# We Make An Endless Supply Of Hot Water AN EASILY ATTAINABLE LUXURY.



**LUXURY SERIES TANKLESS WATER HEATERS** 











Nearly 100 years ago, we at Rinnai established a tradition of never settling for less than the absolute best—a tradition that has grown even stronger today.

Thanks superior to 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.

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

# Enhancing the COMFORTS OF HOME.

With Rinnai Tankless Water Heaters, homeowners can now have more hot water than they ever thought possible.

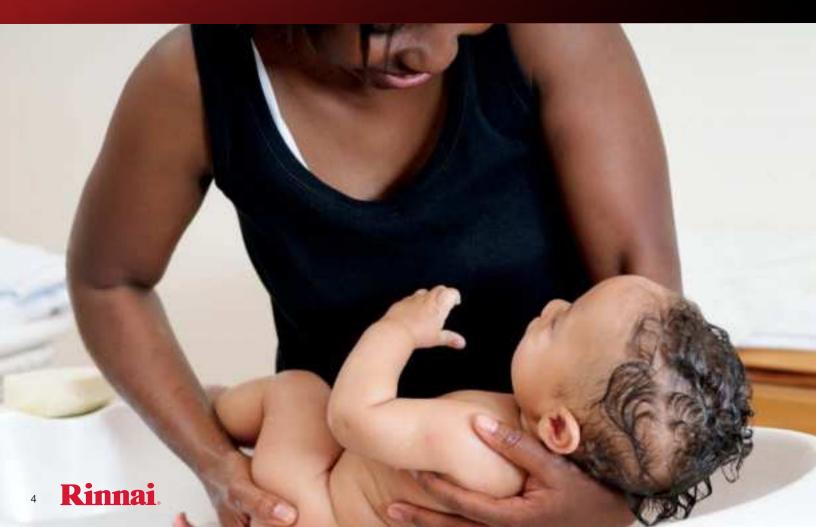
The innovation behind Rinnai Tankless Water Heaters provides an endless supply of hot water wherever and whenever it's needed— even for simultaneous uses at multiple fixtures.

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 and can contribute to a favorable HERS rating and optimize LEED certification.

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

The flexibility of always having enough hot water. The reliability of proven engineering. It's everything homeowners need to feel comfortable.

### Only from Rinnai.



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





## Commercial Solutions - where the demands are greatest,

## RINNAI DELIVERS.

Leveraging decades of global commercial water heating experience, Rinnai Tankless Water Heaters 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 service and everything in-between, our dedication to delivering our absolute best never wavers.

For A Free Sizing Consultation, Call Our Application Engineers At 866-383-0707.



## Rinnai Tankless Solutions Give You



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



# RINNAI NON-CONDENSING LUXURY SERIES... EXCEPTIONAL HOT WATER PERFORMANCE WITH ENERGY EFFICIENCY TO SPARE.

Rinnai Luxury Series Tankless Water Heaters take hot water performance higher, delivering the most impressive output of our non-condensing line. Using a durable copper heat exchanger to optimize heat transfer, these high achievers attain an Energy Factor ratings of up to .82, making them 18 percent more efficient\* than an ENERGY STAR® qualified storage tank.

Featuring Rinnai's energy smart Cir-Logic technology, our Luxury models produce an endless supply of hot water. An added external pump and dedicated recirculation line moves hot water quicker to showers and faucets. To save even more time and energy, a 24-hour digital controller can be easily programmed to ensure hot water is available during peak demand times like early morning before work and school. Add a sleek, space-saving design and robust array of standard features, and the luxury of superior comfort, convenience and savings is at every homeowner's command.

\*Based on comparing a Rinnai .82 Tankless Water Heater to an ENERGY STAR® qualified tank water heater.

## THE POWER TO LIVE BETTER.

#### Tankless 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.

#### 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.

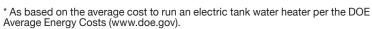
**Flexible installation:** Small size allows for installation in non-traditional spaces such as crawl spaces and attics, making it perfect for use in any size home, including manufactured and modular homes.

#### 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 CO<sub>2</sub> emissions contribute to cleaner air and a healthier environment.



<sup>\*\*</sup> Based on DOE ENERGY STAR® lifecycle estimates.



