

Rinnai®

NEW and IMPROVED

SENSEI™

FEATURING

Smart-Circ™
Intelligent Recirculation™



SENSEI™

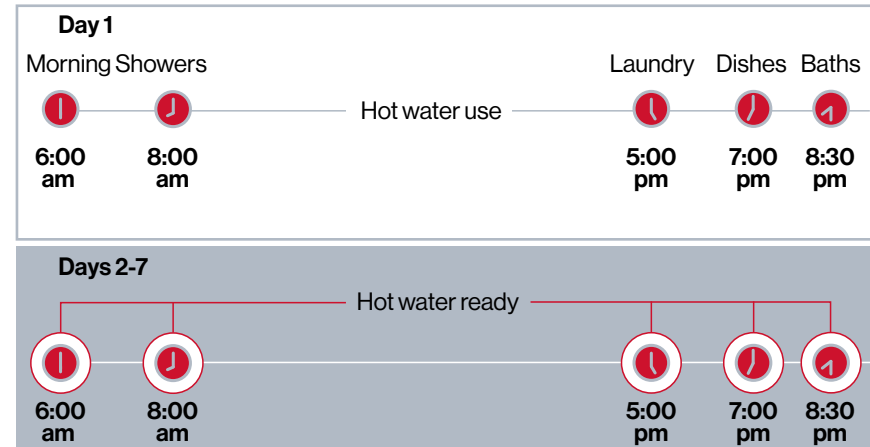
Major Time and Energy Savings

Introducing the new and improved Sensei. Rinnai is delivering the same superior quality that is now even EASIER FOR THE PRO TO INSTALL. New features include:

- Smart-Circ™ Intelligent Recirculation™
- New more powerful multi-speed DC Pump
- Simplified recirculation operation no longer requiring an internal bypass and recirculation plug/filter
- And so much more!



Smart-Circ™ Intelligent Recirculation™

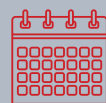


With Smart-Circ™, installation just got easier. External controllers are no longer required to set-up recirculation for your customers. Smart-Circ™ “learns” users’ hot water patterns over a seven-day period, then schedules pump and tankless recirculation patterns accordingly. Users enjoy hot water during regular demand periods, while saving energy and money.

You're all set!

Hot water will be ready for you based on your previous usage schedule. As hot water events are added throughout the week, scheduled recirculation adjusts accordingly.

What about usage changes?



Smart-Circ™ does not distinguish between weekday and weekend patterns.



Additional activity, like when users have guests. This will set a usage pattern that continues for 7 days before returning to normal.



To achieve scheduled recirculation or on-demand operation, control•r™ Wi-Fi module or MC-195T controllers are required (sold separately). Additional controllers will override Smart-Circ™ Intelligent Recirculation™.

Hot water usage must be greater than 20 seconds to be added to Smart-Circ's memory. This minimizes unwanted recirculation.

