



The new degree of comfort.®



Residential Gas  
RTGH-S/SR Tankless  
Water Heaters

## Rheem® IKONIC™ Super High Efficiency Condensing Tankless Gas Water Heater

### Easy Installation

- PVC Vent runs up to 70' (2"), 150' (3")
- Easy set up with full text digital display and no dip-switches
- Field gas convertible from natural gas to LP - conversion kit included

### Ready for Retrofits

- Allows flex venting through existing B-vent up to 50'
- 1/2" Gas line compatibility up to 24 ft (subject to local code)
- Approved for installations in Manufactured Home (Mobile Home) environments

### Key Features

- Stainless steel Primary and Secondary heat exchangers provide increased efficiency and durability
- **Rheem® Exclusive!** Hot-start programming™ ensures the unit is in a ready state between back-to-back usage, avoiding any cold water bursts
- Built-in Recirculation pump for no wait continuous hot water at the tap (SR models)
- Built-in EcoNet® Wi-Fi technology for direct control from your device (optional for S models)

### Specifications

| Rheem Model Number                                      |            | RTGH-S84i<br>RTGH-SR84i                                                       | RTGH-S10i<br>RTGH-SR10i | RTGH-S11i<br>RTGH-SR11i |
|---------------------------------------------------------|------------|-------------------------------------------------------------------------------|-------------------------|-------------------------|
| Gas Input Rate                                          | MAX        | 157,000 BTU/h                                                                 | 180,000 BTU/h           | 199,900 BTU/h           |
|                                                         | MIN        | 11,000 BTU/h                                                                  | 11,000 BTU/h            | 11,000 BTU/h            |
| Uniform Energy Factor (UEF)                             |            | 0.96                                                                          |                         |                         |
| Hot Water Flow Rate Capacity – Gallons Per Minute (GPM) | MAX (35°F) | 8.4                                                                           | 10.1                    | 11.2                    |
|                                                         | 45°F Rise  | 6.9                                                                           | 7.9                     | 8.8                     |
|                                                         | 67°F Rise  | 4.6                                                                           | 5.3                     | 5.9                     |
| Number of Bathrooms¹                                    |            | 3                                                                             | 4                       | 5                       |
| Temp. Range                                             |            | 85°F - 140°F                                                                  |                         |                         |
| Temp. Setting from Factory                              |            | 120°F                                                                         |                         |                         |
| Installation Type                                       |            | Indoor (Outdoor Conversion Kit sold separately: RTGH-SX)                      |                         |                         |
| Fuel Type                                               |            | Compatible with Natural Gas and LP (ships NG with LP conversion kit included) |                         |                         |
| Heat Exchanger Material                                 |            | Primary: Stainless Steel – Secondary: Stainless Steel                         |                         |                         |
| Minimum Activation Flow                                 |            | 0.4 GPM                                                                       |                         |                         |
| Minimum Continuous Flow                                 |            | 0.26 GPM                                                                      |                         |                         |
| Maximum Altitude                                        |            | 10,200 ft.                                                                    |                         |                         |
| Ultra Low NOx                                           |            | Meets 14 ng/J NOx requirements – SCAQMD Rule 1146.2 compliant                 |                         |                         |
| Warranty                                                |            | 15 Year Heat Exchanger   5-Year Parts   1-Year Labor                          |                         |                         |

| Model Number                         | RTGH-S                                                                                     | RTGH-SR                                                                                  |
|--------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Height                               | 28-9/16"                                                                                   |                                                                                          |
| Width                                | 17-5/16"                                                                                   |                                                                                          |
| Depth                                | 13-11/16"                                                                                  |                                                                                          |
| Weight                               | 77.6lbs                                                                                    | 86lbs                                                                                    |
| Venting Diam. Allowed                | 2" / 3"                                                                                    |                                                                                          |
| Max. Single Vent Run (straight pipe) | 70 ft (2") / 150 ft (3")                                                                   |                                                                                          |
| Venting Materials                    | Sched. 40 PVC, CPVC, Polypropylene                                                         |                                                                                          |
| Common Venting (max. units)          | 2 units³                                                                                   |                                                                                          |
| Flex Venting                         | Allowed: 2" up to 50'                                                                      |                                                                                          |
| Manifold Controls (max. units)       | Up to 20 units without external control required⁴                                          |                                                                                          |
| Controls                             | Built-in digital display with full-text menus                                              |                                                                                          |
| Power Supply                         | 120V 60Hz                                                                                  |                                                                                          |
| Max. Power Consumption               | 85W (Normal use), 0.7Amps<br>132W (Anti freeze only), 1.1Amps<br>3.5W (Standby), 0.03Amps⁵ | 100W (Normal use), 0.83Amps<br>200W (Anti freeze), 1.67Amps<br>3.5W (Standby), 0.03Amps⁵ |
| Gas Connection                       | 3/4" NPT                                                                                   |                                                                                          |
| Hot Water Connection                 | 3/4" NPT                                                                                   |                                                                                          |
| Cold Water Connection                | 3/4" NPT                                                                                   |                                                                                          |
| Condensate Connection                | 1/2" NPT                                                                                   |                                                                                          |
| Vent Connections Diameter            | 2" Band Connections (Adapter required to vent with 3" PVC from unit)                       |                                                                                          |



