



# Rinnai®

## THE RINNAI LS SERIES TANKLESS WATER HEATERS

ENERGY-EFFICIENT HOT WATER NEVER LOOKED SO GOOD

WHOLE-HOUSE AND COMMERCIAL TANKLESS WATER HEATING SOLUTIONS

**NEW!**  
**0.4 GPM**  
ACTIVATION RATE

★ ★ ★ ★  
#1 PRODUCT FOUR CONSECUTIVE YEARS  
IN BUILDER MAGAZINE'S "FAVORITE 50"

★  
TOP 100 PRODUCTS FOR 2008  
IN PROFESSIONAL BUILDER MAGAZINE



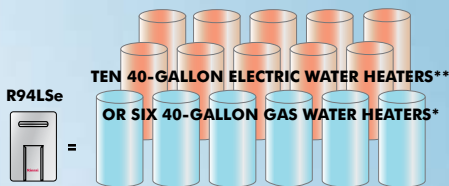
**GREEN.**  
GET REAL ENERGY EFFICIENT NOW

# why tankless?

at a glance

Unlimited hot water supply maintains consistent, safe temperature.

One Rinnai delivers 240 gallons or more per hour with no recovery time.



Based on 77° Rise, \* Based on a 34,000 BTU input.  
\*\* Based on 4,500 Watt elements.

## WHOLE-HOUSE SIMULTANEOUS BATH USE – SIZING CHART

Model	Ground Water Temperature	
	Summer Season – 70° F	Winter Season – 50° F
R75LSi/e		
R94LSi/e		
R98LSi/e		

- Customer has the option of using the following appliances instead of a shower: residential grade clothes washing machines or dishwashers.
- Shower heads assumed to be 2.5 gpm mixed flow rate or less. If custom shower fixtures i.e. body sprays, large rain heads, or tubs over 60 gallons in capacity are used, please contact Rinnai.
- Bathroom sink faucets assumed to be 2 gpm mixed flow rate or less.
- Assumed mixed temperature on shower heads and bathroom sink faucets to be 104° F.
- Assumed Rinnai set point to be 120°F.
- Assumed 50 psi - 80 psi inlet water pressure for maximum flow.

## \*ESTIMATED ANNUAL ENERGY COST COMPARISON

Costs less to operate on an annual basis.

Rinnai R94LSi	<b>\$223</b>
40-Gallon Gas Tank**	<b>\$281</b>
40-Gallon Electric Tank**	<b>\$492</b>

\* Based Upon DOE Average Energy Costs for 2008 (www.doe.gov)  
\*\* Source: GAMA Consumers Directory of Certified Efficiency Ratings

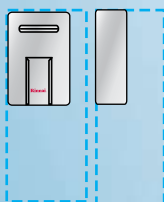
## TANKLESS VS. TANK COMPARISON

Significant space savings over conventional tank water heaters.

Dimensions:  
14" W x 26" H x 10" D vs  
approx. 20" Dia. x 47" H

Space Savings:  
Avg. 12-16 sq. ft.  
Wall mounted  
vs 40-gallon tank

Weight Savings:  
50 lbs. vs approx. 320 lbs.  
or more during use



## Heat Water Only When You Need It!

Tankless water heating is the wave of the future – available to you today. You'll enjoy more than 40 percent energy savings\*, continuous hot water, and significant space savings<sup>1</sup> – plus a typical life span of 20 years or more in residential applications. And this "green" technology produces less CO<sub>2</sub> and NO<sub>x</sub> than conventional gas or electric tank water heaters.

You see, Rinnai Tankless Water Heaters use natural gas or propane gas to heat water only when needed. When water flow is detected, the Rinnai begins heating water as it passes through its copper heat exchanger. The design of the unit allows it to capture up to 84 percent of the heat energy, making it highly efficient and cost effective.

When the demand for water ceases, the tankless unit shuts down and uses no electricity – a revolutionary advantage over inefficient tank-style heaters. More efficient when it's on, and off when it's off, the Rinnai tankless water heater is the ultimate choice in today's world of high energy costs and environmental preservation.

Additionally, your Rinnai is supported by the most extensive group of professionals in the business. Our nationwide network of more than 20,000 trained and registered installers ensures a trouble-free installation and reliable after-the-sale support.

