



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)

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, Recess Box, Recirculation Pump, DPS/MIS Switch, EZConnect™ Cables, Cascade Cables, Control-R™ Wi-Fi Module, Wireless Accessories, and many more. Visit rinnai.us for a complete list of accessories.

SUPER-HIGH-EFFICIENCY (CONDENSING) TANKLESS WATER HEATER

Installation Type	Internal (Indoor) Commercial Applications	
Model Numbers	CU199i (REU-N3237FFC-US) CU160i (REU-N2530FFC-US)	
Approved Gas Types	Natural and Propane	
Thermal Efficiency	Up to 97%	
Uniform Energy Factor (UEF)	0.93	
Energy Factor (EF) (Canada)	CU199i:	0.96
	CU160i:	0.95
High Altitude Approved	Up to 10,200 ft (3,109 m)	
Water Flow Control	Water Flow Sensor, Electronic Water Control and Bypass Control	
Controller	Standard: Integrated Controller Optional: MC-91-2US	
Certifications	AHRI, ANSI Z21.10.3, CSA 4.3, and ENERGY STAR®	

Warranty

- Heat Exchanger: 8 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

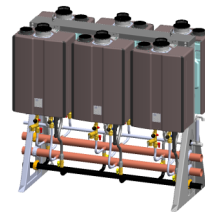
Tankless Water Heater, Wall Mounting Bracket, Pressure Relief Valve and Adapter, Isolation Valve Kit, Vent Screens (x2), Vent Screen Screws (x2), and Self-Tapping Screws (x2)

Additional Features

- 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

COMMERCIAL APPLICATIONS

Commercial Tankless Rack Systems



Demand Duo™ Commercial Hybrid System



CERTIFIED TO ANSI Z21.10.3 – CSA 4.3

SENSE™ TECHNICAL SPECIFICATIONS

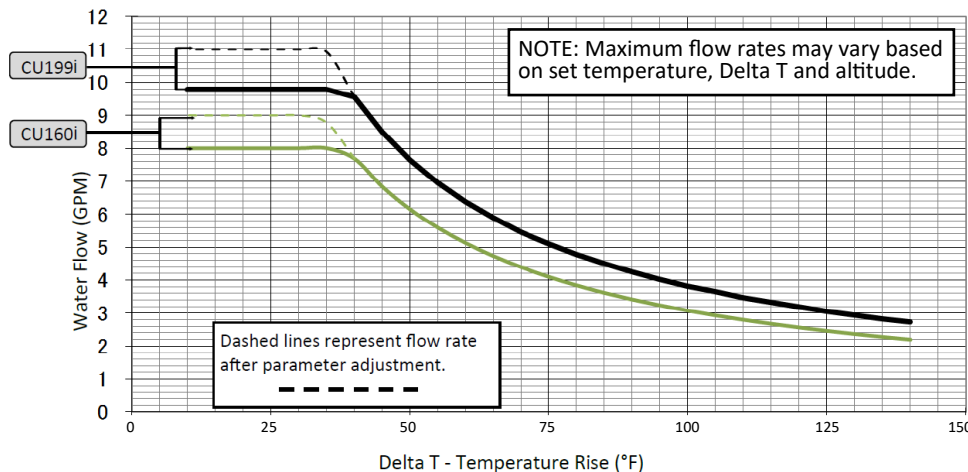
SPECIFICATION		CU199i	CU160i
Dimensions - w, h, d		18.5 in. x 26.4 in. x 11.4 in. (470 mm x 670 mm x 290 mm)	
Minimum Gas Consumption Btu/h		15,000	
Maximum Gas Consumption Btu/h		199,000	160,000
Flow Rate ¹ (Min - Max)		0.26 - 9.8 GPM (1.0 - 37 L/min)	0.26 - 8.0 GPM (1.0 - 30 L/min)
Max Flow Rate with Parameter Adjustment		11 GPM (42 L/min)	9 GPM (34 L/min)
Weight		64 lb (29 kg)	62 lb (28 kg)
Sound Level		49 dB	48 dB
Electrical	Normal	84 W	52 W
	Standby	1.3 W	
	Freeze Protection	148 W	
	Max Current	4 Amps	
	Fuse	10 Amps	
Temperature		<ul style="list-style-type: none"> Minimum: 98° F (37° C) Default Maximum: 140° F (60° C) Default 185° F (85° C) With Parameter Adjustment 	
By-Pass Flow Control		Electronic	
Gas Supply Pressure ²		<ul style="list-style-type: none"> Natural: 3.5 in. w.c. - 10.5 in. w.c. Propane: 8.0 in. w.c. - 13.5 in. w.c. 	
Ignition System		Direct Electronic Ignition	
Electronic Connections		<ul style="list-style-type: none"> Appliance: AC 120 Volts, 60Hz. Temperature Controller: DC 12 Volts (Digital) 	
Water Supply Pressure		<ul style="list-style-type: none"> Minimum: 50 PSI (Recommended 60-80 PSI for max performance) Maximum: 150 PSI 	
Controller Cable		Non-Polarized Two Core Cable (Minimum 22 AWG)	
Service Connections		<ul style="list-style-type: none"> Gas Supply: 3/4 in. (19 mm) NPT Cold Water Inlet: 3/4 in. (19 mm) NPT Hot Water Outlet: 3/4 in. (19 mm) NPT Condensate Drain: 1/2 in. (13 mm) NPT 	
Clearances		<ul style="list-style-type: none"> Top: 2 in. (51 mm)* Bottom/Ground: 12 in. (305 mm) Front: 0 in.** Back: 0 in. Sides: 2 in. (51 mm)*** Vent: 0 in. 	

