160° F (37°–71° C)** | Residential Only | |
| Min. Activation Rate | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) |
| Flow Rate (70° / 50° Temp. Rise) | 4.7 / 6.6 (17.8 / 29.2) | 4.5 / 6.4 (17.03 / 24.2) | 4.7 / 6.6 (17.8 / 29.2) | 4.3 / 6.0 (16.3 / 22.7) | 4.3 / 6.0 (16.3 / 22.7) | 4.7 / 6.6 (17.8 / 25.0) | 4.7 / 6.6 (17.8 / 25.0) |
| Hot Water Flow Rate Range | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–7.5 gpm (0.98–28.4 lpm) | 0.26–7.5 gpm (0.98–28.4 lpm) | 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–9.8 gpm (0.98–37.1 lpm) |
| Controller (standard) | MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US |
| Controllers (optional) | MC-100-1, BC-100V-1, MC-195T-US, MCC-91-2 | | | | | MC-100-1, BC-100V-1 | |
| Ultra Low NOx | no | yes | yes | yes | yes | no | yes |
| Warranty (Residential)* | Limited 12-year on heat exchanger, 5-year on parts, 1-year on labor (5-year optional on labor) | | | | | Limited 10-year on heat exchanger, 5-year on parts, 1-year on labor | |
| Warranty (Commercial)* | Limited 5-year on heat exchanger, 5-year on parts, 1-year on labor (2-year optional on labor) | | | | | Residential Only | |
| Mobile Home Certified | yes | yes | yes | yes | yes | yes | yes |
| Valves Shipped in Box | yes | yes | yes | yes | yes | no | no |
| High Altitude Approved | Up to 10,200 ft. (3,109 m) | | | | | Up to 10,200 ft. (3,109 m) | |
| Certifications | AHRI and CSA | | | | | AHRI and CSA | |
| Venting Options | Concentric | Concentric | N/A | Concentric | N/A | Concentric | N/A |
| TRS Compatible | no | no | no | no | no | no | no |
| ½" Gas Line Compatible*** | yes | yes | yes | yes | yes | yes | yes |
| Wi-Fi Ready | yes | yes | yes | yes | yes | yes | yes |

* For complete information and details regarding Rinnai's warranty, visit rinnai.us.

** To achieve temperatures over 140° F (60° C), an MCC-91 commercial controller must be purchased separately.

HEATERS MODEL CHART AND SPECIFICATIONS.

| Non-Condensing Tankless Water Heaters | | | | | | Residential Hybrid System |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |
| V94Xi | V75i | V75e | V65i | V65e | V53e | RH180 |
| 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 23 x 9 (355.6 x 584.2 x 228.6) | 14 x 21 x 7 (355.6 x 533.4 x 177.8) | 20 x 51.2 x 27.5 (508 x 1,300.5 x 698.5) |
| 46.3 / 21.0 | 45.6 / 20.7 | 43.6 / 19.8 | 45.6 / 20.7 | 43.6 / 19.8 | 34 / 15.4 | 168.5 / 68 |
| Indoor | Indoor | Outdoor | Indoor | Outdoor | Outdoor | Indoor |
| 10,300/192,000 | 10,300/180,000 | 10,300/180,000 | 10,300/150,000 | 10,300/150,000 | 19,000/120,000 | 59,500/91,300 |
| N/A | 10,300/180,000 | 10,300/180,000 | 10,300/150,000 | 10,300/150,000 | 20,200/120,000 | 47,600/87,300 |
| 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 80% Thermal Efficiency |
| 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 98°–140° F (37°–60° C) | 120°–140° F (49°–60° C) | 110°–140° F (43°–60° C) |
| Residential Only | | | | | | Residential Only |
| 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.4 gpm (1.5 lpm) | 0.6 gpm (2.3 lpm) | N/A |
| 4.5 / 6.4 (17.03 / 24.2) | 4.3 / 6.0 gpm (16.3 / 22.7 lpm) | 4.3 / 6.0 gpm (16.3 / 22.7 lpm) | 3.6 / 5.0 gpm (13.6 / 18.9 lpm) | 3.6 / 5.0 gpm (13.6 / 18.9 lpm) | 2.8 / 4.0 gpm (10.6 / 15.1 lpm) | N/A |
| 0.26–9.8 gpm (0.98–37.1 lpm) | 0.26–7.5 gpm (0.98–28.4 lpm) | 0.26–7.5 gpm (0.98–28.4 lpm) | 0.26–6.5 gpm (0.98–24.6 lpm) | 0.26–6.5 gpm (0.98–24.6 lpm) | 0.60–5.3 gpm (0.98–20.1 lpm) | First Hour Rating: 180 gph‡ |
| MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US | MC-91-2US | Status Monitor | Integrated |
| MC-100-1, BC-100V-1 | | | | | MC-91-2US | N/A |
| yes | yes | yes | yes | yes | no | no |
| Limited 10-year on heat exchanger, 5-year on parts, 1-year on labor | | | | | | HEX 10 yrs; tank 6 yrs; parts 3 yrs; labor 1 yr |
| Residential Only | | | | | | Residential Only |
| yes | yes | yes | yes | yes | yes | no |
| no | no | no | no | no | no | no |
| Up to 10,200 ft. (3,109 m) | | | | | | Up to 5,400 ft. (1,646 m) |
| AHRI and CSA | | | | | | |
| Concentric | Concentric | N/A | Concentric | N/A | N/A | 4" UL Listed B-Vent |
| no | no | no | no | no | no | no |
| yes | yes | yes | yes | yes | yes | yes |
| yes | yes | yes | yes | yes | yes | no |