## Never Run Out of Hot Water

Tankless water heating is one of the few energy-saving technologies that actually improves the quality of your life. You'll delight in continuous hot water – for bathing, cooking, dishes, laundry, and all the other countless ways hot water enriches your life. Plus, our digital controllers give you precise control of the output water temperature for the ultimate in comfort and safety.

## Save Space

Traditional tank water heaters can take up to 16 square feet of valuable floor space. But your Rinnai unit – only about the size of a carry-on suitcase – can be installed on virtually any wall inside or outside your home or building, so you can strategically locate the unit for maximum performance and energy efficiency.



Rinnai LS Tankless vs Other Tankless	Rinnai	Other Tankless
Direct-Vent Sealed Combustion	✓	Limited
Free Air Space Requirement (cu. ft.)	3.1	Up to 9,990
Zero-Clearance Venting	✓	Limited
Concentric Vent (One Penetration)	✓	Limited
12-Year Heat Exchanger Warranty**	✓	Limited
24/7/365 Technical Support	✓	Limited

Rinnai LS Tankless vs Traditional Tank	Rinnai	40-Gallon Tank
Hot Water Capacity	Unlimited	40 gallons
Digital Control for:		
• Set Temperature	✓	No
• Consistent Temperature	✓	No
• Self-Diagnostics	✓	No
Interior/Exterior Install Options	✓	Interior Only
Warranty/Avg. Service Life (Years)	12**/20	6/12

\*\* Heat exchanger warranted for 12 years in residential applications, 10 years if used with Rinnai Hydronic Furnace, 5 years in commercial and hydronic applications. All other parts warranted for 5 years. Labor covered for 1 year. See website for complete warranty details.

# the LS Series

introducing Rinnai's most innovative offering



## Contemporary Design

Experience a never-ending supply of fresh hot water – and a sleek, sculpted water heater design that reflects the innovative technology within. With their attractive silver finish, Rinnai LS Series units are available in interior and exterior models, giving you virtually unlimited flexibility to install your unit wherever you choose.

## Perfect for Any Home

The remarkable combination of design and performance makes the LS Series the perfect choice. Whether you're building a spacious new home – complete with luxurious spa bath and body spray system – or remodeling an older home, Rinnai LS units can be used individually, in pairs, or in banks of three or more to supply all your hot water needs.

LS Series interior-mount units can be placed in any room – no need to hide them in closets or utility rooms – and vent directly to the outside. Exterior units require no additional venting and can even be installed in a recessed enclosure, then painted or textured to match the exterior of your home for a clean, inconspicuous appearance.

## Improved Performance and Longevity

Whichever LS unit you choose, you get the benefit of a commercial-grade heat exchanger for optimum durability. In fact, the same LS unit can be used for both residential and commercial applications. Homeowners get the reliability of commercial-grade construction and an industry-leading, 12-year limited warranty, and commercial customers get lower cost and wider availability of units.



## Key Features of the LS Series

- Sleek, modern design
- Commercial-grade heat exchanger for residential and commercial applications
- Industry-leading activation rate of 0.4 gpm to accommodate low flow fixtures
- EZConnect® (connects two units together)
- Integrated condensate collector for interior models
- Pre-set with a maximum temperature of 120° F, with an option to increase it to 140° F (R98LS models not included)
- Up to 12-year heat exchanger limited warranty, 5 years parts, 1 year labor (visit [www.rinnai.us](http://www.rinnai.us) for details)



Rinnai has ENERGY STAR® qualified models available. Rinnai is committed to making energy efficient products that help consumers and businesses save money and protect the environment.



### Commercial Applications

- Restaurants
- Car Washes, Laundromats
- Schools, Colleges and Universities
- Public Facilities and Event Venues
- Hotels and Motels
- Nursing Homes
- Salons and Spas
- Industrial Facilities



### Commercial Quality at Your Fingertips

Both commercial and residential customers benefit from the innovative heat exchanger design of the LS Series. To achieve this level of performance, Rinnai engineers designed the heat exchanger to maximize thermal transfer and minimize thermal stresses. Rigorous high-temperature reliability testing confirmed the design. And now Rinnai delivers to you the most reliable, durable tankless water heater in our history.

This dual-use heat exchanger provides commercial customers a benefit unique to Rinnai: the ability to access a commercial-grade water heater at any of our over 2,000 distribution outlets. So, when emergencies occur and replacement units are needed immediately, you'll no longer need to wait for a commercial unit.

