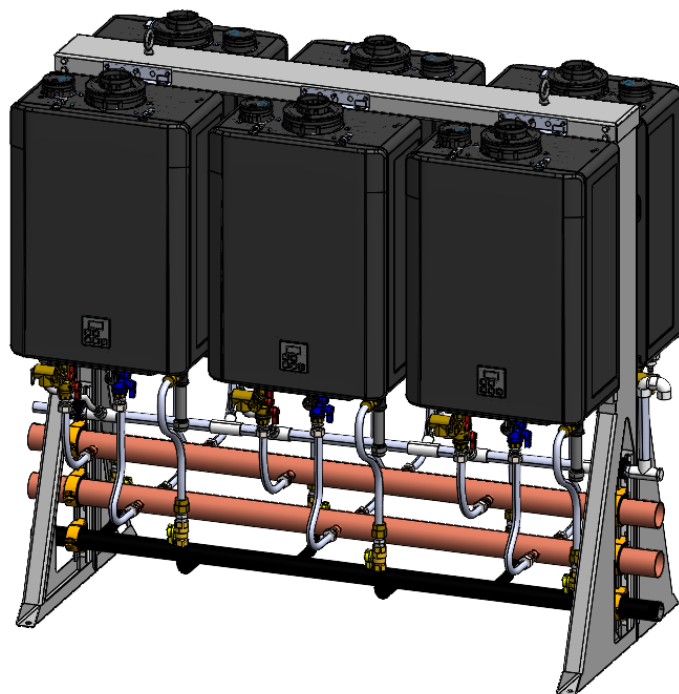




Tankless Rack System (TRS) with SENSEI™ CX Tankless Water Heaters

SPECIFICATIONS

COMMERCIAL



Free-Standing Rack with
Six Rinnai SENSEI™ CX Condensing
Tankless Water Heaters



SENSEI™ CX Condensing
Commercial Tankless Water Heater

Models:

- CX199i
- CX 160i
- CXP199i
- CXP160i

For complete details on commercial water heating solutions and maintenance services,
call 866-383-0707 or email commercialservices@rinnai.us.

1. Configurations

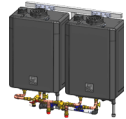
Tankless Rack System (TRS) configurations and part numbers are listed in the following tables.

IMPORTANT: SENSEI™ CX tankless water heaters are available in one SKU which is capable of using Natural Gas or Propane, and for being installed indoor or outdoor *.

When power is connected for the first time, you must select these settings using the controller on the front panel. Refer to the “Initial Settings” section in the “Tankless Water Heater Installation and Operation Manual” for complete instructions.

* Indoor tankless water heaters (applicable models) can convert to an outdoor installation with the Rinnai outdoor vent cap (purchased separately). Contact Rinnai for more information.

WALL-HANGING RACKS

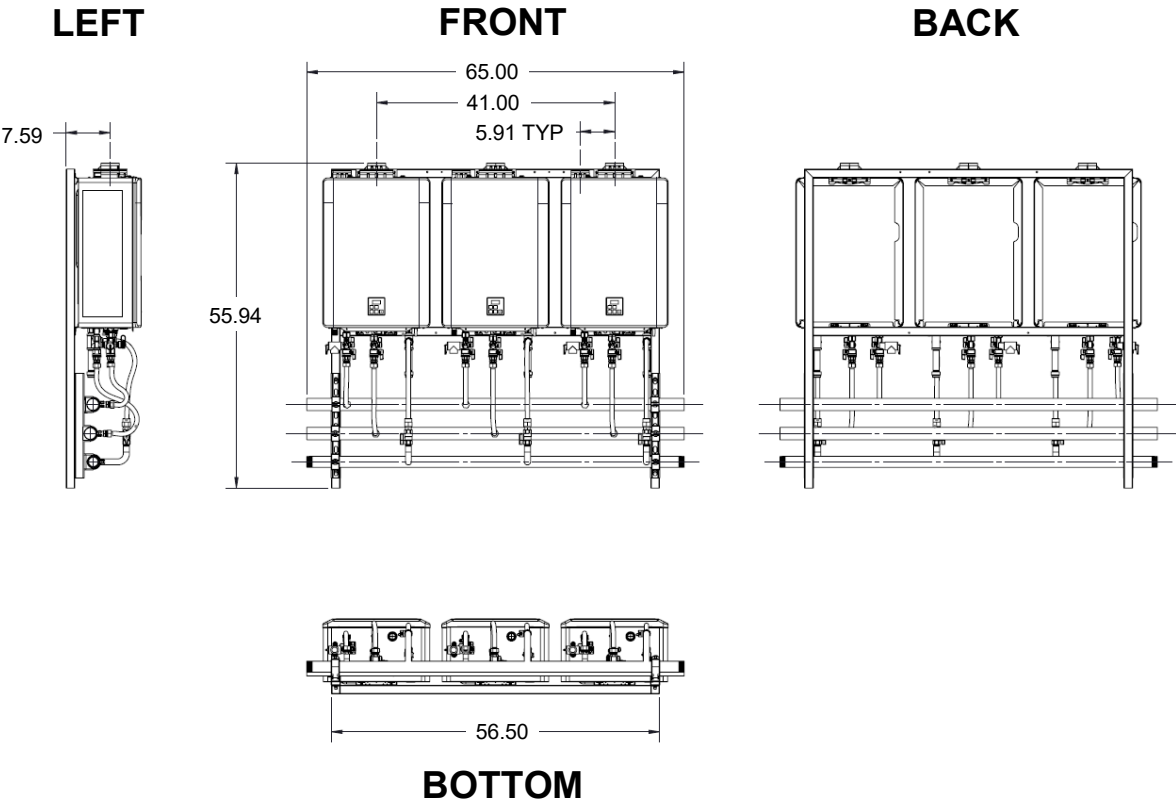
CX Series			
Part No.*	Rack Type	Configuration	Illustration
TRW02CXiN	2-unit interior wall-hanging rack, NG		
TRW03CXiN	3-unit interior wall-hanging rack, NG		
TRX02CXiN	2-unit interior compact wall-mount rack, NG		
CXP Series Featuring Smart-Circ™ Recirculation			
Part No.*	Rack Type	Configuration	Illustration
TRW02CXPiN	2-unit interior wall-hanging rack, NG		
TRW03CXPiN	3-unit interior wall-hanging rack, NG		