*** For complete information on gas sizing for Rinnai Tankless Water Heaters, please consult the Operation and Installation Manual.

‡ Based on DOE first hour test (IOCFR, Part 430).

FLEXIBLE TANKLESS

A First in Both Concentric and PVC/CPVC Venting for Condensing Tankless Water Heaters On One Model

The new RUR and RUC models of the Rinnai Ultra Series Tankless Water Heaters are the only tankless water heaters to offer Concentric Polypropylene or dual-pipe PVC/CPVC venting options on the same model. The dual venting configuration on the top allows for maximum flexibility for installers and dealers — one Concentric vent or two PVC/CPVC pipes can be used for venting.

As the #1 selling brand of tankless water heaters in the U.S. and Canada, we still favor Concentric Polypropylene for its superior joint fit, no cure time, quick installation and reduced wall or roof penetrations, but as leaders in the industry, we understand that PVC/CPVC can sometimes be more readily available or preferred in some installations.

Rinnai is the only tankless water heater manufacturer to offer both Concentric and dual-pipe PVC/CPVC on the same model, providing more venting options right out of the box — saving time, money and offering the best flexibility for faster installations in homes and businesses — from one project to the next.

Dual pipe venting options available on RUR and RUC Tankless Water Heaters include:

- 3" or 4" PVC/CPVC*
- IPEX Concentric and Low Profile Termination Kit*
- 3" Centrotherm InnoFlue Vent System (ULC-S636 listed)*
- Snorkel and Tee Terminations*

DUAL VENTING OPTIONS



For concentric venting, installers simply remove and discard the exhaust adaptor ring.



For PVC/CPVC configurations, the intake cap is removed and discarded. With this option, installers can use three- or four-inch PVC/CPVC pipe for the intake and exhaust.

| VENT TYPE | RUR / RUC NATURAL GAS | RUR / RUC PROPANE | RUCS |
|----------------------------|-------------------------------|---------------------|---------------------|
| Concentric PP | 65 Feet** (19.8 m) | 41 Feet (12.5 m) | 41 Feet (12.5 m) |
| Twin Pipe PP (Centrotherm) | 41 Feet** (12.5 m) | 41 Feet (12.5 m) | 41 Feet (12.5 m) |

| VENT TYPE | RUR / RUC NATURAL GAS | RUR / RUC PROPANE | RUCS |
|---------------------------------|--------------------------------|---------------------|----------------------|
| 3" Dual Pipe PVC/CPVC (76.2 mm) | 65 Feet** (19.8 m) | 41 Feet (12.5 m) | 41 Feet (12.5 m) |
| 4" Dual Pipe PVC/CPVC (10.16 m) | 100 Feet** (30.5 m) | 65 Feet (19.8 m) | 100 Feet (30.5 m) |

*Reference Rinnai Tankless Water Heater Installation and Operation Manual for further information.

**Maximum equivalent vent lengths are specific to the fuel type of the RUC and RUR tankless water heater. Use of elbows in installation will reduce the maximum vent length. It is imperative when performing equivalent vent length calculations, that you refer to the Installation Manual and any applicable technical bulletins.

