



**FLEXIBLE VENTING OPTIONS**

- Concentric or Schedule 40 PVC/CPVC
- Direct Vent (Concentric and Twin Pipe)
- Non-Direct Vent (Room Air)
- Common Vent (Direct Vent and Room Air)
- Maximum Equivalent Vent Lengths:

**Twin Pipe**

|              |               |               |
|--------------|---------------|---------------|
| Vent Sizes   | 2 in. (51 mm) | 3 in. (76 mm) |
| Vent Lengths | 65 ft (20 m)  | 150 ft (46 m) |

**Concentric**

|              |               |               |
|--------------|---------------|---------------|
| Vent Sizes   | 2 in. X 4 in. | 3 in. X 5 in. |
| Vent Lengths | 65 ft (20 m)  | 150 ft (46 m) |

**EASE OF INSTALLATION AND SERVICEABILITY**

- Compact Design to Save Space
- Wi-Fi Technology for Remote Monitoring and Management
- Sliding Mounting Bracket for Easy Installation
- Simple Gas Conversion

**OPTIONAL ACCESSORIES**

Room Air Screen, Condensate Neutralizer, ScaleCutter, Drain Down Kit, Additional Controllers, Pipe Cover, Recirculation Pump, DPS/MIS Switch, EZ Connect Cables, Control-R™ WI-FI Module, Wireless Accessories, and many more.

Visit [rinnai.us](http://rinnai.us) for a complete list of accessories.

**SUPER-HIGH-EFFICIENCY (CONDENSING)**

|                                    |  |      |
|------------------------------------|--|------|
| <b>Installation Type</b>           | Internal (Indoor) Residential Applications. Manufactured (Mobile) Home Certified                         |      |
| <b>Model Numbers</b>               | RU199i (REU-N3237FF-US)<br>RU180i (REU-N2934FF-US)<br>RU160i (REU-N2530FF-US)<br>RU130i (REU-N2024FF-US) |      |
| <b>Approved Gas Types</b>          | Natural and Propane  |      |
| <b>Uniform Energy Factor (UEF)</b> | RU199i:  | 0.93 |
|                                    | RU180i and RU160i:   | 0.92 |
|                                    | RU130i:  | 0.91 |
| <b>Energy Factor (EF) (Canada)</b> | RU199i:  | 0.96 |
|                                    | RU180i, RU160i, RU130i:  | 0.95 |
| <b>High Altitude Approved</b>      | Up to 10,200 Ft (3,109 M)  |      |
| <b>Water Flow Control</b>          | Water Flow Sensor, Electronic Water Control and Bypass Control   |      |
| <b>Controller</b>                  | Standard: Integrated Controller<br>Optional: MC-195T-US, MC-100V-1US, BC-100V-1US, MCC-91-2US            |      |
| <b>Certifications</b>              | AHRI, ANSI Z21.10.3, CSA 4.3, and Energy Star®   |      |

**Warranty**

- Heat Exchanger: 15 years or 12,000 operation hours, whichever occurs first
- All Other Parts and Components: 5 Years
- Reasonable Labor: 1 Year

**Safety Devices**

Flame Failure - Flame Rod, Boiling Protection, Combustion Fan RPM Check, Over Current - Glass Fuse, Remaining Flame (OHS) and Automatic Frost Protection

**Included with Purchase**

Tankless Water Heater, Wall Mounting Bracket, Pressure Relief Valve and Adapter, Isolation Valve Kit, Vent Screens (x2), Vent Screen Screws (x2) and Self-Tapping Screws (x2)

**Additional Features**

- Mobile Home Certified
- Ultra Low NOx
- Complies with South Coast Air Quality Management District 14 ng/J or 20 ppm NOx Emission Levels
- Tankless Rack System™ Compatible
- 1/2 in. (13 mm) Gas Line Compatible