THE ADVANTAGES



EASY
INSTALLATION



PERFORMANCE



SERVICEABILITY

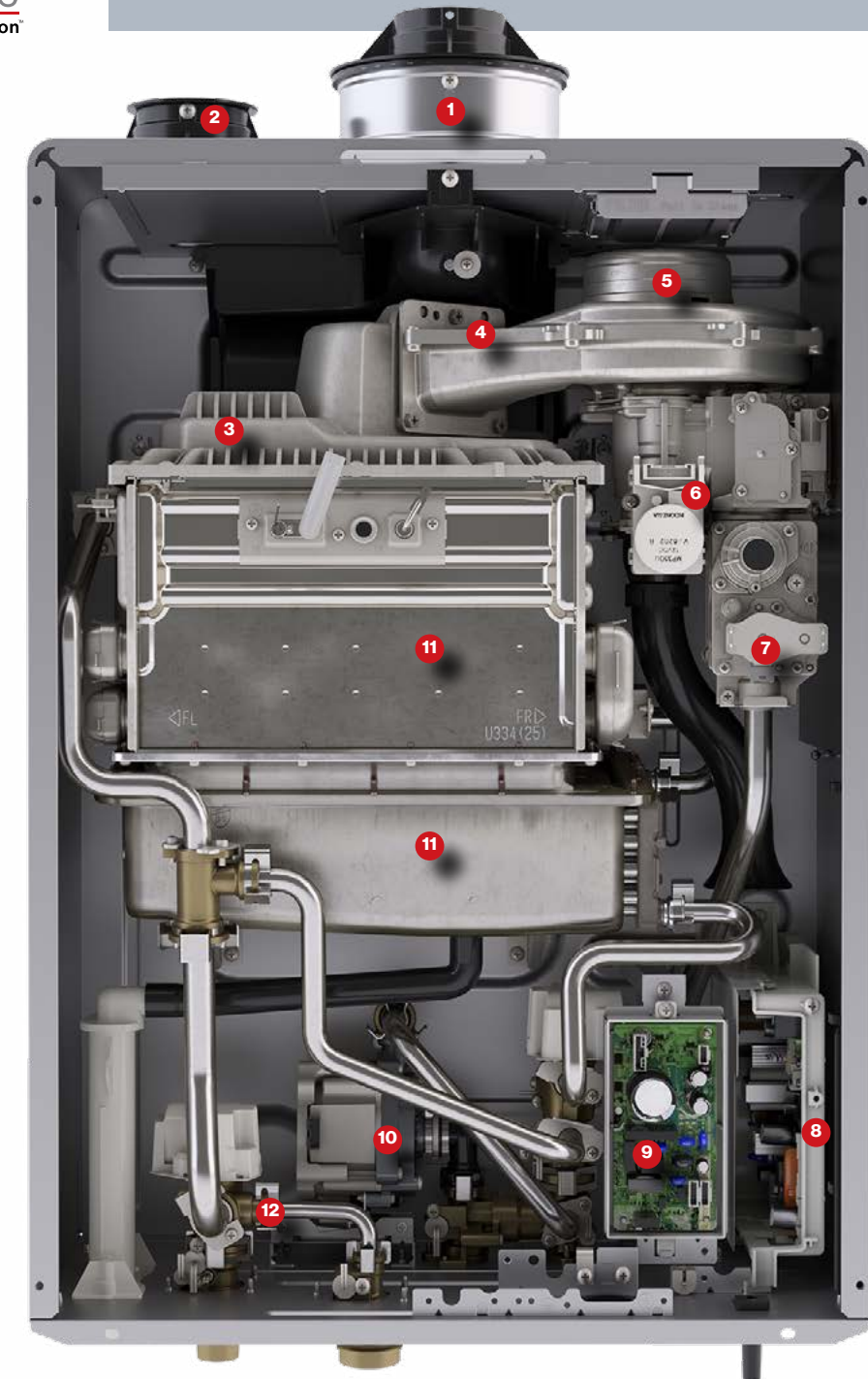
NEW and IMPROVED

SENSEI™

FEATURING
Smart-Circ™
Intelligent Recirculation

Look Inside

Vertically integrated components paired with the most advanced recirculation technology delivering superior product performance.



1 Concentric Vent or 2-Inch Exhaust*

- Allows for easy use of concentric 2”/4” or 3”/5” direct vent or exhaust in 2-pipe or room-air configurations

2 2-Inch Intake Vent Connections

- Allows for maximum flexibility with the use of 2” PVC/CPVC/PP on vent runs up to 65 feet

3 Fiber Mesh Premix Burner*

- Provides even flame distribution for optimal performance for any demand

4 Integrated Check Valve

- Located between the turbo fan and combustion chamber
- Prevents cold air from entering the venting system and backflow of exhaust in common vent applications

5 Turbo Fan*

- Enables longer vent runs and flexible vent options
- Up to 65 feet vent runs with 2”/4” concentric and 2” PVC/CPVC/PP
- Up to 150 feet vent runs with 3”/5” concentric and 3” PVC/CPVC/PP

6 Switching Venturi*

- Provides consistent mixture of air and gas to burner for low turn-down ratios
- Self-compensates in areas with low or fluctuating gas pressures

7 Zero Governor Gas Valve*

- Optimal combustion by delivering the right mixture of air and gas for hot water demand

12 NEW

Simplified Recirculation Operation

- New system logic simplifies installation by eliminating the need for the internal bypass and recirculation plug/filter

