

# DEMAND DUO™ 80-GALLON HYBRID WATER HEATING SYSTEM SUBMITTAL SHEET



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

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

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

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

Model No.:	Gas Type:	Total System Btu/h:
------------	-----------	---------------------

Notes: \_\_\_\_\_

## FEATURES AND BENEFITS

- More capacity, longer warranty, better performance, easy installation**  
 Rinnai's Demand Duo™ 80-Gallon 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
- A direct 80/199 replacement solution
  - Warranty: Heat exchanger and all other parts - 5 years, tank, 6-year parts, reasonable labor - 1 year
  - Built standard with 199,000 BTU C199 Commercial Tankless Water Heater:
    - Ultra Low NOx compliant
    - Commercial ENERGY STAR® certified
    - 82% recovery efficiency/ 0.81 Uniform Energy Factor
  - Integrated temperature controller that provides 98° F to 185° F
  - First Hour Performance: 259 GPH
  - Venting options (Concentric Polypropylene Aluminum)
  - Easy and cost-effective maintenance - all parts field replaceable
  - System weight up to 250 lbs. lighter than competitive units

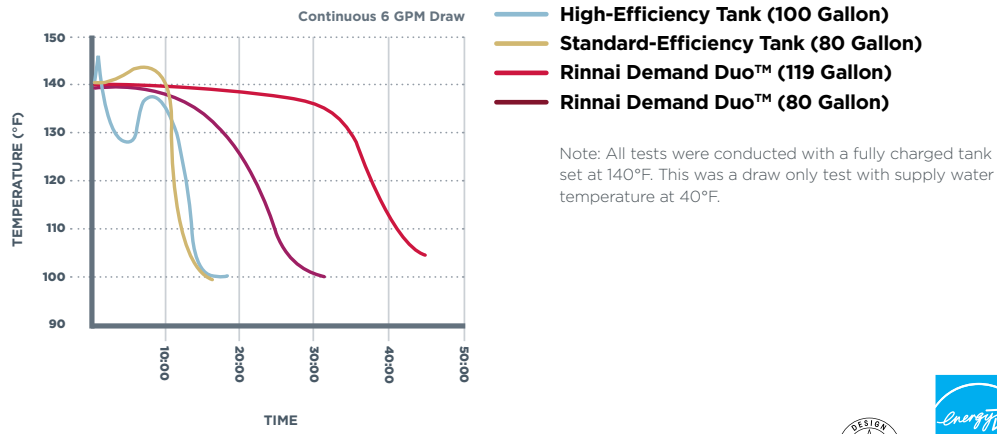
## OPTIONS

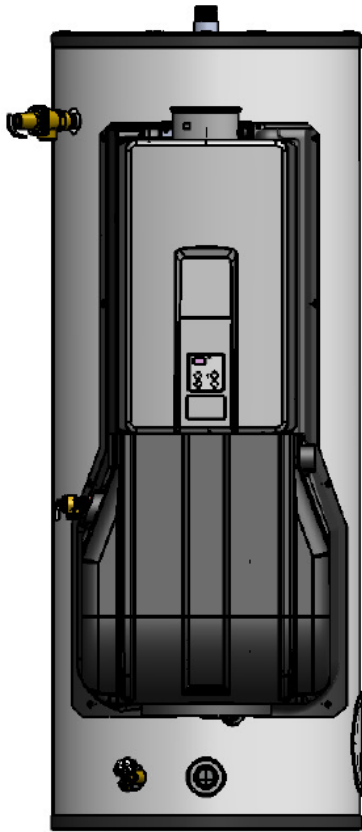
CHS19980	RHS19980
----------	----------

### 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.





**Maximum Gas Consumption:** 199,000 BTU/h  
**Temperature Range F (C):**

- **Commercial:** 98° - 185° (37° - 85°)
- **Residential:** 98° - 140° (37° - 60°)

**Tank Capacity:** 80 Gallons (303 L)

**First Hour Delivery (100°F Rise):**

- **RL94i:** 259 Gallons (980 L)
- **RLX94i:** 251 Gallons (950L)

### Direct Vent Options

- **Concentric:** Ubbink Concentric Non-Condensing Vent

### Clearances from Combustibles (RL94i/RLX94i)

- Top of heater - 6 in. (152mm)\*
- Front of heater - 6 in. (152mm)\*\*
- Sides of heater - 2 in. (51mm)
- Back of heater - 0 in.
- Bottom of heater - 12 in. (305mm)
- From vent pipe - 0 in.

