



Demand Duo® Hybrid Commercial Water Heating Solutions

For Trade Professionals



H-Series



R-Series

BUSINESSES
RELY on
Rinnai™

Demand Duo Hybrid Water Heaters come fully assembled with time saving features that enable a fast and easy connection to gas, water and electric. And Rinnai's reputation for quality means no costly callbacks and an unsurpassed warranty that is more than 2X greater than most tanks on the market.

Upgrade today to a better performing and more reliable form of commercial water heating that businesses across North America rely upon every day - Demand Duo H and R-Series.



Application Engineering Center of Excellence

Our team of application engineers is available to create quotes, size your system and provide designs for your specific project — all at no charge and backed by our 100% sizing guarantee*. Using proven sizing methodologies, Rinnai's Application Engineering Center of Excellence is there to consult with you and provide the best total solution for your next project.

**Call them at 1-800-621-9419 or
email at engineering@rinnai.us.**

* Guarantee is based on customer submitted fixture types and quantities at the time of sizing request. Infrared Heater sizing provided by Rinnai does not qualify for Rinnai's 100% sizing guarantee.

Rinnai® Learn more at rinnai.us

The Time is Right to Switch to Demand Duo®.

Easy installation, superior performance and longer life mean there has never been a better time to switch from traditional tanks to the consistency and efficiency of Demand Duo H- and R-Series solutions.

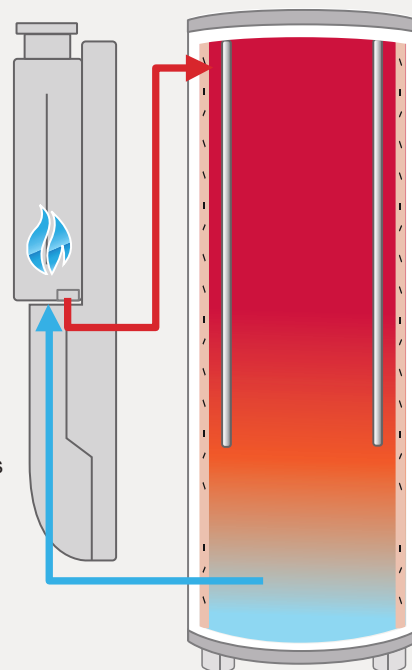
Maximum Performance that Lasts Longer

- Unsurpassed 1st-hour delivery and efficient tank recovery keep pace with demand
- Saves money with lower energy costs
- Longer warranty – more than 2X longer than traditional tanks

How Demand Duo Works

Water heats in the tankless unit rather than inside the tank, providing:

- Zero thermal stress on the tank
- More hot water capacity, since tank only holds two magnesium anode rods
- Easy, cost-effective tankless maintenance versus replacing an entire tank every few years
- Ideal for emergency replacement; installs like a tank but over 100 lbs lighter than most tanks



Transforming the Way Water is Heated.

Fox Run Apartments | Multi-Family

THE SMARTER WAY TO DO HOT WATER

Fox Run Apartments in Cincinnati, OH has 240 living units across 19 buildings. The owner, BRG Realty, dealt with rising electrical rates and soaring maintenance costs to run and repair their existing electric tanks that serviced 12 apartments per building. By converting to Demand Duo condensing units in each building, BRG has improved renter satisfaction and **netted over \$20,000 in combined energy and maintenance savings** in the first year. "The maintenance is lot easier with Demand Duo and we no longer have to worry about constantly replacing heating elements and fuses, said BRG Maintenance Director Mike Markus. "The reliability of Demand Duo has been a great deliverable to BRG and our residents."



University of British Columbia – Okanogan Campus | Education

SAVINGS FROM DAY ONE

Located in Kelowna, Canada, this campus of 9,120 students recently installed 3 Demand Duo 2V commercial hybrid water heaters in a residence hall that services 72 living units equipped with 2 bd/1ba and a kitchen. With 2 tankless units attached vertically to a 119-gallon tank, the Demand Duo 2V provides more redundancy, 551 GPH and better serviceability than other traditional water heating systems. "The Demand Duo's are 12-18% more efficient than most of the commercial tanks we encounter plus they have more than 2X the warranty" said Brent Watson, Owner of Vision Mechanical who did the installation at UBC Okanogan, "and that makes them ideal to meet the extreme hot water demands of a university residence hall."