INSTALLATION OPTIONS

Optimized Concentric Venting for Non-Condensing Tankless Water Heaters

Rinnai Tankless Water Heaters were the first to use a unique Concentric Venting System, a single-vent assembly option featuring an inner tube for exhaust and an outer tube for fresh air from outdoors. The result is a direct-vent, sealed combustion system that offers optimum safety and performance.

Beyond performance, our concentric system option can make installation faster and easier with:

- Single penetration through the wall reducing install time and costs
- Simple positive-fit components for secure connection
- Joint seals that expand and contract with weather to prevent damage
- Ease of assembly, adjustment and disassembly

Rinnai Makes Your 1/2" Gas Line an Option, Not an Obstacle.

If your tankless water heater installation calls for the use of 1/2" gas line, Rinnai has two words for you... no problem. Pick the gas line – and the Rinnai – that's right for you.†

Rinnai Tankless Water Heaters are designed to always provide maximum performance and operating efficiency using either a 3/4" or 1/2" gas line, as long as sufficient gas flow is available.

| RINNAI TANKLESS WATER HEATER MODELS | BTU | GAS LINE | |
|-----------------------------------------------------------------------|---------|---------------------------|-------------------|
| | | 1/2" | 3/4" |
| | | MAXIMUM EQUIVALENT LENGTH | |
| V53e | 120,000 | 100' (30.4 m) | 450' (137.2 m) |
| RUCS65i RUS65e | 130,000 | | 350' (106.7m) |
| V65e V65i | 150,000 | 70' (21.34 m) | 300' (91.44 m) |
| RUC80i RU80e | 152,000 | | 250' (76.2 m) |
| RUCS75i RUS75e | 160,000 | 60' (18.29 m) | |
| RL75i RL75e V75i V75e RUC90i RU90e | 180,000 | 50' (15.24 m) | 200' (60.96 m) |
| V94Xi RLX94i | 192,000 | | |
| V94i V94e RUC98i RU98e RL94i RL94e RUR98i RUR98e | 199,000 | 40' (12.19 m) | 175' (53.34 m) |

Because an undersized gas line can stress a tankless system and potentially reduce its life span, Rinnai Tankless Water Heaters, unlike other tankless water heaters, are equipped with innovative technology that safely ceases operation if it detects inadequate gas flow in order to avoid compromising performance and efficiency.

The table to the left lists the maximum length for both 1/2" and 3/4" gas lines when paired with each of Rinnai's Tankless Water Heaters.

How To Properly Size Your Gas Line:

- Determine what type of gas is being utilized
- Determine the inlet pressure
- Determine the allowed pressure drop
- Determine what other types of gas appliances are sharing the gas line
- Determine the maximum loads expected on the whole system as stated in the National Fuel Gas Code



Venting available in vertical and horizontal configurations. Concentric structure allows hot exhaust to exit through interior tube, while fresh air enters through the outer layer.

Source: NFPA 54/ANSI Z223.1 National Fuel Gas Code.

†For complete information on gas sizing for Rinnai Tankless Water Heaters, consult the Operation and Installation Manual.

VENTING PARTS

TERMINATION & TERMINATION KITS



| NON-CONDENSING (LUXURY AND VALUE SERIES) | | | | | |
|------------------------------------------|-------|-----------------------------------------|------------------|------------------------|-----------------------|
| Part Number | Image | Description | | Inner Exhaust Material | Outer Intake Material |
| 223181 | 1 | Universal Horizontal Termination Kit | 11.5" / 292.1 mm | Aluminum | Plastic |
| 223188 | 1 | Universal Termination Metal Kit | 12" / 304.8 mm | Aluminum | Metal |
| 223182 | 1 | Universal Horizontal Termination Kit | 21" / 533.4 mm | Aluminum | Plastic |
| 223187 | 2 | Horizontal Termination Diverter Kit | 21" / 533.4 mm | Aluminum | Plastic |
| 223183 | 3 | Universal Horizontal Termination | 11.5" / 292.1 mm | Aluminum | Plastic |
| 223184 | 3 | Universal Horizontal Termination | 21" / 533.4 mm | Aluminum | Plastic |
| 184118-S | 4 | Roof Discharge Termination (above roof) | 18" / 457.2 mm | Aluminum | Plastic |
| 184127 | 4 | Roof Discharge Termination (above roof) | 18" / 457.2 mm | Aluminum | Metal |
| 184119 | 5 | Roof Discharge Termination | 38" / 965.2 mm | Aluminum | Plastic |
| 224046 | 6 | Raised Horizontal Termination Kit | — | Aluminum | Plastic |
| 185342 | — | Roof Termination Extension Kit | — | Aluminum | Plastic |

