

### COMMERCIAL



### ■ 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)  
Vent lengths up to 150 Ft with eight Tankless Water Heater units.
- 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) |

### ■ OPTIONAL ACCESSORIES

Room Air Screen, Condensate Neutralizer, ScaleCutter, Control-R™ Wi-Fi Module, Wireless Accessories, and many more.  
Visit [rinnai.us](http://rinnai.us) for a complete list of accessories.

### ■ EASE OF INSTALLATION AND SERVICEABILITY

- Wi-Fi Technology for Remote Monitoring and Management
- Simple Gas Conversion

#### SUPER-HIGH-EFFICIENCY (CONDENSING) HYBRID WATER HEATING SYSTEM

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| Installation Type                | Internal (Indoor) Commercial Applications                      |
| Model Numbers                    | CHS199100CU                                                    |
| Approved Gas Types               | Natural and Propane                                            |
| Maximum Gas Consumption          | 199,000 BTU/h                                                  |
| Thermal Efficiency               | Up to 97%                                                      |
| First Hour Delivery (100°F Rise) | 315 Gallons (1192 L)                                           |
| High Altitude Approved           | Up to 10,200 Ft (3,109 M)                                      |
| Tank Capacity                    | 119 Gallons (450 L)                                            |
| Water Flow Control               | Water Flow Sensor, Electronic Water Control and Bypass Control |
| Controller                       | Standard: Integrated Controller<br>Optional: MC-91-2US         |
| Certifications                   | AHRI, ANSI Z21.10.3, CSA 4.3, and Energy Star®                 |

#### Storage Tank

- 2" Eco-friendly foam insulation
- Glass-lined inner tank
- 1-1/2" MNPT dielectric hot and cold connections
- Pre-installed temperature & Pressure relief valve
- Brass drain valve
- Dual magnesium anode rods
- Hand hole clean-out

#### Warranty

- Heat Exchanger: 8 years or 12,000 operation hours, whichever occurs first
- Tank: 6 years
- All Other Parts and Components: 5 Years
- Reasonable Labor: 1 Year  
(Refer to the Installation and Operation Manual for further warranty information.)

#### Safety Devices

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

#### Additional Features

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



CERTIFIED TO ANSI Z21.10.3 — CSA 4.3

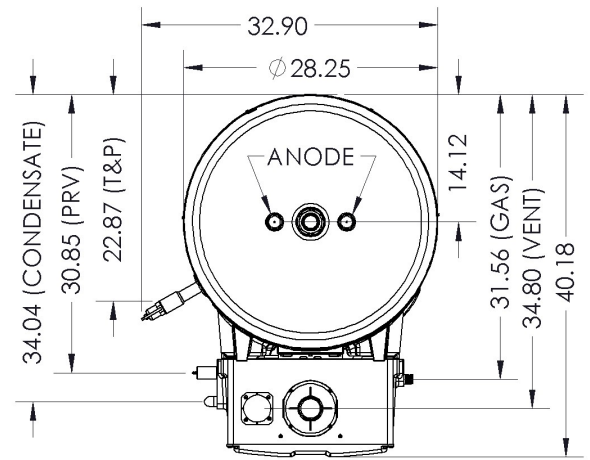
# TECHNICAL SPECIFICATIONS

| SPECIFICATION                        |                   | CHS199100CU                                                                                                                                                                                                                           |
|--------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Description                  |                   | Condensing Hybrid System: Condensing Tankless, Insulated Storage Tank, Pump & Control                                                                                                                                                 |
| Minimum Gas Consumption Btu/h (kW/h) |                   | 15,000 (4.5)                                                                                                                                                                                                                          |
| Maximum Gas Consumption Btu/h (kW/h) |                   | 199,000 (58.3)                                                                                                                                                                                                                        |
| Tank Volume                          |                   | 119 Gallons (450 Liters)                                                                                                                                                                                                              |
| Thermal Efficiency (CU199i)          |                   | Up to 97%                                                                                                                                                                                                                             |
| Weight                               |                   | 431 lb (195 kg)                                                                                                                                                                                                                       |
| Sound Level                          |                   | 49 dB                                                                                                                                                                                                                                 |
| Electrical                           | Normal            | 265 W                                                                                                                                                                                                                                 |
|                                      | Standby           | 44 W                                                                                                                                                                                                                                  |
|                                      | Freeze Protection | 148 W                                                                                                                                                                                                                                 |
|                                      | Max Current       | 5.5 Amps                                                                                                                                                                                                                              |
|                                      | Fuse              | Tankless Engine: 10 Amps, System Controller 10 Amps                                                                                                                                                                                   |
| Temperature                          |                   | <ul style="list-style-type: none"> <li>Minimum: 98° F (37° C) Default</li> <li>Maximum: 140° F (60° C) Default</li> <li>185° F (85° 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>Maximum: 150 PSI</li> </ul>                                                                                                                                                                    |
| Service Connections                  |                   | <ul style="list-style-type: none"> <li>Gas Supply: 3/4 in. (19 mm) NPT</li> <li>Cold Water Inlet: 1-1/2 in. ( mm) NPT</li> <li>Hot Water Outlet: 1-1/2 in. (19 mm) NPT</li> <li>Condensate Drain: 1/2 in. (13 mm) (SOCKET)</li> </ul> |

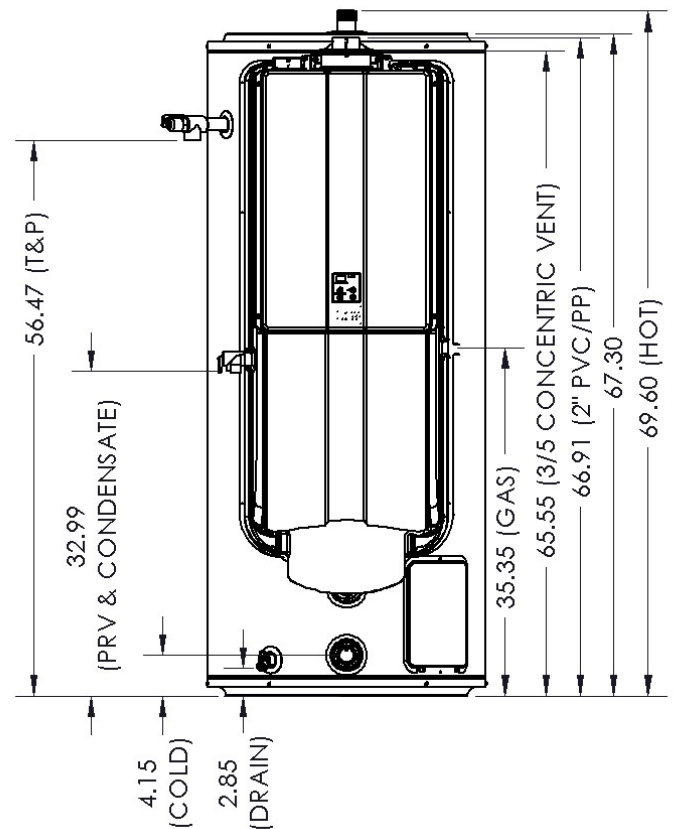
# DIMENSIONS

INCHES

## TOP



## FRONT



# RECOVERY CAPACITIES

| RECOVERY CAPACITIES |                                                        |      |      |      |      |      |      |      |       |       |       |       |       |
|---------------------|--------------------------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| Tank Capacity       | U.S. GALLON/HR LITERS/HR AT TEMPERATURE RISE INDICATED |      |      |      |      |      |      |      |       |       |       |       |       |
|                     | °F                                                     | 30°F | 40°F | 50°F | 60°F | 70°F | 80°F | 90°F | 100°F | 110°F | 120°F | 130°F | 140°F |
|                     | °C                                                     | 17°C | 22°C | 28°C | 33°C | 39°C | 44°C | 50°C | 56°C  | 61°C  | 67°C  | 72°C  | 78°C  |
| 119 U.S. Gals.      | GPH                                                    | 772  | 579  | 463  | 386  | 331  | 289  | 257  | 232   | 211   | 193   | 178   | 165   |
| 450 Liters          | LPH                                                    | 2922 | 2192 | 1753 | 1461 | 1253 | 1093 | 973  | 878   | 799   | 731   | 673   | 625   |