Crowne Plaza Atlanta – Midtown | Hospitality

WORRY-FREE INSTALLATION

Rinnai's total turnkey solution for this 432-room hotel delivered immediate savings on energy costs in November 2019. Managing all aspects of design, logistics, installation and billing, Rinnai replaced two aging, increasingly inefficient dual-burner boilers with 10 Demand Duo 2 Hybrid Water Heating units. Now, **Demand Duo's 97% thermally efficient system serves all the domestic hot water needs for the property**, fitting in the same footprint as just one of the boilers and freeing up space in the mechanical room. Additionally, two Demand Duo 2 units in the sub-basement supply all the hot water needs of the hotel's commercial kitchen and laundry.



Performance. Reliability. Peace of Mind.

High-Efficiency Hybrid Technology.

Venting Options



H-SERIES VENTING OPTIONS

Available in:

Single Vent: Two Pipe PVC/CPVC, Concentric Polypropylene (PP)

Common Vent: PP and PVC/CPVC
Common venting means significantly fewer wall or roof cuts, less labor, and longer vent lengths with single-unit venting.*

Installation Ease

- 1 Multiple Venting Options, Easy to Install
- 2 Pre-assembled Gas Connection
- 3 Pre-assembled Electrical Connection

Optimized Performance

- 4 **NEW** Dual Thermistors for Increased Temp Control
- 5 **NEW** Integrated Pump Control with Optimized Recovery Logic

- 6 Multiple Tankless Options

Multiple Sizes

- 7 80 or 119-Gallon Tank Options



WHERE SMART PERFORMANCE MEETS QUICK INSTALLATION

DuoSmart®

TANK TECHNOLOGY

- Optimized pump design for increased flow and faster recovery
- DuoSmart® Digital Controller for precise temperature control and integrated recirculation
- Free system sizing with 100% guarantee
- Gas swivel flex line rotates 360° for 36", 180° radius connection to gas line
- Factory installed gas dirt leg
- Factory installed electrical access
- Lighter weight for easier handling
- Pre-assembled condensate drain



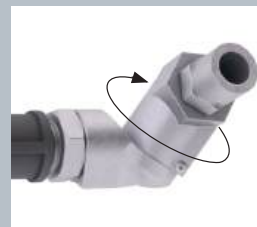
Pre-installed Electrical



DuoSmart® Digital Controller



High Flow Recovery Pump



Two-way Gas Line Rotation for Easy Installation





SAVE TIME WITH
FACTORY INSTALLED
COMPONENTS

\$250

EST. SAVINGS WITH
FACTORY INSTALLED
COMPONENTS

551

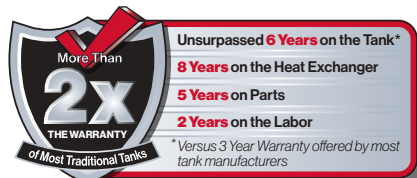
UP TO 551 GALLONS
FIRST HOUR
DELIVERY @100°F Δ*

33-46%

SMALLER FOOTPRINT,
UP TO 46%
SPACE SAVINGS**

When maximum performance and high efficiency are critical, the Rinnai Demand Duo H-Series Condensing Commercial Hybrid Water Heating System delivers. Customers never miss a beat with hot water, whether it's brief, high-spike draws or continuous, heavy use, day-in and day-out.