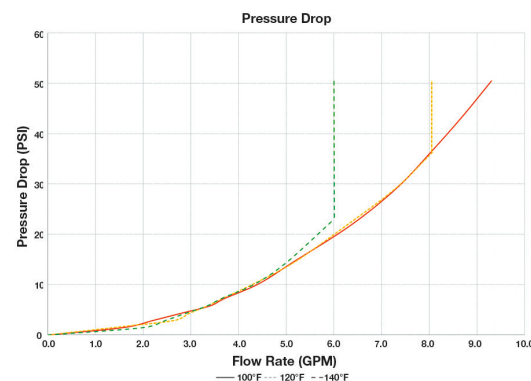
### RTGH-S/SR Models

Indoor Models  
(Outdoor Conversion Kit Available: **RTGH-SX**)  
11,000-199,900 BTU/h  
Natural Gas/LP Convertible



| CLEARANCES            |       |
|-----------------------|-------|
| Top / Bottom          | 12"   |
| Front                 | 1/2"⁶ |
| Sides                 | 1/2"  |
| Back / From Vent Pipe | 0"    |

| RECIRCULATION LENGTH (SRI MODELS) |                         |
|-----------------------------------|-------------------------|
| Pipe Diameter                     | Max. Recirculation Loop |
| 3/4"                              | 400 ft.                 |
| 1/2"                              | 100 ft.                 |

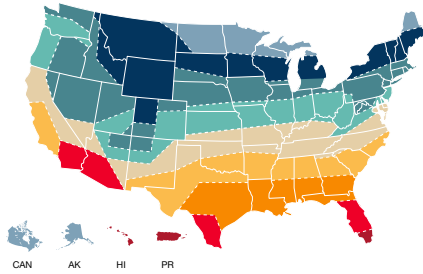


¹ Based on simultaneous showers using 2 GPM flow rate pre-mixed with cold water line. Flow rates vary depending on temperature of incoming cold water and water heater set temperature. Refer to capacity table by zone for accurate sizing. ² For indoor application, this is the temperature of outdoor intake air. ³ External check valve required for installation. ⁴ Manifolds with standard RJ25 communication cables. ⁵ If anti freeze is on and combustion is on, total W will be 217W (85+132). ⁶ Recommended 24" clearance for service.



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## US Ground Water Temperature Zone Map



### Average Flow Rates (GPM) by Application

|                 |     |
|-----------------|-----|
| Low Flow Faucet | 0.5 |
| Bathroom Faucet | 1   |
| Kitchen Faucet  | 1.5 |
| Shower          | 2   |
| Dishwasher      | 2   |
| Washing Machine | 3   |

Flow rates may vary.

### Flow Rate Capacity Table by Zone (Gallons Per Minute - GPM)

Use the U.S. Ground Water Temperature Map to locate your zone. Then use the Flow Rate Capacity Table to determine model flow rate by zone. Flow rates calculated for tankless set temperature of 120°F with a mixed shower temperature of 105°F.

| MODEL #      | Zone 1<br>37°F | Zone 2<br>42°F | Zone 3<br>47°F | Zone 4<br>52°F | Zone 5<br>57°F | Zone 6<br>62°F | Zone 7<br>67°F | Zone 8<br>72°F | Zone 9<br>77°F |
|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| RTGH-S(R)11i | 4.7            | 5.1            | 5.4            | 5.9            | 6.3            | 6.8            | 7.4            | 8.2            | 9.2            |
| RTGH-S(R)10i | 4.3            | 4.6            | 4.9            | 5.3            | 5.6            | 6.1            | 6.7            | 7.4            | 8.3            |
| RTGH-S(R)84i | 3.7            | 4.0            | 4.2            | 4.6            | 4.9            | 5.3            | 5.8            | 6.4            | 7.2            |