11 Primary and Secondary Stainless Steel Heat Exchangers*

- Resists the corrosive nature of the condensate, which occurs earlier in the high-efficiency combustion process

10 NEW

Multi-Speed DC Pump

- Improved more efficient performance
- Higher flow rate
- Better head pressure and for more flexible operation

9 NEW

Smart-Circ™ Intelligent Recirculation™

- Intelligent Recirculation™ “learns” users’ hot water patterns to schedule recirculation
- Recirculation controllers available separately either MC-195T or control•r WiFi

8 NEW

Low Flow Activation Logic

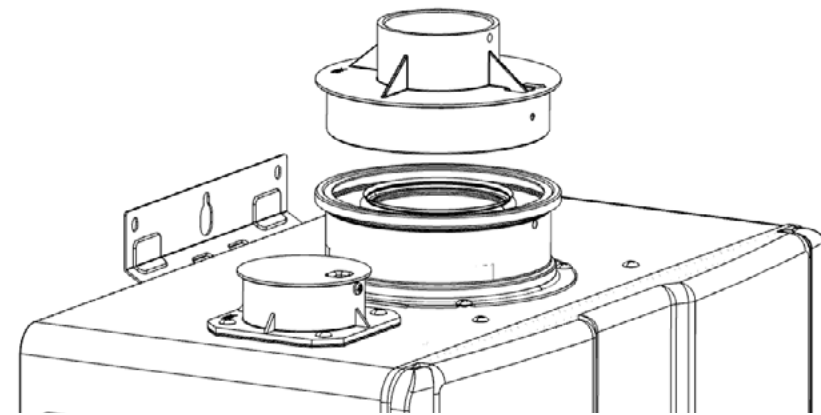
- Improved performance in high temperature climates with low flow rates

*Manufactured by Rinnai

Most Flexible Venting in the Industry

The Rinnai SENSEI™ can go in an existing condensing vent system for replacement if needed, but new installs can use smaller, lighter, less expensive concentric venting.

- 14 possible vent configurations
- 9 compatible vent manufacturers*



2" adaptor ring and cap allow for 3"x 5" concentric venting or 2" twin pipe venting

*Includes 40 PVC

Now Including 2" Venting Options

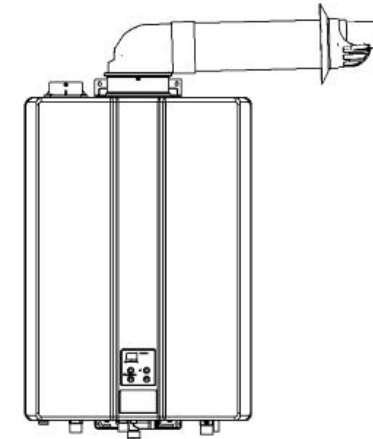
CONCENTRIC		
DIAMETER	EQUIVALENT LENGTH	TERMINATION
2" X 4"	65' (20 M)	VERTICAL OR HORIZONTAL
3" X 5"	150' (46 m)	VERTICAL OR HORIZONTAL

- Unit requires only a single penetration through the wall, reducing install time and costs
- Simple positive-fit components offer a secure connection
- Joint seals expand and contract with weather to prevent damage
- Assembly and adjustment are easy

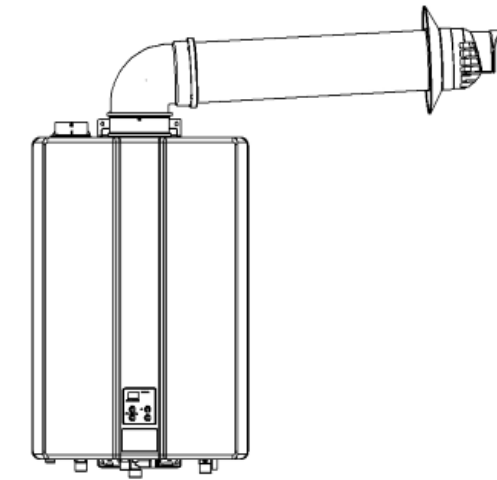
TWIN PIPE AND ROOM AIR			
DIAMETER	MATERIAL	EQUIVALENT LENGTH	TERMINATION
2"	PP, PVC, CPVC	65' (20 m)	VERTICAL OR HORIZONTAL
3"	PP, PVC, CPVC	150' (46 m)	VERTICAL OR HORIZONTAL