#### 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

# Other 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 all 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.

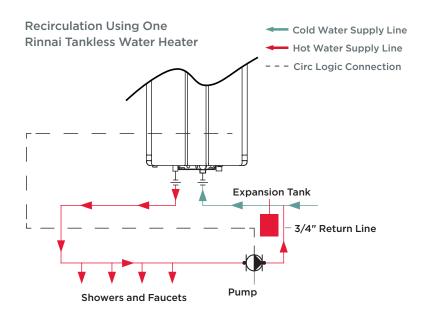
#### **SOLUTION 2: MC-195T 24-HOUR DIGITAL CONTROLLER AND PUMP**

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





# FLEXIBLE TANKLESS 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 ½" 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 ¾" or ½" gas line, as long as sufficient gas flow is available.

		GAS LINE		
RINNAI TANKLESS WATER HEATER MODELS	BTU	1/2"	3/4"	
			IMUM NT LENGTH	
V53e	120,000	- 100'	450' (137.2 m)	
RUCS65i RUS65e	130,000	(30.4 m)	350' (106.7m)	
V65e V65i	150,000	70'	300' (91.44 m)	
RUC80i RU80e	152,000	(21.34 m)	250'	
RUCS75i RUS75e	160,000	60' (18.29 m)	(76.2 m)	
RL75i		(1212211)		
RL75e V75i	180,000	50'	200'	
V75e RUC90i	180,000	(15.24 m)	(60.96 m)	
RU90e				
RLX94i RUC98i	192,000			
RU98e		40'	175'	
RL94i RL94e	199,000	(12.19 m)	(53.34 m)	
RUR98i RUR98e				

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

<sup>‡</sup>For complete information on gas sizing for Rinnai Tankless Water Heaters, consult the Operation and Installation Manual.

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 ½" and ¾" 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 PARTS**















TERMINATION	ON & TE	ERMINATION KITS			
Part Number	Image	Description	Length	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 (above roof); cold climate	38" / 965.2 mm	Aluminum	Plastic
224046	6	Raised Horizontal Termination Kit ("Snorkel")			Plastic
185342	_	Roof Termination Extension Kit	_	Aluminum	Plastic

ELBOWS					
Part Number	Image	Description	Inner Exhaust Material	Outer Intake Material	
224050	7	45-Degree Elbow (Quantity of 2)	Aluminum	Plastic	
224063	8	90-Degree Elbow	Aluminum	Plastic	
224250	7	45-Degree Elbow (Quantity of 2)	Aluminum	Metal	
224255	8	90-Degree Elbow	Aluminum	Metal	

VENT PIPE EXTENSIONS					
Part Number	Image	Description	Length	Inner Exhaust Material	Outer Intake Material
224051	9	Vent Pipe Extension	10"/ 254 mm	Aluminum	Plastic
224052	9	Vent Pipe Extension	19.5" / 495.3 mm	Aluminum	Plastic
224053	9	Vent Pipe Extension	39" / 990.6 mm	Aluminum	Plastic
224054	10	Telescoping Vent Length	2"-12" / 50.8-304.8 mm	Aluminum	Metal
224275	10	Telescoping Vent Length	2"-12" / 50.8-304.8 mm	Aluminum	Plastic
224260	9	Vent Pipe Extension	10"/ 254 mm	Aluminum	Metal
224265	9	Vent Pipe Extension	19.5" / 495.3 mm	Aluminum	Metal
224270	9	Vent Pipe Extension	39" / 990.6 mm	Aluminum	Metal

ADDITIONA	L		
Part Number	Image	Description	
222053	11	Condensate Trap	Suitable for use
146141	12	Roof Flashing Assembly (flat roof)	with plastic and metal components
189950	13	Shingle Roof Flashing (1/12 to 6/12 pitch; plastic)	
189951	13	Shingle Roof Flashing (6/12 to 12/12 pitch; plastic)	
189952	13	Shingle Roof Flashing (8/12 to 16/12 pitch; plastic)	
50171949	14	Tile/Shingle Roof Flashing (1/12 to 6/12 pitch; metal)	
50171961	14	Tile/Shingle Roof Flashing (6/12 to 12/12 pitch; metal)	
50171954	14	Tile/Shingle Roof Flashing (8/12 to 16/12 pitch; metal)	
242141	15	Flashing for Metal Roof	
710342	16	Rubber Wall Plate (white)	
710602	16	Rubber Wall Plate (black)	
224045	17	Thimble (1 piece per box)	
169044	18	Pipe Clamp	
224097	19	Metal Pass Through Plate	
224042	20	Universal Bug Guard	





