

## 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 (PVC/CPVC and PP)

Vent Sizes	2 in. (51 mm)	3 in. (76 mm)
Vent Lengths	75 ft (23 m)	150 ft (46 m)

Concentric

Vent Sizes	2 in. X 4 in.	3 in. X 5 in.
Vent Lengths	75 ft (23 m)	150 ft (46 m)

### ■ EASE OF INSTALLATION AND SERVICEABILITY

- **Smart-Sense™**: Adaptive gas valve technology - No gas conversion kit required.
- **Versa-Vent™**: Outdoor vent cap adapts to any SENSEI™ CX Series model for outdoor installation.
- **Smart Connect™**: Allows you to connect your phone or tablet to SENSEI™ CX Series via Bluetooth® using Rinnai Central™ app.
- **Quick-Flush™**: Provides an efficient flushing procedure to make periodic preventive maintenance a simple task to perform.

### ■ OPTIONAL ACCESSORIES

Description	Part Number	Description	Part Number	Description	Part Number
Outdoor Vent Cap*	RXOVC	Pipe Cover*	PCD11-IB	Controllers	MC-601-BK/W, MC-195T-US
Internal Add-on Recirc. Pump Conversion Kit*	RX2RXPCCK	Recess Box for SENSEI™ CX Series*	RGBCTWHRX	Condensate Neutralizer	103000067, 804000074
Dedicated Return with Isolation Valves and PRV*	107000639	Bottom Plate for Pipe Cover*	109001364	Scale Cutter	103000038
Retrofit Door for CX in RGB-CTWH-4*	104000335	Wireless Module*	RWM200	Scale Cutter Refill	103000039
Retrofit Door for CX in RGB-CTWH-3, 2, 1*	104000336	OPU Switch	REU-OPU3	Cascade Cable	REU-CSA-C1, REU-CSA-C2
Recirculation Pump	GTK03U	Gas Conversion Kit (Labels Only)*	104000330	Leak Detection Kit	RXLeakKit

\*New—for SENSEI™ RX/CX Series Water Heaters

### SUPER-HIGH-EFFICIENCY (CONDENSING) TANKLESS WATER HEATER

<b>Installation Type</b>	Internal (Indoor) Commercial Applications External (Outdoor) Commercial Applications with Outdoor Vent Cap
<b>Model Numbers</b>	CX199i (REU-NB3237FFC-US) CX160i (REU-NB2530FFC-US)
<b>Approved Gas Types</b>	Natural and Propane
<b>Efficiency</b>	 UEF: 0.98 (CX199i) 0.97 (CX160i) Ratings not certified by AHRI      Thermal Efficiency: 97%
<b>High Altitude Approved</b>	Up to 10,200 ft (3,109 m)
<b>Water Flow Control</b>	Water Flow Sensor, Electronic Water Control and Bypass Control
<b>Controller</b>	Standard: Integrated Controller Optional: MC-195T-US, MC-601-BK/W
<b>Certifications</b>	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, Vent Screens (x2), Vent Screen Screws (x2), and Self-Tapping Screws (x4)

#### 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
- Up to 24 units Cascade Capability

#### Additional Applications

- Commercial Tankless Rack Systems
- Demand Duo™ Commercial Hybrid System



CERTIFIED TO ANSI Z21.10.3 — CSA 4.3

# SENSE™ CX TECHNICAL SPECIFICATIONS

SPECIFICATION		CX199i	CX160i
Dimensions - w, h, d		18.5 in. x 25.8 in. x 11.4 in. (470 mm x 654 mm x 290 mm)	
Minimum Gas Consumption Btu/h		15,000	
Maximum Gas Consumption Btu/h		199,000	160,000
Flow Rate <sup>1</sup> (Min - Max)		0.13 - 11.0 GPM (0.5 - 42 L/min)	0.13 - 9.0 GPM (0.5 - 30 L/min)
Weight		55 lb (25 kg)	54 lb (24 kg)
Sound Level		49 dB	48 dB
Electrical	Normal	84 W	52 W
	Standby	1.3 W	
	Freeze Protection	142 W	
	Max Current	4 Amps	
	Fuse	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>Minimum: 15 PSI (Recommended 50 PSI for max performance)</li> <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: 3/4 in. (19 mm) NPT</li> <li>Hot Water Outlet: 3/4 in. (19 mm) NPT</li> <li>Condensate Drain: 1/2 in. (13 mm) NPT</li> </ul>	
Clearances		<ul style="list-style-type: none"> <li>Top: 2 in. (51 mm)*</li> <li>Bottom/Ground: 12 in. (305 mm)</li> <li>Front: 0 in.**</li> <li>Back: 0 in.</li> <li>Sides: 2 in. (51 mm)***</li> <li>Vent: 0 in.</li> </ul>	

\* 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.

