

# RUTGH-S/SR Tankless Water Heaters



## Ruud® S/SR Series 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 (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
- **Ruud® 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 Wi-Fi with EcoNet® capability for direct control from your device (optional for S models)



### Specifications

Ruud Model Number		RUTGH-S84i RUTGH-SR84i	RUTGH-S10i RUTGH-SR10i	RUTGH-S11i RUTGH-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		
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 Bathrooms <sup>1</sup>		3	3-4	4
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	RUTGH-S	RUTGH-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, PP	
Common Venting (max. units)	2 units <sup>3</sup>	
Flex Venting	Allowed: 2" up to 50'	
Manifold Controls (max. units)	Up to 20 units without external control required <sup>4</sup>	
Controls	Built-in digital display with full-text menus	
Power Supply	120V 60Hz	
Max. Power Consumption	85W (Normal use), 0.7Amps 132W (Anti freeze only), 1.1Amps 3.5W (Standby), 0.03Amps <sup>5</sup>	100W (Normal use), 0.83Amps 200W (Anti freeze), 1.67Amps 3.5W (Standby), 0.03Amps <sup>5</sup>
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)	

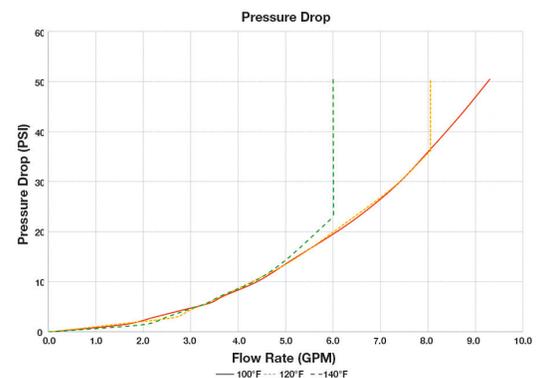
### RUTGH-S/SR Models

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" <sup>6</sup>
Sides	1/2"
Back / From Vent Pipe	0"

Recirculation Length (SR Models)	
Pipe Diameter	Max. Recirculation Loop
3/4"	400 ft.
1/2"	100 ft.

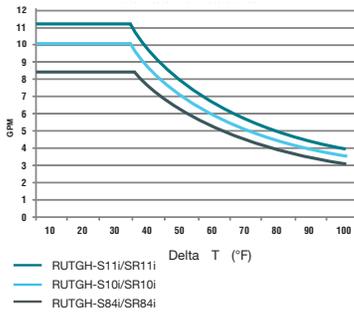


<sup>1</sup>Based on simultaneous showers using 2.5 GPM flow rate pre-mixed with cold water line. Flow rates vary depending on temperature of incoming cold water and water heater set temperature. Refer to flow rate curves for accurate sizing. <sup>2</sup>For indoor application, this is the temperature of outdoor intake air. <sup>3</sup>External check valve required for installation. <sup>4</sup>Manifolds with standard RJ25 communication cables. <sup>5</sup>If anti freeze is on and combustion is on, total W will be 217W (85+132). <sup>6</sup>Recommended 24" clearance for service.

# RUTGH-S/SR Tankless Water Heaters



## Water Heater Flow Rate Curves



Model Number	Temperature Rise (°F)									
	35°	45°	50°	60°	67°	70°	80°	90°	100°	
RUTGH-S84i/SR84i Water Flow (GPM)	8.4	6.9	6.2	5.2	4.6	4.4	3.9	3.4	3.1	
RUTGH-S10i/SR10i Water Flow (GPM)	10.1	7.9	7.1	5.9	5.3	5.1	4.4	3.9	3.5	
RUTGH-S11i/SR11i Water Flow (GPM)	11.2	8.8	7.9	6.6	5.9	5.6	4.9	4.4	3.9	

Above estimates are for sizing purposes only.

## 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)

Equivalent Ft. of Elbows		
	2" Pipe	3" Pipe
90° Elbow	6 ft. (1.83 m)	5 ft. (1.52 m)
45° Elbow	3 ft. (0.9 m)	2.5 ft. (0.75 m)

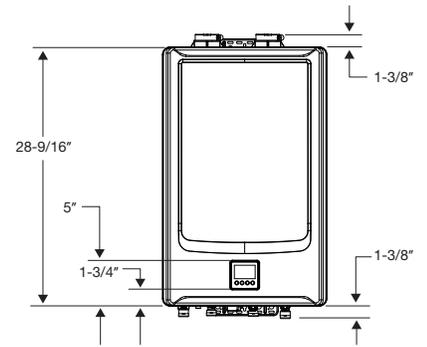
**Venting Materials Allowed: Schedule 40 PVC, CPVC, Polypropylene**

Min. Vent Length Straight Pipe	
Number of 90° Elbows	Min. Length 2" 3" pipe
1	1.0 ft (0.3 m)

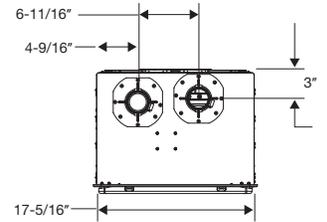
COMMON VENTING	
# of Water Heaters	3" Common Vent
2	60 ft.

SINGLE UNIT: Max. Flex Venting	
Max Length 2" flex vent	
50 ft.	

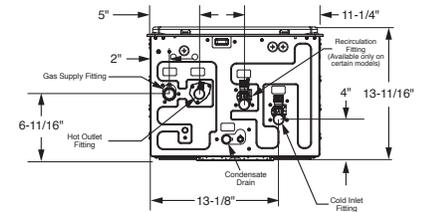
## Dimensions



### 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
SP12151 (optional)	SP21088	SP21091	AP20473	2" US: SP21069G 3" US: SP21069E	2" - SP20897 3" - SP20245	RTG20251	RTG20326	RCPN-AMP03-0013111101-0003 (48")	RTGH-SX	RTG20285

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