Example Vent Configurations

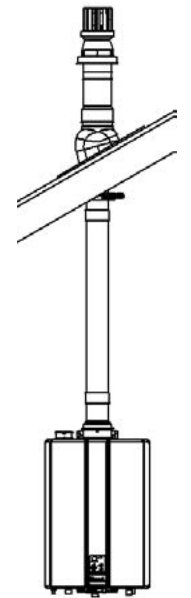
CONCENTRIC



2" x 4" horizontal wall termination configuration

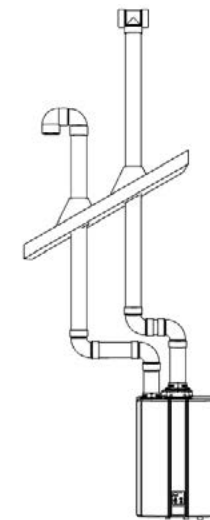


3" x 5" horizontal wall termination configuration



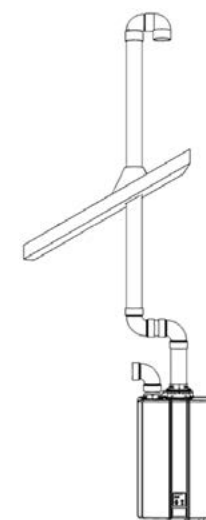
2" x 4" or 3" x 5" vertical roof termination configuration

TWIN PIPE



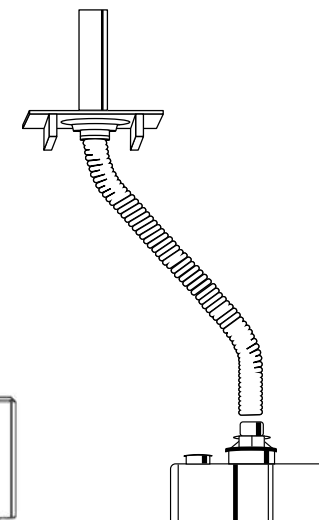
Vertical termination direct vent configuration

ROOM AIR



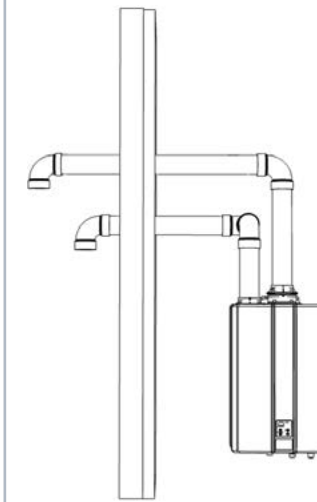
Vertical termination room air configuration

FLEX PP VENT

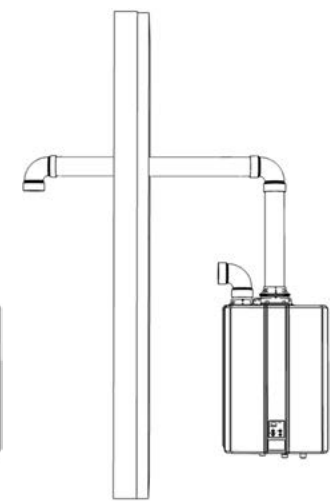


Flex vent terminates directly to the Tankless Water Heater

ELBOWS OR TEES



Elbow or tee side wall termination direct vent configuration

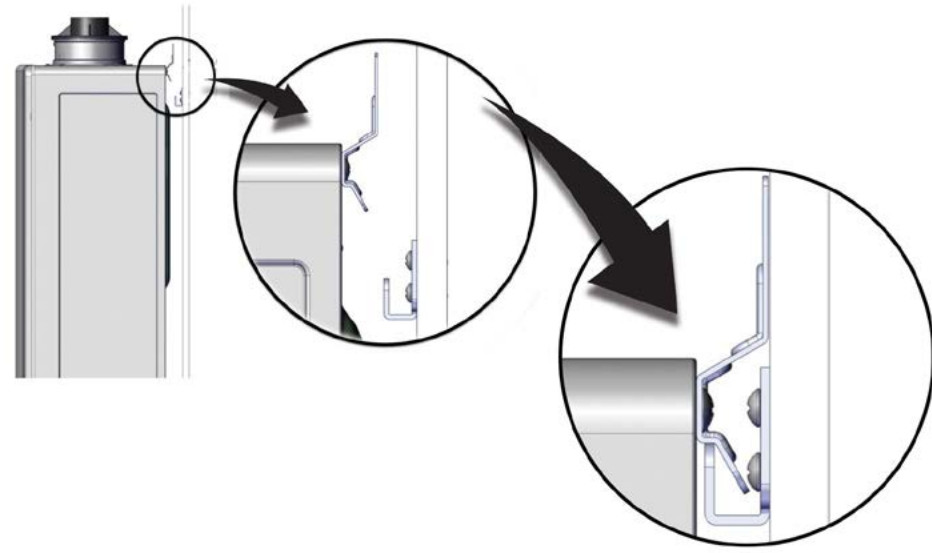


Elbow or tee side wall termination room air configuration

Easy Installation and Serviceability

Mounting Bracket

A versatile design enables side to side movement for easy vent alignment, intended to improve single contractor installation.



Quick & Easy Gas Conversion

An inexpensive conversion kit requires just three simple steps.



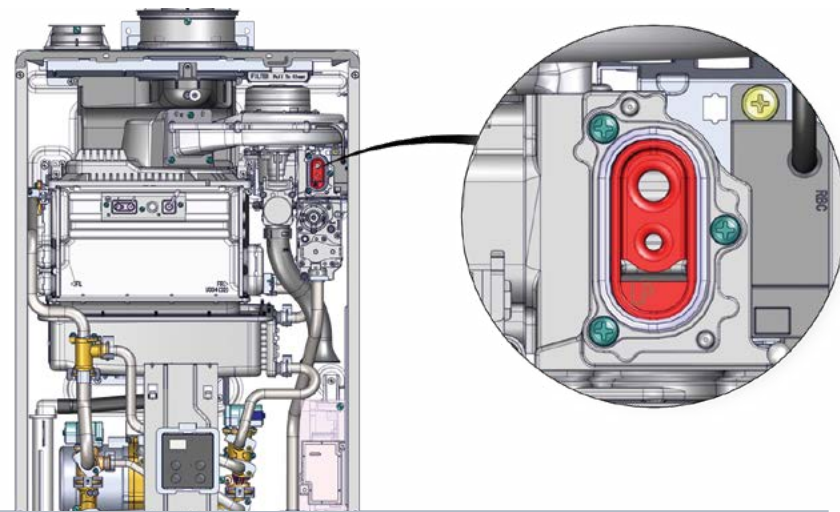
Remove 3 screws



Change the orifice and parameter



Apply new data plate

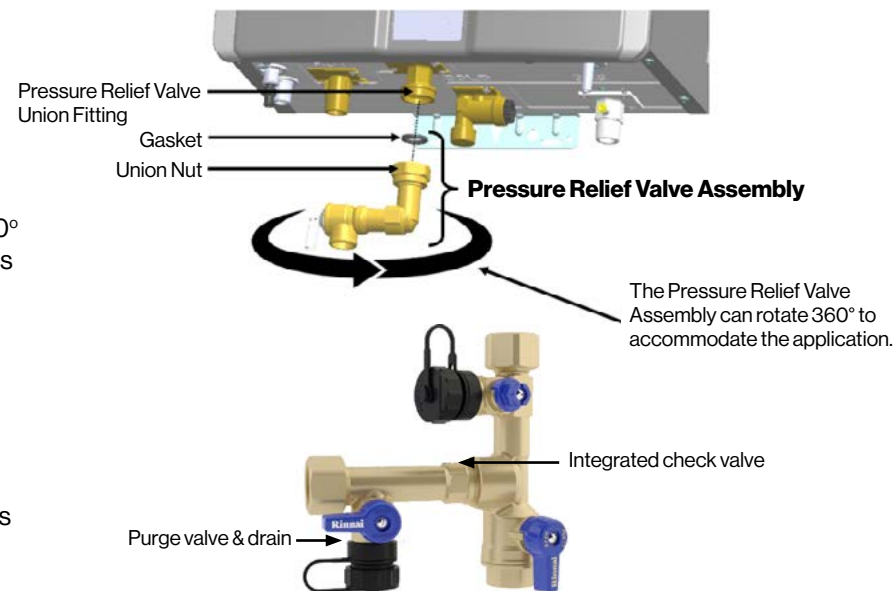


Convenient Isolation Valves + PRV

The pressure relief valve assembly can rotate 360° to accommodate the installation of isolation valves in any application.

