

# DEMAND DUO™ RESIDENTIAL HYBRID WATER HEATING SYSTEM SUBMITTAL SHEET



Job Name: \_\_\_\_\_

Location: \_\_\_\_\_

Architect/Engineer: \_\_\_\_\_

Wholesaler: \_\_\_\_\_

Model No.:	Gas Type:	Total System Btu/h:
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Notes: \_\_\_\_\_

## FEATURES AND BENEFITS

### More capacity, longer warranty, better performance, easy installation

Rinnai's Demand Duo™ Residential Hybrid Water Heating System is the smart choice when it's time to replace a standard tank. Our unique "best of both" system lets your business quickly and easily upgrade to a unit that offers an on-demand and continuous supply of hot water

- An emergency replacement solution for standard tanks
- Warranty: Heat exchanger- 15 years or 12,000 operation hours, whichever occurs first; tank-6-years, parts-5 years, reasonable labor - 1 year
- Built standard with 199,000 BTU RU199i Tankless Water Heater:
  - Ultra Low NOx compliant
  - ENERGY STAR® certified
  - Uniform Energy Factor of 0.93
- Integrated temperature controller that provides 98° F to 185° F
- First Hour Performance: 315 GPH
- Multiple venting options (PVC, Room Air, Concentric, Common Vent)
- Easy and cost-effective maintenance - all parts field replaceable
- System weight up to 250 lbs. lighter than competitive units

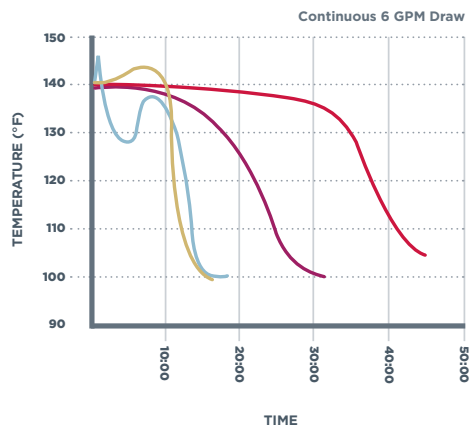
## OPTIONS

RHS199100SE

### Continuous Draw Performance Chart

Internal tests were conducted to show temperature ranges and volume of hot water at a specific GPM draw.

Based on a continuous draw at **6 GPM**, the **Rinnai Demand Duo™** provides more stable temperatures as well as more hot water than both standard- and high-efficiency tanks.



Note: All tests were conducted with a fully charged tank set at 140°F. This was a draw only test with supply water temperature at 40°F.



### RESIDENTIAL



#### ■ 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

<b>Installation Type</b>	Internal (Indoor) Residential Applications
<b>Model Numbers</b>	RHS199100SE
<b>Approved Gas Types</b>	Natural and Propane
<b>Maximum Gas Consumption</b>	199,000 BTU/h
<b>Uniform Energy factor (UEF) (RU199i Tankless unit)</b>	0.93
<b>First Hour Delivery (100°F Rise)</b>	315 Gallons (1192 L)
<b>High Altitude Approved</b>	Up to 10,200 Ft (3,109 M)
<b>Tank Capacity</b>	119 Gallons (450 L)
<b>Water Flow Control</b>	Water Flow Sensor, Electronic Water Control and Bypass Control
<b>Controller</b>	Standard: Integrated Controller Optional: MC-91-2US
<b>Certifications</b>	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: 15 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

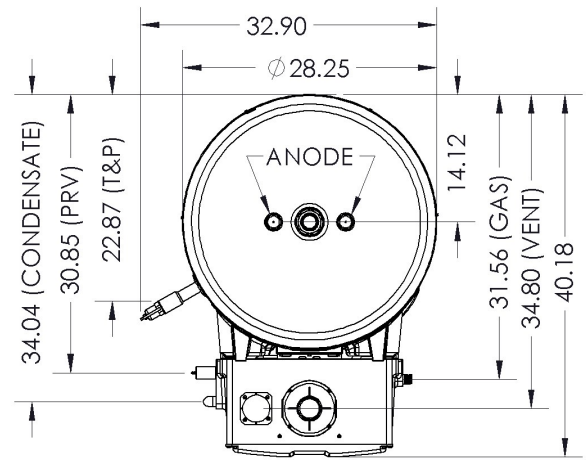
## TECHNICAL SPECIFICATIONS

SPECIFICATION	RHS199100SE	
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>	

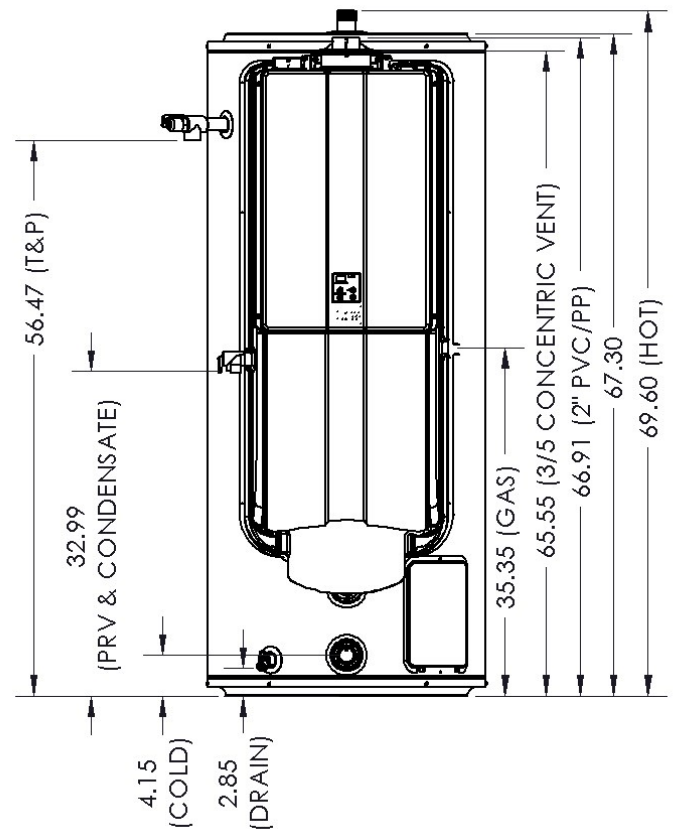
## DIMENSIONS

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