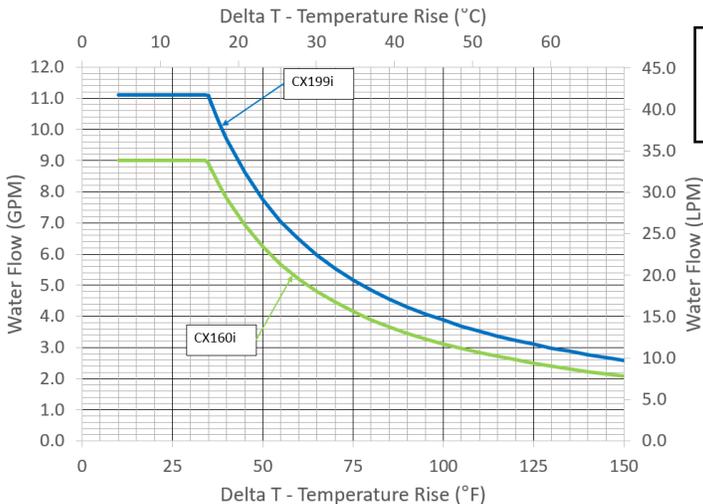
<sup>1</sup> Activation flow rate may vary slightly depending on the temperature setting and the inlet water temperature.

<sup>2</sup> The maximum gas supply pressure must not exceed the value specified by the manufacturer.

Rinnai products are continually being updated and improved; therefore, specifications are subject to change without prior notice.

# SENSE™ CX 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.

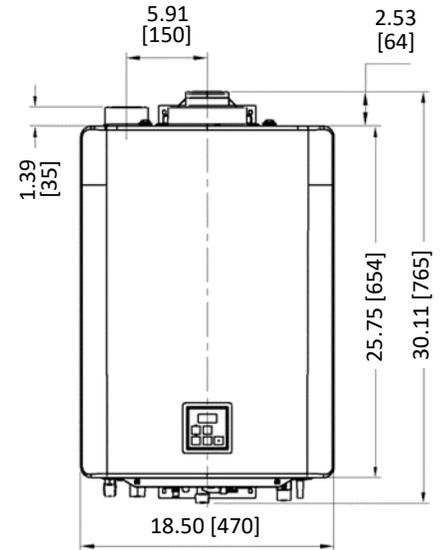


NOTE: Maximum flow rates may vary based on set temperature, Delta T and altitude.

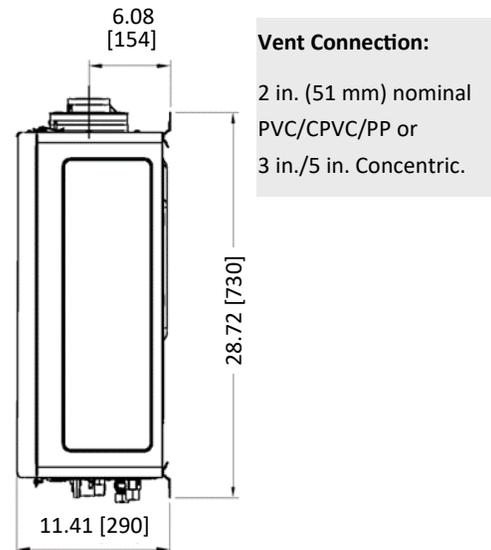
# SENSE™ CX DIMENSIONS

in. (mm)

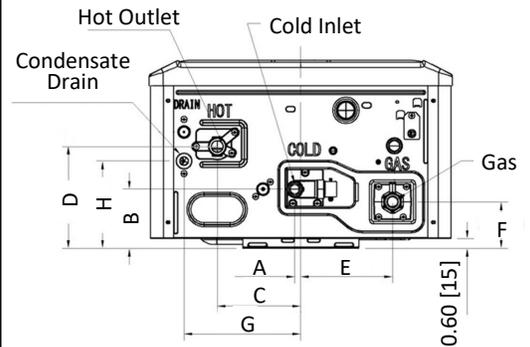
## FRONT



## SIDE



## BOTTOM



Connection		in.	mm
COLD	A	0.37	9
	B	3.60	91
HOT	C	5.10	130
	D	6.20	158
GAS	E	5.60	142
	F	2.83	72
DRAIN	G	7.13	181
	H	5.32	135