- Demand Duo 2V stacks tankless engines vertically – saves valuable commercial space
- Available in a wide range of Btu outputs and tank sizes
- ASME-certified tank (optional) list models
- Install without removing lower cover



- High altitude approved to 10,100 ft.
- BMS compatible
- Wi-Fi capable







Before



After / Demand Duo 2

DEMAND DUO H-SERIES SPECIFICATIONS | CONDENSING MODELS

MODELS	DEMAND DUO® 2/119 GAL					DEMAND DUO® 119 GAL		DEMAND DUO® 80 GAL	
									
Model	CHS398100HCXIN	CHS398100HCXINA****	CHS398100HCXVIN	CHS398100HCXVIN****	CHS320100HCXVIN	CHS199100HCXIN	CHS160100HCXIN	CHS19980HCXIN	CHS16080HCXIN
Dimensions - w x h x d Inches (mm)	38.8 x 69.6 x 40.9 (986 x 1,769 x 1,040)		32.4 x 78.8 x 40.2 (823 x 2,001 x 1,021)			34.7 x 71.1 x 40.2 (883 x 1,805 x 1,021)		31.8 x 64.7 x 36 (809 x 1,643 x 914)	
Product Weight (lbs/kg)	530 / 240	530 / 240	530 / 240	530 / 240	530 / 240	431 / 195	429/195	307 / 139	305/138
Installation Type	Indoor								
Storage Tank	119 Gallons							80 Gallons	
Min/Max Input (1,000 Btu/h)	30 / 398	30 / 398	30 / 398	30 / 398	30 / 320	15 / 199	15 / 160	15 / 199	15 / 160
Thermal Efficiency (TE)	95%						96%	95%	
Temperature Range	98°–185°F /37– 85°C								
First Hour Delivery @ 100 °F ΔT*** (gph/lph)	551 / 2086	551 / 2086	551 / 2086	460 / 1741	317 / 1199	271 / 1025	290 / 1097	244 / 923	209 / 791
Recovery @ 100 °F ΔT (gph/lph)	468 / 1772	468 / 1772	468 / 1772	468 / 1772	376 / 1423	234 / 886	188 / 711	234 / 886	188 / 711

* Demand Duo 2 and 2V

** Demand Duo 2V vs. two 200 Btu tanks in cubic ft.

*** Per test results from Rinnai testing lab based on storage volume and 70 percent usable hot water.

**** ASME Tank ©2020 Rinnai America

Learn more at rinnai.us

The Next Generation in Hybrid Technology

Simplified Installation. Optimized Performance.
Unsurpassed Warranty.

The Demand Duo R-Series easily vents through existing 6" B-Vent, so you save installation time and costs. What's more, our patented technology delivers reliable performance, longer service life and lower total cost of ownership when compared to traditional atmospheric tanks.



Installation Ease

- 1 **New Pre-installed Intake Filter and Exhaust Connector for 6" Category 1 B-Vent**
- 2 **Fast Gas Connect with 36" Swivel Flex Line and pre-installed Drip Leg**
- 3 **Fast Power Connect with pre-installed J-Box and Duplex Outlet**
- 4 **New Cold Water Inlet available at the Top or Bottom of the Tank**

Optimized Performance

- 5 **New Integrated Pump Control**
- 6 **New Enhanced Temperature Recovery**

Multiple Sizes

- 7 **80 or 119-Gallon Tank Options**



DuoSmart®
TANK TECHNOLOGY



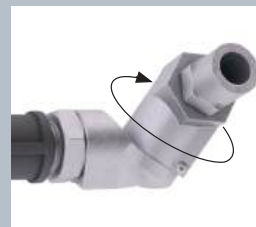
Intake Filter Exhaust Connector



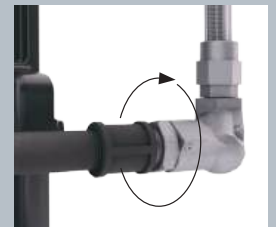
Pre-installed Electrical



3-Piece 6" B-Vent Accessory Kit Included



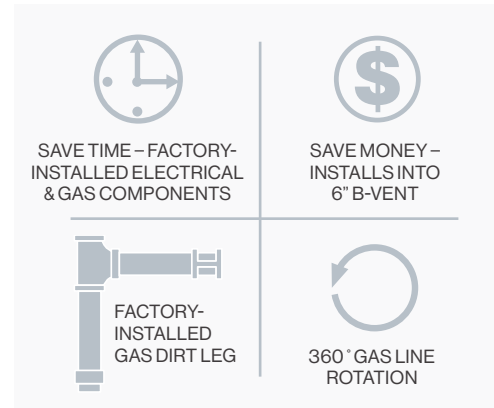
Two-way Gas Line Rotation for Easy Installation



Cost-Saving Reliability That Installs Easily.