| CONDENSING (ULTRA SERIES) | | | | | |
|---------------------------|-------|----------------------------------------------------------|----------------|------------------------|-----------------------|
| Part Number | Image | Description | | Inner Exhaust Material | Outer Intake Material |
| 223176PP | 7 | Condensing Horizontal Termination Kit | 12" / 304.8 mm | PP | Plastic |
| 223177PP | 7 | Condensing Horizontal Termination Kit | 21" / 533.4 mm | PP | Plastic |
| 223186PP | 3 | Condensing Horizontal Term Diverter Kit | 19" / 482.6 mm | PP | Plastic |
| 184162PP | 8 | Condensing Roof Discharge Termination Short (above roof) | 38" / 965.2 mm | PP | Plastic |
| 224047PP | 6 | Condensing Raised Horizontal Termination Kit ("Snorkel") | — | PP | Plastic |
| 185344PP | — | Roof Termination Extension Kit | — | PP | Plastic |

ELBOWS

| NON-CONDENSING (LUXURY AND VALUE SERIES) | | | | |
|------------------------------------------|-------|---------------------------------|------------------------|-----------------------|
| Part Number | Image | Description | Inner Exhaust Material | Outer Intake Material |
| 224050 | 9 | 45-Degree Elbow (Quantity of 2) | Aluminum | Plastic |
| 224063 | 10 | 90-Degree Elbow | Aluminum | Plastic |
| 224250 | 9 | 45-Degree Elbow (Quantity of 2) | Aluminum | Metal |
| 224255 | 10 | 90-Degree Elbow | Aluminum | Metal |

| CONDENSING (ULTRA SERIES) | | | | |
|---------------------------|-------|---------------------------------|------------------------|-----------------------|
| Part Number | Image | Description | Inner Exhaust Material | Outer Intake Material |
| 224077PP | 9 | 45-Degree Elbow (Quantity of 2) | PP | Plastic |
| 224078PP | 10 | 90-Degree Elbow | PP | Plastic |

VENT PIPE EXTENSIONS

NON-CONDENSING (LUXURY AND VALUE SERIES)

| Part Number | Image | Description | | Inner Exhaust Material | Outer Intake Material |
|-------------|-------|-------------------------|------------------------|------------------------|-----------------------|
| 224051 | 11 | Vent Pipe Extension | 10" / 254 mm | Aluminum | Plastic |
| 224052 | 11 | Vent Pipe Extension | 19.5" / 495.3 mm | Aluminum | Plastic |
| 224053 | 11 | Vent Pipe Extension | 39" / 990.6 mm | Aluminum | Plastic |
| 224054 | 12 | Telescoping Vent Length | 2"-12" / 50.8-304.8 mm | Aluminum | Plastic |
| 224275 | 12 | Telescoping Vent Length | 2"-12" / 50.8-304.8 mm | Aluminum | Metal |
| 224260 | 11 | Vent Pipe Extension | 10" / 254 mm | Aluminum | Metal |
| 224265 | 11 | Vent Pipe Extension | 19.5" / 495.3 mm | Aluminum | Metal |
| 224270 | 11 | Vent Pipe Extension | 39" / 990.6 mm | Aluminum | Metal |

CONDENSING (ULTRA SERIES)

| Part Number | Image | Description | | Inner Exhaust Material | Outer Intake Material |
|-------------|-------|---------------------|------------------|------------------------|-----------------------|
| 224087PP | 11 | Vent Pipe Extension | 10" / 254 mm | PP | Plastic |
| 224079PP | 11 | Vent Pipe Extension | 19.5" / 495.3 mm | PP | Plastic |
| 224080PP | 11 | Vent Pipe Extension | 39" / 990.6 mm | PP | Plastic |