### Additional Commercial Features and Benefits:

- Variety of digital controllers allows precise control and monitoring.
- Multi-unit options: the EZConnect® cable (for 2 units) or MSA control boards (for 3 or more units\*) allow units to be used in combination and in rotation, to avoid wearing out the first unit in a manifolded series.
- Exterior units can be mounted on outside walls or on rooftops with no additional protection or venting.
- Rinnai's concentric venting system means zero clearance, sealed combustion, and single wall or roof penetration for maximum safety and installation simplicity. The R98LS unit uses separate intake and exhaust vents.

\* For each group of five units one MSA-M and three MSA-S control boards are required.

R98LSi



Full service restaurant gains extra mechanical room square footage for additional storage plus redundancy by installing multiple units on the exterior wall.



At this 40-room hotel, exterior units are mounted on the rooftop with no additional venting. Hotel owners have experienced 50 percent reduction in therms per occupied room.



High school expands available space in mechanical room with increased efficiency and less capital expense.

# endless options

flexibility + control



MC-91-1-S Digital Controller Integrated in Internal Unit; Standard Digital Controller for Exterior Unit



MC-100V-1-S Deluxe Digital Controller



BC-100V-1US-S Bath-Fill Digital Controller

## Accessories

Rinnai's line of digital controllers allows you to set water temperature precisely for multiple locations in your home, analyze and troubleshoot the water heater, and even automatically fill your bath to a pre-set temperature and volume. (Note: the MC-91 controller is integrated on the front panel of the LS interior units and comes standard with all LS exterior units.)

## Flexible Installation

For interior installation, Rinnai units use a *concentric venting system* – a single vent assembly featuring an inner, metal vent for exhaust gases and an outer PVC or metal tube for bringing combustion air from outdoors. (Note: the R98LSi utilizes dual vent system.) The result: a direct-vent, sealed-combustion system that offers optimum safety, performance and ease of installation.

Exterior units can be installed in a recessed enclosure, which can be painted or textured to match your home's panel or brick siding.

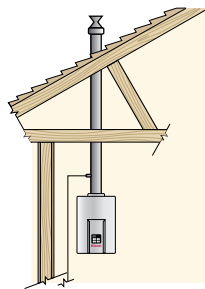
## Multiple Units

If you need more than one unit for your larger home, spa or body spray shower, Rinnai's EZConnect® feature allows you to link two units with a simple cord. For even larger applications, your installer can place multiple units in parallel.



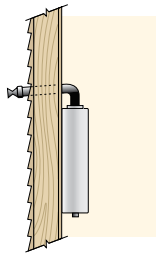
## Other benefits include:

- **Integrated Condensate Collector:** ensures condensation doesn't drain back into unit, and reduces cost of venting.
- **High-Altitude Operation:** all LS units can be adjusted for use up to 10,200 ft.



**INTERIOR ROOF OR WALL VENTING**

The Rinnai can be vented vertically or horizontally.



**EXTERIOR WALL-MOUNT**

installations require no additional venting accessories.



**CUSTOM INSTALLATIONS** to blend in with the interior (shown at left with optional pipe cover) or to be recessed on an exterior wall of the home.

## More Than 30 Million Installations Worldwide Make Rinnai #1!

At Rinnai, we've sold more tankless water heaters worldwide than anyone else. Our complete commitment to safety, quality, support and the environment has also made us #1 in the U.S. market.

## Tomorrow's Innovation Today

As the leading manufacturer of gas heating products worldwide, Rinnai continues innovating to ensure a greener environment. Rinnai's superior heating and hot water technologies deliver greater efficiency and reliability, so everyone benefits – with environmental preservation and energy conservation that results in a better planet for us all.