* 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

¹ 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).
² The maximum gas supply pressure must not exceed the value specified by the manufacturer.

SENSE™ WATER FLOW CURVE

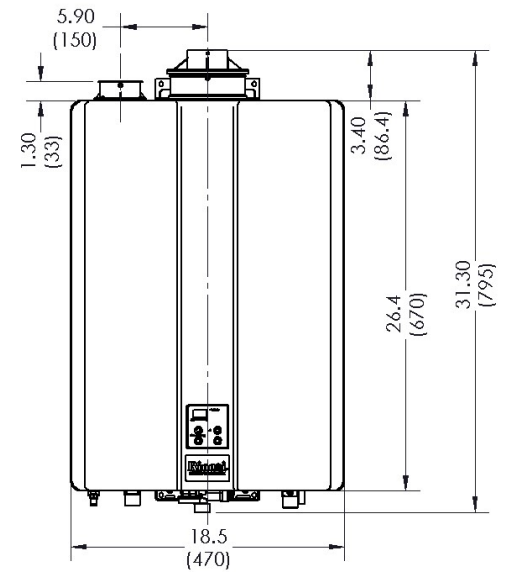
Flow curves apply only to incoming water temperatures of 70° F (21° C) or less. For incoming water temperatures greater than 70° F (21° C), please contact Rinnai.



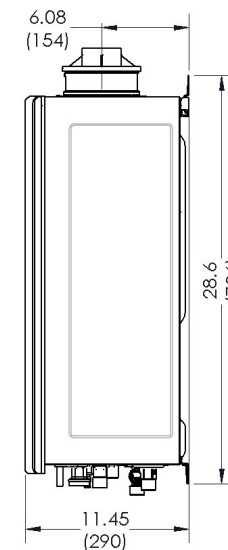
SENSE™ DIMENSIONS

in. (mm)

FRONT



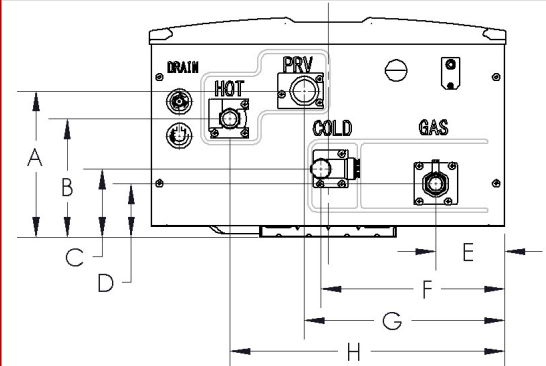
SIDE



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