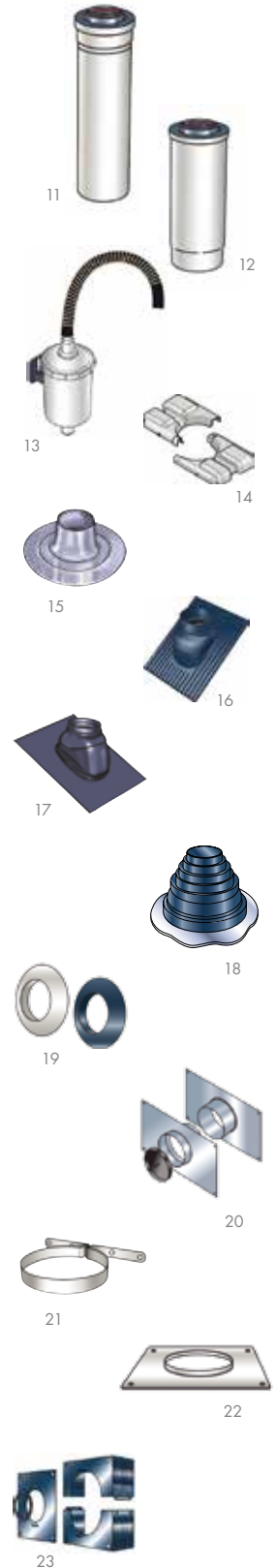
ADDITIONAL

NON-CONDENSING (LUXURY AND VALUE SERIES)

| Part Number | Image | Description | |
|-------------|-------|-----------------------------------------|----------------------------------------------------|
| 222053 | 13 | Condensate Trap | Suitable for use with plastic and metal components |
| 224040 | 14 | NSF Cover (for commercial applications) | |

NON-CONDENSING & CONDENSING (ULTRA SERIES)

| Part Number | Image | Description | |
|-------------|-------|---------------------------------------------------------|----------------------------------------------------|
| 146141 | 15 | Roof Flashing Assembly (flat roof) | Suitable for use with plastic and metal components |
| 189950 | 16 | Shingle Roof Flashing (1/12 to 6/12 pitch; plastic) | |
| 189951 | 16 | Shingle Roof Flashing (6/12 to 12/12 pitch; plastic) | |
| 189952 | 16 | Shingle Roof Flashing (8/12 to 16/12 pitch; plastic) | |
| 50171949 | 17 | Tile/Shingle Roof Flashing (1/12 to 6/12 pitch; metal) | |
| 50171961 | 17 | Tile/Shingle Roof Flashing (6/12 to 12/12 pitch; metal) | |
| 50171954 | 17 | Tile/Shingle Roof Flashing (8/12 to 16/12 pitch; metal) | |
| 242141 | 18 | Flashing for Metal Roof | |
| 710342 | 19 | Rubber Wall Plate (white) | |
| 710602 | 19 | Rubber Wall Plate (black) | |
| 224045 | 20 | Thimble (1 piece per box) | |
| 169044 | 21 | Pipe Clamp | |
| 224097 | 22 | Metal Pass Through Plate | |
| 224042 | 23 | Universal Bug Guard | |



ACCESSORIES

To further enhance the performance of Rinnai tankless water heating products, these accessories add even more flexibility.



MC-195T-US



BC-100V-1S



MC-100V-1S



MC-91-2S

| DIGITAL TEMPERATURE CONTROLLER | | | |
|--------------------------------|-------------------------------------------------------|----------------------|--------------|
| Part Number | Description | Temp. Range | Color |
| MC-91-2S | Residential/Commercial Standard Digital Controller | 98°-140°F / 36°-60°C | Silver |
| MC-91-2W | Residential/Commercial Standard Digital Controller | 98°-140°F / 36°-60°C | White |
| MCC-91-2W | Commercial Controller | >140°F / 60°C | White |
| MC-100V-1S | Deluxe Digital Controller with Clock and Call Feature | 98°-140°F / 36°-60°C | Silver |
| MC-100V-1W | Deluxe Digital Controller with Clock and Call Feature | 98°-140°F / 36°-60°C | White |
| BC-100V-1S | Bath Fill Digital Controller | 98°-140°F / 36°-60°C | Silver |
| BC-100V-1W | Bath Fill Digital Controller | 98°-140°F / 36°-60°C | White |
| MC-195T-US | 24-Hour Digital Controller for Recirculation | 98°-140°F / 36°-60°C | Silver/Black |