CERTIFIED TO ANSI Z21.10.3 — CSA 4.3

# SENSEI™ TECHNICAL SPECIFICATIONS

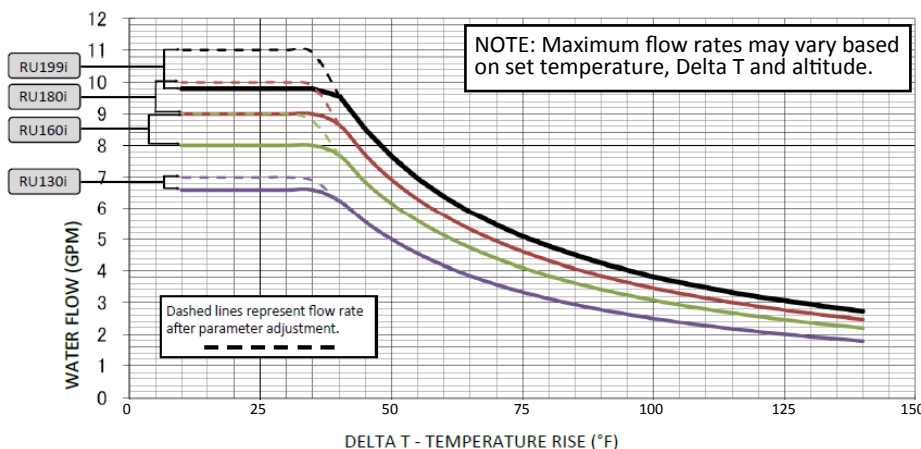
| SPECIFICATION                           |                   | RU199i   | RU180i                          | RU160i                          | RU130i                          |
|---|-------------------|--|---------------------------------|---------------------------------|---------------------------------|
| Dimensions - w, h, d                    |                   | 18.5 in. x 26.4 in. x 11.4 in. (470 mm x 670 mm x 290 mm)  |                                 |                                 |                                 |
| Minimum Gas Consumption Btu/h           |                   | 15,000   |                                 |                                 |                                 |
| Maximum Gas Consumption Btu/h           |                   | 199,000  | 180,000                         | 160,000                         | 130,000                         |
| Flow Rate <sup>1</sup> (Min - Max)      |                   | 0.26 - 9.8 GPM (1.0 - 37 L/min)  | 0.26 - 9.0 GPM (1.0 - 34 L/min) | 0.26 - 8.0 GPM (1.0 - 30 L/min) | 0.26 - 6.6 GPM (1.0 - 24 L/min) |
| Max Flow Rate with Parameter Adjustment |                   | 11 GPM (42 L/min)  | 10 GPM (38 L/min)               | 9 GPM (34 L/min)                | 7 GPM (26 L/min)                |
| Weight                                  |                   | 64 lb (29 kg)  | 64 lb (29 kg)                   | 62 lb (28 kg)                   | 62 lb (28 kg)                   |
| Sound Level                             |                   | 48 dB  | 47 dB                           | 47 dB                           | 47 dB                           |
| Electrical                              | Normal            | 84 W   | 65 W                            | 52 W                            | 38 W                            |
|   | Standby           | 1.3 W  |                                 |                                 |                                 |
|   | Freeze Protection | 148 W  |                                 |                                 |                                 |
|   | Max Current       | 4 Amps   |                                 |                                 |                                 |
|   | Fuse              | 10 Amps  |                                 |                                 |                                 |
| Temperature                             |                   | <ul style="list-style-type: none"> <li>Minimum: 98° F (37° C) Default</li> <li>Maximum: 120° F (49° C) Default</li> <li>140° F (60° C) With Parameter Adjustment</li> </ul>  |                                 |                                 |                                 |
| By-Pass Flow Control                    |                   | Electronic   |                                 |                                 |                                 |
| Gas Supply Pressure <sup>2</sup>        |                   | <ul style="list-style-type: none"> <li>Natural: 3.5 in. w.c. - 10.5 in. w.c.</li> <li>Propane: 8.0 in. w.c. - 13.5 in. w.c.</li> </ul>   |                                 |                                 |                                 |
| Ignition System                         |                   | Direct Electronic Ignition   |                                 |                                 |                                 |
| Electronic Connections                  |                   | <ul style="list-style-type: none"> <li>Appliance: AC 120 Volts, 60Hz.</li> <li>Temperature Controller: DC 12 Volts (Digital)</li> </ul>  |                                 |                                 |                                 |
| Water Supply Pressure                   |                   | <ul style="list-style-type: none"> <li>Minimum: 50 PSI (Recommended 60-80 PSI for max performance)</li> <li>Maximum: 150 PSI</li> </ul>  |                                 |                                 |                                 |
| Controller Cable                        |                   | Non-Polarized Two Core Cable (Minimum 22 AWG)  |                                 |                                 |                                 |
| Service Connections                     |                   | <ul style="list-style-type: none"> <li>Gas Supply: 3/4 in. (19 mm) NPT</li> <li>Cold Water Inlet: 3/4 in. (19 mm) NPT</li> <li>Hot Water Outlet: 3/4 in. (19 mm) NPT</li> <li>Condensate Drain: 1/2 in. (13 mm) NPT</li> </ul> |                                 |                                 |                                 |
| Clearances                              |                   | <ul style="list-style-type: none"> <li>Top: 2 in. (51 mm)*</li> <li>Bottom/Ground: 12 in. (305 mm)</li> <li>Front: 0 in.**</li> <li>Back: 0 in.</li> <li>Sides: 2 in. (51 mm)***</li> <li>Vent: 0 in.</li> </ul>               |                                 |                                 |                                 |