### Clearances from Non-Combustibles (RL94i/RLX94i)

- Top of heater - 2 in. (51mm)\*
- Front of heater - 6 in. (152mm)\*\*
- Sides of heater - 1/2 in. (13mm)
- Back of heater - 0 in.
- Bottom of heater - 12 in. (305mm)
- From vent pipe - 0 in.

\*54 in. (1371.6mm) required for anode rod serviceability

\*\*24 in. (610mm) required for serviceability

### Safety Features

- Flame failure - Flame Rod
- Boiling protection
- Combustion fan rpm check
- Over current - glass fuse
- Remaining flame (OHS)
- Thermal fuse
- Automatic frost protection

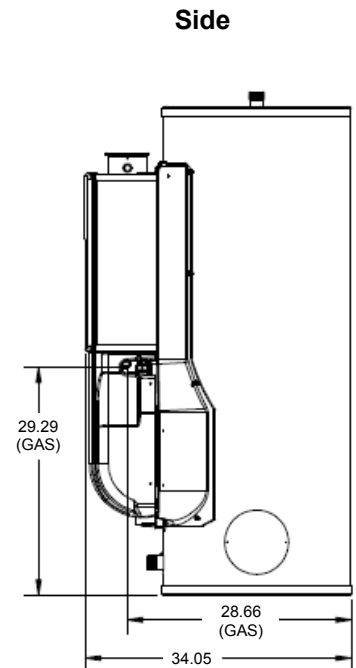
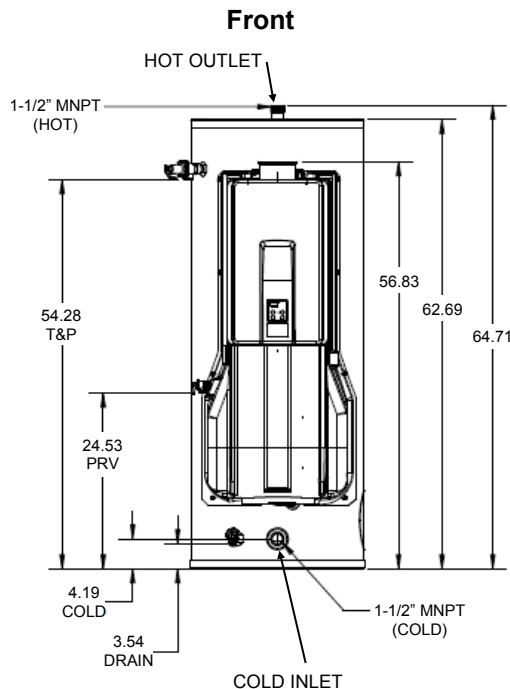
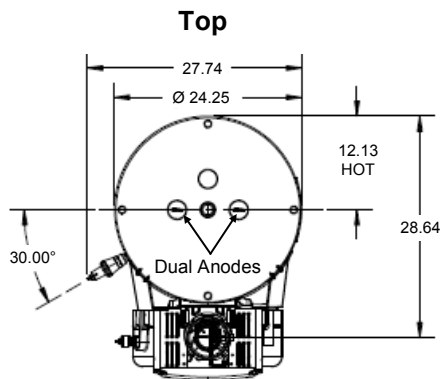
### Storage Tank

- 2 in. Foam insulation
- Glass-lined inner tank
- 1.5 in. MNPT dielectric hot and cold connections
- Pre-installed temperature & pressure relief valve
- Brass drain valve
- Dual magnesium anode rods
- Hand hole clean-out

### Limited Warranty

- **Heat Exchanger:** Residential - 12 years\* / Commercial - 5 years\*
  - **Tank:** 6 years\*
  - **All Other Parts:** 5 years\*
  - **Labor:** 1 year\*
- (\*Reference Tankless Water Heater manual for further warranty information.)