RSC models include isolation and PRV valves adding value compared to similar models in the industry.

Rinnai offers a (optional accessory) dedicated return valve kit that includes required check valves and purge points.











Easy Parameter Adjustments






- Installation is more efficient with easily accessible control panel
- Controls are integrated on internal and external models
- A parameter adjustment can be made for greater hot water flow (up to 11 GPM) in areas with warm groundwater applications
- Simply use the buttons on the built-in control panels to select a temperature setting



MODEL CHART AND SPECIFICATIONS SUPER-HIGH-EFFICIENCY (CONDENSING) TANKLESS WATER HEATERS

								
MODEL	RSC199i (replaces RUR199i)	RSC199e (replaces RUR199e)	RSC160i (replaces RUR160i)	RSC160e (replaces RUR160e)	RU199i	RU199e	RU180i	RU180e
BUILT-IN PUMP	YES	YES	YES	YES	NO	NO	NO	NO
Smart-Circ Intelligent Recirculation	YES	YES	YES	YES	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)
PRODUCT DIMENSIONS W, H, D INCHES (MM)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 X 29.2 X 11.45 (470 X 742 X 291)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 X 29.2 X 11.45 (470 X 742 X 291)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 X 29.2 X 11.45 (470 X 742 X 291)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 X 29.2 X 11.45 (470 X 742 X 291)
PRODUCT WEIGHT (LBS / KG)	68 / 31	68 / 31	66 / 30	66 / 30	64 / 29	62 / 28	64 / 29	62 / 28
INSTALLATION TYPE	INDOOR	OUTDOOR	INDOOR	OUTDOOR	INDOOR	OUTDOOR	INDOOR	OUTDOOR
MIN./MAX. BTU	15,000/199,000	15,000/199,000	15,000/160,000	15,000/160,000	15,000/199,000	15,000/199,000	15,000/180,000	15,000/180,000
TEMP. RANGE RESIDENTIAL	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C*	98° F – 140° F / 37° C – 60° C*	98° F – 140° F / 37° C – 60° C*	98° F – 140° F / 37° C – 60° C*
TEMP. RANGE COMMERCIAL*	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 185° F / 37° C – 85° C*	98° F – 185° F / 37° C – 85° C*	98° F – 185° F / 37° C – 85° C*	98° F – 185° F / 37° C – 85° C*
MINIMUM ACTIVATION RATE	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)
FLOW RATE (70°/50° TEMP. RISE)	5.4 / 7.6	5.4 / 7.6	4.3 / 6.1	4.3 / 6.1	5.4 / 7.6	5.4 / 7.6	4.9 / 6.9	4.9 / 6.9
HOT WATER FLOW RATE RANGE	0.26 - 9.8 GPM (1.0 - 37 L/MIN)	0.26 - 9.8 GPM (1.0 - 37 L/MIN)	0.26 - 8.0 GPM (1.0 - 30 L/MIN)	0.26 - 8.0 GPM (1.0 - 30 L/MIN)	0.26 - 9.8 GPM (1.0 - 37 L/MIN)	0.26 - 9.8 GPM (1.0 - 37 L/MIN)	0.26 - 9.0 GPM (1.0 - 34 L/MIN)	0.26 - 9.0 GPM (1.0 - 34 L/MIN)
CONTROLLER (STANDARD)	INTEGRATED				INTEGRATED			
CONTROLLERS (OPTIONAL)	MC-60i; for scheduled recirculation use MC-195T-US or control-r™ WiFi Module				MC-60i; for scheduled recirculation use MC-195T-US or control-r™ WiFi Module			
CERTIFICATIONS	AHRI, CSA, ENERGY STAR®				AHRI, CSA, ENERGY STAR®			
WARRANTY (RESIDENTIAL)**	Limited 15-year on heat exchanger, 5-year on parts, 1-year on labor Register within 90 days and receive an additional 4 years of labor coverage for free (\$250 value).				Limited 15-year on heat exchanger, 5-year on parts, 1-year on labor Register within 90 days and receive an additional 4 years of labor coverage for free (\$250 value).			
WARRANTY (COMMERCIAL)**	Limited 8-year on heat exchanger, 5-year on parts, 1-year on labor Register within 90 days and receive an additional 1 year of labor coverage for free (\$250 value).				Limited 8-year on heat exchanger, 5-year on parts, 1-year on labor Register within 90 days and receive an additional 1 year of labor coverage for free (\$250 value).			
MOBILE HOME CERTIFIED	YES	YES	YES	YES	YES	YES	YES	YES
VALVES SHIPPED IN BOX	YES	YES	YES	YES	YES	YES	YES	YES
THERMAL BYPASS CROSS VALVE IN BOX	YES	YES	YES	YES	N/A	N/A	N/A	N/A
HIGH ALTITUDE APPROVED	UP TO 10,200 FT. (3,109 M)				UP TO 10,200 FT. (3,109 M)			
VENTING OPTIONS	CONCENTRIC OR PVC/CPVC/PP	N/A	CONCENTRIC OR PVC/CPVC/PP	N/A	CONCENTRIC OR PVC/CPVC/PP	N/A	CONCENTRIC OR PVC/CPVC/PP	N/A
ULTRA LOW NOX	YES	YES	YES	YES	YES	YES	YES	YES
TANKLESS RACK SYSTEM™ (TRS/TRW) COMPATIBLE	YES	YES	YES	YES	YES	YES	YES	YES
1/2" GAS LINE COMPATIBLE†	YES	YES	YES	YES	YES	YES	YES	YES
WI-FI READY	YES	YES	YES	YES	YES	YES	YES	YES