## **ACCESSORIES**

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



MC-195T-U



BC-100V-19



MC-100V-19



AC-91-29

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



Pipe Cover Enclosure



Recess Box

ADDITIONAL ACCESSORIES			
Part Number	Description		
GTK15	Grundfos® Pump with Timer Kit for Rinnai Circ-Logic Enabled Models		
PCD03-SM2	Pipe Cover Enclosure		
RGB-25U-C	Universal Tankless Recess Box for Models RL94e, RL75e, V75e, V65e (VA, VB, VC)		
RGB-25-MSAL-C	Moisture Seal Recess Box		
REU-MSB-M	Multi-Unit Controller Master Unit		
REU-MSB-C1	Cable to Connect Ultra and Luxury Series Water Heaters		
REU-MSB-C2	Cable to Connect MSB-M Control Units		
REU-EZC-1US	EZConnect® Cable for Connecting 2 Units		

### **NON-CONDENSING TANKLESS WATER HEATERS**

### MODEL CHART AND SPECIFICATIONS.

	Luxury Series				
		m			
Model	RL94i	RLX94i	RL94e	RL75i	RL75e
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)
Weight (lbs / kg)	46.3 / 21.0	46.3 / 21.0	44.3 / 20.1	45.6 / 20.7	43.7 / 19.8
Installation Type	Indoor	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
Min./Max. BTU (propane)	10,300/199,000	N/A	10,300/199,000	10,300/180,000	10,300/180,000
Energy Factor	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)
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)
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)	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)
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)
Controller (standard)	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	
Ultra Low NOx	no	yes	yes	yes	yes
Warranty (Residential)*			ear on heat exchanger, 5-yon labor (5-year optional o		
Warranty (Commercial)*			ar on heat exchanger, 5-y on labor (2-year optional o		
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)		
Certifications			AHRI and CSA		
Venting Options	Concentric	Concentric	N/A	Concentric	N/A
TRS Compatible	no	no	no	no	no
½" Gas Line Compatible***	yes	yes	yes	yes	yes

<sup>\*</sup> For complete information and details regarding Rinnai's warranty, visit rinnai.us.
\*\* To achieve temperatures over 140° F, an MCC-91 commercial controller must be purchased separately.

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

## Rinnai Tankless Water Heater Operation

#### **How a Rinnai Tankless Water Heater Works**

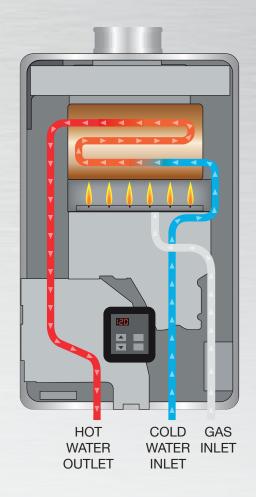
When the need for hot water arises by turning on a shower, washing machine, dish washer or faucet, cold water enters the Rinnai Tankless Water Heater from the inlet pipe at the bottom of the unit. The PC board is then signaled to activate the flame igniter or ignition.

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 from 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.

The gas valve and blower automatically adjusts 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 his 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.



The tankless burner is on only when hot water is needed

### 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	

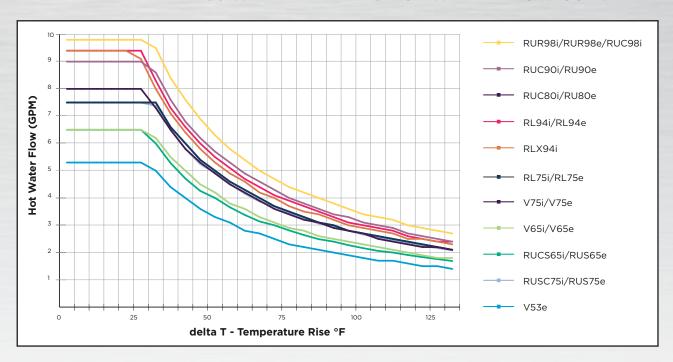
<sup>\*</sup>Based on national averages per Department of Energy, U.S. Energy Information Administration.



#### RINNAI TANKLESS WATER HEATERS

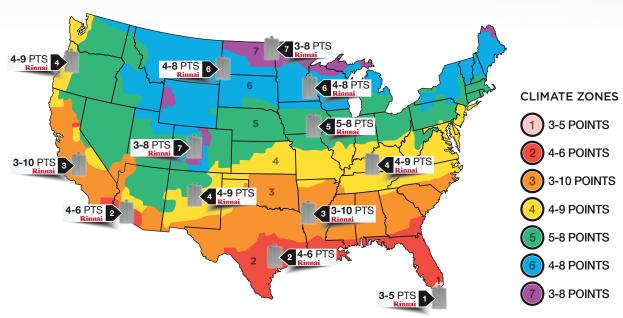
### FLOW CHART AND HERS DATA

#### 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 www.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.





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

www.rinnai.us