Tankless 1st-hour: 276 gph





When you need a quick, simple replacement for a traditional atmospheric tank, Rinnai's Demand Duo R-Series Commercial Hybrid Water Heating System produces consistent, reliable hot water in a cost-saving package.

- Vents into existing 6" B-Vent
- Eliminates new vent runs
- Cuts cost of additional venting material
- No new ceiling, roof or wall penetrations
- Easy to install*, lighter than tanks



- High altitude approved to 5,400 ft.
- Certification System: AHRI, ANSI, CSA
- Wi-Fi capable

DEMAND DUO® R-SERIES SPECIFICATIONS | NON-CONDENSING MODELS

	DEMAND DUO® 100 GAL	DEMAND DUO® 80 GAL
		
Model	CHS199100REC	CHS19980REC
Part Number	CHS199100RECIN / CHS199100RECIP	CHS19980RECIN / CHS19980RECIP
Dimensions - w x h x d Inches (mm)	31.5 x 71.4 x 40.2 (800 x 1814 x 1020)	27.7 x 65.3 x 35.6 (703 x 1657 x 904)
Product Weight (lbs/kg)	364 / 165	331 / 150
Installation Type*	Indoor	Indoor
Storage Tank	119 / 450	80 / 303
Min/Max Input (1,000 Btu/h)	11.9 / 199	11.9 / 199
Thermal Efficiency (TE)*	80%	80%
Temperature Range	120°–180°F / 49°–82°C	120°–180°F / 49°–82°C
First Hour Delivery @ 100 °F ΔT* (gph/lph)	276 / 1045	249 / 942
Recovery @ 100 °F ΔT (gph/lph)	193 / 730	193 / 730

*Local, state, provincial, federal and national fuel gas codes must be adhered to prior to and upon installation.



Cold Water Inlet on Top Option



Common Vented Units

Proudly assembling Tankless Water Heaters at our state-of-the-art factory located in Griffin, Georgia, USA



Rinnai established its US operations in 1974 and introduced Tankless Water Heating to the North American Market in 1999.

In 2018 Rinnai assembled its first tankless water heater in the United States in Griffin, Georgia. Our state-of-the-art facility was completed in 2021 with assembly of the new RE•SERIES™ Non-Condensing Tankless Water Heaters beginning in 2022.

Rinnai continues to make significant investments in expanding its operations and product portfolio.

Rinnai®



Water Heating Solutions



Home Heating Solutions



Commercial Water Heating Solutions

Over 100 Years of Smart Comfort

With headquarters in Japan and a global network of subsidiaries and sales offices, Rinnai has enhanced the way business and residences heat their water while **Creating a healthier way of living®.**

Dedicated to a smarter kind of comfort, our value-added products continue to stay in step with demands of a changing world.

Every. Detail. Matters.™

You don't become a market leader without thinking through every single detail. Then overthinking it. Then rethinking it. Every small detail matters. A lot. From flexible venting to customizable solutions and maximum ROI, we've thought through all the possible barriers and potential problems before they exist. Simply put, we're not just in the business of tankless water heaters. We're in the business of solving problems. That means we won't relax. Ever. We just can't. We'll keep rethinking every single tiny detail, innovating, and improving our products, services, and programs.

Learn more about Rinnai high-performance Tankless Water Heaters, Hybrid Water Heating Systems, Boilers, Vent-Free Fan Convectors, EnergySaver® Direct Vent Wall Heaters, Hydronic Air Handlers, Electric Heat Pump Water Heaters, and Accessories.

rinnai.us | rinnai.ca

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