MODEL CHART AND SPECIFICATIONS
SUPER-HIGH-EFFICIENCY (CONDENSING) TANKLESS WATER HEATERS

	SE+ SERIES				COMMERCIAL SERIES			
								
MODEL	RU160i	RU160e	RU130i	RU130e	CU199i	CU199e	CU160i	CU160e
BUILT-IN PUMP	NO	NO	NO	NO	NO	NO	NO	NO
Smart-Circ Intelligent Recirculation	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)	YES (REQUIRES EXTERNAL PUMP)
PRODUCT DIMENSIONS W, H, D INCHES (MM)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 x 29.2 x 11.45 (470 x 742 x 291)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 x 29.2 x 11.45 (470 x 742 x 291)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 x 29.2 x 11.45 (470 x 742 x 291)	18.5 X 31.3 X 11.45 (470 X 670 X 291)	18.5 x 29.2 x 11.45 (470 x 742 x 291)
PRODUCT WEIGHT (LBS / KG)	64 / 29	62 / 28	64 / 29	62 / 28	64 / 29	64 / 29	62 / 28	62 / 28
INSTALLATION TYPE	INDOOR	OUTDOOR	INDOOR	OUTDOOR	INDOOR	OUTDOOR	INDOOR	OUTDOOR
MIN./MAX. BTU	15,000/160,000	15,000/160,000	15,000/130,000	15,000/130,000	15,000/199,000	15,000/199,000	15,000/160,000	15,000/160,000
TEMP. RANGE RESIDENTIAL*	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	98° F – 140° F / 37° C – 60° C	N/A	N/A	N/A	N/A
TEMP. RANGE COMMERCIAL*†	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C	98° F – 185° F / 37° C – 85° C
MIN. ACTIVATION RATE	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)	0.4 GPM (1.5 L/MIN)
FLOW RATE (70°/50° TEMP. RISE)	4.3 / 6.1	4.3 / 6.1	3.5 / 4.9	3.5 / 4.9	5.4 / 7.6	5.4 / 7.6	4.3 / 6.1	4.3 / 6.1
HOT WATER FLOW RATE RANGE	0.26 - 8.0 GPM (1.0 - 30 L/MIN)	0.26 - 8.0 GPM (1.0 - 30 L/MIN)	0.26 - 6.6 GPM (1.0 - 24 L/MIN)	0.26 - 6.6 GPM (1.0 - 24 L/MIN)	0.26 - 9.8 GPM (1.0 - 37 L/MIN)	0.26 - 9.8 GPM (1.0 - 37 L/MIN)	0.26 - 8.0 GPM (1.0 - 30 L/MIN)	0.26 - 8.0 GPM (1.0 - 30 L/MIN)
CONTROLLER (STANDARD)	INTEGRATED				INTEGRATED			
CONTROLLERS (OPTIONAL)	MC-601; for scheduled recirculation use MC-195T-US or control-r™ WiFi Module				MC-601, MCC-601; for scheduled recirculation use MC-195T-US or control-r™ WiFi Module			
CERTIFICATIONS	AHRI, CSA, ENERGY STAR®				AHRI, CSA, ENERGY STAR®			
WARRANTY (RESIDENTIAL)**	LIMITED 15-YEAR ON HEAT EXCHANGER, 5-YEAR ON PARTS, 1-YEAR ON LABOR REGISTER WITHIN 90 DAYS AND RECEIVE AN ADDITIONAL 4 YEARS OF LABOR COVERAGE FOR FREE (\$250 VALUE).				COMMERCIAL ONLY			
