Rinnai®

RXP199i, RXP160i
CONDENSING TANKLESS WATER HEATER

RESIDENTIAL

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)
- 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. Gas Conversion Label for Propane included with unit.
- **Versa-Vent™**: Outdoor vent cap (RXOVC) adapts to any SENSEI® RX Series model for outdoor installation.
- **Smart Connect™**: Allows an installer to connect your phone or tablet to SENSEI® RX Series Via Bluetooth® using Rinnai Central™ app.
- **Quick-Flush™**: Provides an efficient flushing procedure to make periodic preventive maintenance a simple task to perform.

SUPER-HIGH-EFFICIENCY (CONDENSING) TANKLESS WATER HEATER

Installation Type	Internal (Indoor) Residential Applications External (Outdoor) Residential Applications with Outdoor Vent Cap
Model Numbers	RXP199i (REU-NBP3237FF-US) RXP160i (REU-NBP2530FF-US)
Approved Gas Types	Natural and Propane
Efficiency	AHRI CERTIFIED UEF: 0.98 (RXP199i) 0.97 (RXP160i)
High Altitude Approved	Up to 10,100 ft (3,078 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: 15 years or 12,000 operation hours, whichever occurs first
- All Other Parts and Components: 5 years
- Reasonable Labor: 5 years* *Requires product to be registered within 90 days of installation or labor warranty defaults to 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), Screws (x2), Self-Tapping Screws (x4), Thermal Bypass Valve, Gas Conversion Label for Propane, and Installation and Operation Manual.

Additional Features

- Mobile Home Certified
- Ultra Low NOx
- Tankless Rack System™ Compatible
- 1/2 in. (13 mm) Gas Line Compatible
- Complies with South Coast Air Quality Management District 14 ng/J or 20 ppm NOx Emission Levels
- EZConnect—1 RXP and 1 RX as System

C US LOW LEAD CONTENT · SANITATION · CERTIFIED · DESIGN CERTIFIED · ENERGY STAR

H_2 Compatible to 25% blend

CERTIFIED TO ANSI Z21.10.3 — CSA 4.3

TECHNICAL SPECIFICATIONS

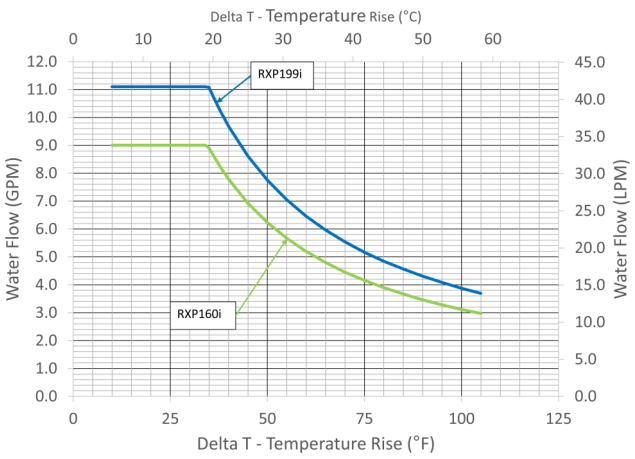
SPECIFICATION		RXP199i	RXP160i
Dimensions - w, h, d		18.5 in. x 25.8 in. x 11.4 in. (470 mm x 654 mm x 290 mm)	
Minimum Gas Consumption Btu/h		15,000	
Maximum Gas Consumption Btu/h		199,000	160,000
Flow Rate[1] (Min - Max)		0.13 - 11.0 GPM (0.5 - 42 L/min)	0.13 - 9.0 GPM (0.5 - 34 L/min)
Weight		58 lb (26 kg)	57 lb (26 kg)
Sound Level		49 dB	48 dB
Electrical	Normal	98 W	73 W
	Normal with Pump Operation	170 W	149 W
	Standby	1.3 W	
	Freeze Protection	174 W	
	Max Current	4 Amps	
	Fuse	10 Amps	
Temperature		• Minimum: 98° F (37° C) Default (Crossover Mode: 120°F (49°C)) • Maximum: 120° F (49° C) Default 140° F (60° 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 products are continually being updated and improved; therefore, specifications are subject to change without prior notice.