* Part No. Legend:

- TR = Tankless Rack
- W = Wall Hanging
- S = Stand Alone
- X = Compact
- IL = Inline
- 2/3/4/5/6 = Number of Water Heaters
- CX = SENSEI™ CX Tankless Water Heater
- i/e = Interior/Exterior
- NG/LP = Natural Gas/Liquid Propane
- TRS: Free-Standing Systems
- TRW: Wall-Hanging Systems
- TRX: Compact Wall-Mount

CX and CXP Series

3-Unit
Wall-Hanging Frame

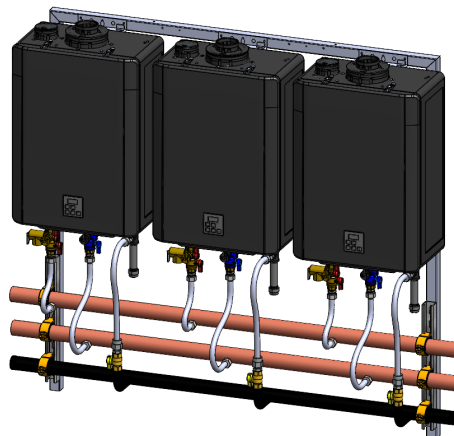


Model	Configuration	Illustration
TRW03CX		

CX and CXP Series 3-Unit Wall-Hanging Frame (Continued)

Model	TRW03CXi	TRW03CXPi
Water Heater Model	CX199i (NG/LP)	QTY 2 CXP199i & QTY 1 CX199i
Crate Dimensions (HxLxD) - in	66 x 70 x 35	
Weight - Fully Assembled - lbs	228	
Weight - Shipping (total) - lbs	449	
Rack Frame - Specifications		
Frame Material	Aluminum	
Frame Finish	Powder Coat	
Color	Gray	
Water & Gas Connections		
Hot Water Trunk Line Diameter	2"	
Cold Water Trunk Line Diameter	2"	
Hot Water Trunk Line Material	Rigid Copper	
Cold Water Trunk Line Material	Rigid Copper	
Water Trunk Connection Type	2" PIPE	
Gas Trunk Line Diameter	1-1/4"	
Gas Trunk Connection Type	1-1/4" MNPT	
Gas Trunk Line Material	Sch 40 Steel	
Gas Branch Line Material	PVC Over CSST	
Electric Requirements		
Voltage	AC 120 Volts - 60 Hz	
Maximum Current (Amperes)	12	
BTU and Flow Rates for CX199i(NG/LP)		
Number of Tankless Water Heaters	3	
Flow rate @ 70°F rise (gpm)	16.2	
Flow rate @ 100°F rise (gpm)	11.4	
Minimum input rate (Btuh)	15,000	
Maximum input rate (Btuh)	597,000	

TRW03CX / TRW03CXP



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
Isolation Valves	MIVK-T-LW	Bottom Plate for Pipe Cover*	109001364	Scale Cutter	103000038
Dedicated Return with Isolation Valves and PRV*	107000639	Wireless Module*	RWM200	Scale Cutter Refill	103000039
Retrofit Door for CX in RGB-CTWH-4*	104000335	Recirculation Pump	GTK03U	Cascade Cable	REU-CSA-C1, REU-CSA-C2
Retrofit Door for CX in RGB-CTWH-3, 2, 1*	104000336	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