WARRANTY (COMMERCIAL)**	LIMITED 8-YEAR ON HEAT EXCHANGER, 5-YEAR ON PARTS, 1-YEAR ON LABOR REGISTER WITHIN 90 DAYS AND RECEIVE AN ADDITIONAL 1 YEAR OF LABOR COVERAGE FOR FREE (\$250 VALUE).				LIMITED 8-YEAR ON HEAT EXCHANGER, 5-YEAR ON PARTS, 1-YEAR ON LABOR REGISTER WITHIN 90 DAYS AND RECEIVE AN ADDITIONAL 1 YEAR OF LABOR COVERAGE FOR FREE (\$250 VALUE).			
MOBILE HOME CERTIFIED	YES	YES	YES	YES	NO	NO	NO	NO
VALVES SHIPPED IN BOX	YES	YES	YES	YES	YES	YES	YES	YES
HIGH ALTITUDE APPROVED	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)	UP TO 10,200 FT. (3,109 M)
VENTING OPTIONS	CONCENTRIC OR PVC/CPVC/PP	N/A	CONCENTRIC OR PVC/CPVC/PP	N/A	CONCENTRIC OR PVC/CPVC/PP	N/A	CONCENTRIC OR PVC/CPVC/PP	N/A
ULTRA LOW NOX	YES	YES	YES	YES	YES	YES	YES	YES
TANKLESS RACK SYSTEM™ (TRS/TRW) COMPATIBLE	YES	YES	YES	YES	YES	YES	YES	YES
1/2" GAS LINE COMPATIBLE††	YES	YES	YES	YES	YES	YES	YES	YES
WI-FI READY	YES	YES	YES	YES	YES	YES	YES	YES



Rinnai Manufacturing
Griffin, Georgia, USA

First Major Tankless Brand to Manufacture in the USA

Rinnai established its US operations in 1974 and introduced Tankless Water Heating to the North American Market in 1999. In 2018 Rinnai manufactured its first tankless water heater in the United States in Griffin, Georgia. Our new manufacturing facility was completed in 2021 with production of the new RE• Series™ tankless water heaters beginning in 2022. Rinnai continues to make significant investments in expanding its operations and product portfolio, focusing on its brand promise of **Creating a healthier way of living®**.



Water Heating Solutions



Home Heating Solutions



Commercial Water Heating Solutions

Every. Detail. Matters.™

You don't become a market leader without thinking through every single detail. Then overthinking it. Then rethinking it. Every small detail matters. A lot. From flexible venting to customizable solutions and maximum ROI, we've thought through all the possible barriers and potential problems before they exist. Simply put, we're not just in the business of tankless water heaters. We're in the business of solving problems. That means we won't relax. Ever. We just can't. We'll keep rethinking every single tiny detail, innovating, and improving our products, services, and programs.

Learn more about Rinnai high-performance Tankless Water Heaters, Hybrid Water Heating Systems, Boilers, Vent-Free Fan Convectors, EnergySaver® Direct Vent Wall Furnaces, Hydronic Air Handlers and Infrared Radiant Heaters.

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