ScaleCutter System

| SCALECUTTER® | | |
|--------------|------------------------------|------|
| Part Number | Description | Feed |
| 103000038 | ScaleCutter System 3/4" Feed | 3/4" |
| 103000039 | ScaleCutter System Refill | 3/4" |



Grundfos Pump with Timer Kit



Condensate Neutralizer Kit



Pipe Cover Enclosure

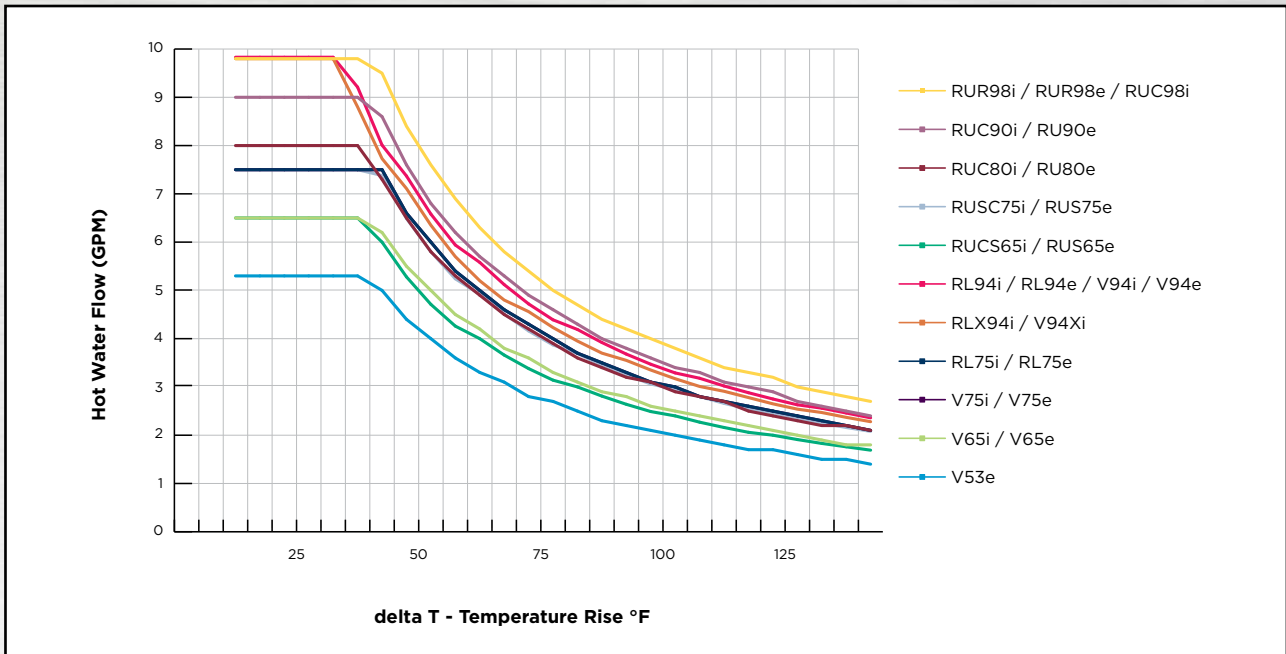


Recess Box

| ADDITIONAL ACCESSORIES | | |
|------------------------|--------------------------------------------------------------------------------|-----------------|
| Part Number | Description | Series |
| GTK15 | Grundfos® Pump with Timer Kit for Rinnai Circ-Logic Enabled Models | Ultra/Luxury |
| 804000074 | Condensate Neutralizer Kit for Condensing Tankless Models | Ultra |
| PC-20-W | Pipe Cover Enclosure for Model V53e | Value |
| PCD03-EWV | Pipe Cover Enclosure (Euro White) | Value (V65/V75) |
| PCD03-SM2 | Pipe Cover Enclosure | Luxury |
| PCD07-SM | Pipe Cover Enclosure | Ultra |
| RGB-20U | Universal Tankless Recess Box for Model V53e | Value |
| RGB-25U-C | Universal Tankless Recess Box for Models RL94e, RL75e, V75e, V65e (VA, VB, VC) | Luxury/Value |
| RGB-CTWH-2 | Tankless Recess Box for Condensing Models | Ultra |
| RGB-25-MSAL-C | Moisture Seal Recess Box | Luxury |
| REU-MSB-M | Multi-Unit Controller Master Unit | Ultra/Luxury |
| REU-MSB-C1 | Cable to Connect Ultra and Luxury Series Water Heaters | Ultra/Luxury |
| REU-MSB-C2 | Cable to Connect MSB-M Control Units | Ultra/Luxury |
| REU-EZC-1US | EZConnect® Cable for Connecting 2 Units | All |
| RMW101 | Wi-Fi Module | All |