Installation Type	Internal (Indoor) Commercial Applications External (Outdoor) Commercial Applications with Outdoor Vent Cap
Model Numbers	CX199i (REU-NB3237FFC-US) CX160i (REU-NB2530FFC-US)
Approved Gas Types	Natural and Propane
Efficiency	 UEF: 0.98 (CX199i) 0.97 (CX160i) Ratings not certified by AHRI Thermal Efficiency: 97%
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-195T-US, MC-601-BK/W
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, 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

SENSEI™ 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 ¹ (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		- 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		- 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		- Appliance: AC 120 Volts, 60Hz. - Temperature Controller: DC 12 Volts (Digital)	
Water Supply Pressure		- Minimum: 15 PSI (Recommended 50 PSI for max performance) - Maximum: 150 PSI	
Service Connections		- 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		- 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 Activation flow rate may vary slightly depending on the temperature setting and the inlet water temperature.

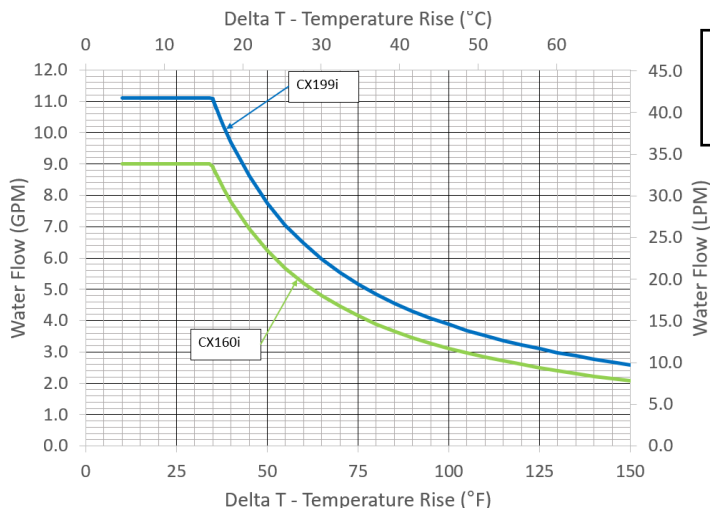
² The maximum gas supply pressure must not exceed the value specified by the manufacturer.

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

SENSEI™ 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.

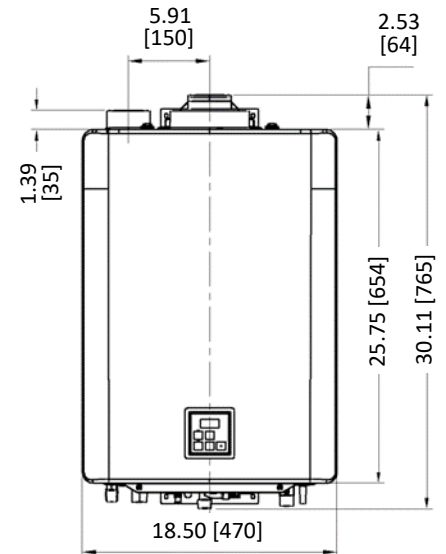


NOTE: Maximum flow rates may vary based on set temperature, Delta T and altitude.

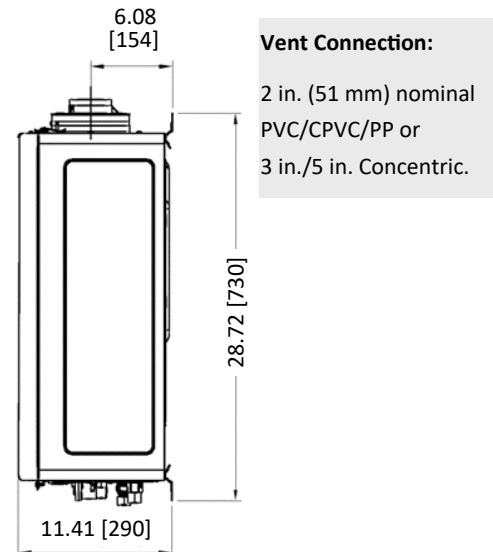
SENSEI™ CX DIMENSIONS

in. (mm)

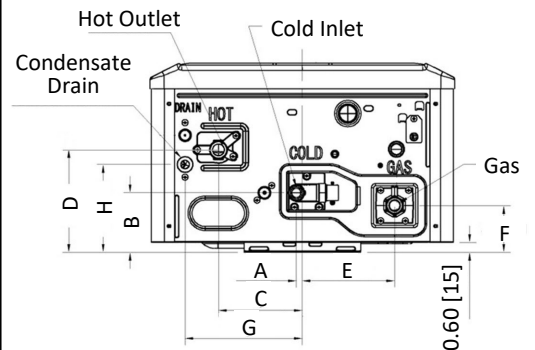
FRONT



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