## Venting

| SINGLE UNIT: MAX. EQUIVALENT VENT LENGTHS - STRAIGHT PIPE |                             |                              |
|-----------------------------------------------------------|-----------------------------|------------------------------|
| Number of 90 Elbows                                       | Max Length 2" straight pipe | Max. length 3" straight pipe |
| 0                                                         | 70 ft. (21.3 m)             | 150 ft. (45.7 m)             |
| 1                                                         | 64 ft. (19.5 m)             | 145 ft. (44.2 m)             |
| 2                                                         | 58 ft. (17.7 m)             | 140 ft. (42.7 m)             |
| 3                                                         | 52 ft. (15.8 m)             | 135 ft. (41.1 m)             |
| 4                                                         | 46 ft. (14.0 m)             | 130 ft. (39.6 m)             |
| 5                                                         | 40 ft. (12.2 m)             | 125 ft. (38.1 m)             |
| 6                                                         | 34 ft. (10.4 m)             | 120 ft. (36.6 m)             |

| MIN. VENT LENGTH<br>STRAIGHT PIPE |                           |
|-----------------------------------|---------------------------|
| Number of<br>90° Elbows           | Min. Length 2"<br>3" pipe |
| 1                                 | 1.0 ft (0.3 m)            |

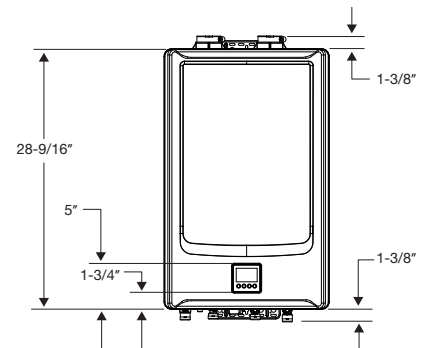
| COMMON VENTING     |                |
|--------------------|----------------|
| # of Water Heaters | 3" Common Vent |
| 2                  | 60 ft.         |

|                                           |
|-------------------------------------------|
| <b>SINGLE UNIT:<br/>MAX. FLEX VENTING</b> |
| <b>Max Length 2" flex vent</b>            |
| 50 ft.                                    |

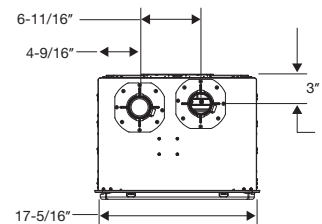
| EQUIVALENT FT. OF ELBOWS |               |                  |
|--------------------------|---------------|------------------|
|                          | 2" Pipe       | 3" Pipe          |
| <b>90° Elbow</b>         | 6 ft (1.83 m) | 5 ft (1.52 m)    |
| <b>45° Elbow</b>         | 3 ft. (0.9 m) | 2.5 ft. (0.75 m) |

**Venting Materials Allowed: Schedule 40 PVC, CPVC, Polypropylene**

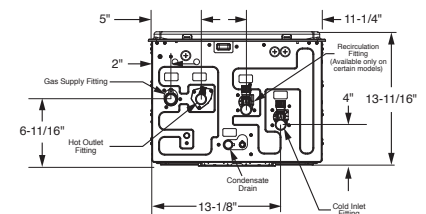
## Dimensions



**TOP VIEW**



**BOTTOM VIEW**



Hanging bracket, bird screens, LP gas conversion kit are included with water heater.

## Parts & Accessories

| Condensate Neutralizer                                                                                       | Non-Return Valve                                                                            | Flex Vent Kit                                                                               | Pipe Cover                                                                                   | Horizontal Vent Termination                                                                                            | Concentric Vent Termination                                                                                      | AllClear® Water Treatment System                                                             | Isolation Valve Kit                                                                            | Manifold Cables                                                                                                        | Outdoor Conversion Kit                                                                        | Crossover Valve                                                                                |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| RTG20329AR<br>(optional)  | SP21088  | SP21091  | RTG20322  | 2" US: SP21069G<br>3" US: SP21069E  | 2" - SP20897<br>3" - SP20245  | RTG20251  | RTG20326  | RCPN-AMP03-0013111101-0003 (48")  | RTGH-SX  | RTG20285  |

*In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.*

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