\* 0 in. from vent components  
 \*\* Clearance for servicing is 24 in. (610 mm) in front of water heater  
 \*\*\* Add 0.25 in. (6.35 mm) for recess box

<sup>1</sup> Minimum flow may vary slightly depending on the temperature setting and the inlet water temperature. Minimum activation flow is 0.4 GPM (1.5 L/min).  
<sup>2</sup> The maximum gas supply pressure must not exceed the value specified by the manufacturer.

# SENSEI™ WATER FLOW CURVE

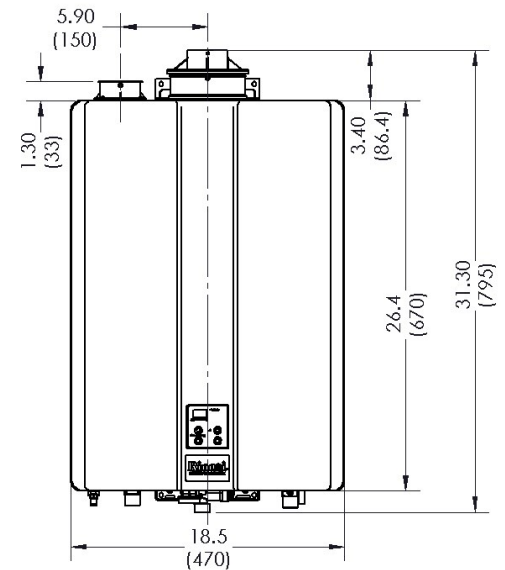
Flow curves apply only to incoming water temperatures of 70° F (21° C) or less. For incoming water temperatures greater than 70° F (21° C), please contact Rinnai.



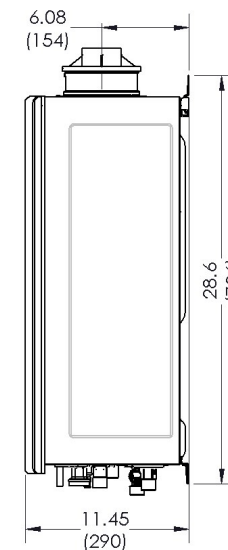
# SENSEI™ DIMENSIONS

in. (mm)

## FRONT



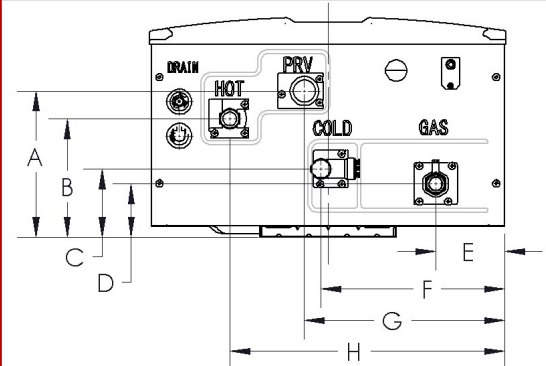
## SIDE



### Vent Connection:

2 in. (51 mm) nominal PVC/  
 Polypropylene or  
 3 in./5 in. Concentric.

## BOTTOM



| Connection |   | in.   | mm  |
|------------|---|-------|-----|
| COLD       | F | 9.54  | 242 |
|            | C | 3.56  | 90  |
| HOT        | H | 14.27 | 362 |
|            | B | 6.16  | 156 |
| GAS        | E | 3.57  | 91  |
|            | D | 2.78  | 71  |
| PRV        | G | 10.39 | 264 |
|            | A | 7.60  | 193 |