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.

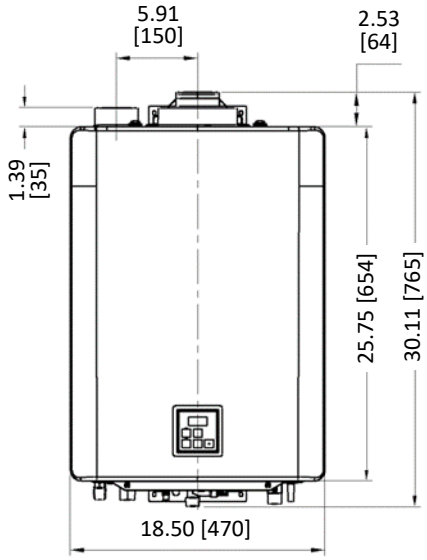


NOTE: Maximum flow rates may vary based on set temperature, Delta T and altitude.

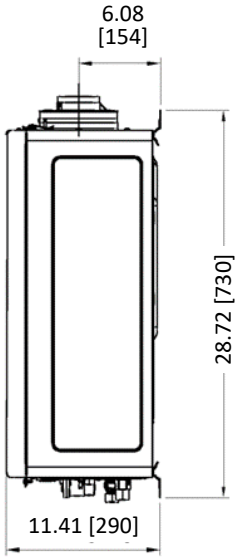
DIMENSIONS

in. (mm)

FRONT



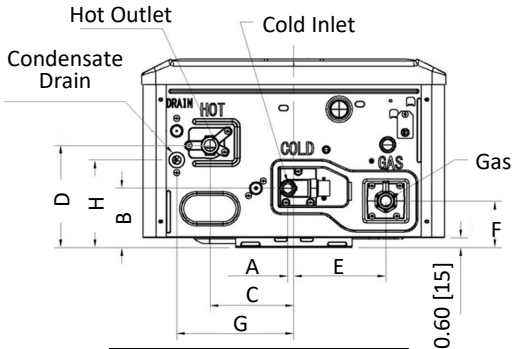
SIDE



Vent Connection:

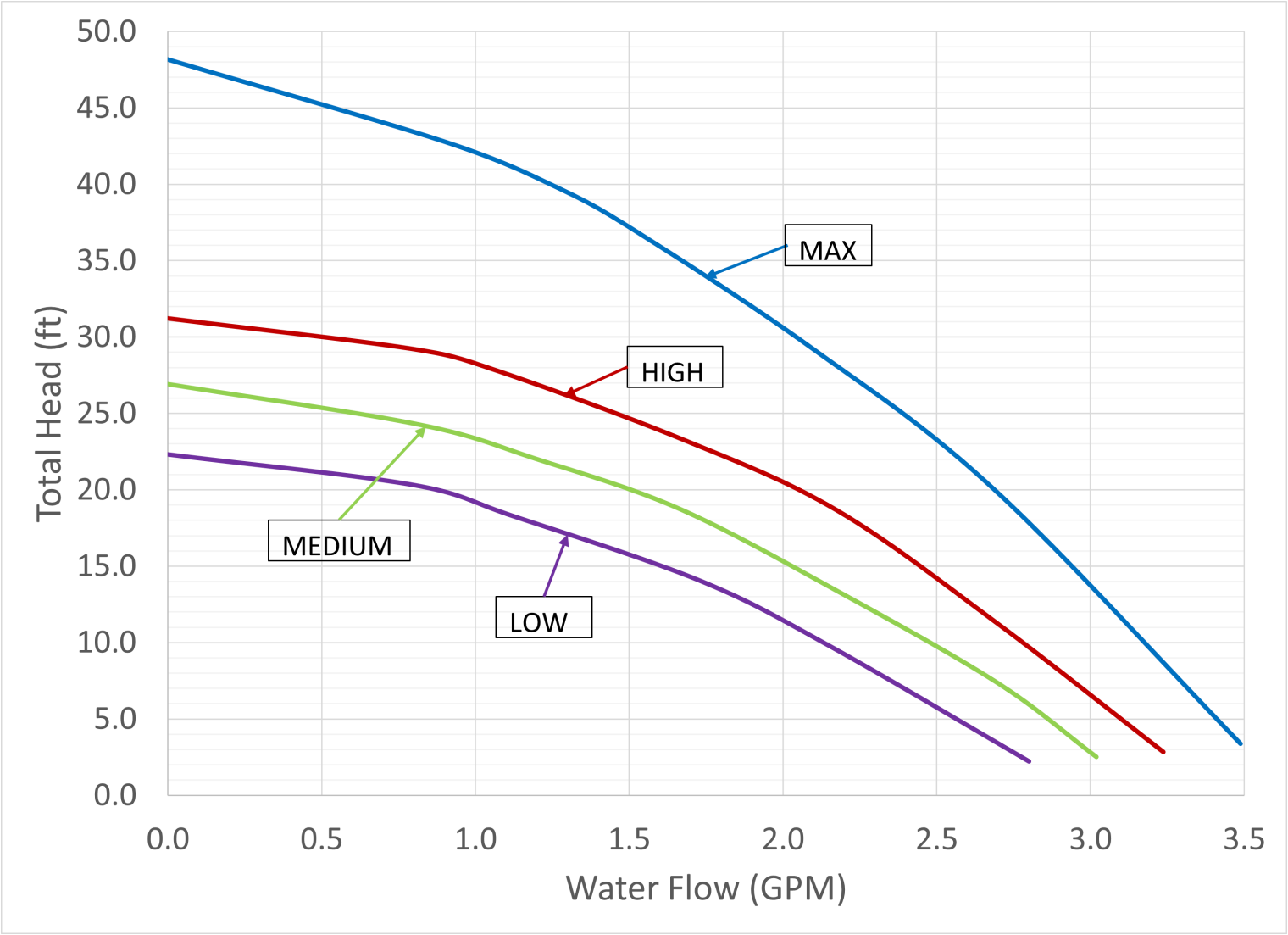
2 in. (51 mm) nominal PVC/CPVC/PP or
3 in./5 in. Concentric.

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

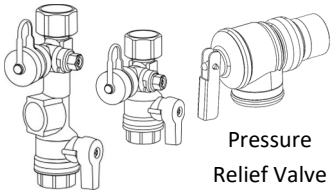
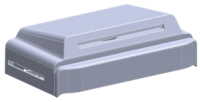
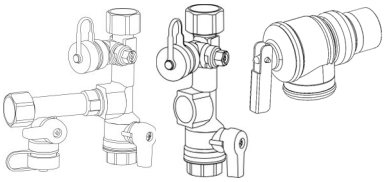
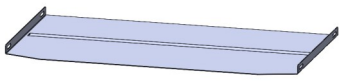
PUMP PERFORMANCE AND PUMP + TANKLESS PERFORMANCE CURVE



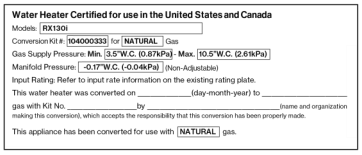
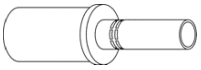
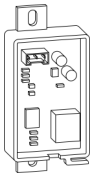
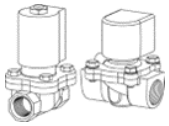
Recirculation Pump Control	• Smart-Circ.™ "learns" users' hot water patterns to activate recirculation. • Manual schedule selection is available with Accessory controllers (MC-195T or Wi-Fi module).
Internal Multi-Speed DC Pump	Integrated pump allows for recirculation through a dedicated return line or crossover with thermal bypass valve.
Maximum Recirculation Pipe Lengths	• 400 equivalent feet (122 m) for 3/4 in. pipe diameter • 100 equivalent feet (30 m) for 1/2 in. pipe diameter *Take equivalent elbow lengths into consideration when calculating pipe length.* **For dedicated return lines:** Total length includes both hot water supply and dedicated return lines. **Cross-over mode:** Total length includes both hot water supply and cold water piping length from the tankless water heater to the thermal bypass valve. Cross-over mode requires the use of a thermal bypass valve (included).

OPTIONAL ACCESSORIES

Numerous optional accessories are available for purchase for your Rinnai Tankless Water Heater. Listed below are some commonly purchased accessories. For a complete list of accessories, visit www.rinnai.us or www.rinnai.ca. For questions, or to purchase an accessory, contact your local Rinnai dealer/ distributor or Rinnai Customer Care at 1-800-621-9419.

Product	Product Description	Image
Isolation Valve Kit with PRV Part #: MIVK-T-LW	Isolation valves provide the ability to isolate the water heater from the structure's plumbing system and allow quick and easy access to flush the heat exchanger. Rinnai strongly recommends use of these valves for service and maintenance.	
Outdoor Vent Cap* Part #: RXOVC	Allows the RX Series tankless water heater to be installed outdoors.	
Dedicated Return and Isolation Valve Kit* Part #: 107000639	Valve kit including tee, drain valve, pressure relief valve, check valve and isolation valves (cold and hot) to simplify set-up of a dedicated recirculation line.	
Retrofit Door for RX in RGB-CTWH-4* Part #: 104000335	With this retrofit door, RGB-CTWH-4 can accommodate the RX Series tankless water heater.	
Retrofit Door for RX in RGB-CTWH-3, 2, 1* Part #: 104000336	With this retrofit door, RGB-CTWH-3, 2 or 1 can accommodate the RX Series tankless water heater.	
Recess Box* Part #: RGBCTWHRX	Allows the RX Series tankless water heater to be recessed into a wall. A vent adapter is provided with the recess box.	
Pipe Cover* Part #: PCD11-SHS	Encloses the piping below the water heater for aesthetic purposes.	
Bottom Plate for Pipe Cover* Part #: 109001364	Use with Pipe cover (Part #: PCD11-SHS)	

* New for SENSEI® RX/CX Series Tankless Water Heaters

Product	Product Description	Image
Wireless Module* Part #: RWM200	Controls On-Demand recirculation, remotely adjust temperatures, and communicates with the service provider portal. The module and MC-195T-US controller are not compatible accessories and must not be installed together.	
BLE Push Button* Part #: RPB200	Mounted in a convenient location, such as a kitchen faucet or bathroom sink, the BLE push button works without the Wireless Module to operate the RX Series tankless water heater recirculation system by pushing the button.	
EZConnect™ Cable* Part #: REU-EZC-3	Electronically connects two water heaters and allows them to function as one hot water source.	
Gas Conversion Kit* Part #: 104000330	Converts the tankless water heater gas type. Kit contains gas conversion manual and conversion rating plate label (adheres to water heater to display new gas type).	 Sample Rating Plate Label
Additional Controllers Part #: MC-601-BK, MC-601-W, or MC-195T-US	Additional controllers are available for user convenience.	
Condensate Neutralizer Part #: 804000074	Neutralizes the condensate generated by the water heater.	
ScaleCutter Part #: 103000038	Filters and reduces the amount of scale entering the water heater allowing for greater water heater longevity.	
ScaleCutter Refill Cartridge Part #: 103000039	Refill cartridge for the ScaleCutter filter assembly.	
OPU Switch Part #: REU-OPU3	Normally Closed (NC) switch that connects to the tankless water heater PC Board. When used with a hydronic air handler, the switch gives priority to domestic hot water during high demand.	
Single Unit Standoff Bracket* Part #: 109001376	The single unit standoff bracket anchors the tankless water heater to the wall with 1.5 inches (38 mm) of clearance between the water heater and wall.	
Drain Down Kit Part #: 104000285	Provides freeze protection by immediately draining the water heater upon loss of power.	
Room Air Screen Part #: 108000104 for 2 in. (51 mm) Part #: 108000105 for 3 in. (76 mm)	Recommended room air screen for use in room air applications only.	

* New for SENSEI® RX/CX Series Tankless Water Heaters

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

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