### Interior Residential/Commercial Models

Models available in Natural Gas or Propane	R75LSi (VB)	R94LSi (VB)	R98LSi/ R98LSi ASME***
Dimensions	14" W x 23" H x 10" D	14" W x 23" H x 10" D	19" W x 25" H x 9" D
Weight	51 lbs	53 lbs	55 lbs
Maximum/Minimum Gas Rate (Input BTU's)	180,000 /9,900 (NG) 180,000/10,300 (LP)	199,000/9,900 (NG) 190,000/10,300 (LP)	237,000 /19,000
Hot Water Capacity Range	0.4 to 7.5 GPM†	0.4 to 9.4 GPM†	0.6 to 9.8 GPM
Energy Factor (NG and LP)	.82	.82	NA
Temperature Range (Min - Max)			
Residential*	98° F - 140° F	98° F - 140° F	98° F - 140° F
Commercial**	98° F - 160° F	98° F - 185° F	98° F - 185° F
Standard Digital Controller	MC-91-1	MC-91-1	MC-91-1



### Exterior Residential/Commercial Models

Models available in Natural Gas or Propane	R75LSe (VB)	R94LSe (VB)	R98LSe/ R98LSe ASME***
Dimensions	14" W x 23" H x 10" D	14" W x 23" H x 10" D	19" W x 25" H x 9" D
Weight	51 lbs	51 lbs	55 lbs
Maximum/Minimum Gas Rate (Input BTU's)	180,000 /9,900 (NG) 180,000/10,300 (LP)	199,000/9,900 (NG) 199,000/10,300 (LP)	237,000 /19,000
Hot Water Capacity Range	0.4 to 7.5 GPM†	0.4 to 9.4 GPM†	0.6 to 9.8 GPM
Energy Factor (NG and LP)	.82	.82	NA
Temperature Range (Min - Max)			
Residential*	98° F - 140° F	98° F - 140° F	98° F - 140° F
Commercial**	98° F - 160° F	98° F - 185° F	98° F - 185° F
Standard Digital Controller	MC-91-1	MC-91-1	MC-91-1

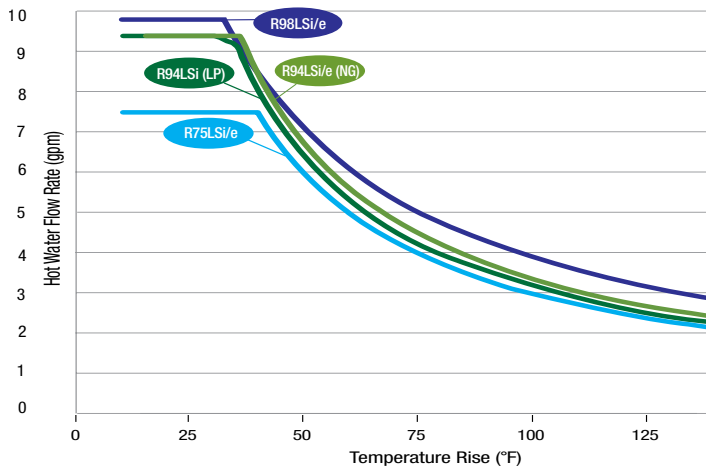
\* Units come with a default maximum temperature of 120° F for increased safety and code compliance. An option to increase the max temp to 140° F is also available.

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

\*\*\*R98LS models have a BTU input of 200,000 or more and are therefore not subject to the EF test.

† 0.4 activation rate for VB models

Tankless Water Heater - Maximum Flow Curves



Rinnai is continually updating and improving products; therefore, specifications are subject to change without prior notice. Local, state, provincial and federal codes must be adhered to prior to and upon installation.

MODEL NO.	HOT WATER FLOW CHART		
	R98-LSi/e TEMPERATURE RISE (°F)	R94-LSi/e GALLONS PER MINUTE	R75-LSi/e GALLONS PER MINUTE
140	2.8	2.4	2.1
135	2.9	2.5	2.2
130	3.0	2.6	2.3
125	3.2	2.7	2.4
120	3.3	2.8	2.5
115	3.4	2.9	2.6
110	3.6	3.0	2.7
105	3.8	3.2	2.9
100	4.0	3.3	3.0
95	4.2	3.5	3.2
90	4.4	3.7	3.3
85	4.7	3.9	3.5
80	4.9	4.2	3.8
75	5.3	4.4	4.0
70	5.7	4.7	4.3
65	6.1	5.1	4.6
60	6.6	5.5	5.0
55	7.2	6.0	5.5
50	7.9	6.6	6.0
45	8.8	7.4	6.7
40	9.8	8.3	7.5
35	9.8	9.4	7.5
30	9.8	9.4	7.5
25	9.8	9.4	7.5
20	9.8	9.4	7.5

## FOR MORE INFORMATION ON RINNAI PRODUCTS

## OTHER RINNAI LITERATURE AVAILABLE



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# Rinnai®