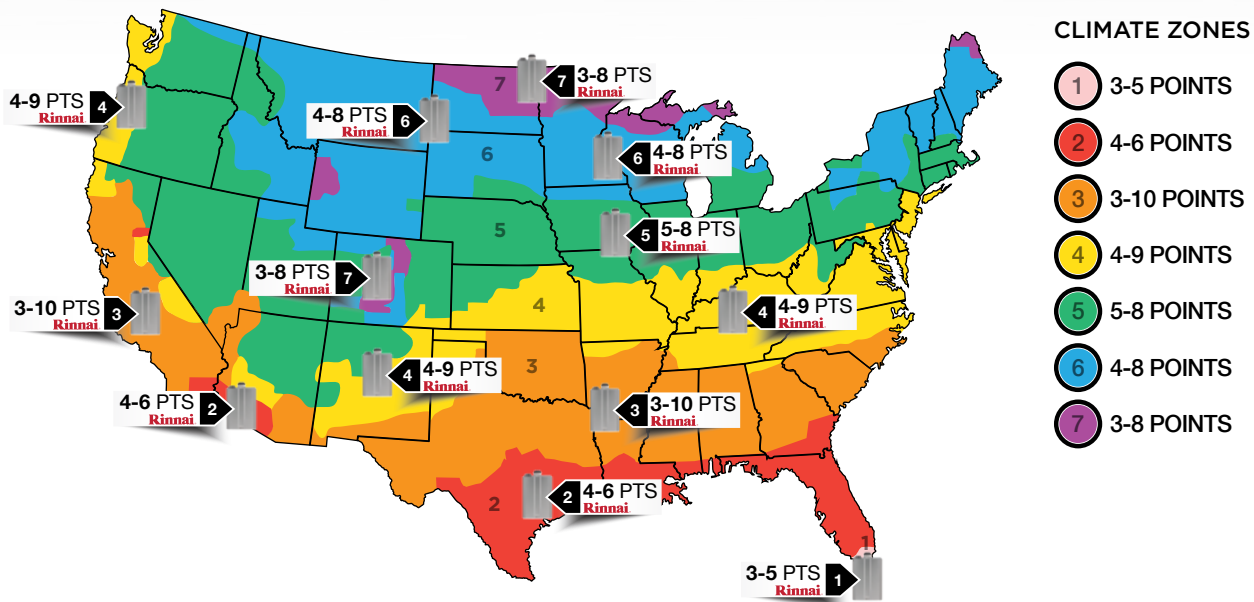
RINNAI TANKLESS WATER HEATERS – FLOW CHART AND HERS DATA

RINNAI TANKLESS WATER HEATERS HOT WATER FLOW CURVE



Tankless water heater output is based on delta T which is the difference between the incoming water temperature and the requested output temperature. This chart is used along with other factors to help size the Rinnai Tankless model for your application.

HERS SCORES IMPROVE WITH RINNAI TANKLESS WATER HEATERS



The Home Energy Rating System (HERS) Index is the industry standard by which a home's energy efficiency is measured. A lower HERS Index Score means a more energy efficient home, which means lower energy costs.

Data analysis conducted by independent third party HERS rater compares traditional electric and gas residential storage tank water heaters to Rinnai's Condensing and Non-Condensing Tankless Water Heaters. Consult and validate your specific application with a local HERS rater.

For more information specific to your zone or city, visit hersindex.com.

A tradition of **TRUE RELIABILITY.**

For nearly 100 years, we at Rinnai have been fiercely committed to delivering nothing less than a superior experience at every touch point.

Beyond manufacturing the highest quality products, our people stand behind all that we make—before, during and long after installation. From the 24/7/365 technical support for professionals, to our national network of independent installers for homeowners, to on-staff engineers who can assist with choosing the right products and sizes—we're inspiring confidence right along with the comfort our solutions provide.



Rinnai®

Learn more about Rinnai high-performance Tankless Water Heaters, Hybrid Water Heating Systems, Boilers, Vent-Free Fan Convectors and EnergySaver® Direct Vent Wall Furnaces at:

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