## DIMENSIONS



**WEIGHT: 290 lb (132 kg)**

Product Number		CHS19980HEiP	CHS19980HEiN	CHS19980HEXiN
Product Description		Hybrid System: Non-condensing tankless, Insulated Storage Tank, Pump & Control		
Minimum Gas Consumption Btu/h (kW/h)		10,300 (3.0)		
Maximum Gas Consumption Btu/h (kW/h)		199,000 (58.3)	192,000 (56.3)	
Tank Volume		80 Gallons (303 Liters)		
Uniform Energy Factor (RL94i)		0.81		
First Hour Delivery		259 Gallons (980 Liters)	251 Gallons (950 Liters)	
Temperature Setting		98° F (37° C) to 185° F (85° C)		
Product Weight		290 lb (132 kg)		
Noise level		49 dB		
System Electrical Data	Normal	278 W		
	Standby	44 W		
	Anti-frost Protection	300 W		
	Max Current	5.5 A		
	Fuse	Tankless Engine - 10 A, System Controller - 10 A		
By-Pass Control		Electronic		
Gas Supply Pressure		8.0 - 13.5 inch W.C.	4.0 - 10.5 inch W.C.	4.0 - 10.5 inch W.C.
Connections		Gas Supply Inlet - 3/4 in. MNPT Hot Water Outlet - 1-1/2 in. MNPT Cold Water Inlet - 1-1/2 in. MNPT		
Ignition System		Direct Electronic Ignition		
Electric Connections		Appliance: AC 120 Volts, 60Hz. Integrated Temperature Controller: DC 12 Volts (Digital)		
Water Temperature Control		Simulation Feed forward and Feedback		
Maximum Water Supply Pressure		150 PSI		
Complies with South Coast Air Quality Management District 14 ng/J or 20 ppm NOx emission levels (RL94i)		Yes	No	Yes

### 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
CHS19980HE	80 U.S. Gals.	GPH	675	507	405	338	289	253	225	203	184	169	156	145
	303 Liters	LPH	2557	1917	1534	1278	1096	959	852	767	697	639	590	548
CHS19980HEX	80 U.S. Gals.	GPH	652	489	391	326	279	244	217	195	178	163	150	140
	303 Liters	LPH	2467	1850	1480	1233	1057	925	822	740	673	617	569	529

RL94 Tankless Water Heater maintains the following certifications:



Product Number		<i>RHS19980HEiP</i>	<i>RHS19980HEiN</i>	<i>RHS19980HEXiN</i>
Product Description		Hybrid System: Non-condensing tankless, Insulated Storage Tank, Pump & Control		
Minimum Gas Consumption Btu/h (kW/h)		10,300 (3.0)		
Maximum Gas Consumption Btu/h (kW/h)		199,000 (58.3)	192,000 (56.3)	
Tank Volume		80 Gallons (303 Liters)		
Uniform Energy Factor (RL94i)		0.81		
First Hour Delivery		259 Gallons (980 Liters)	251 Gallons (950 Liters)	
Temperature Setting		98° F (37° C) to 140° F (60° C)		
Product Weight		290 lb (132 kg)		
Noise level		49 dB		
System Electrical Data	Normal	278 W		
	Standby	44 W		
	Anti-frost Protection	300 W		
	Max Current	5.5 A		
	Fuse	Tankless Engine - 10 A, System Controller - 10 A		
By-Pass Control		Electronic		
Gas Supply Pressure		8.0 - 13.5 inch W.C.	4.0 - 10.5 inch W.C.	4.0 - 10.5 inch W.C.
Connections		Gas Supply Inlet - 3/4 in. MNPT Hot Water Outlet - 1-1/2 in. MNPT Cold Water Inlet - 1-1/2 in. MNPT		
Ignition System		Direct Electronic Ignition		
Electric Connections		Appliance: AC 120 Volts, 60Hz. Integrated Temperature Controller: DC 12 Volts (Digital)		
Water Temperature Control		Simulation Feed forward and Feedback		
Maximum Water Supply Pressure		150 PSI		
Complies with South Coast Air Quality Management District 14 ng/J or 20 ppm NOx emission levels (RL94i)		Yes	No	Yes

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
CHS19980HE	80 U.S. Gals.	GPH	675	507	405	338	289	253	225	203	184	169	156	145
	303 Liters	LPH	2557	1917	1534	1278	1096	959	852	767	697	639	590	548
CHS19980HEX	80 U.S. Gals.	GPH	652	489	391	326	279	244	217	195	178	163	150	140
	303 Liters	LPH	2467	1850	1480	1233	1057	925	822	740	673	617	569	529

RL94 Tankless Water Heater maintains the following certifications:

